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MANAGERIAL ABILITY AND REAL EARNINGS MANAGEMENT

A DISSERTATION APPROVED FOR THE
MICHAEL F. PRICE COLLEGE OF BUSINESS

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Dedication

I dedicate my dissertation to my beloved husband, Chunyang Liu, who laughs with me during the good times and guides me during the bad times. I also want to thank my son, David, and my daughter, Reese, for all the joys they provide to me.

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Chapter 1: Introduction

The accounting literature defines real earnings management (REM) as management actions that deviate from normal business practices, with the primary objective to increase current reported earnings (Graham, Harvey and Rajgopal, 2005; Roychowdhury, 2006). Therefore, REM impacts *current* firm performance. The goal of this study is to understand the impact of REM on *future* firm performance. On the one hand, REM may negatively relate to future firm performance if managers are using REM to disguise lower firm value associated with poor current performance (i.e., opportunistic behavior). If REM occurs solely to meet earnings targets, then such actions may not represent optimal firm operations, therefore destroying the long-term value of the firm. On the other hand, REM may relate positively to future firm performance if managers use REM to (a) operate the firm more efficiently or (b) signal higher future firm value. This study investigates whether REM is positive or negatively related to future firm performance.

This study also examines whether the relation between REM and future firm performance may vary cross-sectionally with managerial ability. More able managers are expected to operate their firms more efficiently. To the extent more able managers are willing to take real actions to meet earnings targets, such activities are more likely to be in shareholders' best interest. Thus, managerial ability is expected to increase the relation between REM and future performance.

While the extant literature examines the *ex-ante determinants* of REM, the literature provides very limited evidence on the *ex-post impact* of REM on future firm performance. Managers' opportunistic theory suggests that REM is negatively related to

future firm performance while efficiency theory and signaling theory implies the opposite prediction. Consistent with the conflicting theoretical arguments, empirical evidence on the ex-post impact of REM is also mixed. Cohen and Zarowin (2010) provide evidence on the adverse effect of REM in the seasoned equity offering (SEO) setting. They find that post-SEO operating underperformance is driven not only by accrual reversals, but also by the real consequences of REM. In addition, Eldenburg, Gunny, Hee and Soderstrom (2011) investigate REM in the non-profit hospital setting and they provide *weak* evidence to support REM as opportunistic behavior instead of strategic management. In contrast, Gunny (2010) shows that firms engage in REM not opportunistically but use REM either to signal firms' better future performance or to have more efficient operations. Specifically, she finds that firms engaging in REM to just meet earnings benchmarks have relatively better subsequent performance than do firms that do not engage in REM and miss or just meet the earnings benchmarks. Her findings suggest that REM is a signaling or efficient behavior rather than managerial opportunistic behavior.

Given the mixed findings in the prior literature, I test the association between REM and future firm performance in a general setting. To capture REM, I follow Roychowdhury (2006) and estimate abnormal levels of production costs and discretionary expense (the sum of SG&A, R&D, and advertising). In addition, I combine these two measures into one comprehensive aggregate measure of REM. I find that, after controlling for size, performance, growth, and industry, the aggregate REM is negatively related to future firm performance. This result suggests that firms engage in REM opportunistically. Because more able managers are assumed to work more in the

interest of shareholders and make better decisions, I predict and find that managerial ability decreases the negative relation between REM and future firm performance. This indicates that more able managers minimize the negative effects of REM.

Compared to prior studies, my study contributes to the REM literature by providing a more complete picture of the impact of REM on firms' future performance. First, prior studies (Cohen and Zarowin, 2010; Gunny, 2010) only examine the average difference of firm future performance between the REM firms and non-REM firms. My study is the first to examine whether the effect of REM on future firm performance varies cross-sectionally. My study first predicts that managerial ability leads to cross-sectional variation in the impact of REM. According to Demerjian, Lev and McVay (2011), "more able managers can better understand technology and industry trends, reliably predict product demand, invest in higher value projects and manage their employees more efficiently than less able managers" (p.1). Therefore, I expect more able managers to generate more value enhancing effect of REM (or minimize value destroying effect). By including managerial ability, this study suggests that the impact of REM may vary predictably as a function of managerial ability.

Second, my study investigates the impact of REM on future firm performance by using a sample of firms that are more likely to have managed earnings to meet/beat various earnings targets. The findings in this study do not depend on a specific corporate event (such as SEOs, as in Cohen and Zarowin 2010), or a specific industry (such as non-profit hospitals, as in Eldenburg, Gunny, Hee and Soderstrom 2011), or a specific time period (such as pre-SOX period, as in Gunny 2010). My study contributes

to the literature by providing evidence on the signaling/efficiency-versus-opportunistic debate.

Third, this study directly answers the call for research on the impact of earnings management by Healy and Wahlen (1999). My study extends this line of research by investigating the impact of REM on future firm performance. Additionally, this study also answers the call for research on how managers choose competing objectives by Dechow, Ge and Schrand (2010). These objectives could relate to compensation, litigation risk, proprietary costs, incentives to influence stock price, or long-term performance. My study directly investigates whether managers trade off *immediate* benefits of opportunistic accounting choices against the potential long-term reputation loss (opportunism) or trade off short-term sacrifice of economic value against the long-term benefits (signaling).

Finally, my study has important implications for managers and investors. For managers, it is important to understand the long-term impact of REM that they may want to engage in. It is also important for investors to know that whether REM achieves short-term goals while sacrificing long-term benefits. If this is the case, investors may want to invest carefully when they see possible REM in their long-term investment firms.

Chapter 2: Background and Hypotheses Development

In the following section, I review prior research related to earnings management. I also summarize the literature on the existence of REM. In addition, I examine existing papers on the impact of REM. I rely on economic theory and earnings management literature to develop my hypothesis.

2.1 Earnings Management Literature

The earnings management literature attempts to help people understand why managers manage earnings, how they do so and the consequences of this behavior.

Extant empirical evidence shows that managers face significant pressure to avoid reporting losses, earnings declines and negative earnings surprises (Burgstahler and Dichev, 1997; Degeorge, Patel and Zeckhauser, 1999; Skinner and Sloan, 2002; Payne and Thomas, 2003; Gore, Pope and Singh, 2007). One possibility of why managers place such weight on achieving these earnings thresholds is stakeholders' reliance on heuristic cutoffs, such as zero earnings, to assess managerial and firm performance (Burgstahler and Dichev, 1997). Prior research shows that the market rewards firms that meet or beat earnings benchmarks (Barth, Elliott and Finn, 1999; Bartov, Givdy and Hayn, 2002; Kasznik and McNichols; 2002; Skinner and Sloan, 2002; Brown and Caylor, 2005; Rees and Sivaramakrishnan 2007), and penalizes firms when earnings benchmarks are missed (Bernard, Thomas and Abarbanell, 1993; Skinner and Sloan, 2002; Payne and Thomas, 2010). Given the importance of these earnings benchmarks, it is not surprising that managers may manage earnings upward to attain these earnings targets.

Managers can respond to the possibility of missing a benchmark in at least three ways. First, managers may manage earnings opportunistically to maximize firm valuations, avoid contracting consequences such as violation of debt covenants (Healy and Wahlen, 1999; Teoh, Welch and Wong, 1998; Cohen and Zarowin, 2010; Aboody and Kasznik, 2000; DeFond and Jiambalvo, 1994). Second, if managers have private information that future profitability will be high, managers may manage earnings to signal managers' private information (Subramanyam, 1996; DeFond and Park, 1997; Altamuro, Beatty and Weber, 2005; Tucker and Zarowin, 2006; Hope, Dou and Thomas, 2011). Third, managers may cut back on unnecessary expenditures in tough times; the cuts may result in the company meeting or beating its current year benchmarks, but management did not intentionally signal.

Prior research shows that managers primarily employ three strategies to manage earnings to attain earnings targets. One way earnings can be managed is by manipulating accruals which does not affect cash flows (see Schipper, 1989; Healy and Wahlen, 1999; Dechow and Skinner, 2000; for literature review). The accrual earnings management is achieved by changing accounting methods or estimates used when reporting a given transaction in the financial statement. Examples include changing the depreciation method for fixed assets and altering the estimates for provision for doubtful accounts. In sum, this earnings management strategy can bias reported earnings in a particular direction without direct cash flow consequences.

Another way earnings could be managed is through classification shifting (McVay, 2006; Fan, Barua, Cready and Thomas, 2010). In the case of classification shifting, managers reclassify core expenses as special items to improve reported core

earnings. A third channel through which earnings can be managed to attain the target is structuring real transactions which affect both earnings and cash flows. The real activity manipulation is a purposeful activity to move reported earnings in a particular direction, which can be achieved by changing the timing of an activity or structuring an operation. This earnings management strategy has to take place *during* the fiscal year. For example, managers may engage in price discounts to increase sales, overproduction to spread fixed costs over more units and thus reduce COGS, or reduction of discretionary expenses (e.g. R&D expenses, advertising expenses, employee training expenses) to avoid missing earnings targets (Baber, Fairfield and Haggard, 1991; Dechow and Sloan, 1991; Bushee, 1998; Roychowdhury, 2006; Cohen, Dey and Lys, 2008).

Studies on the consequences of earnings management have focused primarily on stock price effects. Prior research shows how ex-ante earnings management relates to observed post event abnormal stock returns. Some evidence shows that investors see through earnings management (Shivakumar, 2000; Hirshleifer, Hou, Teoh and Zhang, 2004). Stock return evidence also indicates that investors discount abnormal accruals relative to normal accruals. However, several other studies suggest that the market overprices the portion of abnormal accruals stemming from managerial discretion (Sloan, 1996; Teoh, Wong and Rao, 1998; Xie, 2001; Cheng and Thomas, 2006).

2.2 Evidence of Real Earnings Management

In a survey of company executives, Graham, Harvey and Rajgopal (2005) show that financial executives indicate a stronger willingness to manage earnings through real activities than through accruals. There are at least two reasons for this choice. First, accrual earnings management is more likely to call attention from auditors and

regulators than real activity earnings management. Second, accrual manipulation has constraints. Because of the reversing nature of accrual accounting, managers' optimistic accounting choices in one period reduce their ability to make similar optimistic choices in subsequent periods. Therefore, the realized shortfall between unmanaged earnings and desired earnings targets can exceed the amount by which accruals can be managed. That is, if all accrual earnings management strategies are used and the reported earnings still falls short of the desired thresholds, managers then have no options because REM cannot be adjusted after the fiscal year end. Graham, Harvey and Rajgopal (2005) further show the prevalence of real activities manipulation as an earnings management tool by specifically reporting that:

*"*A surprising 78% of the surveyed executives would give up economic value in exchange for smooth earnings." (Graham, Harvey, and Rajgopal, 2005, p.5)

"…strong evidence that managers take real economic actions to maintain accounting appearances. In particular, 80% of survey participants report that they would decrease discretionary spending on R&D, advertising, and maintenance to meet an earnings target. More than half (55.3%) state that they would delay starting a new project to meet an earnings target, even if such a delay entailed a small sacrifice in value…" (Graham, Harvey, and Rajgopal, 2005, p.32-33)

This survey study provides support to the idea that firms engage in REM. However, it is still unclear whether managers engage in REM due to efficiency consideration, or to signal better future performance, or this is just a type of their opportunistic behavior.

In addition to the survey evidence, extant empirical evidence confirms the existence of REM. Much earlier evidence centers on managerial discretion over R&D expenditures (Dechow and Sloan, 1991; Baber, Fairfield and Haggard, 1991; Bushee, 1998; Cheng, 2004). Later studies suggest that managers engage in a variety of REM activities in addition to R&D reduction. Other types of REM activities manipulation

that have been investigated in the prior research include overproduction (Lev and Thiagarajan, 1993; Abarbanell and Bushee, 1997; Roychowdhury, 2006; Gunny, 2010), stock repurchases (Bens, Nagar, Skinner and Wong, 2003), sale of assets (Bartov, 1993; Herrmann, Inoue and Thomas, 2003), cutting advertising expenditures (Roychowdhury, 2006; Bhojraj, Hribar, Picconi and McInnis, 2009; Gunny, 2010), cutting selling, general and administrative expenses (Roychowdhury, 2006; Gunny, 2010), and sales price reduction (Roychowdhury, 2006; Gunny, 2010).

Consistent with the survey evidence in Graham, Harvey and Rajgopal (2005), prior empirical evidence also shows that managers use accrual earnings management and REM as substitutes. Cohen, Dey and Lys (2008) find that managers switched from using more accruals to using more REM after the passage of SOX in 2002. A subsequent study by Cohen and Zarowin (2010) investigates the accrual earnings management and REM around SEO. They find that these SEO firms use both forms of earnings management in the year of SEO and that the tendency for SEO firms to use REM is positively correlated with the costs of accrual earnings management in these firms. Zang (2012) finds that managers trade off the two forms of earnings management based on their relative costs. She further suggests that managers adjust the level of accrual earnings management according to the level of REM. In sum, these three studies together suggest that managers use REM and accrual earnings management as substitutes.

2.3 Impact of REM on Future Operating Performance

While there is prevalent survey and empirical evidence showing the *existence* of REM, evidence on the *impact* of this earnings management form is limited. Three

recent studies test the consequence of real earnings management on firms' future operating performance. However, these three studies provide mixed results regarding to the impact of REM.

Cohen and Zarowin (2010) investigate the relation between earnings management behavior of SEO firms and post-SEO operating underperformance. They document that SEO firms engage in REM in addition to accrual earnings management. Furthermore, they show that the decline in post-SEO performance due to the real activities manipulation is more severe than that due to accrual management. Overall, Cohen and Zarowin (2010) show an adverse ex-post effect of REM for a specific corporate event, SEO. Eldenburg, Gunny, Hee and Soderstrom (2011) investigate REM in nonprofit hospitals. They conclude that "we find *weak* evidence to support opportunism rather than good management" (p. 1605). While the nonprofit hospital setting provides weak evidence showing the negative effect of real activities manipulation on future performance, it is important to examine whether this is true for publicly traded firms.

On the other hand, Gunny (2010) uses a sample of public traded firms from 1988 to 2002 to examine the relation between REM and future operating performance. She specifically focuses on a sample of firms that have high incentives to manage earnings to achieve earnings benchmarks (meet/beat zero earnings and last year's earnings). She finds that firms that engage in REM have relatively better subsequent three years performance than firms that do not engage in REM and miss or just meet the benchmarks. Gunny (2010) suggests that firms' engagement in REM pre-SOX is consistent with signaling rather than opportunism. My study complements hers in that I

investigate the ex-post effect of REM on firms' operating performance for pre-SOX and post-SOX periods (as suggested by Cohen, Dey and Lys 2008 that managers switching from accrual management to REM after the passage of SOX in 2002) and test whether this effect could be a function of managerial ability or the need to signal.

