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中文摘要：過去研究顯示，公司經營績效若未達分析師的盈餘預期，會對經理人的獎酬與任期產生不利之影響，這顯示經理人為了迎合或擊敗分析師的盈餘預測可能會產生盈餘操縱的動機。另外，相對績效衡量的文獻則指出，在衡量經理人的績效時，同業公司的表現具有額外的資訊意涵，所以在衡量公司經理人績效時應將同業的績效納入考量。本研究的目的即在探討當公司盈餘未達分析師預期時，經理人獎酬的減少是否會因競爭對手迎合或擊敗分析師預測的情況而有所不同。本研究發現當公司經營績效未能達到分析師的盈餘預測，若競爭對手迎合或擊敗分析師預測的比例越高時，經理人獎酬會有越大的負面影響。本研究讓吾人對以分析師盈餘預測作為績效衡量之標準(performance benchmark)有更深入的了解，並有助於我們瞭解這樣的獎酬契約設計可能造成的盈餘管理動機。此外，本研究亦希望藉由探討公司迎合或擊敗分析師預測與否是否具有傳達其他同業競爭公司績效的資訊意涵，對相對績效衡量與資訊移轉方面的文獻有所貢獻。

中文關鍵詞：迎合或擊敗盈餘預期、分析師預測、同業競爭對手、相對績效衡量、

英文摘要：Recent studies show that missing analysts' forecasts has an incremental adverse impact on CEO compensation and CEO retention beyond the general pay-performance sensitivities. This provides evidence on the precise incentives that lead CEOs to manage earnings to meet or beat analysts' earnings forecasts (MBE). Yet, the relative performance evaluation (RPE) literature suggests that managers should be evaluated on a relative basis because the performance of peer firms reveals additional information about managerial performance. The purpose of this study is to investigate whether rival firms' meeting/beating analysts' forecasts affects CEO compensation. We find that missing analysts' forecasts has a more adverse effect on CEO compensation when a greater percentage of rival firms meeting/beating analysts' forecasts. We believe that this study enhances our understanding on the use of analysts' forecasts as a performance benchmark for executive compensation and the evidence from this study contributes to the extensive research in accounting that examines managerial incentives to meet analysts' forecasts.

We also believe that this study contributes to the relative performance literature and the information transfer literature by examining whether firms' meeting or missing analysts' expectations provides information about the performance of other firms in the same industry.

英文關鍵詞： meeting/beating earnings expectation, analysts' forecasts, rival firms, relative performance evaluation, incentive contract design

The Effects of Rival's Meeting/Beating Analysts' Forecasts on Executive Compensation

中文摘要:

過去研究顯示，公司經營績效若未達分析師的盈餘預期，會對經理人的獎酬與任期產生不利之影響，這顯示經理人為了迎合或擊敗分析師的盈餘預測可能會產生盈餘操縱的動機。另外，相對績效衡量的文獻則指出，在衡量經理人的績效時，同業公司的表現具有額外的資訊意涵，所以在衡量公司經理人績效時應將同業的績效納入考量。本研究的目的即在探討當公司盈餘未達分析師預期時，經理人獎酬的減少是否會因競爭對手迎合或擊敗分析師預測的情況而有所不同。本研究發現當公司經營績效未能達到分析師的盈餘預測，若競爭對手迎合或擊敗分析師預測的比例越高時，經理人獎酬會有越大的負面影響。本研究讓吾人對以分析師盈餘預測作為績效衡量之標準(performance benchmark)有更深入的了解，並有助於我們瞭解這樣的獎酬契約設計可能造成的盈餘管理動機。此外，本研究亦希望藉由探討公司迎合或擊敗分析師預測與否是否具有傳達其他同業競爭公司績效的資訊意涵，對相對績效衡量與資訊移轉方面的文獻有所貢獻。

關鍵字： 迎合或擊敗盈餘預期、分析師預測、同業競爭對手、相對績效衡量、獎酬契約設計

Recent studies show that missing analysts' forecasts has an incremental adverse impact on CEO compensation and CEO retention beyond the general pay-performance sensitivities. This provides evidence on the precise incentives that lead CEOs to manage earnings to meet or beat analysts' earnings forecasts (MBE). Yet, the relative performance evaluation (RPE) literature suggests that managers should be evaluated on a relative basis because the performance of peer firms reveals additional information about managerial performance. The purpose of this study is to investigate whether rival firms' meeting/beating analysts' forecasts affects CEO compensation. We find that missing analysts' forecasts has a more adverse effect on CEO compensation when a greater percentage of rival firms meeting/beating analysts' forecasts. We believe that this study enhances our understanding on the use of analysts' forecasts as a performance benchmark for executive compensation and the evidence from this study contributes to the extensive research in accounting that examines managerial incentives to meet analysts' forecasts. We also believe that this study contributes to the relative performance literature and the information transfer literature by examining whether firms' meeting or missing analysts' expectations provides information about the performance of other firms in the same industry.

