PROSPECTOR-DEFENDER STRATEGY, AUDITOR INDUSTRY SPECIALIZATION, EARNINGS MANAGEMENT THROUGH REAL ACTIVITIES, AND EARNINGS QUALITY

Wuryan Andayani

Ph.D. Student at Universitas Gadjah Mada, Yogyakarta
Brawijaya University, Malang
(a_wuryan@yahoo.com)

Sony Warsono

Faculty of Economics and Business
Universitas Gadjah Mada
(iarirfan@yahoo.com)

ABSTRACT

This study observed the influence of the company prospector-defender strategy and auditor industry specialization toward the earnings management through real activities and earnings quality. An important finding in this study confirmed that the auditor industry specialization could not restrict the earnings management and the company's prospector strategy could restrict the earnings management. On the contrary, defender strategy could not restrict the earnings management. Another finding proved that the auditor industry specialization influence the earnings response coefficient (ERC) and investors' response. Besides the auditor industry specialization, as well as the prospector and defender strategies, other factors also affected influence ERC are leverage, company size, stock return, beta and market return. The interaction among the prospector and defender strategies and unexpected earnings neither influence the CAR nor the investors' response. This was probably because the investors pay attention to the strategy used by the company. However, there were any interaction variables: industry specialization auditor, leverage, stock return, beta and market return influence the CAR and investors' response.

Keywords: auditor industry specialization, prospector-defender strategy, earnings response coefficient, earnings quality.

INTRODUCTION

Research about factors affecting earnings quality is very important to do since earnings quality mechanism can bound managers' ability to alter their accounting data. In the real world, accounting system provides a space for manager to influence the financial statement data. As a result, outcome on firm's financial statement information are noisy and bias.

Healy & Palepu (2004) pointed out that there are three sources of noise and bias in accounting data: 1) The rigidity in the accounting rules; 2) The random forecast errors; and 3) Systematic reporting choices made by corporate managers in order to achieve specific objectives. First, the noisy accounting rule in SFAC No.2 issued by the FASB requires firms to Expend research outlays when they are in-

curred. Obviously, some research expenditures have future value while others do not. Second, the source of noise arises from forecast error on credit trade prediction, where managers cannot predict future cost of current transactions. Manager estimates account receivables that cannot be collected and this failure in customer's payment resulted in an error prediction. Third, manager's accounting choice included accounting based on debt covenants, management compensation, tax consideration, rule consideration, stock exchange consideration, shareholders consideration, as well as business competition consideration.

Besides earnings quality factors, audit factor is also capable to increase earnings quality and to bind earnings management. Auditor who has a comprehensive understanding of industry characteristics is more effective in auditing compared to those without knowledge of industry characteristics (Maletta & Wright, 1996); Becker (1998) stated that earnings management rate is higher for client with non Big Six auditor. Solomon *et al*. (1999) found that specialist auditor is more accurate in auditing and does not perform an error audit. Client of non specialist auditor reported a higher discretionary accrual than those reported by a client of specialist auditor (Krishnan, 2003), which by then supported Johnson *et al*. (1991), O'Keefe *et al.* (1994), Becker (1998) and Solomon (1999).

Furthermore, researches on auditor specialization with earnings response coefficient (ERC) which are conducted by Teoh & Wong (1993) and Mayangsari (2003). Teoh & Wong (1993) reported that client with a big six auditor has a high ERC. In Indonesia, while Mayangsari (2003) found a proof that auditor specialization correlated positively with financial report integrity, and corporate governance correlated negatively with financial report. Furthermore, Mayangsari (2004) proved that auditor specialization influenced ERC.

Earnings management can also be conducted by firm which competes in an industry that finally influences the policy option of financial statement (Healy & Palepu, 2004). In a highly competitive business world, firm is challenged to conduct the right business strategy. Therefore, firm is able to compete and go over its competitor in gaining earnings and chances to grow. There are four firm's competition typologies: prospector, defender, analyzer, and reactor (Miles & Snow, 1978; Habbe & Hartono, 2001); prospector, analyzer, low cost defender, and differential defender (Olson, 2005).

Miles & Snow (1978) and Olson *et al.* (2005) stated that prospector has competitive characteristics to offer product that differs with its competitor, where in other word it is unique (differentiation strategy). Defender has a competitive characteristic by offering a cheaper product (cost leadership strategy). Besides Miles & Snow (1978) and Habbe & Hartono (2001), a research on prospector and defender organizational strategy was done by Porter (1980); Anthony & Ramesh (1992), Woodside *et al.* (1999); Olson *et al.* (2005). The result of Habbe & Hartono (2001) and Saraswati & Atmini (2007) on association between stock price and prospector and defender firm are not significant.

This research differs from the previous researches. This research is associated with the possibility of prospector and defender's auditor specialization to limit earnings management and also to get information on prospector and defender's earnings quality.

LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Prospector and Defender Organizational Strategy and Earnings Management

Competition strategy is conducted by a firm in order to survive and able to compete with other firms. Miles & Snow (1978) stated that competition strategy comprises of

prospector, defender, analyzer, and reaction. Olson (2005) pointed out that firm strategy consist of prospector, analyzer, low cost defender, and differentiated defender. Prospector is always observing market opportunity and doing product innovation, while defender has a narrow product domain and does not innovate on technology, structure, and operational method, but only increases operational efficiency. Analyzer, operates in a stable market-product domain, gives attention to competitor's new ideas. Reactors, does not response changes and environment instability, and consistent with strategy and structure.

Porter (1980) stated that firm in growth phase has a higher margin and profit than that in maturity phase. This is because the growing firm is still in its developing phase and also doing a lot of investment so thus its ROI is still low compared to a mature firm. In addition, Anthony & Ramesh (1992) also found that in growth phase, the growing of sales is higher than in maturity and decline phase. In this phase, the dividend payout is lower than that in maturity phase. It means that prospector firm gives a small small dividend to shareholders. Subsequently, Ittner, *et al.* (1997) found that in a competition, a prospector firm gives more weight on product innovation as a competitive advantage. Therefore, a prospector firm tends to invest in form of R&D and has a bigger capital expenditure than a defender firm.