In sum, the recent trend in examining REM focuses primarily on the ex-ante existence of REM. Limited evidence is provided for the ex-post effect of REM. Consistent with the conflicting theoretical arguments, the empirical evidence on the ex-post effect is also mixed. Therefore, the directional relation between REM and firms' future operating performance is still an empirical question. My study will add additional evidence to this line of literature.

2.4 Hypotheses Development

The Impact of REM on Future Performance

As discussed above, prior accounting literature has investigated the impact of REM on future firm performance for some specific contexts and provides mixed findings. Unlike prior research, however, I examine the impact of REM in a general setting, which doesn't depend on a specific corporate event, a specific sample or a specific time period. As discussed below, there are competing explanations for the impact of REM on future firm performance. Under managers' opportunistic behavior, the relation between REM and future firm performance is negative, while under efficiency and signaling behavior the predicted relation is positive.

Managers' Opportunistic Behavior Prediction

Economic theory provides a theoretical basis for opportunistic behavior that managers' concern over current performance motivates them to manipulate current-

period earnings at the expense of future-period earnings (Stein, 1989; Fudenberg and Tirole, 1995). One reason for managers' opportunistic behavior is that outside investors and analysts rely on current-period earnings to make forecast of future earnings. Another reason for this behavior is that most contractual obligations (such as earnings based bonuses, debt contracts, etc.) are linked to current-period earnings. Knowing this fact, managers will attempt to manipulate today's earnings to raise forecast firm value.

Empirical research on the practice of managers' opportunistic behavior includes DeAngelo (1986), Perry and Williams (1994), Dechow and Sloan (1991), Jacobson and Aaker (1993), and Aboody and Kasznik (2000). DeAngelo (1986) examines the accounting decisions made by managers of management buyouts of public stockholders. She hypothesizes that managers of buyout firms have an incentive to "understate" earnings through accrual earnings management. However, she finds little evidence of earnings management through accruals by buyout firms. Related to DeAngelo (1986), Perry and Williams (1994) examine unexpected accruals controlling for changes in revenue and depreciable capital. Their findings indicate that managers engage in income-decreasing earnings management prior to management buyout.

Dechow and Sloan (1991) examine CEOs' opportunistic behavior in their final years of office. They find that these CEOs manage discretionary investment expenditures to improve short-term earnings performance. In particular, these CEOs spend less on R&D during their final years in office. Aboody and Kasznik (2000) examine the timing of voluntary disclosures around CEO stock option awards. They find that managers manage earnings downward around award dates by delaying good news and rushing forward bad news. Their findings suggest that CEOs make

opportunistic voluntary disclosure decisions that maximize their stock option compensation. In summary, prior research provides evidence on the existence of management opportunistic behavior in an array of business contexts, such as earnings management through accruals prior to management buyout, discretionary investment expenditures in management final year in the office, and voluntary disclosure decision around CEO stock option awards.

Empirical research has also examined the consequence of managers' opportunistic behavior, such as Teoh, Welch and Wong (1998), Bhojraj, Hribar, Picconi and McInnis (2009), and Cohen and Zarowin (2010). Teoh, Welch and Wong (1998) provide evidence that managers overstate earnings through accrual management prior to initial public offerings (IPOs). They show that this opportunistic management behavior results in negative consequence in the stock market in the long-run. A related study, Cohen and Zarowin (2010) find that post-SEO operating underperformance is due to management opportunistic behavior through earnings management prior to SEOs. Furthermore, they report that post-SEO operating underperformance is driven not just by accrual reversals, but also due to the real consequence of earnings management through real transactions.

Bhojraj, Hribar, Picconi and McInnis (2009) investigate the market performance consequences of management opportunistic behavior, especially by cutting discretionary expenditures and managing accruals to exceed analyst forecasts. They find that firms just beat analyst forecasts through this kind of opportunistic behavior has a short-term stock price benefit relative to firms that miss forecasts without doing so. However, this trend reverses over a 3-year horizon. Overall, this study provides

evidence on the negative consequence of management opportunistic behavior to beat earnings benchmarks.

In summary, early research suggests that managers engage in array of opportunistic behavior that concerns short-term benefits detrimental to long-term firm value. The firms that have managers engaging in opportunistic behavior experience poor stock return performance and operating performance in the long run. I expect that managers could engage in earnings management through real transactions for the short-term benefit only. This line of research tends to the prediction that REM is *negatively* related to future operating performance. *Managers'*

Efficient Behavior Prediction

As indicated in the prior section, managers' opportunistic behavior suggests that managers may engage in REM opportunistically, therefore result in a negative relation between REM and future firm performance. In this section and the next section, I discuss a positive relation between REM and future firm performance that is consistent with two distinct explanations: efficiency and signaling. In this section, I argue that managers' efficient behavior suggest a positive relation between REM and future firm performance.

Under opportunistic prediction, REM is supposed to be actions taken that deviate from optimal business strategy and is hence less efficient operations. In other words, REM is assumed to be costly to firms. In this section, I discuss an alternative and contrasting possible role of REM. Specifically, I argue that REM could be actions that are taken to achieve earnings targets that help the firm to operate *more efficiently*. These actions are dictated by managers' strategic consideration and assist the firm to

switch to an updated optimal business strategy. Therefore, REM may not only have positive effect on current firm performance but also enhance long-term performance. This strategic consideration scenario, an idea considered in strategic management literature, leads to the prediction that REM is positively associated with future operating performance.

Strategic management deals with utilization of firm resources to enhance firm performance in their external environments. Lamb (1984) defines strategic management as below:

> "an ongoing process that evaluates and controls the business and the industries in which the company is involved; assesses its competitors and sets goals and strategies to meet all existing and potential competitors; and then **reassesses each strategy annually or quarterly to determine how it has been implemented and whether it has succeeded or needs replacement by a new strategy to meet changed circumstances, new technology, new competitors, a new economic environment, or a new social, financial or political environment**." (Lamb, 1984, ix, emphasis added)

Consistent with Lamb (1984), managers may engage in REM due to their strategic management consideration. In managers' regularly (annually or quarterly) business strategy reassessment, they realize the need of updating their strategy due to the change in the external environment. Therefore, they take actions (REM) to shift their business to an updated optimal business strategy. If this is the case, REM is not costly to the firm, but enhances firm operation *efficiency*. Thus, under this scenario, REM is positively related to future operating performance.

Managers Signaling Behavior Prediction

As discussed in the prior section, the efficiency explanation suggests a positive relation between REM and future firm performance. In this section, I discuss an alternative possible explanation for this positive relation. Specifically, I argue

managers' signaling behavior may be another rationale that explains the positive relation between REM and future firm performance.

In markets with asymmetric information when one party has more or better information than another party, transactions are less likely to occur (Akerlof, 1970). One possible solution to this problem is signaling (Spence, 1973). One party sends a signal that reveals some piece of relevant information to another party. Spence first proposes this solution in a job market scenario where employees attempt to sell their services to employers for some price. In general, employers are willing to pay a higher price for a better employee. However, while employees may know their own ability level, the employers cannot observe this ability level, thus there is an information asymmetry between employers and employees. In this case, education credentials can be used as a signal by employees to indicate their ability level, therefore narrowing the information gap between employers and employees. The costs associated with attaining education credentials are referred as signaling costs.

Signaling works effectively in a situation of asymmetric information only if it satisfies the following two requirements. First, the signal is observable and is positively related to the unseen characteristics that are valuable to the less informed party. Second, the signaling costs are negatively related to the productive capability. In Spence's job market signaling model, education credentials becomes signal only when (a) the employer assumes that these credentials are positively correlated with employees' greater ability and (b) the costs of obtaining the credentials are lower for the high quality employees. In addition, the signaling costs have to be less than the potential

benefits of engaging in signaling activity. In sum, signaling costs play a significant role in this model.

Since the proposition of job market signaling model by Spence in 1973, the signaling theory has been applied in the field of finance and accounting research (Leland and Pyle, 1977; Subramanyam, 1996; DeFond and Park, 1997; Altamuro, Beatty and Weber, 2003; Tucker and Zarowin, 2006; Dou, Hope and Thomas, 2011). One finance study, Leland and Pyle (1977) show how companies with good future perspectives and higher possibilities of success (good companies) should send a clear signal to the market when going public. One such signal could be entrepreneurs' willingness to retain shares in their own firms.

Since accounting involves the transfer of managers' private information to those who need it for decision-making, signaling theory has also been widely applied to accounting research (Subramanyam, 1996; DeFond and Park, 1997; Altamuro, Beatty and Weber, 2003; Tucker and Zarowin, 2006; Dou, Hope and Thomas, 2011). DeFond and Park (1997) suggest that income smoothing is not used opportunistically, but improves the ability of income to reflect future performance. Related to DeFond and Park' (1997) conjecture that discretionary accruals are used to smooth income, Tucker and Zarowin (2006) provide additional evidence on the informativeness of income smoothing. In addition, related to the debate on the information-versus-garbling role of income smoothing, Dou, Hope and Thomas (2011) provide more evidence on the efficiency side of income smoothing. Overall, these studies indicate that income smoothing is used as a vehicle for managers to signal their private information about future performance.

The economic literature suggests that signaling is used in markets with asymmetric information to make the transaction happen. Additionally, finance and accounting literature suggest that managers rely on signals, such as smoother earnings, to transfer their private information to the outside parties. These research streams together suggest that managers use discretion in their financial reporting and operating decisions to signal their private information about firms' future performance to uninformed outside parties. Using this signaling framework, I expect that only firms with good future prospects engage in REM to signal future performance because this signaling option could be too costly for poorly performing firms to follow. Overall, the benefits of signaling outweigh the signaling costs. This reasoning lends to the prediction that REM is *positively* associated with future operating performance.

In summary, misalignment of managers' and shareholders' incentives could induce managers to use REM to manage earnings opportunistically, thereby resulting in a negative relation between REM and future firm performance. On the other hand, managerial discretion on the operating transactions could enhance earnings informativeness by allowing transfer of private information, or REM could be purely dictated by managers' efficiency consideration. These two arguments together predict a positive relation between REM and future firm performance.

Given that existing theories provide competing predictions about the effect of REM on future operating performance, I test the following alternative hypotheses:

H1: REM affects future firm performance.

[Insert Figure 1, 2 and 3]

Managerial Ability and the Impact of REM

In this section, I attempt to isolate the efficiency argument using managerial ability. Specifically, I argue that managers' ability to efficiently operate his/her firm helps explain the cross-sectional variation in the impact of REM. The neoclassical view of the firm considers top managers to be homogeneous inputs into the production process. In other words, faced with similar technologies, factors, and product market conditions, different managers would make similar choices. This view implies that managers do not matter for corporate practices (Weintraub, 2002). In contrast, upper echelons theory (Hambrick and Mason, 1984; Hambrick, 2007) states that organizational outcomes (e.g., strategic choices and performance levels) are partially influenced by managerial background characteristics. Numerous studies have since found evidence documenting the correlation between managers and corporate decisions. For example, Bertrand and Schoar (2003) find that CEOs have different managerial styles that are carried as they go from one firm to another firm, and more importantly, these different styles matter for a wide range of corporate decisions. Examples of these decisions are acquisition or diversification decisions, dividend policy, and cost cutting policy. Several other studies find the relation between CFO expertise and restatements (Aier, Comprix, Gunlock, and Lee, 2005), CEO reputation and earnings quality (Francis, Huang, Rajgopal, and Zhang, 2008), managerial style and firm voluntary disclosure (Bamber, Jiang, and Wang, 2010), managerial style and corporate tax avoidance (Dyreng, Hanlon, and Maydew, 2010), and CFOs' style and accounting policies (Ge, Matsumoto, and Zhang, 2011). Taken together, the evidence in this line of

research lends support to the important role of individual managers in certain corporate decisions and performance. In other words, top managers matter for corporate practice.

After recognizing managers as a potential source of value creation for the firm, recent strategic management literature documents that managerial ability affects resource productivity (Holcomb, Holmes, and Connelly, 2009). In particular, firm performance depends on the ability of managers to create value from resources the firm controls. From a strategic perspective, managerial ability derives from two main sources: domain expertise and resource expertise.

> "**Domain expertise** refers to managers' understanding of the industry context and the firm's strategies, products, markets, task environments, and routines, while **resource expertise** refers to the ability of managers to select and configure a firm's resource portfolio, bundle resources into distinctive combinations, and deploy them to exploit opportunities in specific contexts." (Holcomb, Holmes, and Connelly, 2009, p. 459, emphasis added)

Recent studies have found compelling evidence of managerial ability in the finance and accounting literature. For example, Litov, Baker, Wachter, and Wurgler (2005) suggest that managerial ability plays an important role in explaining investment company behavior. Berk and Green (2004) and Berk and Stanton (2007) find that managerial ability explains much of the observed behavior of open-end and close-end fund.

Several other studies examine the relation between managerial ability and accounting practices. Hayes and Schaefer (1999) find a relation between managerial ability and abnormal returns. They identify more able managers as those who resign for a similar position at another firm, and find that firms losing these more able managers experience a negative stock price reaction of -1.51%. Baik, Farber, and Lee (2011) find a positive relation between CEO ability and both the likelihood and frequency of

management earnings forecasts. Demerjian, Lewis, Lev, and McVay (2011) examine whether managerial ability is associated with earnings quality. They find that more able managers are associated with fewer subsequent restatements, higher earnings and accruals persistence, lower errors in the bad debt provision, and higher quality accrual estimations. Taken together, the findings in this line of research suggest that managerial ability does have an influence on firm performance and accounting practices.

Managerial ability is likely to affect firm performance. More able managers have more knowledge about their business, therefore making better judgments and decisions. I expect more able managers to be more knowledgeable about their own firm and the industry they are in, as well as to be better able to see how decisions and choices affect the long-term value and the overall effectiveness of the organization. Given the estimation challenges to form a forward-looking operational plan involved in REM, as well as the complexities in the consideration of the short-term versus the long-term benefits of REM, more able managers will make better decisions relative to lower ability managers in similar situations. For example, facing the same pressure of meeting the benchmarks, a more able manager and a lower ability manager may choose different transactions to manage earnings up. In other words, a more able manager may engage in the type of transactions that has less adverse effect, or they may even use this opportunity to update their business strategy to achieve more efficient business operations. On the other hand, a lower ability manager may not be able to see the long-term effect of different transactions, therefore choose the transaction whichever comes to them handy and can help achieve current benchmarks.