Keywords: meeting/beating earnings expectation, analysts' forecasts, rival firms, relative performance evaluation, incentive contract design

1. Introduction

Recent studies show that missing analysts' forecasts has an incremental adverse impact on CEO compensation and CEO retention beyond the general pay-performance sensitivities (eg. DeFond and Park 1999; Matsunaga and Park 2001; Mergenthaler, Rajgopal, and Srinivasan 2009). This provides evidence on the precise incentives that lead CEOs to manage earnings to meet or beat analysts' earnings forecasts (MBE).¹ Yet, the relative performance evaluation (RPE) literature suggests that managers should be evaluated on a relative basis because the performance of peer firms reveals additional information about managerial performance (eg. Sloan 1993; Aggarwal and Samwick 1999; DeFond and Park 1999). The purpose of this study is to investigate whether rival firms' meeting/beating analysts' forecasts affects CEO compensation.

Theoretically, multiple performance signals will be used in compensation contracts as long as they are not redundant (Holmstrom 1979; Feltham and Xie 1994). Along this line of research, peer firm performance has been viewed to be an important source of information in filtering out common uncontrollable factors from absolute firm performance. DeFond and Park (1999) then define industry-relative net earnings, computed as return on assets minus the industry median, as RPE-based accounting measure, while attributing analysts' earnings forecast errors, measured as actual reported earnings minus analysts forecast of earnings, to firm-specific performance measures.

However, financial analysts are outsiders who generally have less access to firm-level, idiosyncratic information than insiders such as boards of directors. Analysts forecasts literature suggests that financial analysts are better at obtaining and mapping industry and market-level information into prices. For example, Ramnath (2002) documents that analysts revise their earnings forecasts in response to the earnings announcement of other firms in the same industry. Moreover, Piotroski and Roulstone (2004) suggest that analysts' forecasts convey more industry-level information than firm-specific information. Taken together, financial analysts have the comparative advantage of analyzing specific industry or market sector trends and their earnings forecasts, to a greater degree, incorporate the industry-level information and market-wide trend. Thus, using analysts' forecasts as a performance benchmark and evaluating earnings performance relative to analysts' forecasts also have the benefit of removing industry common uncertainties from managerial performance. In other words, if a firm's reported earnings meet or beat analysts forecasts, this implies that the firm outperforms analysts expectations based on their interpretation of industry-level information or market-wide information.

Alternatively, positive (negative) forecast errors may, to a certain extent, indicate that analysts, in general, underestimated (overestimated) the impact of industry common factors on firm performance. Thus, if CEO's meeting/beating analysts' forecasts is used as a performance measure in compensation contract design, then analysts' interpretation of industry-level information becomes an uncontrollable factors to CEOs and thus rival's meeting/beating analysts forecasts can be used as a

¹ We refer to "meeting expectation" and "meeting or beating expectation" interchangeably throughout this paper. Managers seek to avoid negative quarterly earnings surprise more than to avoid either quarterly loss or quarterly earnings decreases in recent years (Dechow, Richardson, and Tuna, 2003; Brown and Caylor, 2005). As a result, unless explicitly stated, "meeting expectation" refers to "meeting analyst's earnings expectation."

reference for the accuracy of analysts' forecasts and thus remove the bias in analysts forecasts when analysts forecasts is used as a performance benchmark.

In addition, prior research shows that meeting or beating analysts' consensus forecasts of earning is associated with better future operating performance (Bartov et al. 2002; McNichols and Kasznik 2002). Thus, unlike historic performance measures (e.g., ROA), meeting/beating analysts' forecasts per se provides additional signal about managerial performance in creating future operation income and complements traditional short-term oriented earnings metrics in incentive contract design.