In Indonesia, Habbe & Hartono (2001) examined the association between stock price and accounting performance measurement for prospector and defender firm. Habbe & Hartono (2001) did not find any empirical evidence of relationship between stock price and prospector and defender strategy. Saraswati & Atmini (2007) examined market reaction to prospector and defender accounting performance measurement after crisis period. The result proved that prospector firm has a higher growth rate of earnings and sales than defender firm (insignificant), dividend payout

ratio of defender firm is higher than that of prospector firm, and last, market reaction of prospector is higher than defender's (also insignificant).

Earnings management is a choice of accounting policy for manager to achieve several particular objectives (Scott, 2006). Healy & Palepu (2004) said that there are three sources of noise and bias in accounting data which are noisy in accounting rule, error prediction, and manager's accounting policy choice which includes business competition. Thus, earnings management can emerge from business competition between firms. Next, Burgstahler & Emas (1998) in Aljifri (2007) stated that earnings management can be developed from actual operation, investment, and funding which can influence the size of accounting earnings. This is in accordance with Roychowdurry (2006) who argued that earnings management through real activity is indicated with low abnormal discretionary cost and high abnormal production cost.

Discretionary cost expenditure includes research and development (R&D), as well as advertising, maintenance, sales, general and administration costs. Firm reduces reported cost and increases the sales by selecting discretionary cost expenditure to increase earnings. Manager selects discretionary cost to achieve earnings target, showing that discretionary cost is low.

Manufacture firm's manager can produce more goods than actual demand to increase earnings. With higher production rate, overhead cost is still distributed to several bigger units, so that fixed cost per unit is lower. As long as reduced cost is still done per unit, there will be no increasing in marginal cost per unit, hence fixed cost per unit becomes lower. This implicates that cost of goods sold is reported lower and firm reports a better operational margin. Firm does not close production cost and saving cost of all items that are produced in the same sales period. As a result, opera-

tional cash flow is lower than given normal sales rate.

Audit Industry Specialization

Agency theory and contracting theory are developed to explain audit brand name and industry specialization as a function to reduce agency cost (Craswell, *et al.*, 1995). Audit quality can reduce agency problem that occurs between management as the agent and stockholder as the principal (Jensen & Meckling, 1976). Audit quality also can reduce contracting problem and reduce monitoring cost (Watts & Zimmerman, 1986). Hogan & Jeter (1996) stated that auditor who has industry specialization gives a better audit quality than a non-specialist one. According to Hogan & Jeter (1996), auditor specialization is required and increasing due to the expanding target market and competition between accounting firms. Auditor concentration increases in an unregulated industry with a low claim.

Auditor reputation is related with how the auditor can create useful information for financial users. Jensen & Meckling (1976) and Watts & Zimmerman (1986) stated that auditor with a good reputation can solve debt contract problem by giving valuable information about debtor. On the contrary, a limitation on information availability concerning the firm will make lender (creditor) depends on firm's disclosure. This disclosure will be utilized to evaluate the performance and future prospect. Later, if information availability is restricted, the lender will have to spend an expensive cost to get information and to monitor a reliable financial statement. Thus, information gap between stockholder (*principal*) and manager (*agent*) will influence agency cost. It can also influence monitoring cost. According to previous research, agency cost and monitoring cost are expected to decrease with the emergence of audit quality and auditor specialization in industry.

Research on audit quality conducted by Dopuch & Simunic (1982) confirmed that special auditor invests more on recruitment and training, information technology, and auditing technology than that done by non specialist auditor. Johnson, *et al.* (1991) discovered evidence that industry expertise is related with the ability to detect fraud. O'Keefe, *et al*. (1994) also found evidence that specialist auditor shows obedience to audit standard (GAAS) compared those of non specialist one. While Teoh & Wong (1993) reported that client with Big 6 Auditor has a high Earnings Response Coefficient. These researches showed that audit quality can increase earnings quality and financial statement quality.

Research associating auditor specialization with earnings management is done by Maletta & Wright (1996) who examine fundamental difference in character and method in detecting earnings management. Maletta & Wright (1996) stated that auditor with a comprehensive understanding of industry characteristic audits more effectively than auditor without knowledge of industry characteristics.

Next, Beker (1998) showed that earnings management rate is higher for client with a non Big 6 Auditor. Thus, client of a Big 6 Auditor reported discretionary accrual that in average is higher than that reported by client of Big 6 Auditor. Solomon (1999) conducted a research on industry specialist auditor and found evidence that specialist auditor is more accurate in detecting errors than non specialist auditor. Hogan & Jeter (1999) also found that auditor specialization indicates a qualified audit. This finding is important Accounting firms who rarely conduct audit will give an incorrect explanation about ration fluctuation. An effective audit depends on accuracy and auditor who has special expertise that related to audit effectiveness. Therefore, auditor with special expertise is able to assist in detecting earnings management.

To answer opinion that a qualified auditor can reduce monitoring cost, Francis, *et al.* (1999) conducted a research. The result also proved that external monitoring can restrict earnings opportunity to report financial statement based on accrual. Next, Pittman & Forting (2004) pointed out that qualified auditor (the Big 6) can reduce debt monitoring cost by increasing financial statement credibility. Auditor expertise is also able to reduce problem of asymmetric information between debtor and creditor.

Audit quality is difficult to observe since it has a multidimensional size. This is in accordance with Balsam, *et al.* (2003) who stated that audit quality is multidimensional as well as difficult to observe and has no single characteristic of proxy. Balsam, *et al.* (2003) proved that client of the Big 6 specialist auditor has a lower discretionary accrual and a higher ERC than those of non Big 6 client. Research shows that a low audit quality correlates with flexibility on choosing accounting methods.

Result of Johnson, *et al.* (1991), O'Keefe, *et al.* (1994), Becker (1998), Solomon (1999), and Balsam, *et al.* (2003) supported Khrisnan (2003); that research on expertise of the Big 6 industry auditor can limit earnings management. Khrisnan (2003) research result proved that client of a non specialist auditor reported absolute discretionary accrual above average rate of 1.2% from total assets, which is higher than discretionary accrual reported by client of a specialist auditor. That result is consistent with opinion which stated that specialist auditor can reduce earnings management compare to non specialist auditor. Roychowdhury (2006) pointed out that discretionary cost such as research & development (R&D), advertisement, and maintenance are commonly charged upon its happening. Therefore, firm reduces discretionary cost to raise earnings. Hence, a low discretionary cost indicates the emergence of earnings management. In general, previous researches proved that audit quality can reduce earnings management. Audit quality correlates with auditor specialization and auditor's reputation, where three of them should be possessed by auditor since it is a component of auditor expertise. Several researches also supported the statement that specialist auditor has a good resource and a good experience, as well as has the ability to detect and to restrict earnings management.

