Corporate Reputation and Real Activities Management as Myopic Behaviour: Evidence from U.S. Companies

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Abstract

In this paper we explore the association between corporate reputation as a disclosure and real activities managements as myopic behaviour based on the firms from Fortune's America's Most Admired Companies (AMAC) list. We find that the corporate reputation is significantly and negatively related to both the three ways of real activities manipulation i.e. real actions by sales, overproduction and discretionary expenditures, respectively and the two aggregate measures of real activities management. We also find that the reputation effect matters for the immediate market reactions and future valuation adjustment towards real activities management as myopic behaviour.

Keywords: real activities management; corporate reputation; managerial myopic; immediate and future market reactions;

1 Introduction

Earnings management can be categorised into two forms: accruals-based management and real activities management. In contrast to accruals-based earnings management which only involves the timing of earnings recognition to obscure true economic value, real activities management changes the firm's underlying operations for boosting current-period earnings, which has suboptimal business consequences (Graham et al., 2005; Roychowdhury, 2006).

In this paper we explore the association between corporate reputation and real activities management as myopic behaviour. Our study is motivated by the two main aspects according to prior research. First, since the financial scandals of the early 2000s involving firms such as Enron and WorldCom, real activities management has become a more popular means than accruals-based management for manipulating short-term earnings after the passage of the Sarbanes-Oxley Act (SOX) in 2002. Moreover, real activities management has been identified as myopic behaviour of management (Mizik, 2010), because its characteristics of changing the firm's underlying operational practices directly trades off current earnings against future (Kothari et al. 2016). One of main potential consequences of such myopic behaviour is its negative impact on the long-term firm value. Prior research such as Darrough and Rangan (2005), Cohen and Zarowin (2010), and Kothari et al. (2016) has investigated such negative potential consequence of real activities management based on the capital market incentives, and the other research has examined factors influencing real activities management as myopic behaviour, such as institutional investors by Bushee (1998) and internal governance by Cheng et al. (2016). Facing the popular use of such myopic behaviour and its negative potential consequences, it is important to further explore potential factor or disincentive which affects or alleviates real activities management as myopic behaviour for developing new theoretical and practitioner implications towards various stakeholders.

Second, corporate reputation has been identified in the literature as self-regulatory mechanism which can influence firm conduct (Barnett and Pollock, 2012). A firm's reputation arises when the firm's stakeholders trust that the firm will uphold its explicit and implicit contracts/claims, and will not act opportunistically to their detriment, which can encourage good behaviour and discipline bad behaviour (Karpoff, 2011). On the one hand, firms with higher reputation have benefits. For example, reputable investment banks obtain higher fees for their services (Beatty et al. 1998). Firms with higher reputations enjoy a lower cost of equity capital (Cao et al. 2015). On the other hand, corporate reputation could discipline firm misconduct. Karpoff (2011) reviews the empirical studies on the costs to firms from misconduct that affects various stakeholders based on the reputation mechanism, suggesting that various types of misconduct including financial and non-financial misconduct are associated with significant share value and reputational losses. However, whether corporate reputation could discipline myopic behaviour such as real activities management is an unsolved empirical question.

Thus, in this paper we answer the questions that whether corporate reputation affects real activities manipulations as myopic behaviour of management. We hypothesize that corporate reputation as a disclosure may be a disincentive for reputable firms to engage in real activities management as myopic behaviour. We measure corporate reputation based on company scores from Fortune's America's Most Admired Companies (AMAC) list, which has been extensively used in the reputation-related research (Walker, 2010; Cao et al., 2012). Higher scores based on this list imply better reputation.

Our empirical tests are based on a sample of 1153 firm-year observations from the AMAC list during the time period from 2006-2012 with data availability. We first test the association between corporate reputation and real activities manipulations, after controlling variables such as costs of real earnings management firm characteristics based on prior research.

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Real activities manipulations are achieved by sales, overproduction and discretionary expenditures, respectively. We find that the corporate reputation is significantly and negatively related to both the three ways of real manipulation and the two aggregate measures of real activities management, indicating that with the increase in firms' reputation score, their managers are less likely to manage earnings upward by promoting sales, reducing product cost by overproduction, and cutting expenditures.

We second test the immediate market reaction and whether an additional valuation adjustment occurs in the future because of real activities management as myopic behaviour, when considering the reputation effect on such myopic behaviour. Following Mizik (2010), we find that market participants have insignificant immediate reaction and future valuation adjustment for firms with higher reputation, whereas they have significantly negative immediate reaction and future valuation adjustment for firms with lower reputation. In addition, we further investigate the total long-term consequences of real activities manipulation as myopic behaviour by assessing the future market reaction to such myopic behaviour. We find that, to some extent, market participants have significantly negative future valuation adjustment for firms with lower reputation when they value the long-term consequences of firms engaging in myopic behaviour. All these findings suggest that both firms with higher reputation engage less in real activities manipulation as myopic behaviour and higher corporate reputation makes market participants have positive perceptions or images of firms due to their competitive edge.

We make several contributions to the literature. First, our paper contributes to the reputation literature. Empirical studies have well documented the effect of reputation on firm conduct. Reputation can not only encourage good firm behaviour (e.g., Beatty et al. 1998; Cao et al. 2015), but also can discipline bad behaviour (Karpoff, 2011). In this paper we examine association between corporate reputation and real activities manipulation, showing that

reputation effect can alleviate such myopic behaviour as one of most important agency problems.