Analogously, rival firms' meeting/beating analysts' forecasts signals rival firms' better future performance and may indicate shifts in industry's competition balance. For example, Kim, Lacina, and Park (2008) find that negative information transfers associated with management earnings forecasts are caused by competitive shifts within the industry, while positive information transfers are due to industry commonalities. While a higher proportion of rival firms meeting expectations might signal their better future industry performance, it might represent, or be perceived to be, a firm's loss in product market competition that would lead to a decrease in firm's future performance. Accordingly, this evidence, along with the findings that a premium to MBE is positively associated with firm's future performance, indicates that the fact that firms' meeting (or missing) expectation, in addition to signaling firm's better (worse) future performance, might also convey information about shifts in competitive relation among the firm and its peer firms for a given total market share of the industry. A firm's loss in product market competition and in turn the decrease in firm' future performance will be greater when more rival firms beat their analysts' expectations, particularly when the firm fails to meet analysts' expectations. In this paper, we explore whether boards place a greater penalty for CEOs' missing analysts forecasts when there is a higher proportion of rival firms meeting analysts' expectation. Specifically, we expect that missing analysts' forecasts has a more adverse effect on CEO compensation when a greater percentage of rival firms meeting/beating analysts' forecasts.

To conduct this study, we rely on three databases, Execucomp, Compustat, and I/B/E/S. Our sample selection procedure starts from ExecuComp firms. We then obtain the analysts forecasts and financial data from I/B/E/S and Compustat. Regarding the identification of rival firms, we'll first rely on SIC code in Compustat and define other firms in the same 4-digit SIC code as rival firms and calculate the percentage of rival firms meeting/beating analysts' forecasts.

The remainder of this report is organized as follows. In section 2, we provide a review of literature related to board structure and CEO incentive and develop the hypotheses. Section 3 describes the procedure of sample selection, data collection, and discusses the structure of empirical tests. Section 4 represents the results of the study and the concluding remarks.

2. Literature Review and Hypotheses Development

In this study, we investigate whether the penalty for failing to meet analysts forecasts depends on rival firms' meeting/beating analyst forecasts. Prior literature suggests that the performance of other firms in the same industry may be useful in CEO compensation for at least two reasons. First, it provides information about uncontrollable events and thus serves as a filter for common uncertainty to enhance contract efficiency (eg. Antle and Smith 1986; Gibbons and Murphy 1990; Sloan

1993; Jensen and Murphy 1990; Barro and Barro 1990; Janakiraman et al 1992; DeFond and Park 1999; Rajgopal et al. 2005). We refer to this as industry commonality perspective. Second, it captures an important dimension of CEO's efforts in industry competition (eg. Aggarwal and Samwick 1999). We refer to this as industry competition perspective.

From industry commonality perspective, rival firms' meeting or beating analysts forecasts is informative because meeting or beating analysts forecast also depends on how well analysts form their expectations. One problem with the analyst forecast as a standard is that in a highly volatile and uncertain operating environment, the aggregation of information may not be sufficient to provide a reasonable measure of the true $E(x)$. Despite that financial analysts have the comparative advantage of interpreting industry-level information and market-wide trend (Piotroski and Roulstone 2004), it is still likely that their forecasts underestimate or overestimate the impact of industry-wide commonality on $E(x)$. If they underestimate (overestimate) the impact of industry-wide commonality on $E(x)$, such underestimation (overestimation) would also occur when they form expectations on other firms in the same industry and thus evaluating CEO's missing analysts forecasts relative the meeting or missing analysts forecasts of other firms in the same industry helps to reduce CEO's risk exposure to such "industry uncontrollable commonalities" and increases contract efficiency.

From industry competition perspective, as prior studies shows that meeting or beating analysts' consensus forecasts of earning is associated with better future operating performance (Bartov et al. 2002; McNichols and Kasznik 2002), rival firms' meeting or beating analysts' forecasts indicates their better future performance and thus may represents a shift in industry competitive balance. Unlike historic performance measures (e.g., ROA), meeting/beating analysts' forecasts per se provides additional signal about managerial performance in creating future operation income. Specifically, if a firm misses analysts forecasts while it's rival firms meet/beat analysts' forecasts, this may represent the firm's loss in the market share or in its competitive advantages and thus should been taken into account when boards determine CEO compensation.

