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Huijie Cui, Sidney Chi-Moon Leung

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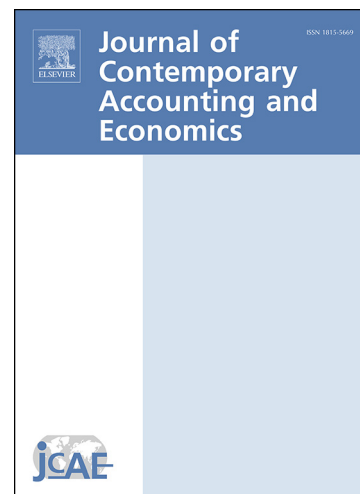
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**The Long-Run Performance of Acquiring Firms in Mergers and Acquisitions:
Does Managerial Ability Matter?**

Huijie Cui*

Department of Accounting and Financial Management

International Business School

Beijing Foreign Studies University

Sidney Chi-Moon Leung

Department of Accountancy

College of Business

City University of Hong Kong

*Corresponding author. Tel.: +86 15110187134.

E-mail address: cuihuijie@bfsu.edu.cn (H.J. Cui).

Mail address: Beijing Foreign Studies University, North Xisanhuan Road, Beijing, China.

The Long-Term Performance of Acquiring Firms after Mergers and Acquisitions: Does Managerial Ability Matter?

Abstract: This paper examines the association between the managerial ability of acquiring firms and their long-term performance after mergers and acquisitions (M&As). Based on M&A data for U.S. firms from 2000 to 2012, we find that acquiring firms with higher managerial ability achieve better long-term operating performance and stock returns. We also find that the positive effect of managerial ability on long-term performance is more pronounced when acquirers and target firms belong to the same industry. The result suggests that managers who have higher ability to manage their firms, i.e., to generate higher revenues for given resources, are more capable of achieving higher synergy benefits and better post-acquisition performance in same-industry acquisitions than in cross-industry acquisitions.

Keywords: managerial ability; mergers and acquisitions; data envelopment analysis; horizontal acquisition.

JEL classification: G34, M12

1. Introduction

Pursuing mergers and acquisitions (M&As) is a highly popular investment strategy among firms seeking to boost their corporate growth or strengthen their competitive advantage over rivals. The global volume of M&A deals in 2018 and 2017 reached US\$4.1 trillion and US\$3.7 trillion, respectively (J.P. Morgan, 2019). The common reason for engaging in M&As is to achieve synergy and efficiency effects, and ultimately to increase the shareholder wealth of acquiring firms (Tuch and O'Sullivan, 2007; Vaara, 2002). Prior M&A studies generally indicate positive short-term returns for target firms (e.g., Martynova and Renneboog, 2008). However, empirical research into acquirer post-acquisition performance has failed to find consistent evidence of improved performance after acquisitions. Agrawal and Jaffe (2000) show that the abnormal returns to acquiring firms in the years following an acquisition are negative, or at best not statistically different from zero. In the meta-analyses of empirical research on post-acquisition performance, King et al. (2004), Tuch and O'Sullivan (2007) and Dutta and Jog (2009) conclude that, on average, M&A activity does not lead to superior financial performance. These studies highlight great variations in acquisition performance, with about 40% of acquiring firms achieving positive returns in the two- to three-year period after acquisitions, and about 50% suffering negative returns. Concluding that a large portion of variations in post-acquisition performance are moderated by variables unspecified in the research up to that point, King et al. (2004) call for future research to investigate the driving factors that lead to value creation or value destruction in M&A activities.

Top management of firms is responsible for making investment, financing, and other strategic decisions. A prevailing view in the business press and among managers themselves is that a firm's top management team, including its CEO, executive directors, and other senior executives, is a crucial factor, if not the most crucial one, in corporate decisions and business performance. The notion that managerial ability is an important determinant of value creation and firm performance is a central premise of the resource-based view of the firm (Barney, 1991). As suggested by Castanias and Helfat (1991), the top management team is one of the most unique input resources in a

firm. It makes and implements strategic and operational corporate decisions. In M&A activities, able managers are more capable of identifying suitable target firms, handling the complex tasks of merging the combined organizations' resources, and minimizing personnel or cultural conflicts (Bertrand and Schoar, 2003; Holcomb et al., 2009). Although managerial ability has long been recognized in the management literature as a key factor explaining the differences between organizational outcomes (e.g., Holcomb et al., 2009), thus far, very few studies have given attention to whether managerial ability matters in M&A performance (Chen and Lin, 2018).

Managerial ability refers to a top management team's levels of knowledge, skill, and experience, which are often tacit and difficult to measure (Hitt et al., 2007).¹ Demerjian et al. (2012) developed a manager-specific efficiency measure based on the "data envelopment analysis" approach. They drew on a resource-based analysis and measured managerial ability based on relative managers' efficiency among industry peers in generating revenues. A number of recent studies have used the Demerjian efficiency measure as a proxy for the ability of management to manage a firm and examine how managerial ability affects credit risk assessment (Bonsall et al., 2017), earnings quality (Demerjian et al., 2013), and bank liquidity creation and risk-taking analysis (Andreou et al., 2016).

It is not clear whether managerial ability in generating revenues has a complementary effect in generating better post-M&A performance. If more able managers who manage a firm efficiently in generating higher revenues relative to their industry peers also perform better in managing combined assets and operations after M&As, acquiring firms' post-M&A performance would be significantly better compared to less able managers. On the other hand, if the complementary effect between managerial ability to generate higher revenues and the ability to manage

¹ We refer interchangeably to the ability of the top management team and managerial ability throughout the paper.

complex M&A integration processes effectively does not exist, there should be no or even a negative relationship between the Demerjian measure of managerial ability and post-acquisition long-term operating performance.