Second, our paper contributes to studies which examines factors influencing real activities management. the earnings management literature. Bushee (1998) examines the association between institutional investors on R&D cuts as myopic behaviour to reverse a decline in earnings, showing the monitoring role of institutional investors in reducing pressures for myopic behaviour. Cheng et al. (2016) investigate the impact of internal governance, proxied by both the number of years to retirement of key subordinate executives and their compensation relative to CEO compensation, on real activities manipulation. In the study we identify corporate reputation as disclosure to alleviate firms' real activities management as myopic behaviour, which extends our understanding of factors affecting earnings management.

The remainder of the paper is organized as follows. Section 2 reviews the related literature and develop our hypothesis. Section 3 offers sample selection and research design. Section 4 exhibits the main empirical results. Section 5 concludes.

2 Related literature and hypothesis development

2.1 Real earnings management

Cohen et al. (2008) suggest that, compared with accruals-based earnings management, real activities management (RAM) has become a more popular means for manipulating short-term earnings after the passage of the Sarbanes-Oxley Act (SOX) in 2002. Unlike accruals-based earnings management which only affects the timing of earnings recognition and do not change true economic values, RAM alters operational practices and usually sacrifices firms' long-term economic values. By surveying and conducting interviews with top company executives, Graham et al. (2005) find that, in the post-Enron and post-SOX world, real actions

have become executives' preferred method for overstating earnings when face with a possibility of failing to meet their desired quarterly earnings targets, although real actions is more likely to sacrifice the long-term economic value of companies.

Facing the popular use of real activities management, an increasing number of research has investigated various aspects of RAM, including its measurement, characteristics, and consequences, and factors influencing real earnings management. For example, Roychowdhury (2006) develops the three measures of RAM by considering the abnormal levels of cash flow from operations (by acceleration of the timing of sales through increased price discounts), from production costs (by reporting lower cost of goods sold through increased production), and from discretionary expenditures (by reducing discretionary expenditures including advertising, research and development (R&D), and sales, general and administrative expenses (SG&A)) respectively. All of the three measures change the firm's underlying operations for boosting current-period earnings, which has suboptimal business consequences (Graham et al., 2005; Roychowdhury, 2006).

Real earnings management has been identified as myopic behaviour of management in the literature (Mizik, 2010; Kothari et al. 2016). Mizik (2010) suggests that real activities management, which is contrasted with accruals-based earnings inflation, is myopic behaviour that managers who concentrate on short-term goals such as current earnings targets overemphasize strategies with immediate payoffs at the expense of strategies with superior but more distant payoffs. Kothari et al. (2016) suggest that real earnings management directly trades off current earnings against future competitiveness.

One of main consequences of real activities management as myopic behaviour is that it has a net negative impact on future firm value. For example, Darrough and Rangan (2005) find that managers reduce R&D expenditure in the year of an initial public offering (IPO) to increase

the IPO offer price, mainly due to the fact that reductions in R&D expenditure increase current reported earnings, and managers believe that investors place more emphasis on current earnings and less empirical on R&D. They also suggest that such reductions to increase current earnings is at the expense of future earnings. Cohen and Zarowin (2010) find that real activities management gives rise to negative post-SEO earnings performance. Kothari et al. (2016) also find that real earnings management by reduction in expenditures on R&D and selling, general, and administrative activities is the main reason for post-SEO stock market underperformance when compared with accruals-based management, suggesting that managers display a greater propensity for RAM at the time of SEOs, although real activities management diminish the long-run economic profits of firms.

Some studies have investigated factors influencing real activities management as myopic behaviour. For example, Bushee (1998) examines the association between institutional investors on R&D cuts as myopic behaviour to reverse a decline in earnings, finding that firms with high institutional ownership have a lower probability of cutting R&D expenditure to reverse earnings decline, mainly due to the monitoring role of institutional investors in reducing pressures for myopic behaviour. Cheng et al. (2016) investigate whether internal governance, indicated by key subordinate executives' horizon incentives and their influence within the firm, affects the extent of real earnings management in U.S. firms. They find that the extent of real earnings management decreases with key subordinate executives' horizon (captured by the number of years to retirement) and influence (captured by their compensation relative to CEO compensation).

2.2 Corporate reputation

Corporate reputation refers to the reputation effect at a corporate level, which has been identified in the literature as self-regulatory mechanism which can influence firm conduct (Barnett and Pollock, 2012). From a game theoretic perspective, the reputation effect can be defined in a repeated game with information asymmetry, in which one player's type (or reputation) is shaped by the other players' perceptions of this player's past actions; all players' actions, therefore, appear to be affected by such reputation concern, based on the fact that one player's reputation affects others' reactions, which is referred to as the reputation effect (Kreps et al., 1982; Kreps and Wilson, 1982). The reputation effect at a corporate level is a set of attributes ascribed to a firm, inferred from the firm's past actions (Weigelt and Camerer, 1988). The reputation effect can help to alleviate agency problems (Fama, 1980; Holmstrom, 1982).

From a management perspective, corporate reputation can be referred to as "observers' collective judgments of a corporation based on assessments of the financial, social, and environmental impacts attributed to the corporation over time" (Barnett et al., 2006). Corporate reputation is also an essential intangible and strategic asset (Hall, 1993; Fombrun, 1996). There are five attributes of corporate reputation: (1) the corporate reputation is based on perceptions: (2) it is the collective perception of stakeholders; (3) it is comparative; (4) it can be either positive or negative; and (5) it is temporal (Walker, 2010).