Overall, based on the argument above, we expect that the penalty for missing analysts' forecasts is greater when there are more rival firms meeting/beating analysts' forecasts. Therefore, we propose and state the hypothesis as follow (in the alternative form):

Hypothesis: The negative impact of missing analysts' expectation on CEO compensation is stronger when more rival firms' meeting analysts' expectations.

3. Research Design

In this section, we describe the sample and the construction of our main variables in subsection 3.1 and discuss our regression models in section 3.2.

3.1 Sample and Data

We use data on publicly traded U.S. firms for the period 2002 to 2007. Our sample is the intersection of three databases: Execucomop, Compustat, and I/B/E/S. We begin our sample period from 2002 year for the following reasons: (1) the extant literature provides evidence on significant changes in managerial behavior and in turn changes in analysts' behavior in the post Regulation Fair Disclosure, effective in

2000,² and (2) managers seek to avoid negative quarterly earnings surprise more than to avoid either quarterly loss or quarterly earnings decreases in more recent years (Dechow, Richardson, and Tuna, 2003; Brown and Caylor, 2005). Regarding the definition of rival firms, we rely on 4-digit SIC code to define other firms in the same 4-digit SIC code as rival firms.

Our initial sample begins with 10,738 firm-year observations with CEO compensation data available on the Execucomp database. We delete 858 firm-year observations with no change in ROA and one-year stock return data. The intersection of the sample with I/B/E/S and Compustat reduces the sample size to 4,826 firm-year observations. Among the 4,826 firm-years, only 1,283 firm-year observations have complete 4 quarters of MBE data. Thus, our main tests are based on the sample of 1,283 firm-year observations.

The mean (median) ROA of the 1,283 firm-years is 6.31% (6.36%) and the mean (median) one-year stock return is 14.14% (10.06%). 8.46% of the sample observations have negative earnings during the year.

Measurement of MISS/MEET

We require our sample firm-quarters to have necessary financial data from Compustat and analyst forecasts data from I/B/E/S. Consistent with Bartov et al. (2002) and Brown and Pinello (2007), we require firm-quarters to satisfy three criteria: (1) at least two individual earnings forecasts (not necessarily by the same analyst) are made at least 20 trading days apart, (2) the release date of the earliest forecast is at least one trading day after the previous quarter's earnings release, and (3) the release date of the latest forecast precedes the current quarter's earnings release date by at least three days. Because firms in regulated industries are subject to different earnings management constraints from firms in nonregulated industries, we exclude utilities and financial services firms (two-digit Standard Industrial Classification (SIC) codes 49 and 60–67).³

We first compute earnings surprise (*SURPRISE*) for each firm. *SURPRISE* is calculated as actual earnings per share less the last analyst forecast made before the current quarter's earnings announcement, scaled by closing price as of the end of the prior period. We then measure negative surprises as a binary variable (*MISS*) with negative earnings surprises coded as 1 and all others as 0. For rival firms, we then measure nonnegative surprises as a binary variable (*MEET*) with nonnegative earnings surprises coded as 1 and all others as 0 and obtain the *RIVALMEET* measures needed for our tests.

Among the 1,283 firm-year observations, the percentages of missing the 1st, 2nd, 3rd and 4th -quarter analysts' earnings forecasts are 21.96%, 22.96%, 24.74%, and 26.07%, respectively.

3.2. Empirical tests of hypothesis

² Regulation Fair Disclosure (therefore Reg FD) is intended to prohibit firms from disclosing "material" information selectively to analysts and institutional investors. Therefore, this regulation has an critical effect on managerial disclosure policies and in turn analysts' behavior (see review paper by Ramnath, Rock, and Shane, 2008). To avoid confounding effect of this regulation on managerial and analysts' behavior, we focus our research on post-Reg FD sample periods.

³ Excluding firms with two-digit SIC codes 49 and 60–67 is consistent with the extant literature (e.g., Burgstahler and Dichev [1997], Matsumoto [2002]).

We begin by investigating whether the failure to meet analysts' earnings benchmark affects CEO compensation using a methodology similar to that discussed in Matsunaga and Park (2001) and Mergenthaler, Rajgopal, and Srinivasan (2009). We first focus on CEO bonus pay and then extend our analysis to CEO equity compensation. Following these two studies, we do not consider salary compensation because salary is generally set at the start of the period and is thus less likely to be affected by current period performance. We then examine whether the penalty for missing expectation vary with rival's meeting expectations, controlling for the general pay-performance sensitivity.