Using a sample of U.S. M&A cases over the 2000-2012² period, we find that managerial ability does matter to the long-term operating performance after mergers and acquisitions. Specifically, our results show that acquiring firms with higher managerial ability generate significantly better *industry-adjusted return on assets*, *industry-adjusted operating cash flows*, and *industry-adjusted market-to-book ratio* in the one-, two-, and three-year windows following M&As compared with acquiring firms with lower managerial ability. We also find that managerial ability is positively and significantly associated with acquiring firms' stock returns (market performance) in the one-, two-, and three-year periods following acquisition. Our change-model analysis shows that increases in managerial ability are positively and significantly associated with increases in long-term operating performance of acquisitions, but no such result is found for post-acquisition stock returns. Regarding the industry type of M&As, we find that, while managerial ability is positively and significantly associated with long-term operating performance in both same-industry and cross-industry acquisitions, the positive effect of managerial ability on post-acquisition performance is significantly stronger in same-industry than in cross-industry M&As. When post-acquisition performance is measured by long-term stock returns, the results are mixed. Overall, our findings provide evidence that the managerial ability of acquiring firms is important for increasing M&A synergy benefits and thus improving long-term performance.

In additional analyses, we find that managerial ability neither affect short-term (5-day) acquisition announcement returns in the full sample nor in the same-industry

² Although the sample period is ended of 2012, we also require financial and return data for 2013, 2014 and 2015 to calculate the post 3-year performance.

(*HORIZON*=1) sample or cross-industry (*HORIZON*=0) sample. Additionally, we use a matched sample on the basis of matching industry, firm year, and firm size to construct high- and low-managerial ability groups and obtain similar results. We also use different benchmarks or compounding methods to calculate post-acquisition long-term performance. The results are consistent with those reported in our main analyses.

This study makes several contributions to the literature. First, previous studies have found intriguing evidence that some acquiring firms achieve positive post-M&A returns, while some suffer negative returns (e.g., Cartwright and Schoenberg, 2006). Due to the evident complexity and uncertainty of M&A activities, researchers have called for further research to identify factors leading to either value creation or value destruction in M&A activities (King et al., 2004; Tuch and O'Sullivan, 2007). Our findings of a positive association between managerial ability and long-term performance provide a partial explanation for an unexplained phenomenon in the M&A performance literature - wide variations in long-term post-acquisition performance.

Second, previous studies investigating the effects of managerial quality on M&A performance have used indirect measures of managerial ability such as CEO characteristics, historical returns, and media coverage. These proxies neither measure the quality of the management team as a whole nor distinguish managerial effects from firm-characteristic effects, making it difficult to attribute their results directly to the ability of the management team (Demerjian et al., 2012; Francis et al., 2008; Bertrand and Schoar, 2003). We use Demerjian's (2012) relative efficiency measure as a direct proxy of managerial ability in the examination of the effects of management quality on post-acquisition performance. Our findings consistently show that acquiring firms with high managerial ability are more capable of generating better long-term post-acquisition performance.

Third, our findings contribute to a better understanding of whether the industry-specific or generic aspect of managerial ability matters more to success or failure in

M&As. We find that the positive effect of managerial ability on long-term performance is stronger in same-industry acquisitions than in cross-industry acquisitions. This result is consistent with the industry-specific knowledge, skills, and experience of managers being incrementally important to create higher M&A synergy benefits than their generic managerial ability.

Finally, our work is mostly close to that of Chen and Lin (2018). However, our study is largely distinguished from their work. Chen and Lin (2018) primarily focus on the announcement (short-term) abnormal return. Announcement return can reflect investors' perception of the success of a deal and investors' perception can be biased. This is different from whether managers have the ability to guide the company after the M&As. In other words, Chen and Lin (2018) examine how investors perceive management. What we examine in this paper is whether management with high ability can properly manage the company after the merger. The two constructs are different.³

Given Demerjian's (2012) measure of ability being an efficiency indicator in managing a firm, managerial ability should be more directly related to operating performance than stock returns. In our study, the analysis primarily focuses on the long-term operating performance, supplemented by stock-return performance of M&As. Another difference is that Chen and Lin (2018) argue that superior managers are more able to distinguish a good deal from a bad one. We argue that high quality managers are more capable of managing combined resources, resolving personnel conflicts, and generating better synergies post M&As, thus leading to better post-acquisition operating performance.

The remainder of the paper is organized as follows. Section 2 describes related studies and research questions. Section 3 describes the research design, including

³ We appreciate the reviewer for suggesting this point of argument.

sample selection and research methodologies. Section 4 reports and discusses the empirical results. Section 5 summarizes and concludes the study.

2. Related studies and research questions

2.1. Managerial ability of acquiring firms and long-term operating performance

The role and quality of top management in improving firm performance is widely acknowledged and has been investigated regarding its effects on various aspects of a firm's organization, governance, financial and investment policies, and innovation activities (Certo et al., 2006). Managers who undertake M&A activities are mostly motivated to achieve synergy effects and enhance firm value. However, M&As involve complex and dynamic integration processes between the acquiring firm and target firm, and it is not easy to achieve the intended synergy benefits. Indeed, it is not uncommon for M&As to result in failure. Some of the causes of acquisition failure are inadequate evaluation of the target firm, large debt after acquisition, and a problematic integration and implementation strategy (e.g., Hitt et al., 2007; Vasilaki and O'Regan, 2008).

Able managers can contribute to value creation for their firms, but overconfident managers may cause harm in M&A activities. Studies have shown that overconfident managers may overestimate merger synergies, misperceive merger opportunities, and undertake value-destroying projects, all of which can result in negative post-acquisition returns (Malmendier and Tate, 2005; Roll, 1986).