As a result, a firm's reputation arises when the firm's stakeholders trust that the firm will uphold its explicit and implicit contracts/claims, and will not act opportunistically to their detriment, which can encourage good behaviour and discipline bad behaviour (Karpoff, 2011). On the one hand, firms with higher reputation have benefits. For example, reputable investment banks obtain higher fees for their services (Beatty et al. 1998). Firms with higher reputations enjoy a lower cost of equity capital (Cao et al. 2015). On the other hand, corporate reputation could discipline firm misconduct. Karpoff (2011) reviews the empirical studies on the costs to firms from misconduct that affects various stakeholders based on the reputation mechanism,

suggesting that various types of misconduct including financial and non-financial misconduct are associated with significant share value and reputational losses.

Concerning measures of corporate reputation, reputation rankings by professional third parties are widely used in research as a proxy for corporate reputation. The most widely used corporate reputation measure is the America's Most Admired Companies (AMAC) ranking (Walker, 2010). Fortune publishes the AMAC ranking each March with their partner Hay Group. This ranking is based on a survey of about 4,000 business executives, directors and analysts. The 10 largest companies in each industry receive a score based on nine criteria: (1) innovation, (2) people management, (3) use of assets, (4) social responsibility, (5) management quality, (6) financial soundness, (7) long-term investment, (8) product quality and (9) global competitiveness. Raters are asked to assess each company on each attribute by assigning a score from 0 (poor) to 10 (excellent). The overall corporate reputation score is an average of the attribute scores.

2.3 Hypothesis development

Signaling models, pioneered by Spence (1973), have generated valuable insights into the conditions that encourage myopic behaviour. Based on assumption that managers usually have better information than outsiders about the value maximizing decisions of their firms, signaling models suggest the basic elements triggering myopic behaviour: (1) there exists firms with different types i.e. firms with good or bad prospects; and (2) good-type firms have a desire to separate themselves from bad-type ones, mainly because managers care about their firms' current stock prices and this is higher for better firms (Grant et al. 1996). Because of firms' private information (e.g. firms face good or bad prospect) unavailable to the outsiders, managers can send a signal to inform the market about their firms' advantageous prospects, for

example, by reporting desired favorable earnings. However, there exists signal-jamming behavior that bad-type firms may attempt to mimic the behaviour of good-type firms for the purpose of fooling the stock market into believing that they are facing good prospects (Grant et al. 1996; Mizik, 2010). The greater the weight managers place on current stock price relative to future economic value, the more likely they are to engage in signal jamming (Bizjak et al. 1993). Therefore, to meet desired current earnings targets or report favorable earnings, managers within bad-type firms might be more likely to engage in signal jamming, for example, by manipulating real activities to create an immediate favorable market reaction.

However, corporate reputation is the result of signaling activity (Shapiro, 1983), which means that the other players' perceptions of this player's type based on his previous actions serve as a signal of this player's current type supported by his current actions. Moreover, a ranking of corporate reputation as a disclosure has separated firms with higher type (reputation) from those with lower type; and a firm with good reputation (type) signals its competitive edge by attracting customers to the company's products and services, investors to its securities, high quality employees to its jobs, suppliers' and distributors' offer of excellent contract terms, and favorable capital access, among other benefits (Fombrun, 1996; Deephouse, 2000; Rindova et al., 2005). Therefore, a firm with higher reputation ranking has been more favorable current stock price, and might be less need to engage in myopic behavior at the expense of the long-term profits such as real activities management to report favorable current earnings for an immediate favorable market reaction. Thus, corporate reputation as a disclosure may be a disincentive for higher-reputation firms to engage in real activities management as myopic behaviour. As a result, our main hypothesis can be stated as:

H1: *Higher reputation firms engage less in real earnings management, all else equal*.

3 Empirical approach

3.1 Sample selection

The sample population for this study is based on the Fortune America's Most Admired Companies (here after AMAC). Wartick (2002) implies that corporate reputation should be measured as stakeholders' perception rather than factual representation. Similarly, Walker (2010) suggests that perception-based survey is more appropriate as a measure of corporate reputation than objective measures such as market share or winning contests. Among the perception surveys worldwide, Fortune's America's Most Admired Companies (AMAC) is one of the most famous reputation rankings. It has been copied in several countries, including the UK and Germany. Because Hay Group, which conducts the AMAC survey, describes the process in detail, we are able to understand whose perceptions this survey represents. Moreover, the U.S. reputation survey offers the largest sample size per year compared to surveys in other countries.

Data for corporate reputation is collected from the Fortune Magazine website, all the original financial data (un-restated) and marginal tax rates are downloaded from WRDS COMPUSTAT, information for institutional shareholders is collected from 13F, and the board information is derived from WRDS RiskMetrics.

The initial sample from the AMAC includes 4498 firm-year observations for the period 2006 to 2012. From this initial sample, 2342 firm-year observations are most admired companies and the 2156 firm-year observations are contenders. Since the results may be affected by specific regulations and the unique characteristics of firms from regulated industries and the financial sector, 998 firm-year observations in regulated industries and financial sector are excluded from our initial sample following Roychowdhury (2006). 211 firm-years are excluded because the companies could not be found in COMPUSTAT. Further

2136 firm-year observations are eliminated due to information missing from COMPUSTAT, 13F and RiskMeterics. After the elimination, the final sample consists of 1153 firm-year observations.