To separate the incremental effect of a missed earnings expectation from overall performance, our regressions include variables to control for both accounting and market performance. Following prior studies (eg. Janakiraman et al 1992; Matsunaga and Park 2001), we include the change in ROA from period t-1 to t (ΔROA) to control for accounting-based performance and the firms' annual stock return in year t (RET) to control for market performance.

One challenge in constructing the research design is that compensation data are on an annual basis, while missing/meeting analysts' forecasts of interest are on a quarterly basis. Mergenthaler, Rajgopal, and Srinivasan (2009) deal with this issue by counting the number of quarters which the firm misses analysts' EPS estimate in a given fiscal year, while Matsunaga and Park (2001) use separate variables for the number of quarters during the year that the firm misses earnings benchmark (once, twice, etc).

Following these two studies, we first estimate the following regression to test our hypothesis:

$$\Delta COMP = \alpha_0 + \alpha_1 N_MISS + \alpha_2 RIVALMEET + \alpha_3 N_MISS \times RIVALMEET + \alpha_4 \Delta ROA + \alpha_5 RET + \varepsilon \quad (1)$$

where

$\Delta COMP$	=	change in compensation (log transformation);
N_MISS	=	number of quarters that a firm fails to meet analysts forecasts;
$RIVALMEET$	=	the average number of quarters that rival firms meet analyst forecasts during the fiscal year;
ΔROA	=	the annual change in ROA, defined as the ratio of earnings before interest and taxes to average total assets;
RET	=	annual return measured as the monthly stock returns compounded over the 12-month fiscal year;

Prior studies suggest a negative coefficient on the MISS variables. Based on our hypothesis, we then expect the coefficients on the interaction terms, $MISS \times RIVALMEET$, to be negative.

However, to be more precise, we need to match a firm's failure to meet expectations in a given quarter with rival's meeting/beating expectation in the same quarter. Thus, simply counting the numbers of quarters that the firm and its rivals miss the benchmarks during the year may not precisely test our hypothesis. To enhance the power of tests, we will deal with this issue by using each miss (the first quarter, second quarter, third quarter, and the fourth quarter in a year) as separate independent variable and interact the miss with the percentage of rival firms' MBE in the same fiscal quarter.

This method also allows us to examine whether the incremental penalty associated with any miss varies with whether a particular miss occurs in the first, second, third, or fourth quarters of the fiscal year. One would expect that missing analysts forecasts in the fourth quarters of the fiscal year to incur higher incremental penalty as Brown and Pinello (2007) suggest that managers have considerably more discretion over expense recognition in the first three quarterly reports (i.e. interim periods) than in the annual report (i.e. the fourth quarter) and annual reports are also subject to independent audits but auditors' involvement with interim reports is limited (Frankel, Johnson, and Nelson 2002).

We then estimate the following regression:

$$\begin{aligned}
\Delta COMP = & \gamma_0 + \gamma_1 MISS(Q1) + \gamma_2 MISS(Q2) + \gamma_3 MISS(Q3) + \gamma_4 MISS(Q4) \\
& + \gamma_5 RIVALMEET(Q1) + \gamma_6 RIVALMEET(Q2) + \gamma_7 RIVALMEET(Q3) \\
& + \gamma_8 RIVALMEET(Q4) + \gamma_9 MISS(Q1) \times RIVALMEET(Q1) \\
& + \gamma_{10} MISS(Q2) \times RIVALMEET(Q2) + \gamma_{11} MISS(Q3) \times RIVALMEET(Q3) \\
& + \gamma_{12} MISS(Q4) \times RIVALMEET(Q4) + \gamma_{13} \Delta ROA + \gamma_{14} RET + \varepsilon
\end{aligned}
\tag{2}$$

where

- $\Delta COMP$ = change in compensation (log transformation);
- $MISS(QJ)$ = 1 if earnings were below the last consensus analysts forecasts (negative forecast error) for quarter J during the year and 0 otherwise;
- $RIVALMEET(QJ)$ = the percentage of rival firms that meet analysts' forecasts in quarter J;
- ΔROA = the annual change in ROA, defined as the ratio of earnings before interest and taxes to average total assets;
- RET = annual return measured as the monthly stock returns compounded over the 12-month fiscal year;