Mayangsari (2003) found evidence that auditor specialization has a positive impact on financial statement integrity while corporate governance negatively correlates with financial statement. Later, Mayangsari (2004) found that auditor industry specialization with earnings response coefficient/ERC. Unlike Mayangsari (2003, 2004), Siregar & Utama (2006) and Andayani, *et al.* (2008) found evidence that the Big 4 auditor is not able to restrict earnings management. This result emerged due to the inappropriateness of audit quality proxy which used accounting firms measure. Hence, this research uses audit quality proxy of industry specialization. Therefore, the hypotheses are as follows:

H1a: abnormal discretionary cost of firm using auditor industry specialization is higher than that of firm without auditor industry specialization.

H1b: abnormal discretionary cost of firm using prospector strategy is higher than that of firm using defender strategy.

H1c: firm using auditor industry specialization will be positively responded by investor than that of firm without auditor industry specialization.

H1d: firm using prospector strategy will positively responded by investor than that of firm using defender strategy.

Earnings Response Coefficient (ERC)

ERC is a measure of unexpected earnings' effect on stock return, and is measured as a regression slope of abnormal stock return and

unexpected earnings (Cho & Jung, 1991). ERC is also used as a measure of earnings quality (Choi & Jeter, 1990). Teoh & Wong (1993) examined the effect of auditor quality on earnings response coefficient and found that investor responded to unexpected earnings, consistent with that of Balsam, *et al.* (2003). Balsam, *et al.* (2003) examined the connection between earnings quality (measured with ERC) and industry specialist auditor, and found that specialist auditor gives more reliable earnings signal and having a higher ERC than that of a non specialist auditor. Therefore, the hypothesis can be concluded as follows:

H2: the earnings quality of firm using an industry specialization and using prospector strategy is higher than that of firm which is not using industry specialization and using defender strategy.

RESEARCH METHODS

Sample Selection and Data Collection

Population in this research is all firms listed in Bursa Efek Indonesia (formerly Bursa Efek Jakarta). The sample selection is based on purposive sampling method in order to gain representative sample according to criteria as follows:

Samples are firms listed on BEI in 2004-2006 and are not regulated (Dunn, *et al.*, 2004). This period is chosen under the assumption that monetary crisis' effect is getting smaller. Unregulated firms are chosen because they are not affected by tariff rule, such as one set by government for oil and transportation industry, and also financial industry get government's rule on interest rate.

Regression Test Equation of Research Hypotheses

$$Y_{it} = \alpha_0 + \beta_1(SP)_{it} + \beta_2(PD)_{it} + \beta_3(CFO)_{it} +$$

$$\beta_4(LEV)_{it} + \beta_5(LTA)_{it} + \varepsilon_{it} \qquad (1)$$

where:

Y_t = abnormal discretionary cost. Abnormal discretionary cost is an estimates of residual (Khrisnan, 2003 and Balsam, *et al.*, 2003) which is then being absoluted (Balsam, 2003).

SP = 1 is auditor who has industry specialization by The Big 4. The Big 4 consists of PWC (partner Haryanto Sahari & Co); Deloitte Touche Tohmatsu (partner Hans, Tuanakotta Mustofa & Halim); KPMG (Siddharta & Harsono); Ernst & Young (partner Prasetyo, Sarwoko, & Sandjaya) and 0 is vice versa

PD = 1 if firm is a prospector type and 0 if firm is a defender type

TA = Assets's Total Logarithm as a proxy of firm's size, as a control variable based on previous research (Balsam, *et al.*, 2003; Reynolds & Francis, 2000; Becker, *et al.*, 1998; Warfield, *et al.*, 1995).

CFO = operational cash flow, as a control variable based on previous research (Balsam, *et al.*, 2003; Reynolds & Francis, 2000; Becker, *et al.*, 1998; Warfield, *et al.*, 1995).

LEV = long-term debt ratio, scaled using total assets, as a control variable based on previous research (Balsam, *et al.*, 2003; Reynolds & Francis, 2000; Becker, *et al.*, 1998; Warfield, *et al.*, 1995).

Earnings Management Proxy through Real Activity

1. $DISKRES_t/A_{t-1} = \alpha_0 + \alpha_1 (1/A_{t-1}) +$

$$\beta_1(Penj_t/A_{t-1}) + \varepsilon_t \quad (2)$$

$DISKRES$ = sales and general administration cost

2. $Y_t = \alpha_0 + \alpha_1 SP_{it} + \alpha_2 PD_{it} + \alpha_3 LTA_{it} +$

$$\alpha_4 CFO_{it} + \alpha_5 LEV_{it} + \varepsilon_{it.} \qquad (3)$$

In this case:

Y_t is an abnormal discretionary cost

SP = audit specialization, 1, if it is audited by a specialist auditor and 0 if it is audited by a non specialist; PD = Prospector and defender type of firm; LTA = total asset; CFO = operating cash flow; LEV = leverage.

Proxy of Prospector and Defender Firm

Proxy for prospector and defender firm is:

1. The sum of employee divided by total sales (KAR/PEN)

2. Price to book value (PBV) (Ittner *et al* 1997).

3. Capital expenditure divided by market value of equity (CEMVE)

4. Capital expenditure divided by total asset (CETA) (Skinner 1993, Kallapur and Trombley 1999).

5. KARPEN = KAR/PENJ   (4)

6. PBV = MV/BV   (5)

7. CETA = $(CE_t - Ce_{t-1})/TA_{t-1}$ (6)

8. CEMVE = $(CE_t - Ce_{t-1})/MVE_{t-1}$ (7)

In this case:

KAR = total employee; PEN = total nett sales; MV = market price per share; BV = book value per share; CE_t = capital expenditure year t; CE_{t-1} = capital expenditure year t-1; MV_{t-1} = market value of equity in the end of year t-1; TA_{t-1} = total asset year t-1

The value of those four variables is then analyzed with common factor analysis.