In summary, early studies suggest that managerial ability impacts firm performance and accounting choices. Managerial ability is likely to affect managers' choice among transactions they use to manage earnings, therefore affects future firm performance. I expect that more able managers are better able to choose the right transaction to manage earnings and the right transaction enhances future firm performance. Thus, more able managers generate more positive effect of REM, or minimize negative effect of REM. My second hypothesis is:

H2: The relation between REM and future firm performance <u>increases</u> with managerial ability.

In other words, to the extent REM relates positively to future firm performance, high managerial ability is expected to further increase the positive relation. If REM and future firm performance are negatively related, high managerial ability should reduce the negative relation.

[Insert Figure 4]

Chapter 3: Research Design

3.1 Variable Definitions

REM Measures

Following prior literature, I examine the following two methods of REM: reducing cost of goods sold by overproducing inventory and cutting discretionary expenses (R&D, advertising, and SG&A expenses). These two manipulation methods are investigated by two proxies: the abnormal level of production costs and the abnormal level of discretionary expenses. Subsequent studies using the same proxies provide further evidence that these proxies capture REM (Cohen, Dey, and Lys, 2008; Cohen and Zarowin, 2010; Gunny, 2010; Zang, 2012, McGuire, Omer, and Sharp, 2012).

1. Reducing cost of goods sold by overproduction. Managers can produce more goods than demand to increase earnings. When managers produce more units, they can allocate the fixed overhead costs over a larger number of units, therefore lowering the fixed costs per unit. As long as this reduction in fixed costs per unit is not offset by the increase in marginal cost per unit, total cost per unit declines. This overproduction leads to a lower cost of goods sold, while some extra production costs and holding costs. Overall, overproduction results in higher production costs and lower cash flows for a given sales level.

2. Reducing discretionary expenditures including R&D, advertising, and SG&A expenses. This reduction of discretionary expenses will lead to higher current earnings and possibly higher cash flows if these expenses are paid in cash.

Following Roychowdhury (2006), I estimate the abnormal level of production costs using the following equation:

$$\frac{PROD_{it}}{Assets_{i,t-1}} = k_1 \frac{1}{Assets_{i,t-1}} + k_2 \frac{SALES_{it}}{Assets_{i,t-1}} + k_3 \frac{\Delta SALES_{it}}{Assets_{i,t-1}} + k_4 \frac{\Delta SALES_{i,t-1}}{Assets_{i,t-1}} + \varepsilon_{it} \quad (1)$$

Production costs are defined as the sum of COGS and the change in inventory during the year. Equation (1) is estimated cross-sectionally for each industry and year so that the estimated coefficients vary over time and reflect the impact of industry-wide economic circumstances during the year on production costs. The industry is identified using two-digit SIC code.[1] I require at least 15 observations for each industry-year. The abnormal level of production costs is measured as the estimated residual from equation (1). The higher the residual, the larger is the amount the inventory overproduction and the greater is the use of the reduction of COGS to increase earnings.

Also following Roychowdhury (2006), I estimate the abnormal level of discretionary expenditures with the following regression:

$$\frac{DISX_{it}}{Assets_{i,t-1}} = k_1 \frac{1}{Assets_{i,t-1}} + k_2 \frac{SALES_{i,t-1}}{Assets_{i,t-1}} + \varepsilon_{it} \quad (2)$$

The abnormal level of discretionary expenditures is measured as the estimated residuals from the above equation. Following Zang (2012), I multiply the residual by negative one so that the higher the value the more likely the firm is cutting discretionary expenditures.

[1] Roychowdhury (2006) showed that the results will not be impacted if using Fama and French (1997) industry classification.

Given sales levels, firms that manage earnings through REM are likely to have one or both of these: abnormally high production costs, and/or abnormally low discretionary expenditures. To capture the total effects of REM, I test another aggregate REM metrics in addition to the individual two metrics following Cohen and Zarowin (2010) and McGuire, Omer, and Sharp (2012)[2]. The aggregate metric is the aggregation of abnormal production costs and abnormal discretionary expenditures (Agg REM). The higher the value of the aggregate measure, the more likely the firm is engaging in REM. In sum, I will use two individual proxies (abnormal discretionary expenditures, and abnormal production costs) and one aggregate proxy (Agg REM) to test my hypotheses.

Managerial Ability Measures

My conceptual variable managerial ability should capture managers' ability to efficiently manage his/her firm. The measure of managerial ability in Demerjian, Lev, and McVay (2012) is a reasonable proxy for this construct. Their measure of managerial ability is a performance-based measure of managers' efficiency in using their firms' resources. More able managers will generate a higher rate of output for a given level of resources, or minimize resources used for a given level of output. This measure is intuitively appealing because it measures managerial ability in line with the over-arching goal of the firm – maximizing profit (output) for a given level of resources. The other existing measures of managerial ability are media coverage (Milbourn, 2003; Rajgopal, Shevlin, and Zamora, 2006; Francis, Huang, Rajgopal, and Zang, 2008), historical return (Rajgopal, Shevlin, and Zamora, 2006) and managerial fixed effects (Bertrand and Schoar, 2003; Dyreng, Hanlon, and Maydew, 2010; Ge, Matsumoto, and

[2]Cohen and Zarowin (2010) note that aggregating all three proxies into one proxy may not be conceptually right because the same activity (overproduction) that lead to unusually high production costs can also lead to unusually low cash flow from operations.

Zhang, 2011). The advantage of Demerjian et al. measure is that it is manager-specific and available for a large sample of firms, while media coverage and historical returns are difficult to attribute solely to manager, or manager fixed effects is limited to a small sample of managers who switch firms. In addition, the Demerjian et al. measure outperforms the other existing measures of managerial ability (Demerjian, Lev, and McVay, 2012).

Demerjian, Lev, and McVay (2012) adopt two steps to formulate their measure of managerial ability. First, they use Data Envelopment Analysis (DEA) to estimate *total firm efficiency* (which is influenced by both the manager and the firm[3]) within its industry, where efficient firms are those that generate more revenue from a given set of resources (Cost of Goods Sold, Selling and Administrative Expenses, Net PP&E, Net Operating Leases, Net Research and Development, Purchased Goodwill, and Other Intangible Assets). They specifically solve the following optimization problem:

$$max_v \theta = \frac{Sales}{v_1 COGS + v_2 SG\&A + v_3 PPE + v_4 OpsLease + v_5 R\&D + v_6 Goodwill + v_7 OtherIntan} \quad (3)$$

The five stock variables (Net PP&E, Net Operating Leases, Net Research and Development, Purchased Goodwill, and Other Intangible Assets) are measured at the beginning of year t, while the two flow variables (Cost of Goods Sold and SG&A) are measured over year t. They estimate DEA efficiency (total firm efficiency) by industry group because it is reasonable that firms in the same industry have similar technologies and business models to convert resources to outputs. The optimization finds the firm-

[3] For example, manager can achieve higher firm efficiency if they are better able to predict future demand and industry trend. Or firm characteristic, such as size, can also help achieve higher firm efficiency because managers in large firms can negotiate better terms.

specific vector of optimal weights on the seven inputs, v, by comparing each of the input choices of the firm under study to those of the other firms in its estimation group. The efficiency measure (calculated in optimization model 3), θ, can take the value between zero and one, where one indicates the most efficiency. The score indicates the degree to which the firm is efficient, where the closer the score to one the more efficient the firm is.

Since the total firm efficiency score can be attributed to both the manager and the firm, Demerjian, Lev, and McVay (2012) then partition total firm efficiency between the firm and the manager. They regress total firm efficiency on six firm-characteristics that either aid or hinder mangement's efforts: firm size, market share, positive cash flow, and firm age (these four factors likely aid management), and complex multi-segment and international operations (these two likely hinder management). They estimate the following Tobit regression by industry including year fixed effects. They cluster standard errors by firm and year to control for cross-sectional and inter-temporal correlation:

$$Firm\ Efficiency = \beta_0 + \beta_1 Ln(Total\ Assets) + \beta_2 Market\ Share + \beta_3 Positive\ Free\ Cash\ Flow + \beta_4 Ln(Age) + \beta_5 BusinessSegmentConcentration + \beta_6 Foreign\ Currency\ Indicator + Year\ Indicators + \epsilon \quad (4)$$

The residual from this regression is the measure of managerial ability that I am going to use in my study. I will adopt this measure of managerial ability in two ways. First, I directly incorporate the residual (continuous variable) of model (4) as the measure of managerial ability in my test. Second, following Demerjian, Lewis, Lev, and

McVay (2011), I decile rank the residual by year and industry to make it more comparable across time and industries and to mitigate the extreme observations.

To check the validity of their measure, Demerjian, Lev, and McVay (2012) find that this measure is strongly associated with manager fixed effects and CEO pay. Taken together, their validity tests support that their measure of managerial ability is a manager-specific measure.

3.2 Testing H1

H1 predicts that REM relates to future firm performance, but the sign of the relation depends on whether managers primarily engage in REM for opportunistic versus efficiency/signaling reasons. That is, when managers engage in REM to manage earnings opportunistically, REM is predicted to be negatively related to future firm performance; when managers engage in REM to signal higher future performance or to increase operating efficiency, REM is predicted to be positively related to future firm performance. To test this hypothesis, I examine the relation between REM engagement to barely meet benchmarks in period t and future firm performance in period t+1, t+2, and t+3. I estimate the following equation:

$$Future\_Perf_{t+i} = \beta_0 + \beta_{1*}Suspect_t + \beta_n*Controls_{nt} + \varepsilon_{t+i} \quad (5)$$

where the dependent variable is future firm performance, proxed by $adjROA_{t+i}$. $adjROA_{t+I}$ is defined as the difference between firm-specific future ROA and the median ROA for the same year and industry. Subscript *t* refers to the year on which REM is engaged to barely meet the benchmarks while subscript *i* refers to the number of year after period t. *Suspect* is an indicator variable, which equals one if a firm is

identified as REM suspect (refer to an earlier section on "REM Suspect Firms Identification"), and zero otherwise.

Control variables are included following Gunny (2010), which include $adjROA_t$ to control for current performance, SIZE to control for size effect, MTB to control for growth opportunities, and ZSCORE to control for the financial health of the firm.

I expect a negative relation between firm future performance and suspects ($\beta_1<0$) if managers are primarily opportunistic, and a positive relation ($\beta_1>0$) if most managers are using REM for efficiency or signaling reasons.

3.3 Testing H2

H2 predicts that managerial ability either mitigates the negative effect of REM on future performance or enhances the positive effect of REM on future performance. In other words, more able managers either strengthen the positive relation or weaken the negative relation between the suspect variable and future firm performance. To test this hypothesis, I modify Model 5 by adding an interaction variable for managerial ability.

$$Future\_Perf_{t+i} = \beta_0 + \beta_1 * Suspect_t + \beta_2 * MgrlAbility_{t-1} + \beta_3 * Suspect_t * MgrlAbility_{t-1+} \beta_n * Controls_{nt} + \varepsilon_{t+i} \quad (6)$$

Managerial ability measure is calculated following Demerijian, Lev, and McVay (2012) as discussed above. I use managerial ability from period t-1 assuming managerial ability is not changing from period t-1 to period t.[4] Control variables are the same as those used in Model 5.

β_3 is the variable of interest to test my H2. I predict a positive relation between managerial ability and future firm performance of REM firms ($\beta_3>0$). This prediction

[4] This is actually the underlying implication in Demerjian, Lev, and McVay's measure of managerial ability. Their measure captures the managerial ability of a management team instead of any individual ability. So it is less likely to change with the departure of any individual of the management team.

supports that managerial ability either strengthens the positive effect of REM or weakens the negative effect of REM.

Chapter 4: Data, Sample and Descriptive Statistics

I obtain data from the 2011 Annual Compustat File for financial statement data. The sample selection process is detailed in Table 2. My sample starts from all firm-years from 1987 to 2008 with the required data to calculate the REM measures and the managerial ability measure. The sample period begins with 1987 because I require that cash flow from operations be available from the Statement of Cash Flow in Compustat. The period ends in 2008 since the measure of future firm performance requires three years of subsequent earnings. I exclude financial institutions (SIC 6000-6999) and regulated companies (SIC 4400-5000) from the sample because firms in highly regulated industries follow accounting rules that differ from other industries. Because the equations for production costs and discretionary expenditures are estimated by every industry-year, I require at least 15 observations for every industry-year. Imposing all the data-availability requirements yields a final sample of 82,839 firm-years over the period 1987 – 2008, including 40 industries, 830 industry-years and 10,043 individual firms.

Table 3 provides the descriptive statistics for the variables in the final sample that are used to test my two hypotheses. The definitions of the variables can be found in Table 1. The mean (median) of managerial ability is −0.0370 (−0.0434), which is comparable to this reported in Demerjian et al. (2012). The mean (median) of the residual of the estimated production costs model is −0.4969 (−0.5278). The mean (median) of the residual of the estimated discretionary expense model is 0.1210 (0.2265). The aggregate residual which measures the total level of REM has a mean (median) of −0.3759 (−0.2583). All of these means and medians are comparable to prior studies (e.g., Zang 2012). The estimated residuals from the estimation models measure

the abnormal level of production costs and discretionary expense. Higher levels of abnormal production costs and discretionary expense indicate more REM through sales manipulation, overproduction and cutting discretionary expenses. I winsorize all my variables at the top and bottom 1 percent to avoid the influence of outliers.

Table 4 shows the Pearson correlation among the variables. The high correlations between Production REM and Aggregate REM, and between Discretionary REM and Aggregate REM are mechanical because Aggregate REM is the sum of these two proxies. There is a negative correlation between Production REM and Discretionary REM. The negative correlation between managerial ability and aggregate REM suggests that better managers are negatively correlated with REM overall. And the positive correlations between managerial ability and future performance measures ($adjROA_{t+1,}$ $adjROA_{t+2,}$ and $adjROA_{t+3}$) suggest that better managers are positively correlated with future performance.