4. Results and Concluding remarks

Our empirical results based on equation (1) show that when regressing changes in CEO bonus on number of changes in ROA, one-year stock return, and the number of quarters missing analysts forecasts, the estimated coefficient on N_MISS is significantly negative ($t=-2.14$, $p=0.0162$). This is consistent with the finding in prior studies that changes in CEO compensation is negatively associated with the number of quarters that the firm misses analysts' forecasts during the year. When the interaction term of N_MISS and $RIVALMEET$ are included in the regression, the estimated coefficient on the interaction term, $N_MISS * RIVALMEET$, is significantly negative at a 10% level (estimated coefficient=-0.26, $t=-1.49$, $p=0.0688$, one-tailed). This is consistent with our hypothesis that the negative impact of missing analysts' expectation on CEO compensation is stronger when more rival firms' meeting analysts' expectations. In addition to using changes in CEO bonuses as the dependent variable, we also extend our analysis to changes in CEO cash compensation (i.e. salary plus bonus). The results are qualitatively the same.

Our main tests require firms to have complete data of four quarters MBE data to count the number of missing analysts forecast during the year. However, this

requirement reduces our sample size dramatically. Thus, we conduct an additional test that allows the utilization of more observations. Instead of requiring firms to have all four quarters' MBE data, we conduct our analysis by regression changes in CEO compensation to the meeting/beating analysts forecast of the fourth quarter earnings. Brown and Pinello (2007) suggest that managers have considerably more discretion over expense recognition in the first three quarterly reports (i.e. interim periods) than in the annual report (i.e. the fourth quarter) and annual reports are also subject to independent audits but auditors' involvement with interim reports is limited (Frankel, Johnson, and Nelson 2002). Thus, we expect that missing analysts forecasts in the fourth quarters of the fiscal year to incur higher incremental penalty. The estimated coefficient on the interaction between missing the 4th quarter analysts' forecasts and the percentage of rival's meeting analysts' forecasts is significantly negative (estimated coefficient = -0.71, t=-1.41, p=0.0791, one tailed).

The regression results of equation (2) show that the estimated coefficients on the interactions terms, $MISS(Q1)*RIVALMEET(Q1)$ and $MISS(Q2)*RIVALMEET(Q2)$ are not significantly negatively, while the estimated coefficient on the interaction terms, $MISS(Q3)*RIVALMEET(Q3)$ and $MISS(Q4)*RIVALMEET(Q4)$ are negative. This result is generally consistent with the notion that missing analysts' forecasts in the fourth quarters of the fiscal year while other firms meet analysts' forecasts incurs higher incremental penalty.

Overall, the study makes several contributions. First, we believe that evidence from this study contributes to the extensive research in accounting that examines managerial incentives to meet analysts' forecasts. We show that the strength of incentives to meet analysts' forecasts depends on whether other firms in the same industry meet/beat analysts' forecasts. Second, we believe that this study enhance our understanding on the use of analysts' forecasts as a performance benchmark for executive compensation. DeFond and Park (1999) use analysts' earnings forecasts errors to capture the concept of a firm-specific performance benchmark. Our study provide evidence that analysts' forecasts incorporate industry-level industry information and market-wide trend and thus can also be used to remove the effect of industry uncontrollable commonalities on managerial performance. Our findings also contribute to the relative performance evaluation literature that CEO compensation is affected by the extent that rival firms meeting/beating analysts' forecasts. Finally, we believe that our study contribute to the information transfer literature by examining whether firms' meeting or missing analysts' expectations provide information, such as industry commonalities or industry competitive shifts, about the performance of other firms in the same industry.