Previous studies that examine the effects of management quality on acquisition performance have primarily focused on the individual characteristics of CEOs to proxy for managerial ability. For example, Datta et al. (2005) suggest that higher CEO equity-based compensation improves the acquirer's post-acquisition performance. Walters et al. (2007) use CEO tenure to proxy for managerial ability, and find that the post-acquisition returns of acquiring firms tend to increase at first and then decrease. Ahn et al. (2010) examine the impact of multiple directorships on stockholder wealth around

the announcements of M&As, and find that multiple directorships become value-destroying in acquisitions when they become too busy. Chikh and Filbien (2011) use CEO duality, ownership, expertise, and networks as proxies of CEO ability and find that dual CEOs, CEOs with higher levels of firm ownership, and more experienced CEOs all care more about investors' reactions to M&A activities and are more likely to terminate deals as soon as possible when they start experiencing negative stock returns.

Other studies examine the roles of top managers or directors in M&A performance. Field and Mkrtchyan (2017) analyze whether directors' acquisition experience is helpful to generate better short- and long-term acquisition performance. Ghannam et al. (2019) study the influence of bidding firms' powerful non-executive chair on acquisition premium. Bertrand and Schoar (2003) extend the focus from CEOs to other senior managers and provide evidence that the managerial abilities of other management team members besides CEOs or CFOs make significantly positive contributions to M&A performance. They find that the inclusion of other management members aside from CEOs and CFOs in the regression increases the explanatory power of R-squared for acquisition returns by a significant amount (11%). These findings suggest that it is not just the CFO or CEO, but the whole management team that is important to acquisition performance.

Greater managerial ability allows firms to exploit the untapped value of resources, to make good decisions, and to enhance the firm's performance and value (Bertrand and Schoar, 2003). Managers with superior knowledge, skills, and experience also have a greater ability to collect public and private information, identify suitable target firms, and select valuable resources and negotiate their use on favorable terms in business combinations (Chikh and Filbien, 2011; Holcomb et al., 2009; Makadok, 2001). In summary, the level of managerial ability possessed by an acquiring firm (i.e., the strategic knowledge, skills, and experience of the top management team) plays a major role in achieving higher synergy benefits of acquisitions.

Operating performance measures are often used to evaluate the success of an acquisition because accounting-based measures capture the economic performance of a firm and represent actual, realized performance as reported in the annual financial statement. Synergies obtained from M&As are best reflected in accounting measures such as return on assets (ROA) (Hitt et al., 1998). Healy et al. (1992) find that merged firms have a significant increase in post-acquisition operating cash flows. Harrison et al. (1991) suggest that M&A synergies if existent will be reflected in long-term operating performance.

Demerjian et al. (2012) develop a managerial ability measure based on relative efficiency among industry peers in generating higher revenues for given resources. It does not directly measure the ability of managers in handling M&A events which are strategic corporate decisions in nature and involve implementations of complex processes. The key question is whether high quality managers who manage a firm efficiently in generating higher revenues relative to industry peers also exhibit higher ability in managing M&As. Demerjian et al. (2013) argue that more able managers are more knowledgeable of their client base and macro-economic conditions when estimating their bad debt expense, more knowledgeable of the expected future benefits of recorded assets, and more able to understand and apply complex standards. Furthermore, more able managers have a greater expertise in synthesizing information into reliable forward-looking estimates compared to industry peers. Therefore, capable managers are more likely to manage post-M&A operations better. If there is a complementarity between managerial ability to generate higher revenues and the ability to select suitable target firms, manage complex M&A integration processes effectively, and generate more synergy benefits, we expect acquiring firms with higher managerial ability exhibit better long-term operating performance. On the contrary, if managers' ability to generate higher revenue in a firm and their ability to manage more complex and strategic M&A decisions are different, unrelated attributes, there should either be no association between the Demerjian measure of managerial ability and post-acquisitions long-term operating performance or they may be negatively related.

Accordingly, it is unclear whether these two managerial abilities are connected or disconnected. Our first research question is to examine whether there is a positive association between Demerjian's (2012) managerial ability measure and the long-term operating performance of M&As. Empirical results will provide insights into whether the Demerjian measure is interlinked with managerial ability in making M&A decisions and executing M&A implementations, and whether managerial ability is a key factor of success or failure of mergers and acquisitions.

Similar to prior studies that examine the long-term operating performance of M&A activities, we use industry-adjusted operating performance measures as the main dependent variable to control for the effect of industry performance during the same period.

2.2. Managerial ability of acquiring firms and long-term stock returns

Despite the advantages of accounting-based operating performance measures for assessing the success of M&As, there are notable limitations of accounting-based measures. First, accounting-based measures do not capture nonfinancial performance. Since M&A performance is a multidimensional construct covering both financial and nonfinancial performance, market-based measures, e.g., stock returns, may cover M&A performance more comprehensively. Second, the reliability of the accounting-based measures is subject to the manipulation of earnings and other accounting numbers in financial statements, and changes in accounting standards.

Alternatively, market-based long-term stock returns have been used to assess the performance of M&As. The rationale behind using stock returns to assess M&A performance is that the firm's strategic goal of M&As is to maximize its shareholder wealth (Papadakis and Thanos, 2010). Stock price is a direct measure of stockholder value and reflects investors' expectations of future performance. So, stock returns have been often used in finance and strategic management studies for evaluating M&A performance. In this study, we also examine whether managers with higher managerial

ability are able to have higher post-acquisition long-term stock returns.

We would like to point out that operating performance and stock returns can differ. While operating performance reports realized or actual performance, stock returns reflect investor perception of a firm's future performance. In addition, stock price involves not only real economic gains but also capital market inefficiency. As we argued earlier, managerial ability in managing a firm is more closely linked to the long-term realized operating performance than stock return. We therefore consider operating performance as the primary dependent variable and stock returns as the additional dependent variable for assessing the effect of managerial ability on M&A long-term performance.