3.2 Variable measurement

The main independent variable in this empirical analysis is corporate reputation, measured by the natural logarithm of the overall reputation score from Fortune list of America's (World's) Most Admired Companies. AMAC provides a better fit for this research since it focuses on the judgment of executives, directors, and security analysts from the same industry. We use this ranking since it comprises a broader range of industries and more firms, and has a longer period of available data compared to other reputation rankings used in recent reputation literature. The designation starts with the largest US and global companies (measured by revenue). Hay Group sorts the companies by industry and selects between 10 and 15 of the largest companies from each industry. About 4,000 executives, directors, and security analysts are interviewed to rank companies in their own industry. The companies rated in the top half of each industry are categorized as the Most Admired Companies.

Three ways of real activities management are used as dependent variables to test our main hypothesis in this research respectively. Following Roychowdhury (2006), the earnings manipulation through real activities is measured in three ways: increasing sales by providing discounts, increasing earnings by reducing the cost of goods sold by overproduction, and / or reducing discretionary expenditures, including R&D, advertising, and SG&A expenditures. To capture the real manipulation through these three methods, we first estimate the normal level of cash flow from operation, cost of production and expenditures with the follow equation.

The normal level of cash flow from operation:

$$\frac{CFO_{it}}{A_{it-1}} = \beta_0 + \beta_1\left(\frac{1}{A_{it-1}}\right) + \beta_2\left(\frac{S_{it}}{A_{it-1}}\right) + \beta_3\left(\frac{\Delta S_{it}}{A_{it-1}}\right) + u_{it} \qquad (1)$$

where CFO_{it} is the cash flow from operation (Compustat data item 308) of firm i in year t, A_{it-1} the lagged total asset (Compustat data item 6) of firm i; S_{it} is the sales (Compustat data item 12) of current period for firm i, and ΔS_{it} is the change in sales for firm i.

The normal level of the cost of production:

$$\frac{PROD_{it}}{A_{it-1}} = \beta_0 + \beta_1\left(\frac{1}{A_{it-1}}\right) + \beta_2\left(\frac{S_{it}}{A_{it-1}}\right) + \beta_3\left(\frac{\Delta S_{it}}{A_{it-1}}\right) + \beta_4\left(\frac{\Delta S_{it-1}}{A_{it-1}}\right) + u_{it} \qquad (2)$$

where $PROD_{it}$ is the sum of cost of goods sold (Compustat data item 44) and changes in inventory (Compustat data item 3) of firm i in year t, and ΔS_{it-1} is the lagged change in sales for firm i.

The normal level of expenditures:

$$\frac{DISX_{it}}{A_{it-1}} = \beta_0 + \beta_1\left(\frac{1}{A_{it-1}}\right) + \beta_2\left(\frac{S_{it-1}}{A_{it-1}}\right) \qquad (3)$$

where $DISX_{it}$ is the sum of R&D expense (Compustat data item 46), Advertising expense (Compustat data item 45) and Selling, General and Administrative expenses (Compustat data item 189)[3].

Equations (1), (2), and (3) are estimated for each industry each year with at least 15 available observations. Following Roychowdhury (2006), industries are defined by two-digit SIC codes. Overproduction (RM_PROD) is measured as the estimated residual from the regressions. The residuals for abnormal sales and discretionary expenditures are multiplied by -1 (denoted as RM_CFO and RM_DISX respectively). That is, higher values of RM_CFO,

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[3] As long as General and Administrative expenses are available, if R&D and Advertising expenses are missing they are set to zero.

RM_PROD, RM_DISX indicate higher amount of sales manipulation, overproduction, and reduced discretionary expenditures that firms use to manipulate earnings.

For control variables, we use variables including number of analysts following, firm size, leverage ratio, return on assets, market to book ratio, a dummy variable of showing whether the firm is audited by big 4 audit firms, the firm's market share, marginal tax rates, number of years the auditor has audited the client, net operating assets and the firm's operating cycle. Please see Table 1 as variable description and measurement.

Specifically, the firm's market share (*Market_Share*) indicates the firm's market leader status. Firms with larger market share should associate with lower cost of real earnings management. This is measured by the ratio of a firm's sales to the total sales of the same industry. Three-digit SIC code is used to define industry following Harris (1998). For firms' marginal tax rates (MTR), according to Zang (2012), higher MTR indicates higher cost for real earnings management.

Big4 is a dummy variable indicates whether the firm is audited by big 4 audit firms. Net operating assets (*NOA*) captures the extent of discretionary accruals in previous period. *NOA* is assumed to be positively related to the discretionary accruals. For operating cycle, longer operating circle should associate with lower discretionary cost since longer operating circle gives firms larger accrual accounts and longer period for accruals to reserve.

In addition, return on asset (ROA) is used to control for firm performance; logged total assets is used to control for firm size; market to book ratio is used to control for firm growth. Leverage ratio is also included to control for debt covenant as prior research suggests that debt contract is one of the main motivations for firm to manipulate earnings.

[Insert Table 1 here]

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3.3 Empirical specifications

To investigate the reputation effect on real activities manipulation, we first regress the corporate reputation on the three ways of real earnings management respectively, shown as the following equation:

$$REM = \beta_0 + \beta_1 REP + \sum_m \beta_{2m} Control + \sum_n \beta_{3n} Year\ Dummy \qquad (4)$$

$$+ \sum_0 \beta_{4n} Industry\ Dummy + u_{it}$$

where *REM* denotes REM_CFO, REM_PROD, and REM_DISX i.e. real manipulation through sales, overproduction and discretionary expenditures respectively. We also use two aggregate measures of real activities management as our two additional dependent variables: REM1= REM_PROD + REM_DISX, and REM2= REM_CFO + REM_PROD + REM_DISX. *REP* is the main independent variable – corporate reputation. *Control* is the relevant control variables.