Table 5 reports the estimation results for the normal levels of production costs and discretionary expense (Model 1 and 2). These two models are estimated cross-sectionally for every industry-year with at least 15 observations. There are 830 industry-years available during the sample period. The table reports the mean coefficients across industry-years. The t-statistics are calculated using the standard error of the mean coefficients across industry-years (Fama and MacBeth 1973). The coefficients are generally significant and as predicted which are comparable to those reported in Roychowdhury (2006). The reported adjusted R^2 are means across industry-years. The mean adjusted R^2 is 79.30 percent for the production costs model and 14.06 percent for

the discretionary expense model, indicating that these models have reasonable prediction power.

Table 6 reports the results for the managerial ability estimation model. The table reports the mean coefficients estimated across the 43 industry estimation. The t-statistics are calculated using the standard error of the mean coefficients across industries along the lines of Fama and MacBeth 1973. The coefficients are generally significant with predicted signs except firm age and foreign currency indicator.

Chapter 5: Results

5.1 Test H1

Table 7 reports results from testing H1. H1 posits that REM affects future firm performance. Panel A shows results for testing the subsequent period (period t+1) performance for all three measures of REM and Panel B shows results for testing period t+1, t+2, and t+3 performance for aggregate REM. Panel A reports a significant negative coefficient on Production Suspect, indicating that firms that engage in production REM have worse subsequent performance in t+1 than the non-production REM firms. Controlling for current performance and other common firm characteristics, production REM firms have lower adjusted ROA of 1.3% than non-production REM firms in the subsequent year. This result suggests that firms use overproduction opportunistically. On the other hand, I find a significant positive relation between discretionary expense REM and adjusted ROA in the following period. I find that the average performance of discretionary expense REM is 0.26% higher than non-discretionary expense firms. This finding suggests that managers cut discretionary expenses efficiently or for a good reason, which results a higher future firm performance compared to non-discretionary expense REM firms. Overall, I find that aggregate REM firms have worse future firm performance than non-REM firms. The average performance of aggregate REM firms is 0.4% lower than non-REM firms in the subsequent year. This result suggests that firms generally engage in REM opportunistically. The coefficients on control variables are generally significant with predicted sign. As predicted, current-period industry-adjusted ROA, firm size, growth and financial health are positive associated with industry-adjusted ROA in t+1.

Panel B presents significant negative coefficients on aggregate Suspect which measures the total level of REM in the subsequent three periods. This indicates that REM firms overall have worse performance not only in period t+1, but also in period t+2 and period t+3. The negative effect of REM on firm performance lasts at least three periods.

5.2 Test H2

Table 8 presents results from testing H2. H2 predicts that the relation between REM and future firm performance increases with managerial ability. I use the residual from managerial ability estimation model (Equation 4) to proxy for managerial ability. Consistent with H1, the coefficients on Suspect are significantly negative for Production Suspect and Aggregate Suspect. This indicates that production REM firms perform worse than non-production REM firms. Consistent with prior literature, managerial ability is positively related to future firm performance. This is consistent with the intuition that more able managers are associated with better future firm performance. As predicted, I find a significantly positive relation between the interaction term (Suspect x Managerial Ability) and the subsequent firm performance. This indicates that better managers decrease the negative effect of REM, which supports H2. The coefficients on control variables are significant in the predicted direction.

5.3 Supplemental Analyses

Discretionary Expenses

In H1 test, following prior literature on REM, I sum up all three types of discretionary expenses (SG&A expense, R&D expense and advertising expense) in one variable which is called Discretionary Expenses. And I test whether the firms that

engaging in cutting discretionary expenses in general perform better or worse than other firms. Table 9A presents results for this test. I find that, in general, firms engaging in cutting discretionary expenses perform significantly better than other firms. I also notice that these three types of discretionary expenses are very different in nature, so I rerun the estimation model for each type of discretionary expense separately to get SG&A suspect, R&D suspect and advertising suspect. And then I test these three suspects separately in H1 and H2 testing. I find a significantly positive coefficient only on SG&A suspect in H1 testing. This indicates that firms that engaging in cutting SG&A discretionary expenses perform significantly better than other firms. And there is no significant difference on the subsequent firm performance between R&D suspect and other firms, and between advertising suspect and other firms.

Pre- and Post- Sarbanes-Oxley Periods

Cohen et al. (2008) documents that the level of REM declined prior to SOX and increased significantly after SOX. And they suggest that managers switch from using accrual management to REM since SOX. So it is possible that REM has more negative effect in post-SOX period than in pre-SOX period. Here I test whether the relation between REM and future firm performance changed since the passage of SOX. Table 10 presents results of this test. I find significantly negative coefficients on both production suspect and aggregate suspect in both pre- and post – SOX periods, which are consistent with H1. This suggests that production REM firms perform worse in the subsequent period than non-production REM firms no matter whether in the pre- or post- SOX periods. I find that in pre-SOX period, production REM firms have lower future firm performance of 1.185% than non-production REM firms. And in post-SOX

period, production REM firms have lower future firm performance of 1.604% than non-production REM firms. And I do not find significant difference of subsequent firm performance between discretionary expense REM firms and others. When I test the relation between managerial ability and REM in the pre- and post- SOX periods, I find that more able managers reduce the negative effect of production REM in both pre- and post- SOX periods, which is consistent with my H2 test results.

Mature versus Growth Firms

In this section, I provide tests to explore how the relation between managerial ability and REM varies in the mature firms and growth firms groups. Table 11 presents results of this test. First, I find significantly negative coefficients on production suspect in both mature firms group and growth firms group. This suggests that, no matter in the mature firms group or the growth firms group, production REM firms perform worse in the subsequent period than non-production REM firms. In addition, I find a significantly positive coefficient on discretionary expense suspect only in the mature firms group, but not in the growth firms group. And I only find a significantly negative coefficient on aggregate REM suspect in the growth firms group not in the mature firms group. Second, I find that only in the growth firms group, better managers are able to reduce the negative effect of overproduction.

Firm Size

In this section, I provide tests to explore how the relation between managerial ability and REM varies across different firm size groups (large firms group, medium firms group and small firms group). Table 12 provides results of this test. I find that production REM firms perform worse than non-production REM firms in the

subsequent period in all three groups of firms. The discretionary expense REM firms perform better than others only in the small and medium firms groups. And the aggregate REM firms perform worse than other firms only in the small firms group. Furthermore, I find that more able managers are able to reduce the negative effect of overproduction in all three groups of firms.

Manufacturing Firms

In this section, I test my two research questions with manufacturing firms only. Table 13 presents results of this test. I find results that are consistent with my prior results in H1 and H2 tests. I find that production REM firms perform worse than non-production REM firms and discretionary expense REM firms perform better than non-discretionary expense REM firms. Further, I find that better managers are able to mitigate the negative effect of overproduction.

Young versus Old Firms

Here I test my two hypotheses in young firms group and old firms group separately. Table 14 provides results of this test. I find that production REM firms and aggregate REM firms perform worse than other firms only in the young firms group. And discretionary expense REM firms perform better than non-discretionary expense REM firms only in the young firms group as well. In the young firms group, more able managers are able to reduce the negative effect of overproduction.

Bloated Balance Sheet

Zang (2012) suggests firms with bloated balance sheet are more likely to use REM instead of accrual management. Here I test whether the relation between REM and managerial ability varies across bloated balance sheet firms group and not bloated

balance sheet firms group. Table 15 presents the results of this test. I find that production REM firms perform worse in the subsequent period than non-production REM firms in both bloated group and not bloated group. And I find that aggregate REM firms perform worse than others only in the bloated balance sheet group. I also find that better managers can not reduce the negative effect of overproduction in the bloated balance sheet group.

Analysts Following

In this section, I explore whether analysts' following plays a role in the relation between managerial ability and REM. Table 16 presents results of this test. I find that production REM firms perform worse in the subsequent period than non-production REM firms in both analyst following group and no analyst following groups. The discretionary expense REM firms perform better than non-discretionary expense REM firms only in the no analyst following group. Furthermore, I find that more able managers are able to reduce the negative effect of overproduction only in the no analyst following group.

Corporate Governance

To capture future firm performance beyond managerial ability, I include Gindex in addition to the other control variables in this test. I also include the interaction of Gindex and suspect. Table 17 presents results of this test. Consistent with the results in my H2 test, I find that more able managers are able to reduce the negative effect of overproduction.

Chapter 6: Conclusions

In this study, I examine the impact of REM on future firm performance. REM here refers to abnormal operating activities to barely meet an earnings benchmark. I use three measures of REM in my tests: (1) abnormally high production costs for a given sales level indicating excess overproduction, (2) abnormally low discretionary expense indicating excess cut of discretionary expense, and (3) the total level of abnormal operating activities which is the sum of the first two measures. First, I examine the relation between REM and future firm performance. I find that firms engaging in production REM have significantly lower subsequent industry-adjusted ROA than do other firms. This is also true for aggregate REM. The negative effect of aggregate REM on firm performance lasts for at least three subsequent periods. This result suggests that firms engage in production REM opportunistically. I also find a positive relation between cutting discretionary expenses, especially SG&A expenses, and future firm performance. This suggests that in general managers cut discretionary expenses efficiently or for a good reason. Second, my results show that the impact of REM on future firm performance varies cross-sectionally with managerial ability. I find that managerial ability decreases these negative effects of REM.

My study makes the following contributions. First, my study provides the first evidence on the cross-sectional variation of the impact of REM on future firm performance. This evidence helps explain the mixed findings in the prior literature regarding to the impact of REM. Second, my study investigates the impact of REM in a general setting which test the future performance of REM firms versus all other firms. In addition, my study does not depend on a specific corporate event, a specific industry,

or a specific time period. The results of my study present a more complete picture of the impact of REM. Third, my study benefits investors by facilitating their understanding of the implications of REM on future firm performance. It also benefits managers by helping them learn the possible negative impact of REM.

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Appendix A: Figures

Figure 1

Figure 1 – Hypothesis 1 Development

	Opportunism	Efficiency	Signaling
Managers' incentive to engage in REM	Disguise poor performance	Operate the firm more efficiently	Disclose private information about higher future performance
Result of REM	Less efficient behavior	More efficient behavior	Less efficient behavior
Effect of REM on *current* reported performance	Positive	Positive	Positive
Relation between REM and *future* reported performance	**Negative**	**Positive**	**Positive**
Relation between REM on long-term firm value	Negative	Positive	Positive (Higher future performance > current signaling costs)

Figure 2

Figure 2 – H1

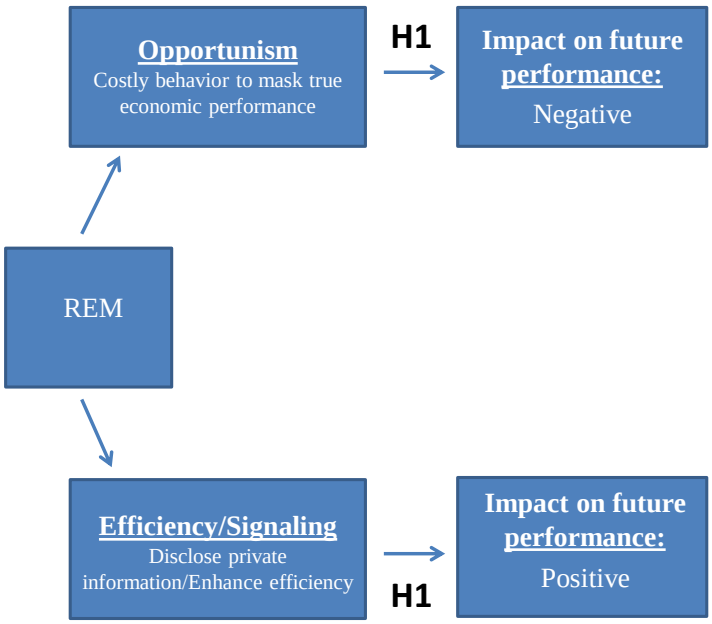


Figure 3

Figure 3 – Hypotheses

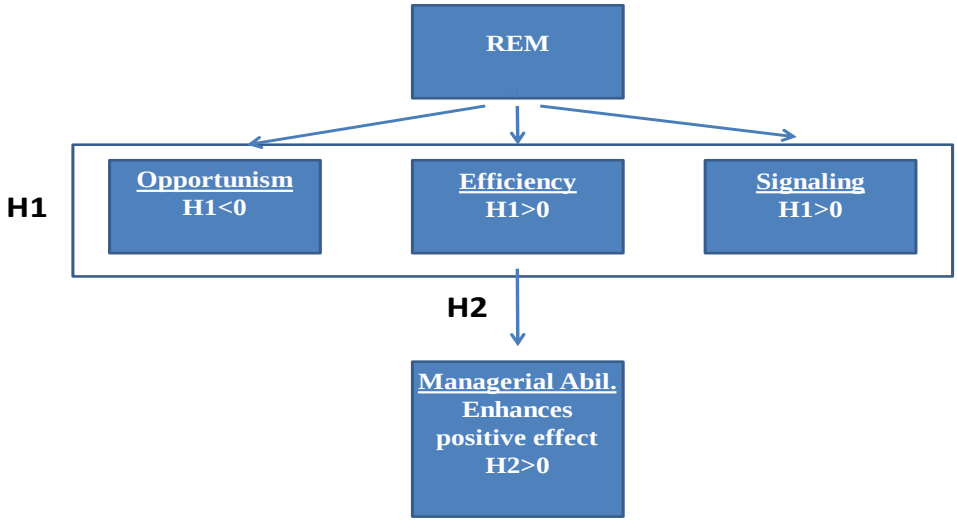
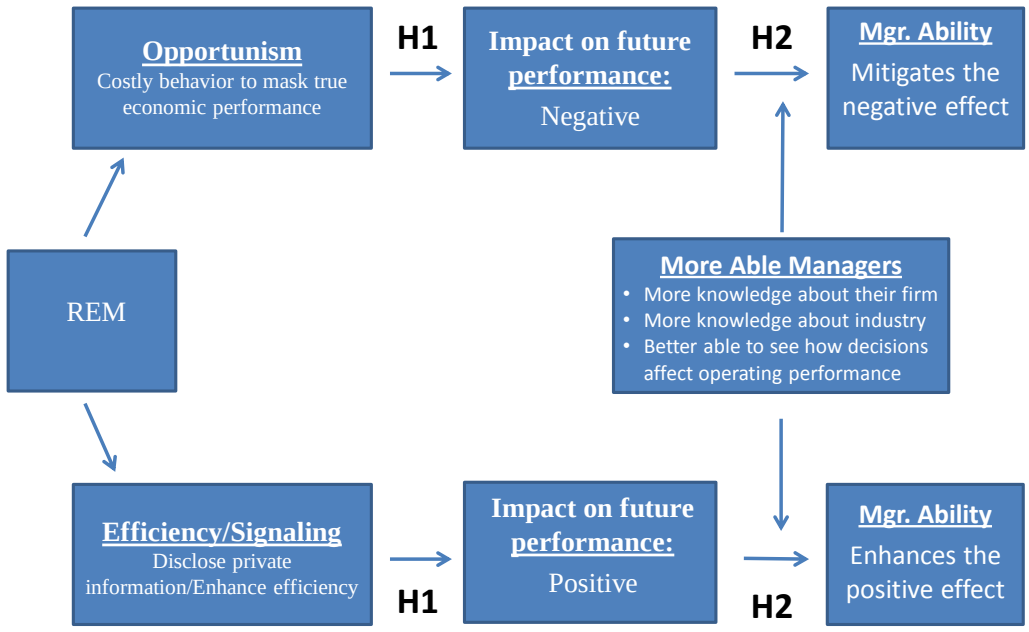