2.3. Horizontal versus diversified acquisitions and the association between managerial ability and post-acquisition performance

We further evaluate whether the industry-specific or generic component of managerial ability (knowledge, experience, and expertise) is more important for the long-term performance of acquisitions. Managers utilize their knowledge, expertise, and skills to identify and assess potential targets for mergers and acquisitions and manage the integration process. Managerial ability is generally conceptualized as involving three major categories of knowledge, namely *firm-specific*, *industry-specific*, and *generic* (also called *general*) knowledge. These three kinds of expertise vary in their degrees of transferability and relevance for different firms and industry contexts (Castanias and Helfat, 1991). Industry-specific ability is somewhat less transferable than generic knowledge. In same-industry acquisitions (horizontal acquisitions), managers do not need to learn new industry-specific knowledge, so horizontal acquisitions involve less cost and effort than cross-industry acquisitions (diversified

acquisitions).⁴

Previous studies identify some advantages of horizontal acquisitions. Capron (1999) suggests that acquiring managers can more easily recognize and reduce the inefficiencies between the acquiring and target firms if they are both in the same industry because these managers already have experience in managing similar lines of business. Managers in the same industry have more access to the same senior-management forums and networking events, and are therefore likely to be well-informed about occurrences in each other's firms (Raman et al., 2013). Managers of acquiring firms are also more knowledgeable about the economic performance, key risks, and economic drivers of target firms in their own industry. On the other hand, in cross-industry acquisitions, managers may be less efficient and effective in managing combined businesses. Therefore, our third research question is "will managers with higher managerial ability achieve higher synergy effects in horizontal acquisitions, thus generating better long-term performance than in diversified acquisitions?"

3. Research design

3.1. Sample selection

We begin the sample selection process by extracting data from the SDC Platinum Mergers & Acquisitions Database, and include all deals settled between 2000 and 2012.⁵ Our initial sample includes only public acquiring firms because we need a broad set of financial data to construct the control variables. Data on managerial ability comes from Demerjian's website. We collect information about annual financial data for the operating performance and control variables from Compustat, and monthly return data

⁴ Same-industry acquisitions are interchangeable with horizontal acquisitions, and cross-industry acquisitions are interchangeable with diversified acquisitions.

⁵ We are unable to look at the post-acquisition performance of target firms, because the vast majority of target identifiers in the SDC are the same as the acquirer after M&As. The sample size of target firms for post-acquisition performance turns out to be too small for meaningful analysis to be conducted.

from CRSP. We delete observations from the financial sector due to their special structure. We exclude observations for which the financial data or return data are missing. To be included in the final sample, the percentage of shares acquired in an M&A must be no less than 50%. We also limit our observations to completed deals as we need their post-acquisition performance⁶. Furthermore, to avoid very small deals, we omit transaction values of US\$1 million or less. We also delete incomplete deals and observation without completed control variables. The final sample consists of 7,907 observations.

3.2. Measurement of managerial ability

M&A decisions and implementations are collectively determined by the management team of the acquiring firm. A major challenge in research into the effect of managerial ability on long-term M&A performance is the difficulty of identifying a good measure of managerial ability, because such ability is tacit and cannot be observed directly. Prior studies use different measures to proxy managerial ability, such as the infrequency of shocks or management turnover (Hayes and Schaefer, 1999; Bertrand and Schoar, 2003); past abnormal performance; and CEO or CFO characteristics such as compensation, tenure, media coverage, or education (Milbourn, 2003; Rajgopal et al., 2006). The managerial ability proxies used in the literature have been criticized as either too broad or unable to represent the ability of the management team as a whole (Bertrand and Schoar, 2003; Demerjian et al., 2012). For example, focusing solely on the characteristics of CEOs or CFOs ignores the contribution from other senior executives on the management team, such as COOs, subdivision leaders, and other senior staff who also play important and significant roles in M&A decisions and integration processes. Bertrand and Schoar (2003) show that management team members other than CEOs and CFOs have economically and statistically positive

⁶ We also use the full sample including completed and uncompleted observations to repeat our analysis. The results are consistent with our main results.

effects on acquisition decisions. Therefore, CEOs or CFOs alone may not represent the holistic managerial ability of the acquiring firms. In addition, some previous measures of management ability are affected by both firm- and manager-specific factors, which cannot be teased out separately. Demerjian et al. (2012) argue that quantifying managerial ability should be based on managers' efficiency (relative to their industry peers) in transforming resources under management control into revenues. This approach of measuring managerial ability according to managers' capacity to generate revenue aligns with the goal of profit maximization. Demerjian et al. (2012) use the data envelopment analysis (DEA) technique to create an initial measure of a firm's relative efficiency within its industry by using Fama-French 48 identification, and then measure the firm's managerial ability by decomposing total firm efficiency into firm- and manager-specific efficiency components. This method partitions time and industry effects, and separates manager-specific effects from firm-specific effects more precisely than previous methods. Demerjian et al. (2012) demonstrate that their DEA measure of managerial ability outperforms existing managerial ability measures (Bui et al., 2018; Baghdadi et al., 2018).

In our study, we adopt the DEA measure of managerial ability proposed by Demerjian et al. (2012), which operates on the premise that high quality managers are more likely to use fewer resources to generate more outputs. This method of measurement compares the sales generated by each firm, conditional on the following inputs used by the firm: cost of goods sold, selling and administrative expenses, net PP&E, net operating leases, net research and development, purchased goodwill, and other intangible assets. The measured resources reflect tangible and intangible assets, innovative capital (R&D), and other inputs that are not reported separately in the financial statements (such as labor and consulting services), but whose costs are included in the cost of sales and SG&A. Demerjian et al. (2012) use DEA to solve the following optimization problem:

$$\begin{aligned} & \max_v \theta \\ & = \frac{\text{Sales}}{v_1 \text{CoGS} + v_2 \text{SG\&A} + v_3 \text{PPE} + v_4 \text{OpsLease} + v_5 \text{R\&D} + v_6 \text{Goodwill} + v_7 \text{OtherIntan}} \end{aligned}$$