Cumulative Abnormal Return (CAR)

Cumulative Abnormal Return (CAR) is a proxy of stock price which shows the size of market respond to published accounting earnings. Abnormal return shows market response towards an event while abnormal return is a difference between actual return and normal return (Hartono, 2000). Normal return is investor's expected return. Assumption used in this study is the semi efficient market assumption and investor has an expected return. Abnormal return occurs because there is new information that alters investor's expected return. Expected return is calculated by deducting actual return with expected return as shown below:

$$AR_{it} = R_{it} - E(R_{it}) \qquad (8)$$

In this case:

AR_{it} = abnormal return security i in period t; R_{it} = actual return security i in period t; $E(R_{it})$ = expected return security i in period t; Expected return is estimated with market model, using regression equation technique (CAPM formula) as follows:

$$R_{it} = \alpha_i + \beta_i R_{mt} + \varepsilon_i \qquad (9)$$

In this case:

R_{it} = return security i in estimated period t; α_{it} = intercept security i; β_{it} = beta security i; RM_t = market index return at estimated period t; CAR around event period is calculated by summing abnormal return for firm i along short term window period, this period is used since investor will quickly react to economic-value information.

$$CAR_{i(-5,+5)} = \sum_{t=-5}^{+5} AR_{it} \qquad (10)$$

In this case:

CAR_{it} = Cumulative Abnormal Return firm i at observing period ±5 days since date of issue of the financial statements

AR_{it} = Abnormal Return firm i in day t.

Unexpected Earnings (UE)

Unexpected Earnings (UE) is a difference between the actual earnings and the expected earnings. The expected earnings are estimated by random walk model. Random walk model estimates that walking period earnings is similar with previous period earnings, like those used by Kallapur (1994).

$$UE_{it} = \frac{(EPS_{it} - EPS_{t-1})}{|P_{it-1}|} \qquad (11)$$

In this case:

> Ueit= Unexpected earnings firm i in period t; EPSit= earnings per share firm i in period t; Pit-1=stock price firm i in period t

Earnings Response Coefficient Test

This research examines hypothesis that ERC using auditor industry specialization and having prospector type is higher than that of defender firm which is not audited by non-auditor industry specialization by using regression as follows:

$$CAR_{it} = \beta_0 + \beta_1 UE_{it} + \beta_2 SP_{it} + \beta_3 PD +$$
$$\beta_4 MB_{it} + \beta_5 LTA + \beta_6 LEV +$$
$$\beta_7 CFO_{it} + \beta_8 BETA + \beta_9 RET_{it} +$$
$$\beta_{10} RETPASAR_{it} + e_{it} \qquad (12)$$

$$CAR_{it} = \beta_0 + \beta_1 UE_{it} + \beta_2 SP*UE_{it} +$$
$$\beta_3 PD*UE_{it} + \beta_4 MB*UE_{it} +$$
$$\beta_5 LTA*UE_{it} + \beta_6 LEV*UE_{it} +$$
$$\beta_7 CFO*UE_{it} + \beta_8 BETA*UE_{it} +$$
$$\beta_9 RET*UE_{it} +$$
$$\beta_{10} RETPASAR*UE_{it} + e_{it} \qquad (13)$$

In this case:

> CAR$_{it}$ = Cumulative Abnormal Return; UE= Unexpected earnings; MB= market

to book ratio (market value ratio divided by book equity value (Balsam, 2003; Collins and Kothari, 1989); LTA= log total assets, as a controlling variable (Balsam, 2003; Bowen *et al*, 1992); LEV= leverage; CFO= operating cash flow; BETA= market model beta, which is a systematic risk expected to effect negatively on ERC (Balsam, 2003; Collins & Kothari, 1989; Lipe, 1990).

RET= return, to reduce the calculation error of UE. (Balsam, 2003; Easton & Zmijewski, 1989)

ERC= coefficient slope, which is put into regression as an interaction with UE variable. ERC of specialist auditor is greater than that of non specialist auditor.

Market return= is used for minimizing UE error measure.

FINDINGS AND CONSEQUENCES

Selection on prospector and defender firm and on auditor industry specialization

The selection of firm with prospector and defender typology is using factor analysis. This procedure is utilized to identify latent dimension or to shape data representing the original variable (Hair, *et al*, 1995). Those four variables are CEMVE, PBV, KARPEN, CETA. Fac_sum is a sum variable of factor 1 and factor 2 score which is an index to classify firm with prospector and defender typology. The sum of these indexes (fac sum) is then ranked, one-third highest rank represent prospector typology while one-third lowest rank is a defender typology. From here, 243 prospector firms and 240 defender firms are obtained.

Table 1. *Common Factor Analysis*

A.	Communalities of four indicator variable			
	Variabel	CEMVE	PBV	KARPEN	CETA
	Communalities	0.652	0.558	0.641	0.235
B.	Eigenvalues for correlation matrix deduction			
	Factor	1	2	3	4
	Eigenvalues	1.059	1.027	0.987	0.927
C.	Correlation between factors with four indicators			
	Indicator	CEMVE	PBV	KARPEN	CETA
	Factor 1	0.200	0.741	0.987	0.927
	Factor 2	0.782	0.095	0.603	0.208

Subsequently, common factor analysis pointed out 483 firms, where later identification shows 236 firms using specialist auditor and 247 firms using non-specialist auditor.

Abnormal Discretionary Cost as an Indication of Earnings Management

Table 2. Regression Test Result

$$Y_{it} = \alpha_0 + \beta_1(SP)_{it} + \beta_2(PD)_{it} + \beta_3(CFO)_{it} + \beta_4(LEV)_{it} + \beta_5(LTA)_{it} + \varepsilon_{it}$$

where: Y_{it} is abnormal discretionary cost.

Variable	Coefficient	t	p-value
SP	-0.034765	-9.125575	0.0000***
LTA	-0.136906	-53.71166	0.0000***
LEV	-0.008329	-2.669186	0.0076***
CFO	6.35E-08	1402.343	0.0000***
PD	0.016708	4.656048	0.0000***

$R^2 = 0.894092$
Adj $R^2 = 0.894090$
F = 393883.0 (0.0000)***

DW = 2.023800; 483 firm-year sample; Heteroscedasticity test using *Breusch Pagan Godfrey* and showing insignificant probability at $\alpha > 0.05$ and showing no multicolinearity.