Figure 4

Figure 4 – H2



Appendix B: Tables

Table 1 Variable Definitions

Variable	Description	Definition
Real Earning Management Measures:		
Prod Suspect	Real earnings management relating to production	An indicator variable that is equal to one if the residual from production estimation model 1 is in the highest quintile, zero otherwise
Disx Suspect	Real earnings management relating to discretionary expense	An indicator variable that is equal to one if the -1 × residual from discretionary expense estimation model 2 is in the highest quintile, zero otherwise
Agg Suspect	Aggregate measure of real earnings management	An indicator variable that is equal to one if the sum of the residual from production estimation model 1 and the -1 × residual from discretionary expense estimation model 2 is in the highest quintile, zero otherwise
Ability Measures:		
MgrlAbility	Managerial Ability	The residual from managerial ability estimation model 4
HighAbility	High Ability	An indicator variabe that is equal to one if the decile rank (by indusy and year) of managerial ability score from model 4 is the top three deciles, zero otherwise
Future Performance Measures:		
$AdjROA_{t+1, t+2, t+3}$	Future Earnings	The difference between firm-specific future ROA and the median ROA for the same year and industry (Fama and French 48 industry); ROA is calculated as earnings before extraordinary items scaled by total assets reported at the beginning of year t
Control Variables:		
Size	Firm Size	The natural log of the firm's total assets (AT) reported at the end of year t
Growth	MTB	The market value of equity divided by the book value of equity
Financial Health	Modified Altman's Z-score	$3.3 \times (\text{Net Income}_t/\text{Assets}_{t-1}) + 1.0 \times (\text{Sales}_t/\text{Assets}_{t-1}) + 1.4 \times (\text{Retained Earnings}_t/\text{Assets}_{t-1}) + 1.2 \times (\text{Working Capital}_t/\text{Assets}_{t-1})$
Current Performance	AdjROA	The difference between firm-specific ROA and the median ROA for the same year and industry (Fama and French 48 industry)
Other Variables:		
Prod	Production Cost	The sum of COGS and the change in inventory between t-1 and t
Disx	Discretionary Expense	The sum of R&D, Advertising and Selling, General and Administrative expenses; as long as SG&A is available, R&D and advertising are set to zero if they are missing
COGS	Cost of Goods Sold	Cost of Goods Sold is measured over year t
SG&A	Selling, General and	SG&A expense - current year operating lease expense - current year R&D expense
PP&E	Property, Plant and Equipment	Net property, plant and equipment at the beginning of year t
OpsLease	Operating Lease	The discounted present value of the next five years of required operating lease payments (MRC1 - MRC5)

Table 1 (cont'd):

R&D	Capitalized Research and Development expense	The five-year capitalization of R&D expense, where the net value (net of amortization) is $RD_{cap} = \sum_{t=-4}^{0} (1 + 0.2t) \times RD_{exp}$
Goodwill	Goodwill	Goodwill is measured at the beginning of year t
OtherIntan	Other Intangible Assets	The difference between INTAN and GDWL measured at the beginning of year t
Firm Efficiency	Firm Efficiency Score	Firm efficiency score estimated from Data Envelopment Analysis in Model 3
Market Share	Market Share	The percentage of revenues (SALE) earned by the firm within its Fama-French industry in year t
Free Cash Flow Indicator	An indicator variable signifying positive free cash flows	An indicator variable that is equal to one if a firm has non-negative free cash flow (defined as earnings before depreciation and amortization (OIBDP) less the change in working capital (RECT+INVT+ACO-LCO-AP) less capital expenditures (CAPX) in year t), zero otherwise
Age	Firm Age	The number of years the firm has been listed on Compustat at the end of year t
Foreign Currency Indicator	An indicator variable signifying foreign operatings	An indicator variable that is equal to one if a firm reports a non-zero value for Foreign Currency Adjustment (FCA) in year t

Table 2 Sample Selection

Compustat Database (January 1987 - December 2008)		245,662
Less firm-years in financial industry (SIC 6000-7000) and utility industry (SIC 4400-5000)	-77,716	167,946
Less firm-years with insufficient data to calculate firm efficiency score using model 3	-35,639	132,307
Less firm-years that missing industry classification	-512	131,795
Less firm-years with insufficient data to calculate managerial ability using model 4	-82	131,713
Less firm-years with insufficient data to calculate REM measures using model 1 and 2	-14,133	117,580
Require at least 15 observations for each industry-year grouping	-860	116,720
Less firm-years with insufficient data to test main hypothesis using model 5 and 6	-33,881	82,839
Final Sample		82,839

Notes: The sample selection procedures are dicussed in detail in section 4. The final sample consists of 82,839 firm-year observations from 1987-2008, including 40 industries, 830 industry-years and 10,043 individual firms in the final sample. First, the sample period starts from 1987 because I require that cash flow from operations be available from the Statement of Cash Flow on Compustat. And the period ends in 2008 because the measure of future firm performance requires three years of subsequent earnings. Second, I eliminate financial and utilities industries from my sample because firms in these highly regulated industries follow accounting rules that differ from other industries. Third, since I get my abnormal production costs and abnormal discretionary expense by testing the estimation models for every industry-year, I want to have a big enough industry-year grouping. So I require at least 15 observations for each industry-year group. Finally, I impose all the data-availability requirements.

Table 3 Descriptive Statistics

	Final Sample			
	N	**Mean**	**Median**	**Std**
MgrlAbility	82,839	-0.0370	-0.0434	0.1794
Production Costs Residual	82,839	-0.4969	-0.5278	0.4693
Discretionary Expense Residual	82,839	0.1210	0.2265	0.6040
Aggregate Residual	82,839	-0.3759	-0.2583	0.7105
$adjROA_{t+1}$	82,839	0.0000	0.0293	0.1427
$adjROA_{t+2}$	82,839	0.0000	0.0302	0.1417
$adjROA_{t+3}$	82,839	0.0000	0.0320	0.1439
Current Performance	82,839	0.0000	0.0295	0.1478
Size	82,839	4.7695	4.6778	2.3020
Growth	82,839	2.8580	1.8584	5.3441
Financial Health	82,839	0.2621	1.7328	6.4944

Notes: This table provides descriptive statistics for the final sample. Please see Table 1 for variable descriptions. Details of the sample selection procedure for the final sample are provided in Table 2. All variables are winsorized at the 1% and 99% levels.

Table 4 Univariate Correlations

	MarlAbility	Abnormal Prod	Abnormal Disx	aggregate REM	adjROA$_{t+1}$	adjROA$_{t+2}$	adjROA$_{t+3}$	Current Performance	Size	Growth
Abnormal Prod	-0.13681									
	<.0001									
Abnormal Disx	0.06117	-0.14169								
	<.0001	<.0001								
aggregate REM	-0.03836	0.54011	0.75657							
	<.0001	<.0001	<.0001							
adjROA$_{t+1}$	0.27336	-0.15445	0.22791	0.09174						
	<.0001	<.0001	<.0001	<.0001						
adjROA$_{t+2}$	0.23083	-0.133	0.21326	0.09345	0.68338					
	<.0001	<.0001	<.0001	<.0001	<.0001					
adjROA$_{t+3}$	0.20409	-0.11859	0.20264	0.09394	0.58048	0.68411				
	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001				
Current Performance	0.3375	-0.18354	0.25894	0.0989	0.69353	0.58208	0.52469			
	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001			
Size	0.10915	-0.13087	0.32487	0.18974	0.34013	0.32886	0.32863	0.36584		
	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001		
Growth	-0.01284	-0.00319	-0.214	-0.18404	0.0528	0.02948	0.01676	0.04799	-0.00197	
	<.0001	0.3583	<.0001	<.0001	<0.0001	<0.0001	<0.0001	<.0001	0.5715	
Financial Health	0.42785	-0.277	0.30807	0.07894	0.55292	0.48072	0.44092	0.7039	0.38891	-0.06509
	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001

Notes: Please see Table 1 for variable definitions. All variables are winsorized at 1% and 99% levels.

Table 5 Real Earnings Management Model Parameters

$$\frac{PROD_{it}}{Assets_{i,t-1}} = k_1 \frac{1}{Assets_{i,t-1}} + k_2 \frac{SALES_{it}}{Assets_{i,t-1}} + k_3 \frac{\Delta SALES_{it}}{Assets_{i,t-1}} + k_4 \frac{\Delta SALES_{i,t-1}}{Assets_{i,t-1}} + \varepsilon_{it} \quad (1)$$

$$\frac{DISX_{it}}{Assets_{i,t-1}} = k_1 \frac{1}{Assets_{i,t-1}} + k_2 \frac{SALES_{i,t-1}}{Assets_{i,t-1}} + \varepsilon_{it} \quad (2)$$

		Dependent Variable =	
	Exp. Sign	Production Costs	Discretionary Exp.
Intercept		-0.0487 ***	0.2476 ***
		(-8.8900)	(26.2400)
$1/A_{t-1}$		0.0000	0.0000 ***
		(-1.6300)	(-15.3700)
$Sales_t/A_{t-1}$	+	0.7337 ***	
		(129.6300)	
$Sales_{t-1}/A_{t-1}$	+		0.1465 ***
			(19.3900)
$\Delta Sales_t/A_{t-1}$	+	0.0364 ***	
		(4.3700)	
$\Delta Sales_{t-1}/A_{t-1}$	−	-0.0077	
		(-0.4000)	
No. of industry-year		830	830
Adj. R square		79.30%	14.06%

Notes: This table reports the estimated parameters for the REM estimation models, including production REM estimation model and discretionary expense REM estimation model. The residuals from estimations are the abnormal operating activitivies that are used to classify REM suspects. The regressions are estimated for every industry-year. Fama and French industry classification is used to define industries. Industry-years that have less than 15 observations are excluded from the sample. There are 830 seperate industry-years over 1987 - 2008. The table reports the mean coefficient across all industry-years and t-statistics are calculated using the standard error of the mean across the industry-years. The table also reports the mean adjusted R square (across industry-years) for each of these regressions. Please see Table 1 for variable
*, **, *** denotes a two-tailed p-value of less than 0.10, 0.05, and 0.01, respectively.

Table 6 Managerial Ability Model Parameters

$$Firm\ Efficiency = \beta_0 + \beta_1 Ln(Total\ Assets) + \beta_2 Market\ Share + \beta_3 Positive\ Free\ Cash\ Flow + \beta_4 Ln(Age) + \beta_5 BusinessSegmentConcentration + \beta_6 Foreign\ Currency\ Indicator + Year\ Indicators + \epsilon \quad (4)$$

	Dependent Variable = Firm Efficiency	
	Exp. Sign	Average Coefficient (Fama-MacBeth t-statistic)
Size	+	0.0303 ***
		(5.8100)
Market Share	+	2.4788 ***
		(2.1729)
Free Cash Flow Indicator	+	0.0818 ***
		(8.4700)
Age	+	-0.0024
		(-0.9900)
Foreign Currency Indicator	–	-0.0011
		(-0.1000)
Intercept	+	0.5528 ***
		(11.8700)
Year Fixed Effects		Included
Industry Estimations		43

Notes: This table the averages from the Tobit estimations of Model 4 by industry. The residual from the estimation is Managerial Ability. The dependent variable of this regression is the Firm Efficiency calculated from Data Envelopment Analysis; the independent variables are five firm characteristics that affect the firm efficiency. For illustrative purpose, I present the average of the industry coefficients and the Fama-MacBeth t-statistic based on the standard error of these coefficients (in parantheses). Please see Table 1 for variable definitions.
*, **, *** denotes a two-tailed p-value of less than 0.10, 0.05, and 0.01, respectively.

Table 7 H1 Testing

Panel A: Test H1 using Three Types of Suspects in period t+1

$$Future\_Perf_{t+i} = \beta_0 + \beta_1 * Suspect_t + \beta_n * Controls_{nt} + \varepsilon_{t+i} \quad (5)$$

		Dependent Variable = adjROA$_{t+1}$		
	Exp. Sign	Prod Suspect	Disx Suspect	Agg Suspect
Suspect	?	-0.013 ***	0.0026 **	-0.0040 ***
		(-11.85)	(2.30)	(-4.76)
Current Performance	+	0.4983 ***	0.5049 ***	0.5032 ***
		(127.15)	(130.12)	(129.12)
Size	+	0.0073 ***	0.0073 ***	0.0073 ***
		(33.98)	(33.76)	(34.18)
Growth	+	0.0016 ***	0.0017 ***	0.0016 ***
		(8.21)	(8.68)	(8.11)
Financial Health	+	0.0125 ***	0.0122 ***	0.0123 ***
		(42.99)	(42.12)	(42.41)
Intercept	−	-0.048 ***	-0.0500 ***	-0.0490 ***
		(-8.18)	(-8.44)	(-8.34)
Industry dummies		Yes	Yes	Yes
Year dummies		Yes	Yes	Yes
Adj R-sq		0.5027	0.5019	0.502

Notes: This table reports the results from the regression of future firm performance on REM suspects and controls. The dependent variable future performance is measured as ROA$_{t+1}$. I run this regression for three types of suspects seperately, including production costs suspects, discretionary expense suspects and aggregate suspests. All three types of suspects are defined in Table 1. Please also see Table 1 for the other variable definitions.