This optimization procedure finds the firm-specific vector of optimal weights on the seven inputs by comparing each of the input choices of an individual firm to those of the other firms in its estimation group. The efficiency measure of an individual firm produced by DEA, θ , takes a value between 0 and 1, with a value of 1 being the most efficient. This DEA efficiency measure captures both firm- and manager-specific efficiency components. For the purpose of our research objectives, we need to filter out firm-specific efficiency and only use manager-specific efficiency as a proxy for managerial ability. Therefore, Demerjian et al. (2012) decompose total firm efficiency into firm- and manager-specific efficiency by regressing a Tobit model on six firm-specific characteristics: firm size, firm market share, cash availability, life cycle, operational complexity, and foreign operations. The Tobit regression is performed as follows:

$$\begin{aligned} \text{Firm Efficiency}_i &= \alpha + \beta_1 \ln(\text{Total Assets})_i + \beta_2 \text{Market Share}_i + \beta_3 \text{Free Cash Flow} \\ & \text{Indicator}_i + \beta_4 \ln(\text{Age})_i + \beta_5 \text{Business Segment Concentration}_i \\ & + \beta_6 \text{Foreign Currency Indicator}_i + \text{Year}_i + \varepsilon_i \end{aligned}$$

The residual from this estimation is used as the measure of managerial ability (MA). Demerjian et al. (2012) show that this DEA-based managerial ability measure outperforms other traditional managerial ability measures such as historical industry-adjusted return, historical industry-adjusted return on assets, CEO compensation, CEO tenure, and media coverage. Another advantage of using the DEA-based managerial ability measure is that it can be applied and generalized to all public firms. In this study, following Chen and Lin (2018), we use MA dummy which equals to 1 if the MA_SCORE is above the median, otherwise 0, as the main independent variable in the

analysis.⁷

3.3. Regression model

To test whether the managerial ability of acquiring firms affects their post-acquisition performance, we use the following regression model to perform our analysis:

$$\begin{aligned} Performance_i = & \alpha + \beta_1 MA_i + \beta_2 SIZE_i + \beta_3 LEV_i + \beta_4 MB_i + \beta_5 TAX_LOSS_i + \beta_6 \\ & SALE_GROWTH_i + \beta_7 CASH_i + \beta_8 STOCK_i \\ & + Year\ fixed\ effects + Industry\ fixed\ effects + \varepsilon_i \end{aligned} \quad (1)$$

We run OLS regression for Model (1) using post-acquisition performance for the one-, two-, and three-year windows following acquisition as the dependent variable. We look at long-term operating performance and use one-, two-, and three-year post-acquisition return on assets (*ROA*), cash flow from operations (*CFO*), and market-to-book ratios (*MTB*). The definitions of these three main operating performance measures are based on Francis et al. (2008) and Kini et al. (2004) as follows: *ROA* = income before extraordinary items / total assets; *CFO* = (income before extraordinary items – ((current assets – current liabilities) – (current liabilities – lag current liabilities) – (cash and short-term investments – lag cash and short-term investments) + (debt in current liabilities – lag debt in current liabilities) – depreciation and amortization))/lag total assets; *MTB* = (price close * common shares outstanding + long-term debt + debt in current liabilities) / (common/ordinary equity + long-term debt + debt in current liabilities). In calculating one-, two-, and three-year post-acquisition *ROAs*, *CFOs* and *MTBs* for acquirers, we adjust the raw values to the industry median value to control for the industry influence. We expect the estimate of β_1 to be positive. The detailed definitions of all variables are shown in the appendix.

⁷ The results of analysis using the raw value of managerial ability (*MA_SCORE*) and ranked value of managerial ability (*MA_SCORE_RANK*) are consistent with the *MA* dummy.

To answer the second research question and enhance the persuasiveness of our main finding, we also use post-acquisition long-term buy-and-hold abnormal returns (hereafter *BHARs*) to do the analysis. Unlike event studies conducted over short horizons, long-term returns are sensitive to the model used for computing normal returns. Fama and French (1992) argue that firm size and book-to-market ratio combine to explain a much larger proportion of the variation in average stock returns. Thus, we use the size and book-to-market (hereafter *SIZE*BM*) portfolio as our main benchmark in calculating long-term *BHARs*. The benchmarks of portfolio returns are 2*3 *SIZE*BM* portfolios (Fama and French, 1992). Our starting time point is defined as the month following the acquisition.

We select the control variables based on previous studies related to post-acquisition performance. Stock-for-stock acquisitions indicate higher target information asymmetry, and these acquisitions are associated with lower acquisition bidders' returns (Myers and Majluf, 1984). We control for the payment type including all stock transactions and cash transactions: the *STOCK* indicator variable equals 1 if the deal is paid for only using stocks and 0 otherwise. The *CASH* indicator variable equals 1 if the deal is paid for only using cash and 0 otherwise, as acquirers may use cash to gain control of target firms (Schwert, 2000). Ayers et al. (2003) suggest that the acquiring firm's tax rate has a significant influence on the acquisition financing structure and performance. We therefore include a control variable for tax loss carry forward, adjusted by the acquirer's market value prior to the acquisition (denoted as *TAX_LOSS*). In addition, as some firm characteristics significantly affect M&A bid prices and announcement of returns, we control for several important acquiring firms' characteristics. The first, *SIZE*, is the logarithm of the total value of the acquiring firms' assets at the end of the fiscal year before the takeover announcement. The second, *LEV*, is the long- and short-term debt-to-book value of the total assets at the end of the fiscal year before the takeover announcement. The third, *MTB*, represents the market-to-book ratio, which is calculated as the market value of common stock to book value of equity at the end of the fiscal year before the takeover announcement. The fourth,

SALE_GROWTH, is calculated as the year $t-1$ sales less the prior-year $t-2$ sales, divided by the prior year's assets. All regressions control year- and industry-fixed effects and cluster standard errors by firm.

To test the cross-sectional effects of horizontal acquisition on the relation between the managerial ability of acquiring firms and their post-acquisition returns, we use subgroup analysis and chi-tests to compare the subgroup difference. We expect the positive effect of managerial ability on long-term post-acquisition performance to be stronger for horizontal acquisitions.