4 Empirical results

4.1 Descriptive statistics

Descriptive statistics for the sample are presented in Table 2. The mean (median) of the natural logarithm of reputation score is 1.79 (1.81). The original reputation score (does not report) is in the range from 2.32 to 9.05 with the mean (median) of 6.07 (6.12). The mean (median) logarithmic score for the most admired companies and contenders are 1.90 (1.90) and 1.65 (1.68), respectively. The mean (median) of real earnings management through accelerating sales for all, most admired and contender firms are -0.03 (-0.03), -0.06 (-0.04) and 0.00 (-0.02), respectively. The mean (median) of real earnings management through overproduction for all, most admired and contender firms are -0.03 (-0.03), -0.05 (-0.04) and -

0.01 (-0.02), respectively. The mean (median) of real earnings management through discretionary expenditures for all, most admired and contender firms are -0.16 (-0.01), -0.17 (-0.01) and -0.15 (0.00), respectively. The mean (median) of aggregate total of real earnings management for all, most admired and contender firms are -0.23 (-0.09), -0.29 (-0.13) and -0.16 (-0.05), respectively. The mean (median) of the discretionary accruals for all, most admired and contender firms are 0.15 (0.00), 0.13 (0.00) and 0.17 (0.01), respectively. From descriptive statistics, the contender firms use more increasing discretionary accruals than the most admired firms. In addition, the average earnings management through real activities of most admired firms is lower than the average of contender, indicating that most admired firms use less real earnings management than the contenders.

[Insert Table 2 here]

Table 3 presents the Pearson and Spearman correlations among the main variables. There is a significate positive correlation between overproduction and discretionary expenditures. This significant and positive correlation (Pearson) of 0.50 (0.51) between RM_PROD and RM_DISX indicates that firms in this sample always use these two real manipulation methods together to manage earnings. This is consistent with Zang (2012) who also reports a significant and positive correlation (Pearson) of 0.37 (0.19) between the abnormal production cost and cutting of discretionary expenditures. Another high, significant and positive correlation (Pearson) is between board size and board independence of 0.84 (0.84). This is mechanical because board size is the sum of independent directors and dependent directors. In addition, Z-Score is positively correlated with ROA and negatively correlated with Leverage, consistent with that firms with healthier financial condition obtain higher return on assets and keep lower leverage ratio. Positive correlations between real manipulation methods

and discretionary accruals suggest that firms use both real activities manipulation and accrual-based earnings management. The abnormal reduction of discretionary expenditures is negatively correlated with corporate reputation, Z-Score, institutional shareholding, net operating assets, operation cycle, return on assets, firm size, market to book ratio, leverage ratio, board size and independence. The abnormal production cost is negatively correlated with corporate reputation, Z-Score, marginal tax ratio, net operating assets, operation cycle, return on assets, firm size, market to book ratio, leverage ratio, board size and independence. Accruals management is negatively correlated with corporate reputation, Z-Score, auditor, firm size, board size and board independence.

[Insert Table 3 here]

4.3 Main results

Table 4 presents the empirical results supporting our main hypothesis from estimating Model (1), Model (2), Model (3), and Model (4) respectively based on the pooled samples. The dependent variables are RM_CFO, RM_DISX, RM_PROD, REM1 and REM2 separately. As expected, the corporate reputation (REP) is significantly and negatively related to both the three ways of real manipulations through abnormal sales, overproduction and discretionary expenditures and the two aggregate measures of real earnings management. This suggests that with the increase in firms' reputation score, their managers are less likely to manage earnings by real actions through promoting sales, reducing product cost by overproduction and cutting expenditures.

In terms of control variables, we find that both number of both analyst following and return on assets are significantly negatively related to all measures of real actions, including the three ways and the two aggregate measures of real actions.

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4.4 Does corporate reputation matters for the market response to real activities management as myopic behaviour?

Prior research such as Mizik (2010) has suggested that it is of importance to investigate whether market participants could distinguish and appreciate considerations related to myopic behaviour such as real activities manipulation, based on the fact that incentives for myopic behaviour is enhanced when the market is unable to recognize and evaluate the long-run consequences of managers' actions, and that the managers' choice of specific tools and strategies for accomplishing myopic targets is also triggered by the market's ability to assess the value and impact of these tools and strategies on firm long-term performance. In other words, does the market fully and timely responds to myopic strategies when they occur? Thus, we investigate the immediate market reaction and whether an additional valuation adjustment happens in the future when considering the reputation effect on real activities management as myopic behaviour.

Following Mizik (2010), we examine the immediate market reaction and future valuation adjustment based on the equation below:

$$abnStkR_{it+k|t} = \lambda_{0k} + \lambda_{1k} \times Myopoic_{it} + \eta_{it+k} \qquad (5)$$

$$\text{for } k = 0,1,2,3, \text{and } 4$$

where $abnStkR_{it+k|t}$ is the k-period ahead risk-adjusted stock return for firm I; when k=0, this equation tests the immediate market reaction; whereas the equation examines future valuation adjustment when k takes values from 1 to 4. $Myopoic_{it}$ denotes myopic behaviour by manipulating one of the three ways of real activities i.e. abnormal cash flow, abnormal

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production costs, or abnormal discretionary expenditure. *Myopoic$_{it}$* takes 1 when such myopic

behaviour occurs and take 0 otherwise.