*significant at p<0.1, ** significant at p<0.05, *** significant at p<0.01

H1a test result showed that firm using auditor industry specialization correlates negatively with earnings management, significant at $\alpha=0.0000$, which means firm with auditor industry specialization cannot restrict earnings management. This result showed that firm audited by auditor industry specialization has a low discretionary. Roychowdury (2006) stated that to detect real activities manipulation to avoid losses. He investigates patterns in CFO, discretionary expense and production cost. Discretionary expense is defined as the sum of a). advertising expenses, b). Research and Development expense and c). selling, general and administrative (SG&A) expenses. Discretionary expense such as R&D, advertising, and maintenance are generally expensed in the same period that they are incurred. Hence firms can reduce reported expenses, and increase earnings, by reducing discretionary expenditures. Thus, this research shows that auditor industry specialization can-

not restrict earnings management because the sign shows negative. This result supports Siregar & Utama (2006) and Andayani, *et al.* (2008).

H1b test result showed that prospector type of firm correlates positively with earnings management significant statistically at α= 0.0000, hence prospector firm has a high discretionary cost, while in the opposite defender firm has a low discretionary cost. Prospector firms always observe market opportunity and always innovation products. As a consequence, they never conduct such industrial competition since it is already in a mature condition and has a tough target market. This is in accordance with Feltham & Ohlson (1996) which pointed out that firm growth concept causes a reported net assets that is lower than market value. Greenball in Penmann & Zang (2000) also stated that conservative interaction with growth, so that accounting rates of return is lower than that without growth. Skinner & Sloan (2002) documented that firms with growth opportunities are penalized more by the stock market when they miss earnings thresholds. On the contrary, defender type of firm has a narrow product domains, hence firm should struggle hard to compete with competitor to increase earnings. Defender firm has a narrow product domain, and they do not conduct innovations on technoloty, structure, and operation method only increase operation efficiency. Therefore, defender firm has small earnings and never conduct earnings management.

Test result also found that firm size correlated negatively with earnings management significant at α=0.0000, which means the smaller the size of the firm, the higher the discretionary cost, therefore shows no conducted earnings management. Leverage correlated negatively with earnings management with a significance at α=0.0000, where it showed that a high-leverage firm has a low discretionary cost and conducted earnings management. CFO correlated positively with earnings man-

agement significant at α=0.0000, which means that a high CFO shows no earnings management.

Earnings Response Coefficient

Unexpected Earnings (UE) is calculated using Kallapur (1994) formula since Balsam (2003) showed insignificancy. Therefore, re-input is done to calculate UE using Kallapur's formula (1994).

H1c test result is supported, firm using auditor industry specialization correlated positively with market reaction significantly at α=0.0000, which indicates a firm using auditor industry specialization will be responded by investor more positively than firm without auditor industry specialization. H1d test result is also supported, showing that prospector company correlated negatively with earnings management significantly at α=0.0000, thus prospector firm is positively responded by investor, which means that this type of company will likely get more attention from the investor to invest its capital. On the contrary, defender firm is less responded by the market, which indicates this type of firm always observes market opportunity and always innovate product therefore they never conduct such industrial competition since it is already in mature condition and has a tough target market. It also has a narrow product domain, thus firm struggles hard to compete with competitor to increase earnings.

Balsam (2003) and Mayangsari (2004) examined auditor industry specialization towards earnings management measured with ERC which excludes prospector – defender strategy into research model. Our study includes prospector and defender strategy into research model where the result showed that prospector and defender strategy is responded by the market. This test result does not support that of Saraswati & Atmini (2007), Habbe & Hartono (2001), who conducted different dividend test and prospector-defender firm strategy towards market reaction.

Table 3. Overall UE Regression Test Result

$$CAR_{it} = \beta_0 + \beta_1 UE_{it} + \beta_2 SP_{it} + \beta_3 PD + \beta_4 MB_{it} +$$
$$\beta_5 LTA + \beta_6 LEV + \beta_7 CFO_{it} + \beta_8 BETA + \beta_9 RET_{it} + \beta_{10} RETPASAR_{it} + e_{it}$$

Variable	Coefficient	t	p-value
UE	-0.002033	-41.27092	0.0000***
SP	0.034945	17.56583	0.0000***
PD	-0.044236	-22.21217	0.0000***
MB	8.71E-05	4.806047	0.0000***
LTA	9.72-10	9.471217	0.0000***
CFO	1.32E-10	5.255731	0.0000***
LEV	0.0239221	13.88479	0.0000***
RET	0.749221	140.5329	0.0000***
BETA	0.019293	21.06574	0.0000***
RETPASAR	0.023830	4.573869	0.0000***

$R^2 = 0.090191$
Adj $R^2 = 0.09152$
F = 2312.521 (0.0000)***

DW=2.335; 483 firm-year samle; Heteroscedasticity test using Breusch Pagan Godfrey and showing insignificant probability at α > 0.05; normality test using Jarque Bera, residual has a normal distribution significant at α = 0.315700

* significant at p<0.1, ** significant at p<0.05, *** significant at p<0.01

Table 4. Overall UE Regression Test Result

$$CAR_{it} = \beta_0 + \beta_1 UE_{it} + \beta_2 SP * UE_{it} + \beta_3 PD * UE_{it} + \beta_4 MB * UE_{it} +$$
$$\beta_5 LTA * UE_{it} + \beta_6 LEV * UE_{it} + \beta_7 CFO * UE_{it} + \beta_8 BETA * UE_{it} + \beta_9 RET * UE_{it} +$$
$$\beta_{10} RETPASAR * UE_{it} + e_{it}$$

Variable	Coefficient	t	p-value
UE	-0.002864	-3.589908	0.0003***
SP*UE	0.001740	3.010981	0.0026***
PD*UE	0.003657	4.501863	0.0000***
MB*UE	-0.000163	-11.85321	0.0780*
LTA*UE	-5.28E-10	-3.837695	0.0000***
CFO*UE	1.80E-09	16.22082	0.0000***
LEV*UE	-0.002282	-3.837695	0.0001***
RET*UE	0.002079	4.408075	0.0000***
BETA*UE	-0.001614	-5.636587	0.0000***
RETPASAR*UE	0.005645	3.465993	0.0005***