3.4. Descriptive statistics

Table 1 shows the annual distributions of M&As by year. The number of acquisitions is more concentrated in the earlier years of the sample period, reaching the highest level of 1035 in 2000 and dropping to 55 deals in 2008 due to the global financial crisis⁸. The trend is similar to trends documented in the literature (e.g., Ahn et al., 2010).

[Insert Table 1 here]

Table 2 presents summary statistics for the main dependent and independent variables. Panel A shows the summary statistics of the acquirers' post-acquisition operating performance in terms of industry-adjusted *ROA*, *CFO*, and *MTB* for one, two, and three years after the acquisition. Panel B shows the summary statistics of the acquirers' long-term *BHARs*. *BHAR1*, *BHAR2*, and *BHAR3* represent the 2*3 *SIZE*BM* portfolio-adjusted value-weighted returns for the post-acquisition one-, two-, and three-year windows respectively. The descriptive statistics show that the mean/median value

⁸ To obtain the sample distribution annually, we require our observations to include managerial ability, operating performance, and control variable data so as to see the general trends. The reason why we made 8,670 observations but not 7,907 as the main regression is that we just require observations on operating performance but there is no requirement for the *BHARs*.

of post-acquisition operating performance (or long-term returns) is partially negative, which is consistent with the results of previous studies. Langetieg (1978) shows that stock prices have negative reactions over one to three years after acquisitions. Asquith (1983) demonstrates that the average acquirer's return is -0.1% for successful acquiring firms and -5.5% for unsuccessful acquiring firms. Langetieg (1978) also finds that post-merger abnormal performance is not significantly different from that of control firms in the same industry without acquisition activities. Panel C reports the mean (median) value of our main independent variable (*MA_SCORE*) as 0.021 (-0.015). Panel D in Table 2 reports the descriptive statistics of our control variables.

[Insert Table 2 here]

Table 3 presents the Pearson correlation matrix for the dependent, independent, and other important variables. The correlations between operating performance proxies (*ROAI*, *CFOI*, and *MTBI*) and *MA_SCORE* are all positive and significant which is consistent with our expectation. However, the correlation table shows that the long-term return measure (*BHARI*) is negatively correlated with our managerial ability proxy which seems opposite to our preliminary expectation.⁹ After including control variables that could affect the post-acquisition performance, it is possible for the results to reverse. In addition, the correlation between *HORIZON* and acquiring firms' managerial ability (*MA_SCORE*) is found to be positive and significant which indicates that more able managers are in favor of horizontal acquisitions.

[Insert Table 3 here]

4. Results

⁹ Due to the page space limitation, we cannot display all the performance measures including *ROAI*, *ROA2*, *ROA3*, *CFOI*, *CFO2*, *CFO3*, *MTBI*, *MTB2*, *MTB3*, *BHARI*, *BHAR2*, and *BHAR3* together in the correlation matrix. Therefore, we just show the correlation between managerial ability and *ROAI*, *CFOI*, *MTBI*, and *BHARI*.

4.1. Managerial ability and post-acquisition long-term BHARs

We test the first research question by regressing acquiring firms' post-acquisition operating performance as measured by return on assets (*ROA*), cash flow from operations (*CFO*), and market-to-book ratios (*MTB*) on the managerial ability dummy (*MA*) and report the results in Table 4. The coefficients on managerial ability (*MA*) for all nine industry-median adjusted operating performance measures for the one-, two-, and three-year periods following acquisition (*ROA1*, *ROA2*, *ROA3*, *CFO1*, *CFO2*, *CFO3*, *MTB1*, *MTB2*, *MTB3*) are all positive and significant (the minimum t-value is 3.588 and the maximum is 8.113). These results are also economically significant (the minimum economic significance is 2.9% and the maximum is 4.4%). For instance, the coefficient of 0.029 implies that a one-standard deviation increase in managerial ability is associated with a 2.9% increase in *ROA1* relative to the standard deviation. These results strongly support our expectation that acquiring firms with superior managerial ability are able to generate stronger operating performance in the post-acquisition long-term periods.

The results for the control variables show that payment in stock (*STOCK*) has a negative and significant effect on post-acquisition returns, and payment in cash (*CASH*) has a positive influence on post-acquisition returns for acquirers. These results are consistent with those of prior studies (Myers and Majluf, 1984; Schwert, 2000). The coefficient of *TAX_LOSS* is significantly negative.

[Insert Table 4 here]

4.2. Managerial ability and post-acquisition long-term BHARs

We run the robustness tests by using firms' post-acquisition long-term *BHARs* to replace operating performance. Following Barber and Lyon (1997), we calculate the adjusted *BHARs* using the following equation:

$$BHAR_{it} = \prod_{t=1}^{\tau} (1 + R_{it}) - \prod_{t=1}^{\tau} [(1 + E(R_{it}))]$$

Table 5 reports the results for the 2*3 *SIZE*BM* value-weighted returns for one-, two-, and three-year intervals. The coefficients on *MA* in Table 5 are positive and significant for one-, two- and three- year intervals (0.030, t = 2.277 for *BHAR1*, 0.048, t=2.278 for *BHAR2* and 0.055, t = 1.852 for *BHAR3*). These results further support the notion that top management teams with higher managerial ability achieve better post-acquisition returns for acquiring firms.