References

- Aggrawal, R., and A. Samwick. 1999. Executive Compensation, Strategic Competition, and Relative Performance Evaluation: Theory and Evidence. *Journal of Finance* 54 (6): 1999-2043.
- Antle, R., and A. Smith. 1986. An Empirical Investigation of the Relative Performance Evaluation of Corporate Executives. *Journal of Accounting Research* 24 (1): 1-39.
- Barro, J., and R. Barro. 1990. Pay, Performance, and Turnover of Bank CEOs. *Journal of Labor Economics* 8 (4): 448-481.
- Bartov, E., D. Givoly, and C. Hayn. 2002. The rewards to meeting or beating earnings expectations. *Journal of Accounting & Economics* 33(2): 173-204.
- Brown, L. and M. Caylor. 2005. A temporal analysis of quarterly earnings thresholds: propensities and valuation consequences. *The Accounting Review* 80 (2): 423-440.
- Brown, L. and A. S. Pinello. 2007. To what extent does the financial reporting process curb earnings surprise games? *Journal of Accounting Research* 45(5): 947-981.
- Burgstahler, D. and I. Dichev. 1997. Earnings Management to Avoid Earnings Decreases and Losses. *Journal of Accounting & Economics* 24: 99-126.
- DeFond, M.L. and C.W. Park. 1999. The Effect of Competition on CEO Turnover. *Journal of Accounting and Economics* 27: 35-56.
- Dechow, P., S. Richardson, and I. Tuna. 2003. Why are earnings kinky? An examination of the earnings management explanation. *Review of Accounting Studies* 8: 355-384.
- Farrell, K. A. and D. A. Whidbee. 2004. Impact of firm performance expectations on CEO turnover and replacement decisions. *Journal of Accounting and Economics* 36: 165-196.
- Feltham, G. and J. Xie. 1994. Performance measure congruity and diversity in multi-task principle/agent relations. *The Accounting Review* 69 (3):429-453.
- Frankel, R. M., M. F. Johnson, and K. K. Nelson. 2002. The relation between auditors' fees for nonaudit services and earnings management. *The Accounting Review* 77 (4): 71-105.
- Gibbons, R. and K.G. Murphy. 1990. Relative Performance Evaluation for Chief Executive Officers. *Industrial and Labor Relations Review* 43 (1): 30-51.
- Holmstrom, B. 1979. Moral hazard and absorbability. *The Bell Journal of Economics*, 10(1): 74-91.
- Janakiraman S., R. Lambert, and D. Larcker. 1992. An Empirical Investigation of the

Relative Performance Evaluation Hypothesis. *Journal of Accounting Research* 30 (1): 53-69.

Jensen, M., and K.J. Murphy. 1990. Performance Pay and Top-Management Incentives. *Journal of Political Economy*, 98(2): 225-264.

Kim, Y., M. Lacina, and M. S. Park. 2008. Positive and Negative Information Transfers from Management Forecasts. *Journal of Accounting Research* 46(4): 885-908.

Matsumoto, D. 2002. Management's incentives to avoid negative earnings surprises. *The Accounting Review* 77(3): 483-516.

Matsunaga, S. R. and C. W. Park. 2001. The effect of missing a quarterly earnings benchmark on the CEO's annual bonus. *The Accounting Review* 3: 313-332.

McAnally, M. L., A. Srivastava, and C. D. Weaver. 2008. Executive stock options, missed earnings targets, and earnings management. *The Accounting Review* 83(1):185-216.

McNichols, M. F., and R. Kasznik. 2002. Does meeting earnings expectations matter? Evidence from analyst forecast revisions and share prices. *Journal of Accounting Research* 40 (3): 727-759.

Mergenthaler, R. D., S. Rajgopal, and S. Srinivasan. 2009. CEO and CFO Career Penalties to Missing Quarterly Analysts Forecasts. Working Paper.

Murphy, K. J. 1999. Executive Compensation. In O. Ashenfelter and D. Card (eds.), *Handbook of Labor Economics*. Volume 3, North Holland, pp. 2485-2525.

Piotroski, P. D. and D. T. Roulstone. 2004. The Influence of Analysts, Institutional Investors, and Insiders on the Incorporation of Market, Industry, and Firm-Specific Information into Stock Prices. Working Paper, University of Chicago.

Rajgopal, S., T. Shevlin, and V. Zamora. 2005. CEOs' Outside Employment Opportunities and the Lack of Relative Performance Evaluation in Compensation Contracts. Working Paper, University of Washington.

Ramnath, S. 2002. Investor and analyst reactions to earnings announcements of related firms: An empirical analysis. *Journal of Accounting Research* 40 (December): 1351-1376.

Sloan, R. 1993. Accounting Earnings and Top Executive Compensation. *Journal of Accounting and Economics* 16: 55-100.