*, **, *** denotes a two-tailed p-value of less than 0.10, 0.05, and 0.01, respectively.

Table 7 (cont'd):

Panel B: Test H1 using Future Firm Performance in period t+1, t+2, and t+3

$$Future\_Perf_{t+i} = \beta_0 + \beta_1 * Suspect_t + \beta_n * Controls_{nt} + \varepsilon_{t+i} \quad (5)$$

		Dependent Variable =		
	Exp. Sign	adjROA$_{t+1}$	adjROA$_{t+2}$	adjROA$_{t+3}$
Agg Suspect	?	-0.0040 ***	-0.00453 ***	-0.00485 ***
		(-4.76)	(-4.43)	(-4.48)
Current Performance	+	0.5032 ***	0.37288 ***	0.31648 ***
		(129.12)	(85.58)	(68.53)
Size	+	0.0073 ***	0.01025 ***	0.01261 ***
		(34.18)	(42.71)	(49.57)
Growth	+	0.0016 ***	-0.00000048	-0.00094237 *
		(8.11)	-0.02	(-4.00)
Financial Health	+	0.0123 ***	0.01287 ***	0.0127 ***
		(42.41)	(39.61)	(36.88)
Intercept	–	-0.0490 ***	-0.05928 ***	-0.06714 ***
		(-8.34)	(-8.97)	(-9.59)
Industry dummies		Yes	Yes	Yes
Year dummies		Yes	Yes	Yes
Adj R-sq		0.502	0.3688	0.3121

Notes: This table reports the results from the regression of future firm performance on REM suspects and controls. I run this regression for aggregate suspects and test the effect of aggregate REM on firm performance in period t+1, t+2, and t+3. Please also see Table 1 for the other variable definitions.
*, **, *** denotes a two-tailed p-value of less than 0.10, 0.05, and 0.01, respectively.

Table 8 H2 Testing

Test H2 using a continuous managerial ability score MgrlAbility

$$Future\_Perf_{t+i} = \beta_0 + \beta_1 * Suspect_t + \beta_2 * MgrlAbility_{t-1} + \beta_3 * Suspect_t * MgrlAbility_{t-} \quad (6)$$

$$_{1+}\ \beta_n * Controls_{nt} + \varepsilon_{t+i}$$

		Dependent Variable = adjROAt+1		
	Exp. Sign	Prod Suspect	Disx Suspect	Agg Suspect
Suspect	−	-0.0120 ***	0.0019	-0.004 ***
		(-10.57)	(1.63)	(-4.47)
MgrlAbility	+	0.0256 ***	0.0385 ***	0.0291 ***
		(7.76)	(11.62)	(9.16)
Suspect × MgrlAbility	+	0.0359 ***	-0.0140 *	0.0286 ***
		(6.23)	(-1.83)	(4.70)
Current Performance	+	0.4935 ***	0.5003 ***	0.4982 ***
		(125.43)	(128.39)	(127.30)
Size	+	0.0075 ***	0.0075 ***	0.0076 ***
		(34.77)	(36.64)	(35.20)
Growth	+	0.0016 ***	0.0016 ***	0.0016 ***
		(8.23)	(8.22)	(7.83)
Financial Health	+	0.0117 ***	0.0115 ***	0.0116 ***
		(39.48)	(38.96)	(38.99)
Intercept	−	-0.045 ***	-0.0460 ***	-0.0460 ***
		(-7.63)	(-7.76)	(-7.71)
Industry dummies		Yes	Yes	Yes
Year dummies		Yes	Yes	Yes
Adj R-sq		0.5039	0.5028	0.503

Notes: This table reports the results from the regression of future firm performance on REM suspects, managerial ability and controls. Managerial Ability is a continuous score get as the residual from managerial estimation Model 4. I run this regression for three types of suspects seperately, including production costs suspects, discretionary expense suspects and aggregate suspests. All three types of suspects are defined in Table 1. Please also see Table 1 for the other variable definitions.

*, **, *** denotes a two-tailed p-value of less than 0.10, 0.05, and 0.01, respectively.

Table 9 Testing Three Types of Discretionary Expenses

Panel A: Test H1 using Three Types of Discretionary Expenses in period t+1

$$Future\_Perf_{t+i} = \beta_0 + \beta_1 * Suspect_t + \beta_n * Controls_{nt} + \varepsilon_{t+i} \quad (5)$$

		Dependent Variable = adjROA$_{t+1}$		
	Exp. Sign	SGA Suspect	R&D Suspect	Adv Suspect
Suspect	?	0.00525 ***	-0.00222	0.0018
		(5.11)	(-0.84)	(0.42)
Current Performance	+	0.50147 ***	0.49711 ***	0.50711 ***
		(130.44)	(109.38)	(78.63)
Size	+	0.0073 ***	0.00905 ***	0.00672 ***
		(36.23)	(27.93)	(18.98)
Growth	+	0.00214 ***	0.0007 ***	0.00314 ***
		(11.24)	(2.79)	(10.12)
Financial Health	+	0.01016 ***	0.0134 ***	0.00957 ***
		(35.71)	(36.53)	(19.68)
Intercept	–	-0.04856 ***	-0.0187 ***	-0.0210 ***
		(-8.94)	(-3.54)	(-3.3)
Industry dummies		Yes	Yes	Yes
Year dummies		Yes	Yes	Yes
Adj R-sq		0.4771	0.5544	0.5004

Notes: This table reports the results from the regression of future firm performance on REM suspects and controls. The *, **, *** denotes a two-tailed p-value of less than 0.10, 0.05, and 0.01, respectively.

Table 9 (cont'd):

Panel B: Test H2 using Three Types of Discretionary Expenses in period t+1

$$Future\_Perf_{t+i} = \beta_0 + \beta_1 * Suspect_t + \beta_2 * HighAbility_{t-1} + \beta_3 * Suspect_t * HighAbility_{t-1+} \beta_n * Controls_{nt} + \varepsilon_{t+i}$$

		Dependent Variable = adjROAt+1		
	Exp. Sign	SGA Suspect	R&D Suspect	Adv Suspect
Suspect	?	0.0027 **	-0.00134	0.00307
		(2.22)	(-0.49)	(1.36)
MgrlAbility	+	0.000089	0.0623 ***	0.0349 ***
		(0.03)	(13.46)	(6.13)
Suspect × MgrlAbility	+	0.02161 ***	0.0076	0.0293 **
		(2.70)	(0.68)	(2.14)
Current Performance	+	0.30552 ***	0.48771 ***	0.50106 ***
		(67.04)	(106.44)	(77.20)
Size	+	0.0126 ***	0.0097 ***	0.0072 ***
		(52.72)	(29.62)	(19.98)
Growth	+	-0.000835 ***	0.0005 **	0.00296 ***
		(-3.70)	(2.00)	(9.54)
Financial Health	+	0.0099 ***	0.01251 ***	0.00894 ***
		(28.69)	(33.69)	(18.09)
Intercept	–	-0.0644 ***	-0.0152 ***	-0.0191 ***
		(-10.01)	(-2.89)	(-3)
Industry dummies		Yes	Yes	Yes
Year dummies		Yes	Yes	Yes
Adj R-sq		0.2768	0.5562	0.5015

Notes: This table reports the results from the regression of future firm performance on REM suspects, managerial ability and controls. High Ability is an indicator variable that is equal to one if the decile rank (by industry and year) of managerial ability score is the top three deciles, and zero otherwise. I run this regression for three types of suspects seperately, including production costs suspects, discretionary expense suspects and aggregate suspests. All three types of suspects are defined in Table 1. Please also see Table 1 for the other variable definitions.
*, **, *** denotes a two-tailed p-value of less than 0.10, 0.05, and 0.01, respectively.

Table 10 Testing across Years

Panel A: Test H1 using two subsamples pre-SOX sample and post-SOX sample

$$Future\_Perf_{t+i} = \beta_0 + \beta_1 * Suspect_t + \beta_n * Controls_{nt} + \varepsilon_{t+i} \quad (5)$$

		Dependent Variable = adjROA$_{t+1}$											
	Exp. Sign	Prod Suspect				Disx Suspect				Agg Suspect			
		Pre-2002		Post-2002		Pre-2002		Post-2002		Pre-2002		Post-2002	
Suspect	?	-0.0119	***	-0.01604	***	0.00192		0.00288		-0.0043	***	-0.0060	***
		(-8.5)		(-8.64)		(1.38)		(1.44)		(-3.82)		(-3.78)	
Current Performance	+	0.47326	***	0.5252	***	0.47875	***	0.53516	***	0.47712	***	0.53214	***
		(94.62)		(81.01)		(96.48)		(83.70)		(95.77)		(82.69)	
Size	+	0.00666	***	0.00838	***	0.00662	***	0.00849	***	0.00668	***	0.00851	***
		(25.39)		(22.32)		(25.09)		(22.58)		(25.46)		(22.67)	
Growth	+	0.00087	***	0.00331	***	0.00094	***	0.00344	***	0.00084	***	0.0033	***
		(3.58)		(9.56)		(3.86)		(9.91)		(3.46)		(9.50)	
Financial Health	+	0.01357	***	0.01192	***	0.01339	***	0.01134	***	0.01348	***	0.01164	***
		(36.11)		(24.93)		(35.66)		(23.77)		(35.82)		(24.30)	
Intercept	−	-0.0445	***	-0.05165	***	-0.0458	***	-0.0544	***	-0.0452	***	-0.0530	***
		(-6.26)		(-5.22)		(-6.44)		(-5.5)		(-6.36)		(-5.35)	
Industry dummies		Yes		Yes		Yes		Yes		Yes		Yes	
Year dummies		Yes		Yes		Yes		Yes		Yes		Yes	

Notes: This table reports the results from the regression of future firm performance on REM suspects and controls. The dependent

*, **, *** denotes a two-tailed p-value of less than 0.10, 0.05, and 0.01, respectively.

Table 10 (cont'd):

Panel B: Test H2 using two subsamples pre-SOX sample and post-SOX sample

$$Future\_Perf_{t+i} = \beta_0 + \beta_1 * Suspect_t + \beta_2 * MgrlAbility_{t-1} + \beta_3 * Suspect_t * MgrlAbility_{t-1+} \beta_n * Controls_{nt} + \varepsilon_{t+i} \quad (6)$$

	Dependent Variable = adjROA$_{t+1}$									
	Exp. Sign	Prod Suspect		Disx Suspect		Agg Suspect				
		Pre-2002	Post-2002	Pre-2002	Post-2002	Pre-2002		Post-2002		
Suspect	?	-0.01171 ***	-0.0135 ***	0.00123	0.00178	-0.0050 ***		-0.0049 ***		
		(-8.21)	(-6.97)	(0.88)	(0.89)	(-4.28)		(-2.93)		
MgrlAbility	+	0.0364 ***	0.0170 ***	0.0436 ***	0.0324 ***	0.0387 ***		0.0234 ***		
		(8.77)	(3.08)	(11.27)	(6.28)	(9.74)		(4.37)		
Suspect × MgrlAbility	+	0.02272 ***	0.05447 ***	-0.0174 *	-0.02	0.01854 **		0.03577 ***		
		(3.17)	(5.56)	(-1.85)	(-1.39)	(2.42)		(3.54)		
Current Performance	+	0.46719 ***	0.52055 ***	0.47278 ***	0.5306 ***	0.47079 ***		0.52747 ***		
		(92.99)	(79.94)	(94.86)	(82.49)	(94.07)		(81.56)		
Size	+	0.00682 ***	0.00869 ***	0.00679 ***	0.00882 ***	0.00688 ***		0.00887 ***		
		(25.96)	(22.95)	(25.65)	(23.20)	(26.18)		(23.39)		
Growth	+	0.000798 ***	0.00342 ***	0.00082 ***	0.0034 ***	0.000723 ***		0.00332 ***		
		(3.28)	(9.87)	(3.36)	(9.77)	(2.97)		(9.55)		
Financial Health	+	0.01263 ***	0.01123 ***	0.01254 ***	0.01083 ***	0.01257 ***		0.01096 ***		
		(32.97)	(23.12)	(32.76)	(22.33)	(32.78)		(22.49)		
Intercept	–	-0.03967 ***	-0.0501 ***	-0.0405 ***	-0.0515 ***	-0.0401 ***		-0.0505 ***		
		(-5.58)	(-5.07)	(-5.68)	(-5.2)	(-5.64)		(-5.09)		
Industry dummies		Yes	Yes	Yes	Yes	Yes		Yes		
Year dummies		Yes	Yes	Yes	Yes	Yes		Yes		

Notes: This table reports the results from the regression of future firm

*, **, *** denotes a two-tailed p-value of less than 0.10, 0.05, and 0.01, respectiv

Table 11 Testing across Different Growth Firms

Panel A: Test H1 using two subsamples mature firms sample and growth firms sample

$$Future\_Perf_{t+i} = \beta_0 + \beta_1 * Suspect_t + \beta_n * Controls_{nt} + \varepsilon_{t+i} \quad (5)$$

	Dependent Variable = $adjROA_{t+1}$											
	Exp. Sig	Prod Suspect				Disx Suspect				Agg Suspect			
		mature		growth		mature		growth		mature		growth	
Suspect	?	-0.01131	***	-0.01855	***	0.00533	**	0.00152		0.0008		-0.0094	***
		(-5.17)		(-9.15)		(2.53)		(0.58)		(0.49)		(-4.9)	
Current Performance	+	0.42935	***	0.52185	***	0.43319	***	0.53153	***	0.43431	***	0.52807	***
		(57.38)		(75.89)		(58.24)		(78.10)		(58.31)		(77.21)	
Size	+	0.00482	***	0.01142	***	0.00469	***	0.0115	***	0.00481	***	0.01148	***
		(10.96)		(26.25)		(10.59)		(26.34)		(10.92)		(26.36)	
Growth	+	0.00798	**	0.00089		0.00851	***	0.00091		0.00834	***	0.00076	
		(2.48)		(1.61)		(2.64)		(1.63)		(2.59)		(1.36)	
Financial Health	+	0.01128	***	0.01299	***	0.01104	***	0.0127	***	0.01104	***	0.01285	***
		(20.41)		(24.27)		(20.03)		(23.72)		(19.92)		(23.98)	
Intercept	−	-0.04461	***	-0.06348	***	-0.0456	***	-0.066	***	-0.0462	***	-0.0638	***
		(-4.5)		(-4.53)		(-4.6)		(-4.7)		(-4.66)		(-4.54)	
Industry dummies		Yes		Yes		Yes		Yes		Yes		Yes	
Year dummies		Yes		Yes		Yes		Yes		Yes		Yes	

Notes: This table reports the results from the regression of future firm performance on REM suspects and controls. The *, **, *** denotes a two-tailed p-value of less than 0.10, 0.05, and 0.01, respectively.