To further examine whether the reputation effect matters for the immediate market

reaction and future valuation adjustment, we employ equation (5) to test both firms listed in

the most admired ranking and those not listed in this ranking. Table 5 provides the empirical

results based on equation (5). According to Panel A showing firms with higher reputation, for

all the three ways of real activities manipulation, all coefficients including positive ones and

negatives of *Myopoic$_{it}$* are insignificant from year 0 to year 4; whereas, in terms of Panel B

displaying firms with lower reputation, all these coefficients are significantly negative. These

results show that market participants have insignificant immediate reaction and future valuation

adjustment for firms with higher reputation, whereas they have significantly negative

immediate reaction and future valuation adjustment for firms with lower reputation. This is

because both firms with higher reputation engage less in real activities manipulation as myopic

behaviour and higher corporate reputation makes market participants have positive perceptions

or images of firms due to their competitive edge.

[Insert Table 5 here]

In addition, we further investigate the total long-term consequences of real activities

manipulation as myopic behaviour by assessing the future market reaction to such myopic

behaviour. Following Mizik (2010), we examine such total long-term consequences based on

the equation shown below:

$$abnStkR_{it+j|t} = \gamma_{0k} + \gamma_{1j} \times Myopoic_{it} + \eta_{it+j} \qquad (6)$$

$$\text{for } j = 1, 2, 3, \text{and } 4$$

where $abnStkR_{it+j|t}$ is future multiyear cumulative risk-adjusted stock returns for firms engaging in myopic behaviour. $Myopoic_{it}$ is defined as the same as in equation (5). we also use equation (6) to test both firms listed in the most admired ranking and those not listed in this ranking. Table 6 provides the empirical results based on equation (6). According to Panel A showing firms with higher reputation, for all the three ways of real activities manipulation, all coefficients including positive ones and negatives of $Myopoic_{it}$ are insignificant from year 0 to year 4. Whereas, in terms of Panel B showing firms with lower reputation, the coefficients of all the three ways of real earnings management during the period from year 0 to 1 are significantly negative. During the period from year 0 to 2, myopic behaviour i.e. over production and discretionary expenditure has generated negative market reaction. These results exhibit that market participants have insignificant immediate reaction and future valuation adjustment for firms with higher reputation, whereas, to some extent, they have significantly negative future valuation adjustment for firms with lower reputation when they value the long-term consequences of firms engaging in myopic behaviour.

[Insert Table 6 here]

5 Conclusions

In this paper we provide empirical evidence on the association between corporate reputation and real activities management as myopic behavior based on a sample of 1153 firm-year observations from Fortune's America's Most Admired Companies (AMAC) list during the time period from 2006-2012. We further investigate the immediate market reaction, whether an additional valuation adjustment occurs in the future because of real activities management as myopic behaviour, and the total long-term consequences of real activities

manipulation as myopic behaviour by assessing the future market reaction to such myopic behaviour, when considering the reputation effect on such myopic behaviour.

First, we find that there is a significantly negative relationship between corporate reputation as disclosure and both real activities manipulation through sales, overproduction and discretionary expenditures and the two aggregate measures of real actions. Second, we find that corporate reputation really matters for the market response to real activities management as myopic behaviour.

This study explores a new factor influencing real activities management, offering incremental understanding of how corporate reputation alleviates earnings activities management as myopic behavior, which provides a potent empirical evidence on the determinants corporate reputation.

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Table 1 Variable description and measurement

Variable	Description
REM_CFO	Abnormal cash flow, estimated residuals from Equations (1);
REM_PROD	Abnormal production costs, estimated residuals from Equations (2);
REM_DISX	Abnormal discretionary expenditures, estimated residuals from Equation (3) multiplied by 1;
REM_1	Sum of REM_PROD and REM_DISX;
REM_2	Sum of REM_CFO, REM_PROD and REM_DISX;
Rep	Company reputation score, published in Fortune Magazine every March;
CAR	12 month cumulative abnormal return;
nAnalyst	Number of analysts following;
Size	Firm size measured by lagged total assets;
Leverage	Leverage;
ROA	Return on assets, income before extraordinary items divided by lagged total assets;
MTB	Market to book ratio;
Big4	Indicator variable, 1 if the firm is audited by one of big 4 audit firms, 0 otherwise;
Mkt_share	Percentage of the company's sales to the total sales of its industry at the beginning of year t, where industry is defined based on three-digit SIC codes;
MTR	Marginal tax rates developed and provided by Professor John Graham;
AU_yrs	Number of years the auditor has audited the client;
NOA	Indicator variable that equals 1 if the net operating assets (i.e., shareholders' equity less cash and marketable securities and plus total debt) at the beginning of the year divided by lagged sales is above the median of the corresponding industry-year, and 0 otherwise;
Cycle	Days receivable plus the days inventory less the days payable at the beginning of the year.