[Insert Table 5 here]

4.3. Change analysis

We perform a within-company change regression analysis focusing on firms with changes of managerial ability to further alleviate concerns about the potential problems of confounding the effects of firm-specific factors and managerial ability effects on acquisition performance. In order to construct the subsample, the first step is to choose companies that have multiple acquisitions during the sample period. The second step is to exclude the companies that have multiple acquisitions during the same year as there are no variations of managerial ability value. Finally, we transform the change value of managerial ability and post-acquisition performance into dummy variables. We define *MA_INCREASE* as 1 if managerial ability increases between two continuous acquisitions. ΔROA , ΔCFO , ΔMTB , $\Delta BHAR$ is denoted as 1 if the acquisition performance increases between the two continuous acquisitions, otherwise 0. For other continuous variables, we also use the change value. The results are documented in Table 6. Panel A shows the results by using ΔROA , ΔCFO and ΔMTB as the main dependent

variables. The coefficients of *MA_INCREASE* are all positive and significant indicating that the increasing managerial ability is helpful to increase the acquisition performance for acquiring firms. Panel B shows the results by regressing $\Delta BHAR$ on change of managerial ability (ΔMA). However, the results are not significant for all $\Delta BHARs$.

One potential explanation is that the stock market return involves not only performance information but also investment perceptions or other non-financial information. Thus, the stock market return results may suffer from noise and diverge from operating performance proxies. In summary, the results in Table 6, to some extent, support our main expectation regarding the first research question that higher managerial ability leads to acquisition performance improvements.

[Insert Table 6 here]

4.4. Horizontal acquisition and the effect of managerial ability on post-acquisition performance

We next examine whether the positive effects of managerial ability on long-term acquisition performance are more pronounced if the acquiring firm and target firm are in the same industry (horizontal acquisition). We test the third research question by estimating an OLS model, to which we use subgroup analysis. The dummy variable, *HORIZON*, equals 1 if the acquiring and target firms are in the same industry (based on the two-digit SIC codes) and 0 for diversified acquisitions. Our main interest is to compare the difference between *HORIZON=1* and *HORIZON=0*. The results of the analysis are summarized in Table 7. Panel A shows the subgroup analysis results by using *ROA1*, *ROA2*, and *ROA3* as our main dependent variable. Seen from Column (1) to (6), the coefficients of *MA* are all positive and significant. In order to further test whether there exists a difference between *HORIZON=1* and *HORIZON=0*, we perform

the chi-test. The subsample comparisons at the bottom of Panel A, Table 7 suggests that the positive relation between managerial ability and acquisition performance is more pronounced in $HORIZON=1$ group as presented in Column (1), (3), and (5) ($\chi^2 = 5.46$, $p=0.019$; $\chi^2 = 6.00$, $p=0.014$; and $\chi^2 = 4.27$, $p=0.039$). It supports the idea that the superiority of managerial ability in maximizing the synergy benefit is manifested in horizontal M&As.

Panel B, Table 7 documents the subgroup tests by using $CFO1$, $CFO2$, and $CFO3$ as the main dependent variables. The results are consistent with Panel A. The subgroup differences are all significant between two subgroups ($\chi^2 = 6.31$, $p=0.012$; $\chi^2 = 7.16$, $p=0.007$; $\chi^2 = 7.51$, $p=0.006$). Panel C, Table 7 shows the results by using $MTB1$, $MTB2$, and $MTB3$ as the main dependent variables. All the coefficients of MA are positive and significant. However, the two group regressions have no significant difference between $HORIZON=1$ and $HORIZON=0$ subgroups.

What's more, we also conduct subgroup tests by using long-term post-acquisition $BHARs$ as the main dependent variables to repeat the above analyses. The results are presented in Panel D, Table 7. As expected, the coefficient on MA is mostly positive and significant in the $HORIZON=1$ subgroup, while the coefficient in the $HORIZON=0$ group is insignificant. In Columns (3) and (4), we find the subgroup difference is significant between $HORIZON=1$ and $HORIZON=0$ ($\chi^2 = 3.12$, $p=0.077$) for 2-year post-acquisition $BHARs$. In Column (5) and (6), when using post 3-year $BHARs$ as the dependent variable, the subgroup difference is significant and consistent with Columns (3) and (4).

In summary, these results collectively suggest that the industry-specific knowledge, skills, and experience of the managerial team of acquiring firms are much more important than generic managerial ability in effectively managing the integration process and creating positive synergy value in M&As. Overall, Table 7 provides consistent evidence for our expectation of the third research question.

[Insert Table 7 here]

4.5. *Additional tests*

4.5.1. *Managerial ability of acquiring firms and short-run announcement returns*

Many acquisition studies examine short-term stock price reactions to acquisition announcements (e.g., Eckbo and Thorburn, 2000; Moeller et al., 2004; Chen and Lin, 2018). This approach assumes that an M&A announcement brings new information to the market (e.g., investors' expectations about the firm's prospects), which will be updated and reflected in short-term stock price changes (Martynova and Renneboog, 2008). However, due to market frictions and inefficiencies, announcement effects may fail to capture the overall value created by M&As. Loughran and Vijh (1997) indicate that in the short term, markets systematically overestimate or underestimate the gains in efficiency from acquisitions. Mitchell et al. (2004) also provide evidence that stock prices temporarily diverge from their information-efficient values around announcement dates. Although it is more likely that the outcome of implementing M&A decisions and strategies will be captured in a long-term post-acquisition window than in short-term returns around announcement dates, we check whether our findings on long-term stock return performance also apply to short-term market reactions around the acquisition announcement date.

We follow the standard-event study methodology (Linn and McConnell, 1983; Brown and Warner, 1985) by using short-term cumulative abnormal returns in calculating the acquirer's announcement returns. We mainly use 5-day event windows for our analysis. The results for short-term abnormal returns are presented in Table 8.¹⁰

Table 8 reveals weak relationships between the managerial ability of acquiring

¹⁰ We also use 3-day and 11-day event windows to repeat the announcement return analyses. The results are similar to those for the 5-day event window.

firms and short-term announcement returns. Column (1) presents the fundamental regression result which indicates an insignificant fundamental relationship.¹¹ Columns (2) and (3) further document the subgroup analysis by comparing same-industry vs. non-same-industry groups. The results are still weak.