Table 11 (cont'd):

Panel B: Test H2 using two subsamples mature firms sample and growth firms sample

$$Future\_Perf_{t+i} = \beta_0 + \beta_1 * Suspect_t + \beta_2 * MgrlAbility_{t-1} + \beta_3 * Suspect_t * MgrlAbility_{t-} \quad (6)$$

$$_{1+} \beta_n * Controls_{nt} + \varepsilon_{t+i}$$

	Dependent Variable = adjROA$_{t+1}$											
	Exp. Sign	Prod Suspect				Disx Suspect				Agg Suspect			
		mature		growth		mature		growth		mature		growth	
Suspect	?	-0.01161	***	-0.01444	***	0.00541	**	0.0012		0.0014		-0.0074	***
		(-5.13)		(-6.69)		(2.52)		(0.46)		(0.78)		(-3.65)	
MgrlAbility	+	0.01926	***	0.0285	***	0.0153	**	0.0465	***	0.0124	**	0.0373	***
		(2.97)		(4.63)		(2.54)		(8.20)		(1.98)		(6.38)	
Suspect × MgrlAbility	+	0.00629		0.05039	***	0.0164		-0.03	*	0.02649	**	0.03808	***
		(0.56)		(4.78)		(1.22)		(-1.8)		(2.24)		(3.36)	
Current Performance	+	0.42706	***	0.51554	***	0.43161	***	0.52474	***	0.43226	***	0.52097	***
		(56.87)		(74.62)		(57.87)		(76.63)		(57.86)		(75.73)	
Size	+	0.00492	***	0.01185	***	0.00483	***	0.01189	***	0.00491	***	0.01187	***
		(11.14)		(27.09)		(10.87)		(27.05)		(11.13)		(27.11)	
Growth	+	0.00847	***	0.00075		0.0088	***	0.00067		0.0088	***	0.0006	
		(2.63)		(1.35)		(2.73)		(1.20)		(2.73)		(1.08)	
Financial Health	+	0.01092	***	0.012	***	0.01072	***	0.01179	***	0.01066	***	0.01185	***
		(19.49)		(21.94)		(19.17)		(21.56)		(18.98)		(21.65)	
Intercept	–	-0.04182	***	-0.06325	***	-0.0437	***	-0.06305	***	-0.0441	***	-0.0618	***
		(-4.21)		(-4.52)		(-4.39)		(-4.5)		(-4.44)		(-4.41)	
Industry dummies		Yes		Yes		Yes		Yes		Yes		Yes	
Year dummies		Yes		Yes		Yes		Yes		Yes		Yes	

Notes: This table reports the results from the regression of future firm

*, **, *** denotes a two-tailed p-value of less than 0.10, 0.05, and 0.01, respectivel

Table 12 Testing across Different Size Firms

Panel A: Test H1 using three subsamples small firms, medium firms and large firms

$$Future\_Perf_{t+i} = \beta_0 + \beta_1 * Suspect_t + \beta_n * Controls_{nt} + \varepsilon_{t+i} \quad (5)$$

	Dependent Variable = adjROA$_{t+1}$											
	Exp. Sign	Prod Suspect				Disx Suspect				Agg Suspect			
		small		large		small		large		small		large	
Suspect	?	-0.01208	***	-0.0062	***	0.00707	**	0.0012		-0.0043	*	-0.0017	
		(-5.28)		(-3.99)		(2.16)		(1.03)		(-1.94)		(-1.57)	
Current Performance	+	0.48919	***	0.45466	***	0.494	***	0.4585	***	0.4935	***	0.4571	***
		(68.11)		(63.86)		(69.39)		(64.94)		(68.18)		(64.33)	
Size	+	0.0121	***	0.00409	***	0.01191	***	0.004	***	0.0121	***	0.004	***
		(7.65)		(6.43)		(7.52)		(6.31)		(7.64)		(6.34)	
Growth	+	-0.0033	***	0.00888	***	-0.0033	***	0.004	***	-0.0033	***	0.0089	***
		(-8.2)		(31.27)		(-8.08)		(6.31)		(-8.28)		(31.17)	
Financial Health	+	0.01301	***	0.0073	***	0.01282	***	0.007	***	0.0129	***	0.0071	***
		(23.38)		(14.29)		(23.04)		(13.83)		(23.20)		(13.94)	
Intercept	−	-0.03911	***	-0.0309	***	-0.0413	***	-0.0308	***	-0.0410	***	-0.0305	***
		(-2.82)		(-3.67)		(-2.97)		(-3.65)		(-2.95)		(-3.61)	
Industry dummies		Yes		Yes		Yes		Yes		Yes		Yes	
Year dummies		Yes		Yes		Yes		Yes		Yes		Yes	

Notes: This table reports the results from the regression of future firm performance on REM suspects and controls.

*, **, *** denotes a two-tailed p-value of less than 0.10, 0.05, and 0.01, respectively.

Table 12 (cont'd):

Panel B: Test H2 using three subsamples small firms, medium firms and large firms

$$Future\_Perf_{t+i} = \beta_0 + \beta_1 * Suspect_t + \beta_2 * MgrlAbility_{t-1} + \beta_3 * Suspect_t * MgrlAbility_{t-1+} \beta_n * Controls_{nt} + \varepsilon_{t+i} \quad (6)$$

	Dependent Variable = adjROA$_{t+1}$											
	Exp. Sign	Prod Suspect				Disx Suspect				Agg Suspect			
		small		large		small		large		small		large	
Suspect	?	-0.00849	***	-0.00656	***	0.00578	*	0.00105		-0.0013		-0.0022	**
		(-3.37)		(-4.23)		(1.76)		(0.87)		(-0.53)		(-1.98)	
MgrlAbility	+	0.02756	***	0.01521	***	0.04079	***	0.02087	***	0.03039	***	0.02206	***
		(3.65)		(3.65)		(6.06)		(5.02)		(4.23)		(5.31)	
Suspect × MgrlAbility	+	0.04005	***	0.03235	***	-0.0093		0.00151		0.04411	***	-0.00121	
		(3.18)		(3.81)		(-0.45)		(0.18)		(3.25)		(-0.15)	
Current Performance	+	0.48303	***	0.4523	***	0.48705	***	0.45657	***	0.48663	***	0.45478	***
		(66.51)		(63.50)		(67.61)		(64.61)		(67.45)		(63.93)	
Size	+	0.01443	***	0.00466	***	0.01422	***	0.00443	***	0.01415	***	0.00446	***
		(8.90)		(7.28)		(8.75)		(6.92)		(8.70)		(6.98)	
Growth	+	-0.00325	***	0.00895	***	-0.00327	***	0.00897	***	-0.00327	***	0.00888	***
		(-8.09)		(31.45)		(-8.11)		(31.48)		(-8.13)		(31.08)	
Financial Health	+	0.01243	***	0.00658	***	0.01234	***	0.00629	***	0.01231	***	0.00644	***
		(22.11)		(12.53)		(21.96)		(12.06)		(21.88)		(12.24)	
Intercept	−	-0.04061	***	-0.03079	***	-0.0407	***	-0.02904	***	-0.0413	***	-0.0285	***
		(-2.92)		(-3.65)		(-2.94)		(-3.44)		(-2.97)		(-3.38)	
Industry dummies		Yes		Yes		Yes		Yes		Yes		Yes	
Year dummies		Yes		Yes		Yes		Yes		Yes		Yes	

Notes: This table reports the results from the regression of future firm performance on REM suspects and controls. The *, **, *** denotes a two-tailed p-value of less than 0.10, 0.05, and 0.01, respectively.

Table 13 Testing with manufacturing firms only

Panel A: Test H1 using a subsample of manufacturing firms in period t+1

$$Future\_Perf_{t+i} = \beta_0 + \beta_1 * Suspect_t + \beta_n * Controls_{nt} + \varepsilon_{t+i} \quad (5)$$

	Dependent Variable = adjROA$_{t+1}$					
	Exp. Sign	Prod Suspect		Disx Suspect		Agg Suspect	
Suspect	?	-0.01499	***	0.00245	*	-0.0065	***
		(-9.8)		(1.82)		(-5.8)	
Current Performance	+	0.50376	***	0.5098	***	0.50765	***
		(93.17)		(94.83)		(94.22)	
Size	+	0.00681	***	0.00682	***	0.00688	***
		(24.98)		(24.90)		(25.22)	
Growth	+	0.00141	***	0.00146	***	0.00128	***
		(5.40)		(5.58)		(4.91)	
Financial Health	+	0.01423	***	0.01403	***	0.01416	***
		(35.15)		(34.67)		(34.94)	
Intercept	–	-0.07147	***	-0.0744	***	-0.0721	***
		(-11.36)		(-11.68)		(-11.45)	
Industry dummies		Yes		Yes		Yes	
Year dummies		Yes		Yes		Yes	

Notes: This table reports the results from the regression of future firm performance on REM

*, **, *** denotes a two-tailed p-value of less than 0.10, 0.05, and 0.01, respectively.

Table 13 (cont'd):

Panel B: Test H2 using a subsample of manufacturing firms

$$Future\_Perf_{t+i} = \beta_0 + \beta_1 * Suspect_t + \beta_2 * MgrlAbility_{t-1} + \beta_3 * Suspect_t * MgrlAbility_{t-} \quad (6)$$

$$_{1+} \beta_n * Controls_{nt} + \varepsilon_{t+i}$$

		Dependent Variable = adjROAt+1		
	Exp. Sign	Prod Suspect	Disx Suspect	Agg Suspect
Suspect	−	-0.0117 ***	0.00115	-0.00662 ***
		(-7.36)	(0.85)	(-5.67)
MgrlAbility	+	0.03867 ***	0.0613 ***	0.0495 ***
		(8.83)	(14.50)	(11.48)
Suspect × MgrlAbility	+	0.05858 ***	-0.0410 ***	0.02569 ***
		(7.72)	(-4.46)	(3.41)
Current Performance	+	0.49173 ***	0.49759 ***	0.4956 ***
		(90.16)	(91.66)	(91.09)
Size	+	0.0074 ***	0.0074 ***	0.0075 ***
		(26.87)	(26.81)	(27.26)
Growth	+	0.00149 ***	0.0014 ***	0.00122 ***
		(5.71)	(5.35)	(4.68)
Financial Health	+	0.0132 ***	0.01303 ***	0.01308 ***
		(32.06)	(31.74)	(31.84)
Intercept	−	-0.07196 ***	-0.0746 ***	-0.0720 ***
		(-11.47)	(-11.72)	(-11.46)
Industry dummies		Yes	Yes	Yes
Year dummies		Yes	Yes	Yes

Notes: This table reports the results from the regression of future firm performance on REM

*, **, *** denotes a two-tailed p-value of less than 0.10, 0.05, and 0.01, respectively.

Table 14 Testing across Different Age Firms

Panel A: Test H1 using two subsamples young firms and old firms

$$Future\_Perf_{t+i} = \beta_0 + \beta_1 * Suspect_t + \beta_n * Controls_{nt} + \varepsilon_{t+i} \quad (5)$$

	Dependent Variable = adjROA$_{t+1}$											
	Exp. Sign	Prod Suspect				Disx Suspect				Agg Suspect			
		young		old		young		old		young		old	
Suspect	?	-0.0191	***	-0.00297		0.00442	**	0.00043		-0.0065	***	-0.0017	
		(-10.34)		(-1.56)		(1.98)		(0.31)		(-3.95)		(-1.27)	
Current Performance	+	0.48059	***	0.46286	***	0.49065	***	0.46384	***	0.48831	***	0.46302	***
		(74.83)		(54.16)		(77.20)		(54.42)		(76.47)		(54.16)	
Size	+	0.00939	***	0.00336	***	0.00938	***	0.00337	***	0.00952	***	0.00337	***
		(22.22)		(10.20)		(22.01)		(10.22)		(22.48)		(10.24)	
Growth	+	0.00073	**	0.00722	***	0.00085	***	0.00725	***	0.00073	**	0.00718	***
		(2.29)		(18.98)		(2.64)		(18.95)		(2.27)		(18.78)	
Financial Health	+	0.01261	***	0.00973	***	0.01223	***	0.00967	***	0.01241	***	0.00974	***
		(25.31)		(17.94)		(24.57)		(17.87)		(24.85)		(17.91)	
Intercept	−	-0.0553	***	-0.03119	***	-0.0571	***	-0.0318	***	-0.0566	***	-0.0315	***
		(-5.66)		(-3.89)		(-5.83)		(-3.97)		(-5.79)		(-3.93)	
Industry dummies		Yes		Yes		Yes		Yes		Yes		Yes	
Year dummies		Yes		Yes		Yes		Yes		Yes		Yes	

Notes: This table reports the results from the regression of future firm performance on REM suspects and controls. The *, **, *** denotes a two-tailed p-value of less than 0.10, 0.05, and 0.01, respectively.