Table 2 Descriptive statistics

		Mean	St. Dev.	25%	Median	75%
REM_CFO	All	-0.03	0.32	-0.1	-0.03	0.02
	AMAC	-0.06	0.32	-0.11	-0.04	0.01
	Contenders	0	0.32	-0.07	-0.02	0.04
REM_PROD	All	-0.03	0.23	-0.14	-0.03	0.06
	AMAC	-0.05	0.22	-0.16	-0.04	0.05
	Contenders	-0.01	0.23	-0.11	-0.02	0.09
REM_DISX	All	-0.16	0.89	-0.13	-0.01	0.11
	AMAC	-0.17	0.89	-0.14	-0.01	0.11
	Contenders	-0.15	0.89	-0.12	0	0.12
REM_1	All	-0.23	0.95	-0.39	-0.09	0.11
	AMAC	-0.29	0.97	-0.44	-0.13	0.08
	Contenders	-0.16	0.91	-0.31	-0.05	0.17
REM_2	All	0.15	0.75	-0.03	0	0.05
	AMAC	0.13	0.75	-0.04	0	0.05
	Contenders	0.17	0.75	-0.03	0.01	0.06
Reputation	All	1.79	0.18	1.69	1.81	1.92
	AMAC	1.9	0.11	1.83	1.9	1.97
	Contenders	1.65	0.16	1.57	1.68	1.77
Mkt_Share	All	0.16	0.2	0.03	0.08	0.22
	AMAC	0.19	0.2	0.04	0.11	0.26
	Contenders	0.13	0.18	0.02	0.06	0.15
nAnalyst	All	20.29	10.09	13	20	26
	AMAC	22.42	10.09	16	22	28
	Contenders	17.25	9.29	10	17	23
AU_yrs	All	6.61	0.98	7	7	7
	AMAC	6.74	0.82	7	7	7
	Contenders	6.46	1.12	6	7	7
MTR	All	0.31	0.08	0.32	0.34	0.35
	AMAC	0.32	0.06	0.33	0.34	0.35
	Contenders	0.28	0.1	0.25	0.34	0.35
Big4	All	0.98	0.13	1	1	1
	AMAC	0.99	0.11	1	1	1
	Contenders	0.97	0.16	1	1	1
NOA	All	0.85	1.09	0.27	0.51	0.94
	AMAC	0.83	1.04	0.29	0.52	0.93
	Contenders	0.88	1.15	0.25	0.5	0.97
Cycle	All	273.72	766.62	55.76	88.5	129.75
	AMAC	259.09	723.69	56.2	89.29	130.1
	Contenders	292.35	817.92	54.78	87.46	128.14
ROA	All	0.05	0.08	0.02	0.05	0.09
	AMAC	0.06	0.06	0.03	0.06	0.1
	Contenders	0.03	0.09	0	0.03	0.07
Size	All	3.15	1.73	1.9	2.98	4.2

	AMAC	3.42	1.69	2.18	3.22	4.44
	Contenders	2.81	1.72	1.59	2.63	3.79
	All	2.64	3.61	1.26	2.05	3.35
MTB	AMAC	3.08	3.43	1.53	2.35	3.76
	Contenders	2.07	3.77	1	1.66	2.72
	All	0.27	0.18	0.13	0.24	0.38
Leverage	AMAC	0.25	0.17	0.11	0.23	0.35
	Contenders	0.3	0.2	0.15	0.27	0.42

Table 3 Pearson (upper) and Spearman (lower) correlations

	REM_CFO	REM_PROD	REM_DISX	REM_1	REM_2	REP	Mkt_Share	nAnalyst	Au_yrs	MTR	Big4	NOA	Cycle	ROA	Size	MTB	Leverage
REM_CFO		0.08	-0.01	0.35	0	-0.12	0.07	-0.09	0.03	-0.09	0.04	-0.07	-0.08	-0.14	-0.12	-0.02	0.02
REM_PROD	0.29		0.26	0.51	-0.05	-0.15	0.19	-0.08	0.13	-0.06	0	-0.18	-0.21	-0.22	-0.19	-0.15	-0.07
REM_DISX	-0.11	0.5		0.9	-0.03	-0.06	0.1	-0.05	0.04	-0.01	0	-0.07	-0.1	-0.05	-0.09	-0.09	-0.02
REM_1	-0.26	0.41	0.57		-0.04	-0.13	0.16	-0.09	0.08	-0.05	0.01	-0.13	-0.16	-0.15	-0.17	-0.12	-0.03
REM_2	0.31	0.37	0.29	0.65		0.01	-0.07	0.02	-0.02	0.01	0.02	0.01	0.06	0.02	0.13	0.02	-0.01
REP	-0.22	-0.19	-0.09	-0.19	-0.02		0.13	0.26	-0.23	0.33	0.04	0.01	0.03	0.37	0.3	0.12	-0.19
Mkt_Share	0.08	0.24	0.18	0.22	-0.09	0.18		-0.06	-0.05	0.07	0.04	-0.15	-0.07	-0.03	0.01	0.01	0
nAnalyst	-0.13	-0.08	0.03	-0.05	0	0.26	-0.03		0.02	0.27	-0.02	-0.34	-0.1	0.47	-0.03	0.17	-0.49
Au_yrs	0.23	0.19	0.04	0.16	-0.03	-0.26	-0.08	-0.01		-0.1	-0.11	-0.1	-0.04	-0.16	-0.3	-0.08	0
MTR	-0.11	-0.09	-0.03	-0.07	-0.02	0.23	0.08	0.24	-0.17		-0.02	-0.08	0.02	0.49	0.12	0.09	-0.18
Big4	-0.01	0.01	0.02	0.02	-0.02	0.04	0.02	-0.06	-0.11	0		0.05	0.02	0.01	0.05	0.04	0.05
NOA	-0.21	-0.3	-0.19	-0.27	0.06	0.05	-0.16	-0.47	-0.2	-0.03	0.05		0.3	-0.1	0.39	-0.08	0.26
Cycle	-0.21	-0.21	-0.09	-0.18	0.05	0.06	0.04	-0.13	-0.09	-0.01	0.01	0.36		0.06	0.38	0.04	0.1
ROA	-0.33	-0.35	-0.07	-0.25	-0.01	0.37	-0.05	0.54	-0.26	0.31	0.01	-0.06	0.1		0.12	0.19	-0.21
Size	-0.3	-0.21	-0.06	-0.2	0.07	0.31	0.02	-0.08	-0.31	0.11	0.06	0.4	0.31	0.16		0.09	-0.08
MTB	-0.22	-0.32	-0.12	-0.23	0.03	0.26	0	0.26	-0.23	0.15	0.07	-0.04	0.04	0.44	0.21		0.04
Leverage	0.04	-0.05	-0.05	-0.04	0.01	-0.19	0.03	-0.52	-0.01	-0.17	0.06	0.36	0.09	-0.21	-0.08	0.02	