國科會補助計畫衍生研發成果推廣資料表

日期:2012/01/30

國科會補助計畫	計畫名稱: 同業競爭對手迎合或擊敗盈餘預期與經理人獎酬之研究
	計畫主持人: 梁嘉紋
	計畫編號: 99-2410-H-004-087- 學門領域: 會計
無研發成果推廣資料	

99 年度專題研究計畫研究成果彙整表

計畫主持人：梁嘉紋		計畫編號：99-2410-H-004-087-					
計畫名稱：同業競爭對手迎合或擊敗盈餘預期與經理人獎酬之研究							
成果項目		量化			單位	備註（質化說明：如數個計畫共同成果、成果列為該期刊之封面故事...等）	
		實際已達成數（被接受或已發表）	預期總達成數（含實際已達成數）	本計畫實際貢獻百分比			
國內	論文著作	期刊論文	0	0	100%	篇	
		研究報告/技術報告	0	0	100%		
		研討會論文	0	0	100%		
		專書	0	0	100%		
	專利	申請中件數	0	0	100%	件	
		已獲得件數	0	0	100%		
	技術移轉	件數	0	0	100%	件	
		權利金	0	0	100%	千元	
	參與計畫人力（本國籍）	碩士生	2	2	100%	人次	
		博士生	0	0	100%		
		博士後研究員	0	0	100%		
		專任助理	0	0	100%		
國外	論文著作	期刊論文	0	0	100%	篇	
		研究報告/技術報告	0	0	100%		
		研討會論文	1	1	100%		
		專書	0	0	100%		章/本
	專利	申請中件數	0	0	100%	件	
		已獲得件數	0	0	100%		
	技術移轉	件數	0	0	100%	件	
		權利金	0	0	100%	千元	
	參與計畫人力（外國籍）	碩士生	0	0	100%	人次	
		博士生	0	0	100%		
		博士後研究員	0	0	100%		
		專任助理	0	0	100%		

<p>其他成果 (無法以量化表達之成果如辦理學術活動、獲得獎項、重要國際合作、研究成果國際影響力及其他協助產業技術發展之具體效益事項等，請以文字敘述填列。)</p>	<p>無</p>
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	成果項目	量化	名稱或內容性質簡述
科 教 處 計 畫 加 填 項 目	測驗工具(含質性與量性)	0	
	課程/模組	0	
	電腦及網路系統或工具	0	
	教材	0	
	舉辦之活動/競賽	0	
	研討會/工作坊	0	
	電子報、網站	0	
	計畫成果推廣之參與(閱聽)人數	0	

國科會補助專題研究計畫成果報告自評表

請就研究內容與原計畫相符程度、達成預期目標情況、研究成果之學術或應用價值（簡要敘述成果所代表之意義、價值、影響或進一步發展之可能性）、是否適合在學術期刊發表或申請專利、主要發現或其他有關價值等，作一綜合評估。

1. 請就研究內容與原計畫相符程度、達成預期目標情況作一綜合評估

達成目標

未達成目標（請說明，以 100 字為限）

實驗失敗

因故實驗中斷

其他原因

說明：

2. 研究成果在學術期刊發表或申請專利等情形：

論文： 已發表 未發表之文稿 撰寫中 無

專利： 已獲得 申請中 無

技轉： 已技轉 洽談中 無

其他：（以 100 字為限）

3. 請依學術成就、技術創新、社會影響等方面，評估研究成果之學術或應用價值（簡要敘述成果所代表之意義、價值、影響或進一步發展之可能性）（以 500 字為限）

This study makes several contributions. First, we believe that evidence from this study contributes to the extensive research in accounting that examines managerial incentives to meet analysts' forecasts. We show that the strength of incentives to meet analysts' forecasts depends on whether other firms in the same industry meet/beat analysts' forecasts. Second, we believe that this study enhance our understanding on the use of analysts' forecasts as a performance benchmark for executive compensation. DeFond and Park (1999) use analysts' earnings forecasts errors to capture the concept of a firm-specific performance benchmark. Our study provide evidence that analysts' forecasts incorporate industry-level industry information and market-wide trend and thus can also be used to remove the effect of industry uncontrollable commonalities on managerial performance. Our findings also contribute to the relative performance evaluation literature that CEO compensation is affected by the extent that rival firms meeting/beating analysts' forecasts. Finally, we believe that our study contribute to the information transfer literature by examining whether firms' meeting or missing analysts' expectations provide information, such as industry commonalities or industry competitive shifts, about the performance of other firms in the same industry.