$R^2 = 0.001667$
Adj $R^2 = 0.001625$
F = 38.96379 (0.0000)***

DW=1.980034; sample=483 firm - year; Heteroscedasticity test using *Breusch Pagan Godfrey* and showing insignificant probability at α > 0.05; Normality test using *Jarque Bera*, residual has a normal distribution

* significant at p<0.1, ** significant at p<0.05, *** significant at p<0.01

Based on table 4, we can conclude that hypothesis 2 in this research is supported. This research indicates that ERC's size is affected by auditor characteristics and firm's strategy. Auditor industry specialization and prospector strategy will result on a higher ERC than that of non auditor industry specialization and defender firm. It means that reported earnings quality is influenced by auditor industry specialization and firm's strategy. Leverage showed negative, hence supported Dhaliwal, *et al.* (1991). This condition occurs because leverage decline year is relatively high, which by the led to a small earnings quality and negative market response. Beta or risk is also negative, which indicates that a small risk leads to qualified earnings. Firm's size and growth are also negative, which explain that big-sized firm and growing firm have low quality earnings and are responded negatively by the market.

In a case of positive UE, UE correlated negatively with CAR with significance of α=0.0000. It means that when UE is small, investor will respond and will not invest its earnings on a firm with small earnings coefficient. Auditor industry specialization correlated negatively at α=0.0000, where firm that is not audited by the Big 4 will be responded by investor and investor will not invest its fund in that firm. Prospector-defender correlated positively at α=0.0000, which means that prospector firm will be responded positively by investor and it will invest in that firm. Leverage correlated negatively with earnings coefficient and is responded by investor, which is significant at α=0.0000. This finding supported Dhaliwal, *et al.* (1991) that showed leverage correlated negatively. Negatively correlated leverage indicates that a constantly big leverage from year to year will lead to small earnings. Beta correlated negatively with CAR and significant at α=0.0000, which means that small risk will be responded by investor and they will invest on that firm. Return and market return also correlated positively with CAR and are responded by investor at α=0.0000, which means big return and market return will be responded by investor and will gain more attention from investor.

Table 5. Positive UE Regression Test Result

$$CAR_{it} = \beta_0 + \beta_1 UE_{it} + \beta_2 SP_{it} + \beta_3 PD + \beta_4 MB_{it} +$$

$$\beta_5 LTA + \beta_6 LEV + \beta_7 CFO_{it} + \beta_8 BETA + \beta_9 RET_{it} + \beta_{10} RETPASAR_{it} + e_{it}$$

Variable	Coefficient	t	p-value
UE	-0.004406	-145.8332	0.0000***
SP	-0.013294	-14.08625	0.0000***
PD	0.011639	13.13362	0.0000***
MB	2.82E-05	4.098196	0.0000***
LTA	0.016975	27.40366	0.0000***
CFO	1.29E-10	14.18906	0.0000***
LEV	-0.000334	-0.461655	0.6443
RET	0.750338	302.1290	0.0000***
BETA	-0.009358	-22.63805	0.0000***
RETPSR	0.069222	30.58636	0.0000***

$R^2 = 0.486571$
Adj $R^2 = 0.486521$
F = 9614.201 (0.0000)***

DW = 2.3353; sample 319 firm-year; Heteroscedasticity test using *Breusch Pagan Godfrey* and showing insignificant probability at α > 0.05; Normality test using *Jarque Bera*, residual has a normal distribution.

* significant at p<0.1, ** significant at p<0.05, *** significant at p<0.01

Table 6. Positive UE Regression Test Result

$$CAR_{it} = \beta_0 + \beta_1 UE_{it} + \beta_2 SP*UE_{it} + \beta_3 PD*UE_{it} + \beta_4 MB*UE_{it} +$$
$$\beta_5 LTA*UE_{it} + \beta_6 LEV*UE_{it} + \beta_7 CFO*UE_{it} + \beta_8 BETA*UE_{it} + \beta_9 RET*UE_{it} +$$
$$\beta_{10} RETPASAR *UE_{it} + e_{it}$$

Variable	Coefficient	t	p-value
UE	0.019371	8.140759	0.0000***
SP*UE	0.002385	3.325885	0.0000***
PD*UE	0.003968	6.567321	0.0000***
MB*UE	0.000231	4.315687	0.0000***
LTA*UE	-0.003247	-7.07143	0.0000***
CFO*UE	1.29E-10	22.31036	0.0000***
LEV*UE	-0.002818	-5.685951	0.0000***
RET*UE	-0.000838	-1.892223	0.0585*
BETA*UE	-0.009342	-27.83631	0.0000***
RETPSR*UE	-0.022719	-11.69303	0.0000***

R^2 = 0.017331
Adj R^2 = 0.017234
F = 179.4481 (0.0000)***

DW = 2.065399; sample= 319 firm-year; Heteroscedasticity test using *Breusch Pagan Godfrey* and showing insignificant at α > 0.05; Normality test using *Jarque Bera*, residual has a normal distribution.

* significant at p<0.1, ** significant at p<0.05, *** significant at p<0.01

Table 7. Negative UE Regression Test Result

$$CAR_{it} = \beta_0 + \beta_1 UE_{it} + \beta_2 SP_{it} + \beta_3 PD_{it} + \beta_4 MB_{it} +$$
$$\beta_5 LTA_{it} + \beta_6 LEV_{it} + \beta_7 CFO_{it} + \beta_8 BETA_{it} + \beta_9 RET_{it} + \beta_{10} RETPASAR_{it} + e_{it}$$

Variable	Coefficient	t	p-value
UE	-5.89E-05	-2.437860	0.0148**
SP	-0.014549	-10.39449	0.0000***
PD	-0.027959	-20.19750	0.0000***
MB	7.61E-05	2.46E-05	0.0020**
LTA	-0.015369	-14.45648	0.0000***
LEV	0.014323	10.31422	0.0000***
CFO	5.86E-09	8.070869	0.0000***
RET	0.862314	229.5625	0.0000***
BETA	0.001452	2.421603	0.0155**
RETPSR	0.043520	12.36052	0.0000***

R^2 = 0.703643
Adj R^2 = 0.703525
F = 5999.871(0.0000)***

DW = 1.788293; sample 159 firm - year; Heteroscedasticity test using *Breusch Pagan Godfrey* and showing insignificant probability at α > 0.05; Normality test using *Jarque Bera*, residual has a normal distribution.