Table 4 The effect of corporate reputation on real activities management

	REM_CFO	REM_PROD	REM_DISX	REM_1	REM_2
Reputation	-0.3171**	-0.1919***	-0.1592**	-0.3611***	-0.6795***
	(0.140)	(0.072)	(0.072)	(0.132)	(0.198)
nAnalyst	-0.0016	-0.0053***	-0.0064***	-0.0116***	-0.0135***
	(0.002)	(0.001)	(0.001)	(0.002)	(0.003)
Size	-0.0406**	0.0217*	0.1920***	0.2155***	0.1722***
	(0.018)	(0.013)	(0.018)	(0.027)	(0.034)
Leverage	-0.1980	-0.0872	0.0122	-0.0795	-0.3368*
	(0.131)	(0.068)	(0.066)	(0.124)	(0.190)
ROA	-0.3198	-0.8015***	-0.3976***	-1.2249***	-1.5348***
	(0.205)	(0.163)	(0.120)	(0.255)	(0.385)
MTB	-0.0030	0.0001	-0.0012	-0.0008	-0.0046**
	(0.003)	(0.001)	(0.001)	(0.002)	(0.002)
Big4	0.0234	0.1298**	0.0946*	0.2242**	0.2531*
	(0.060)	(0.064)	(0.049)	(0.102)	(0.136)
Mkt_share	0.2649***	0.1819***	0.1738***	0.3639***	0.6431***
	(0.080)	(0.066)	(0.056)	(0.115)	(0.153)
MTR	0.0781	0.3019*	0.5649***	0.9172***	1.0207***
	(0.198)	(0.163)	(0.151)	(0.267)	(0.353)
AU_yrs	-0.0117	-0.0133	-0.0238***	-0.0373**	-0.0503**
	(0.015)	(0.008)	(0.009)	(0.016)	(0.023)
NOA	0.0490	-0.0824***	0.0014	-0.0861**	-0.0189
	(0.071)	(0.024)	(0.022)	(0.039)	(0.089)
Cycle	0.0000	-0.0003**	-0.0003*	-0.0006**	-0.0006*
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
_cons	1.289***	0.269*	-1.223***	-0.924***	0.489
	(0.360)	(0.141)	(0.156)	(0.258)	(0.502)
Year Fixed Effect	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effect	Yes	Yes	Yes	Yes	Yes
N	1,783	1,774	1,695	1,690	1,690
R-squared	0.1345	0.2415	0.5335	0.3615	0.1656

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 5 Immediate and delayed impact of real activities management

	REM_CFO	REM_PROD	REM_DISX
Panel A: Firms on the most admired list			
CAR Model			
year 0	0.0152	-0.02	0.00191
	(-0.00941)	(-0.0297)	(-0.029)
year 1	0.00965	-0.0145	0.00644
	(-0.00912)	(-0.0296)	(-0.0294)
year 2	0.0102	-0.0194	0.00897
	(-0.00959)	(-0.0304)	(-0.0285)
year 3	0.00619	-0.0245	0.00841
	(-0.0095)	(-0.0307)	(-0.03)
year 4	0.00233	-0.0254	0.00773
	(-0.00884)	(-0.03)	(-0.0296)
Panel B: Firms not on the most admired list			
CAR Model			
year 0	-0.0144***	-0.0974***	-0.123***
	(-0.00355)	(-0.00851)	(-0.0156)
year 1	-0.0142***	-0.0910***	-0.0912***
	(-0.00339)	(-0.00819)	(-0.0149)
year 2	-0.0130***	-0.0942***	-0.0736***
	(-0.00348)	(-0.00825)	(-0.0155)
year 3	-0.0154***	-0.0918***	-0.0547***
	(-0.00347)	(-0.00838)	(-0.0151)
year 4	-0.0139***	-0.0859***	-0.0387***
	(-0.00336)	(-0.00821)	(-0.0144)

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 6 Total impact of Real Earnings Management

	REM_CFO	REM_PROD	REM_DISX
Panel A: Firms on the most admired list			
CAR Model			
year 0-1	0.0192	-0.0245	-0.0128
	-0.0209	-0.0619	-0.0566
year 0-2	0.0253	0.0111	0.00135
	-0.0385	-0.114	-0.104
year 0-3	0.0335	0.115	0.0305
	-0.0669	-0.2	-0.18
year 0-4	0.0332	0.271	0.0855
	-0.109	-0.328	-0.296
Panel B: Firms not on the most admired list			
CAR Model			
year 0-1	-0.0223**	-0.180***	-0.272***
	-0.0102	-0.0241	-0.0466
year 0-2	-0.0287	-0.280***	-0.514***
	-0.0336	-0.08	-0.157
year 0-3	-0.0614	-0.415	-0.959
	-0.129	-0.308	-0.608
year 0-4	-0.239	-0.547	-1.725
	-0.596	-1.433	-2.828

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1