Table 14 (cont'd):

Panel B: Test H2 using two subsamples young firms and old firms

$$Future\_Perf_{t+i} = \beta_0 + \beta_1 * Suspect_t + \beta_2 * MgrlAbility_{t-1} + \beta_3 * Suspect_t * MgrlAbility_{t-1+} \beta_n * Controls_{nt} + \varepsilon_{t+i} \quad (6)$$

	Dependent Variable = adjROA$_{t+1}$											
	Exp. Sign	Prod Suspect				Disx Suspect				Agg Suspect			
		young		old		young		old		young		old	
Suspect	?	-0.0172	***	-0.00355	*	0.00334		0.00044		-0.0060	***	-0.0019	
		(-8.89)		(-1.86)		(1.50)		(0.31)		(-3.49)		(-1.39)	
MgrlAbility	+	0.03493	***	0.0183	***	0.0442	***	0.0127	**	0.0393	***	0.0126	**
		(6.32)		(3.27)		(8.74)		(2.30)		(7.50)		(2.28)	
Suspect × MgrlAbility	+	0.03263	***	-0.00479		-0.0086		0.01		0.02683	***	0.01967	*
		(3.46)		(-0.45)		(-0.6)		(1.43)		(2.64)		(1.87)	
Current Performance	+	0.47536	***	0.4606	***	0.48502	***	0.46194	***	0.48244	***	0.4609	***
		(73.74)		(53.75)		(76.01)		(54.09)		(75.26)		(53.78)	
Size	+	0.00963	***	0.00352	***	0.00965	***	0.00356	***	0.00978	***	0.00355	***
		(22.75)		(10.59)		(22.61)		(10.66)		(23.06)		(10.68)	
Growth	+	0.00064	**	0.00724	***	0.00067	**	0.00726	***	0.0006	*	0.00722	***
		(2.00)		(19.00)		(2.09)		(18.97)		(1.86)		(18.88)	
Financial Health	+	0.01223	***	0.00926	***	0.01134	***	0.08932	***	0.01141	***	0.00924	***
		(24.57)		(16.57)		(22.35)		(22.33)		(22.42)		(16.49)	
Intercept	−	-0.0571	***	-0.02872	***	-0.0530	***	-0.0301	***	-0.0527	***	-0.0289	***
		(-5.83)		(-3.57)		(-5.42)		(-3.74)		(-5.39)		(-3.6)	
Industry dummies		Yes		Yes		Yes		Yes		Yes		Yes	
Year dummies		Yes		Yes		Yes		Yes		Yes		Yes	

Notes: This table reports the results from the regression of future firm

*, **, *** denotes a two-tailed p-value of less than 0.10, 0.05, and 0.01, respe

Table 15 Testing across Different Accrual Constraints

Panel A: Test H1 using two subsamples bloated balance sheet firms and not bloated balance sheet firms

$$Future\_Perf_{t+i} = \beta_0 + \beta_1 * Suspect_t + \beta_n * Controls_{nt} + \varepsilon_{t+i} \quad (5)$$

	Dependent Variable = adjROA$_{t+1}$											
	Exp. Sign	Prod Suspect				Disx Suspect				Agg Suspect			
		bloated		not bloated		bloated		not bloated		bloated		not bloated	
Suspect	?	-0.1083	***	-0.36107	**	0.03134		-0.14508		-0.0444	*	-0.0584	
		(-3.6)		(-1.96)		(0.98)		(0.76)		(-1.76)		(-0.38)	
Current Performance	+	0.2419	***	0.0156	***	0.24394	***	0.01564	***	0.24359	***	0.0157	***
		(35.74)		(4.04)		(36.17)		(4.05)		(36.10)		(4.05)	
Size	+	0.1043	***	0.20822	***	0.10519	***	0.20419	***	0.10542	***	0.2084	***
		(25.99)		(6.50)		(26.12)		(6.33)		(26.36)		(6.48)	
Growth	+	0.00023		0.00017		0.00024		0.00019		0.00023		0.0002	
		(1.35)		(0.26)		(1.38)		(0.29)		(1.37)		(0.29)	
Financial Health	+	0.00832	***	-0.00045	*	0.00833	***	-0.00044	*	0.00832	***	-0.0004	*
		(35.12)		(-1.76)		(35.20)		(-1.71)		(35.14)		(-1.71)	
Intercept	−	-0.2859	*	-0.88278	***	-0.3122	**	-0.90906		-0.3047	**	-0.9089	
		(-1.9)		(-0.75)		(-2.07)		(-0.77)		(-2.02)		(-0.77)	
Industry dummies		Yes		Yes		Yes		Yes		Yes		Yes	
Year dummies		Yes		Yes		Yes		Yes		Yes		Yes	

Notes: This table reports the results from the regression of future firm performance on REM suspects and controls.
*, **, *** denotes a two-tailed p-value of less than 0.10, 0.05, and 0.01, respectively.

Table 15 (cont'd):

Panel B: Test H2 using two subsamples bloated balance sheet firms and not bloated balance sheet firms

$$Future\_Perf_{t+i} = \beta_0 + \beta_1 * Suspect_t + \beta_2 * MgrlAbility_{t-1} + \beta_3 * Suspect_t * MgrlAbility_{t-1+} \beta_n * Controls_{nt} + \varepsilon_{t+i} \quad (6)$$

		Dependent Variable = adjROA$_{t+1}$											
	Exp. Sign	Prod Suspect				Disx Suspect				Agg Suspect			
		bloated		not bloated		bloated		not bloated		bloated		not bloated	
Suspect	?	-0.1105	***	-0.3664	**	0.0458		0.1285		-0.0137	***	-0.8960	
		(-2.86)		(-1.98)		(1.38)		(0.65)		(-0.44)		(-0.76)	
MgrlAbility	+	-0.2436	***	-0.1042		-0.2169	***	-0.1898		-0.2395	***	-0.2549	
		(-3.23)		(-0.17)		(-2.98)		(-0.35)		(-3.29)		(-0.43)	
Suspect × MgrlAbility	+	0.09671		0.38993		0.2344		0.5960		0.3196	*	0.75324	
		(0.57)		(0.37)		(1.22)		(0.41)		(1.87)		(0.68)	
Current Performance	+	0.24222	***	0.0156	***	0.2445	***	0.0156	***	0.2437	***	0.01566	***
		(35.79)		(4.04)		(36.25)		(4.04)		(36.08)		(4.05)	
Size	+	0.10519	***	0.20767	***	0.1061	***	0.2051	***	0.1059	***	0.2081	***
		(26.16)		(6.45)		(26.27)		(6.33)		(26.37)		(6.44)	
Growth	+	0.00024		0.00016	***	0.0002		0.0002		0.0002		0.00018	
		(1.36)		(0.26)		(1.39)		(0.30)		(1.37)		(0.28)	
Financial Health	+	0.00828	***	-0.0005	*	0.0083	***	-4E-04	*	0.0083	***	-0.0004	*
		(34.90)		(-1.76)		(35.01)		(-1.72)		(35.01)		(-1.72)	
Intercept	−	-0.3078	**	-0.8828		-0.3342	**	-0.933		-0.3310	**	-0.8960	
		(-2.04)		(-0.75)		(-2.22)		(-0.79)		(-2.19)		(-0.76)	
Industry dummies		Yes		Yes		Yes		Yes		Yes		Yes	
Year dummies		Yes		Yes		Yes		Yes		Yes		Yes	

Notes: This table reports the results from the regression of future firm

*, **, *** denotes a two-tailed p-value of less than 0.10, 0.05, and 0.01, respe

Table 16 Testing across Different Analyst Following Firms

Panel A: Test H1 using two subsamples with analyst followings and without analyst following

$$Future\_Perf_{t+i} = \beta_0 + \beta_1 Suspect_t + \beta_n Controls_{nt} + \varepsilon_{t+i} \quad (5)$$

	Dependent Variable = adjROA$_{t+1}$											
	Exp. Sign	Prod Suspect				Disx Suspect				Agg Suspect			
		follow		no follow		follow		no follow		follow		no follow	
Suspect	?	-0.01517	***	-0.01245	***	0.00105		0.0056	***	-0.0064	***	-0.0020	
		(-9.49)		(-7.86)		(0.75)		(3.25)		(-5.21)		(-1.51)	
Current Performance	+	0.51005	***	0.48321	***	0.51936	***	0.4888	***	0.51533	***	0.48861	***
		(81.46)		(93.16)		(83.85)		(95.21)		(82.62)		(94.87)	
Size	+	0.0071	***	0.00662	***	0.00704	***	0.0065	***	0.00707	***	0.00663	***
		(21.63)		(20.16)		(21.34)		(19.55)		(21.52)		(20.14)	
Growth	+	0.0055	***	-0.00108	***	0.00564	***	-0.001	***	0.00548	***	-0.0011	***
		(20.17)		(-3.81)		(20.59)		(-3.52)		(19.99)		(-3.84)	
Financial Health	+	0.01143	***	0.01298	***	0.01093	***	0.0127	***	0.01122	***	0.01279	***
		(24.64)		(33.65)		(23.68)		(33.09)		(24.15)		(33.16)	
Intercept	–	-0.05143	***	-0.04604	***	-0.0522	***	-0.046	***	-0.0517	***	-0.0464	***
		(-6.04)		(-5.44)		(-6.12)		(-5.45)		(-6.06)		(-5.47)	
Industry dummies		Yes		Yes		Yes		Yes		Yes		Yes	
Year dummies		Yes		Yes		Yes		Yes		Yes		Yes	

Notes: This table reports the results from the regression of future firm performance on REM suspects and controls.
*, **, *** denotes a two-tailed p-value of less than 0.10, 0.05, and 0.01, respectively.

Table 16 (cont'd):

Panel B: Test H2 using two subsamples with analyst followings and without analyst following

$$Future\_Perf_{t+i} = \beta_0 + \beta_1 * Suspect_t + \beta_2 * MgrlAbility_{t-1} + \beta_3 * Suspect_t * MgrlAbility_{t-1+} \beta_n * Controls_{nt} + \varepsilon_{t+i} \quad (6)$$

	Dependent Variable = adjROA$_{t+1}$											
	Exp. Sign	Prod Suspect				Disx Suspect				Agg Suspect			
		follow		no follow		follow		no follow		follow		no follow	
Suspect	?	-0.0162	***	-0.0117	***	0.0001		0.00494	***	-0.0068	***	-0.0018	
		(-10.13)		(-7.1)		(0.07)		(2.84)		(-5.47)		(-1.27)	
MgrlAbility	+	0.0494	***	0.0248	***	0.0505	***	0.0318	***	0.0413	***	0.0263	***
		(12.11)		(5.16)		(11.64)		(7.27)		(9.52)		(5.75)	
Suspect × MgrlAbility	+	-0.0066		0.02174	***	-0.0218	**	-0.0130		0.04666	***	0.01954	**
		(-0.29)		(2.68)		(-2.18)		(-1.18)		(5.52)		(2.27)	
Current Performance	+	0.50508	***	0.47889	***	0.51468	***	0.48445	***	0.50962	***	0.48407	***
		(80.63)		(91.76)		(83.05)		(93.79)		(81.71)		(93.42)	
Size	+	0.00729	***	0.00678	***	0.00718	***	0.00665	***	0.00722	***	0.00682	***
		(22.21)		(20.61)		(21.76)		(20.01)		(21.98)		(20.69)	
Growth	+	0.00537	***	-0.0011	***	0.00553		-0.00107	***	0.00542	***	-0.0011	***
		(19.70)		(-3.86)		(20.18)		(-3.74)		(19.74)		(-3.97)	
Financial Health	+	-0.0458	***	0.01243	***	0.00936	***	0.01227	***	0.00949	***	0.01226	***
		(-5.37)		(31.78)		(19.47)		(31.44)		(19.69)		(31.32)	
Intercept	–	-0.3078	**	-0.0429	***	-0.0465	***	-0.04233	***	-0.0461	***	-0.0429	***
		(-2.04)		(-5.06)		(-5.45)		(-4.99)		(-5.41)		(-5.05)	
Industry dummies		Yes		Yes		Yes		Yes		Yes		Yes	
Year dummies		Yes		Yes		Yes		Yes		Yes		Yes	

Notes: This table reports the results from the regression of future firm

*, **, *** denotes a two-tailed p-value of less than 0.10, 0.05, and 0.01, resp

Table 17 Testing Firms with Governance Score

Panel A: Test H1 including governance score from Risk Matrix

$$Future\_Perf_{t+i} = \beta_0 + \beta_1 * Suspect_t + \beta_n * Controls_{nt} + \varepsilon_{t+i} \quad (5)$$

	Dependent Variable = adjROA$_{t+1}$					
	Exp. Sign	Prod Suspect		Disx Suspect		Agg Suspect	
Suspect	?	-0.00997	***	-0.00452	**	-0.0046	**
		(-3.38)		(-1.96)		(-2.09)	
Current Performance	+	0.49874	***	0.50328	***	0.50064	***
		(36.13)		(36.62)		(36.26)	
Size	+	0.00435	***	0.00433	***	0.00427	***
		(5.05)		(5.01)		(4.96)	
Growth	+	0.0075	***	0.00749	***	0.00746	***
		(14.09)		(14.00)		(13.90)	
Financial Health	+	0.00821	***	0.00789	***	0.00811	***
		(8.56)		(8.26)		(8.43)	
Intercept	–	-0.01925		-0.0185		-0.0186	
		(-0.92)		(-0.89)		(-0.89)	
Industry dummies		Yes		Yes		Yes	
Year dummies		Yes		Yes		Yes	

Notes: This table reports the results from the regression of future firm performance on

*, **, *** denotes a two-tailed p-value of less than 0.10, 0.05, and 0.01, respectively.

Table 17 (cont'd):

Panel B: Test H2 including Gindex

$Future\_Perf_{t+i} = \beta_0 + \beta_1 * Suspect_t + \beta_2 * MgrlAbility_{t-1} + \beta_3 Gindex_t + \beta_4 * Suspect_t * MgrlAbility_{t-1} + \beta_5 * Suspect_t * Gindex_t + \beta n * Controls_{nt} + \varepsilon_{t+i}$

		Dependent Variable = adjROAt+1		
	Exp. Sign	Prod Suspect	Disx Suspect	Agg Suspect
Suspect	−	-0.0182 **	-0.00892	-0.01038
		(-2.24)	(-1.35)	(-1.33)
MgrlAbility	+	0.01827 **	0.0282 ***	0.0296 ***
		(2.22)	(3.48)	(3.65)
Gindex	−	0.0002	0.00021	0.000256
		(0.63)	(0.58)	(0.77)
Suspect × MgrlAbility	+	0.05613 ***	0.0025	0.00203
		(3.33)	(0.14)	(0.12)
Suspect x Gindex	−	0.0009	0.000447	0.00053
		(1.08)	(0.67)	(0.65)
Current Performance	+	0.49571 ***	0.50202 ***	0.49874 ***
		(35.91)	(34.46)	(36.09)
Size	+	0.0044 ***	0.0045 ***	0.0044 ***
		(4.95)	(5.02)	(4.95)
Growth	+	0.00768 ***	0.00744 ***	0.00739 ***
		(14.34)	(13.90)	(13.75)
Financial Health	+	0.0070 ***	0.00682 ***	0.00702 ***
		(7.07)	(6.86)	(7.02)
Intercept	−	-0.01721	-0.0154	-0.0156
		(-0.82)	(-0.73)	(-0.74)
Industry dummies		Yes	Yes	Yes
Year dummies		Yes	Yes	Yes

Notes: This table reports the results from the regression of future firm performance on REM

*, **, *** denotes a two-tailed p-value of less than 0.10, 0.05, and 0.01, respectively.