* significant at p<0.1, ** significant at p<0.05, *** significant at p<0.01

Table 8. Negative UE Regression Test Result

$$CAR_{it} = \beta_0 + \beta_1 UE * UE_{it} + \beta_2 SP * UE_{it} + \beta_3 PD * UE_{it} + \beta_4 MB * UE_{it} +$$
$$\beta_5 LTA * UE_{it} + \beta_6 LEV * UE_{it} + \beta_7 CFO * UE_{it} + \beta_8 BETA * UE_{it} + \beta_9 RET * UE_{it} +$$
$$\beta_{10} RETPASAR * Ue_{it} + e_{it}$$

Variable	Coefficient	t	p-value
UE	-0.063865	-23.28944	0.0000***
SP*UE	0.004581	5.499228	0.0000***
PD*UE	0.063560	21.63938	0.0000***
MB*UE	-0.000938	-6.286367	0.0000***
LTA*UE	0.007719	16.84984	0.0000***
LEV*UE	-0.017588	-24.78612	0.0000***
CFO*UE	-2.68E-09	-2.194534	0.0000***
RET*UE	-0.311628	-79.44221	0.0000***
BETA*UE	0.025520	62.17505	0.0000***
RETPSR*UE	-0.048198	-32.93196	0.0000***

$R^2 = 0.218698$
Adj $R^2 = 0.218389$
F = 707.3448(0.0000)***

DW = 1.909436; sample 159 firm - year; Heteroscedasticity test using *Breusch Pagan Godfrey* and showing insignificant at α > 0.05; Normality test using *Jarque Bera*, residual has a normal distribution.

* significant at p<0.1, ** significant at p<0.05, *** significant at p<0.01

In a case of negative UE, negative earnings coefficient will be responded by investor at α=0.0000. UE correlated negatively with investor's response, which means that small earnings coefficient will be responded by investor, and investor wants to know why the coefficient is small. This might be influenced by global crisis that started to take place in 2007. An increasing stock return of a firm also gain investor's attention and correlated negatively with earnings coefficients at α=0.0000. Subsequently, auditor industry specialization, prospector-defender firm, and firm's size are also correlated positively with investor response at α=0.0000. It means that a firm audited by an auditor industry specialization, prospector firm and big firms will be responded by investor and investor will invest its fund on those firms. When UE is negative, leverage, firm's growth, operational cash flow, return and market return correlated negatively with market response, which means that investor will give more attention to a high-lever-aged firm, high growth, and return on a small UE condition. This research result is in accordance with those of Easton and Zmijewski (1989) and Collins & Khotari (1989), which shows that market response on earnings is varied and depended on firm's type and time.

CONCLUSION

This study examines the influence of prospector-defender type of firm and auditor industry specialization on earnings management through real activity and earnings quality. Test result shows that auditor industry specialization cannot restrict earnings management because the sign is negative, which means that auditor industry specialization has a low discretionary that indicates an earnings management. The result also showed that auditor industry specialization influenced earnings response coefficient (ERC) and is responded by investor. Beside auditor industry specialization, and prospector-defender, other

factors responded by investor and gained market reaction are leverage, firm's growth, CFO, firm's size, firm's stock return, beta, and market return.

REFERENCES

Aljifri, K., 2007. Measurement and Motivations of Earnings Management: A Critical Perspective. *Journal of Accounting, Business and Management,* 14. 75-95

Andayani, W., Rusdi, M.K., and Haris, L.. 2008. The Influence of Good Corporate Governance to Earnings Management through Real Activities Manipulation. In: UPN Veteran Yogyakarta, *Seminar Nasional UPN Veteran Yogyakarta*. Yogyakarta, 24-25 October 2008.

Anthony, J.H., 1992. Association between Accounting Performance Measure and Stock Prices. *Journal of Accounting and Economics,* 15, 203-227.

Ayers, B.C., Jiang, J., and Yeung, P.E., 2006. Discretionary Accruals and Earnings Management: An Analysis of Pseudo Earnings Targets. *The Accounting Review,* 81 (3), 617-652.

Balsam, S., Khrisnan, J., and Yang, J.S., 2003. Auditor Industry Specialization and Earnings Quality. *Auditing: A Journal of Practice and Theory, 22* (2), 71-97.

Becker, C.L., Defond, M.L., Jiambalvo, J., and K.R. Subramanyam, 1998. The Effect of Audit Quality on Earnings. *Contemporary Accounting Research,* 15. 1-24.

Cho, J.Y., and Jung, K., 1991. Earnings Response Coefficients: A Synthesis of Theory and Empirical Evidence. *Journal of Accounting Literature*, 10, 85-116.

Choi, S. and Jeter, C.D., 1990. The Effect of Qualified Audit Opinions on Earnings Response Coefficients. *Journal of Accounting and Economics*, 229-247.

Clikeman, P., 1998. *Auditor Independence: Continuing Controversy. Ohio CPA Journal*, 57, 40-43.

Collins. D.W. and Khotari, S.P., 1989. An Analysis of Intemporal and Cross Sectional Determinants of Earnings Response Coefficients. *Journal of Accounting and Economics,* 11, 143-182.

Craswell, A.T., Francis, J.R., and Taylor, S.L., 1995. Auditor Brand Name Reputation and Industy Specialization. *Journal of Accounting and Economics,* 20, 297-322.

Dhaliwal, D.S., Lee, K.J., and Fargher, N.L., 1991. The Association between Unexpected Earnings and Abnormal Security Returns in the Presence of Financial Leverage. *Contemporaty Accounting Research*, 8, 20-41.

Dechow, P.M., Sloan, R.G., and Sweeney, A.P., 1995. Detecting Earnings Management. *The Accounting Review*, 70, 193-225.

Dunn, K.A., Mayhew, B.W., and Morsfield, S.G., 2004. Auditor Industry Specialization and Client Disclosure Quality. *Review of Accounting Studies*, 9 (1), 35-58.

Dopuch and Simunic, 1982. The Competition in Auditing: an Assessment in Fourth. In: University of Illinois at Urbana-Champaign, *Symposium on Auditing Research*. Illinois: University of Illinois at Urbana Champaign.

Easton, P.D. and Zmijewski, M.E., 1989. Cross-Sectional Variation in the Stock Market Response to Accounting Earnings Announcements. *Journal of Accounting and Economics*, 11 (2), 117-141.

Habbe, H.A., and Hartono, J., 2001. Studi terhadap Kinerja Akuntansi Perusahaan Prospektor dan Defender: Analisis dengan Pendekatan Life Cycle Theory [The Study in Prospector and Defender Companies' Accounting Performance using Life Cycle Theory Approach]. *Jurnal Riset Akuntansi Indonesia*, 4 (1).

Hayn, C., 1995. The Information Content of Losses. *Journal of Accounting and Economics,* 20, 125-153.

Hibrar, P. and Collins, D.W., 2002. Errors in Estimating Accruals: Implications for Empirical Research. *Journal of Accounting Research*, 40, 105-134.

Hogan, C.E. and Jeter, D.C., 1999. Industry Specialization by Auditors. *Auditing: A Journal of Practice and Theory*, 18, 1-18.

Ittner, C.D., Larcker, D.F., and Randall, T., 2003. Performance Implications of Strategic Performance Measurement in Financial Services Films. *Accounting, Organization and Society,* 28, 715-741.

Jensen, M.C. and Meckling, M.H., 1976. Theory of the Firm: Managerial Behaviour, Agency Costs and Ownership Structure. *The American Economic Review*, 3, 305-360.

Jones, J.J., 1991. Earnings Management during Import Relief Investigation. *Journal of Accounting* Research, 29, 193-228.

Johnson, P., Jamal, K., and Berryman, R., 1991. Effects of Framing on Auditor Decision. *Organization Behavior and Human Decision Processes,* 50 (1), 75-105.

Kasznik, R., 1999. On the Association between Voluntary Disxlosure and Earnings Management. *Journal of Accounting Research,* 37, 57-81.

Kothari, S.P., Leone, A.J., and Wasley, C.E., 2005. Performance Matched Discretionary Accrual Measures. *Journal of Accounting and Economics,* 39, 163-197.

Krishnan, G.B., 2003. Does Big 6 Auditor Industry Expertise Constrain Earnings Management. *Accounting Horizons,* Supplement, 1-16.

Maletta, M. and Wright, A., 1996. Audit Evidence Planning: an Examination of Industry Error Characteristics. *Auditing: A Journal of Practice and Theory,* 15 (1), 71-85.

Mayangsari, S., 2003. Analisis Pengaruh Independensi, Kualitas Audit serta Mekanisme Corporate Governance terhadap Integritas Laporan Keuangan [Analysis of the Influence of Independency, Audit Quality, and Corporate Governance Mechanism towards Financial Report's Integrity]. *SNA VI Surabaya.*

Mayangsari, S., 2004. Bukti Empiris Pengaruh Spesialisasi Industri Auditor terhadap Earnings Response Coeffient [Empirical Evidence of the Influence of Auditors Industry Specialization towards Earnings Response Coefficient]. *Jurnal Riset Akuntansi Indonesia,* 7, 154-178.

Miles, R. and Snow, C., 1978. *Organizational Strategy, Structure and Process*. New York: McGraw Hill.

O'Keefe, T., King, R., and Gaver, K., 1994. Audit Fees, Industry Specialization, and Compliance with GAAS Reporting Standards. *Auditing: A Journal of Practice and Theory*, 13, 41-55.

Olson, E.M., Stanley F.S., and Hult, G.T.M., 2005. *The Importance of Structure and Process to Strategy Implementation*. Indiana: Kelley School of Business, Indiana University.

Healy, Paul M. and Palepu, K.G., 2004. *Business Analysis and Valuation: Using Financial Statements*. Mason: South Western Cengage Learning.

Pittman, J.A. and Fortin, S., 2004. Auditor Choice and the Cost of Debt Capital for Newly Public Firms. *Journal of Accounting Economics,* 37, 113-136.

Roychowdury, S., 2006.Management through Real Activities Manipulation. *Journal of Accounting and Economics*, 42 (3), 335-370.

Sanjay, K., 1994. Dividend Payout Ratio as Determinants of Earnings Response Coefficients. *Journal of Accounting and Economics,* 17, 359-375.

Saraswati, E. and Atmini, S., 2007. Reaksi Pasar terhadap Pengukuran Kinerja Akuntansi Perusahaan Prospector dan Defender: Bukti Tambahan untuk Periode Setelah Krisis [Market Reaction towards Prospector and Defender Companies' Accounting Performance Evaluation: Additional Evidence for Post-Crisis Period]. In: Universitas Hasanuddin, *SNA X UNHAS*. Makassar, 26-28 July 2007.

Scott, W.R., 2006. *Financial Accounting Theory*. 4th ed. Toronto: Pearson Prentice-Hall.

Solomon, I., Shields, M., and Whittington, R., 1999. What Do Industry-Specialist Auditors Know? *Journal of Accounting Research*, 37 (1), 191-208.

Siregar, N.P., Veronica, S., and Siddharta, U., 2006. Pengaruh Struktur Kepemilikan, Ukuran Perusahaan, dan Praktik Corporate Governance terhadap Pengelolaan Laba (Earnings Management) [Influence of Ownership Structure, Company Size, and Corporate Governance Practice towards Earnings Management]. *Jurnal Riset Akuntansi Indonesia*, 9 (3), 307-326.

Teoh, S.H. and Wong, T.J., 1993. Perceived Auditor Quality and the Earnings Response Coefficient. *The Accounting Review*, 68 (2), 346-366.

Teets, W.R., and Wasley, C.E., 1996. Estimating Earnings Response Coefficients: Pooled versus Firm Specific Models. *Journal of Accounting Economics,* 21, 279-295.

Watts, R.L., and Zimmerman, J.L., 1986. *Positive Accounting Theory*. New Jersey: Prentice-Hall.

Woodside, A.G., Sullivan, D.P., and Trappey, R.J., 1999. Assessing Relationship among Strategic Types, Distinctive Marketing Competencies, and Organizational Performance. *Journal of Business Research,* 45,135-146.