[Insert Table 8 here]

4.5.2. Matching sample analysis

To conduct a robustness check, we construct a matching sample to examine whether the positive relationship between the managerial ability of acquiring firms and their post-acquisition performance still holds. We use the top 50% of firms in terms of managerial ability as our treatment group, and then match each of these firms to a two-digit SIC code, fiscal year, and firm size among the remaining 50% of firms with lower managerial ability. Our finalized sample contains 3,049 observations. We repeat our analysis of the association between the raw value of managerial ability (*MA_SCORE*) and post-acquisition operating performance and *BHARs*. The results are shown in Table 9. Panel A reports the results by using operating performance proxies (*ROA1*, *ROA2*, *ROA3*, *CFO1*, *CFO2*, *CFO3*, *MTB1*, *MTB2*, and *MTB3*) as the main dependent variables. The coefficients of *MA_SCORE* are all positive and significant. Panel B shows the results from using the long-term *BHARs* as the dependent variable. The coefficients of *MA_SCORE* are all positive and significant for all *BHARs* in the one-, two-, and three-year post-acquisition periods.

[Insert Table 9 here]

¹¹ Our results are not consistent with those of Chen and Lin (2018) for the following three possible reasons: (1) their sample period (1991-2013) is different from ours (2000-2012); (2) we limit all the analysis to completed deals including announcement returns; and (3) the announcement return adjustment benchmark is different from that in Chen and Lin (2018). They use a fundamental market model and we use a size and market-to-book ratio portfolio adjustment model to calculate announcement returns.

4.5.3. *Alternative computations of accounting performance and BHARs*

Because there are various benchmarks for calculating long-term *BHARs*, we perform a series of additional robustness checks. First, we use industry-mean adjusted operating performance measures as sensitivity analyses. Second, we use basic market-value-weighted/equal-weighted returns to retest our results. We also use the other two compounding methods for calculating *BHARs* proposed by Ikenberry et al. (1995). All of the (untabulated) results from these tests are generally consistent with our main analyses.

5. Conclusion

The high volume and importance of M&A activities, inconclusive evidence for positive post-acquisition returns, and great variations in post-acquisition performance highlight the need for further studies of the key factors associated with the success or failure of M&As. M&As involve a complex and dynamic process that involves trade-offs between the potential benefits of synergy and the potential costs of conflicts in terms of personnel, integration, and organizational culture. An acquisition is more likely to be successful if the acquirer is capable of maximizing the synergy benefits and minimizing the costs. M&A activities involve collective strategic decisions and teamwork among the senior management of acquiring firms. Therefore, superior managerial ability is critical to managing post-acquisition integration and changes, maximizing the synergistic benefits of M&As, and thus enhancing post-acquisition performance. We argue that the ability of an acquiring firm's top management team plays a critical role in selecting acquisition targets, managing combined resources, and ultimately creating value. In this study, we demonstrate that acquiring firms with superior managerial ability are likely to achieve better post-acquisition performance than firms with lower managerial ability. We quantify managerial ability based on the resource view of firms, that is, managers' efficiency in transforming resources into revenue, as compared with the performance of their industry peers. We follow

Demerjian et al. (2012) in identifying a manager-specific efficiency component as the proxy of managerial ability. Our empirical results show that both post-acquisition operating performance and long-term stock return performance are positively and significantly associated with the managerial ability of acquiring firms. These findings suggest that the knowledge, skills, and experience of the management team are critical to creating synergy benefits in M&A activities, and that acquiring firms with higher managerial ability are more likely to achieve desirable outcomes in mergers and acquisitions.

We also find that the positive effect of managerial ability on post-acquisition long-term performance is more pronounced in horizontal acquisitions, implying that the industry-specific component of managerial ability is more important than its generic component for acquiring firms in identifying suitable target firms, effectively managing the integration process, and realizing greater synergy benefits. It also implies that it is more beneficial for acquiring firms with high managerial ability to consider potential target firms in the same industry.

Using the manager-specific efficiency of transforming resources into revenues as the proxy of managerial ability, as specified in Demerjian et al. (2012), we demonstrate that managerial ability is an important driving factor in explaining variations in post-acquisition performance. We suggest two avenues for future research. First, researchers can explore other moderating variables that influence the workings of management teams, and thus the association between managerial ability and post-acquisition performance. Second, future research can continue to explore other driving factors that may affect the outcomes of M&A activity and provide other explanations for wide variations in post-acquisition performance.

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Appendix: Variable Definitions

Variable	Definition
<i>MA_SCORE</i>	Raw value of managerial ability measure, following Demerjian et al. (2012).
<i>MA</i>	Dummy variable equals to 1 if the <i>MA_SCORE</i> is above the median value of the observations following Chen and Lin (2018)
<i>BHAR_i</i>	Acquiring firms' 2*3 SIZE*BM portfolio value-weighted buy-and-hold abnormal returns post <i>i</i> -year of acquisition, <i>i</i> =1, 2, 3.
<i>ROA_i</i>	Acquiring firms' return on assets post <i>i</i> -year of acquisition adjusted by industry-median value, <i>i</i> =1, 2, 3.
<i>CFO_i</i>	Acquiring firms' cash flow from operation post <i>i</i> -year of acquisition adjusted by industry-median value, <i>i</i> =1, 2, 3.
<i>MTB_i</i>	Acquiring firms' market-to-book ratio post <i>i</i> -year of acquisition adjusted by industry-median value, <i>i</i> =1, 2, 3.
<i>SIZE</i>	Natural logarithmic value of acquiring firms' market value at the end of the fiscal year before the takeover announcement.
<i>LEV</i>	Long- and short-term debt-to-book value of total assets at the end of the fiscal year before the takeover announcement of acquiring firms.
<i>MB</i>	Market-to-book ratio, which is calculated as acquiring firms' market value of common stock to book value of equity at the end of the fiscal year before the takeover announcement.
<i>TAX_LOSS</i>	Tax loss carry forward adjusted by acquirer's market value prior acquisition.
<i>CASH</i>	Indicator variable that equals 1 if the deal is financed only through cash and equals 0 otherwise.
<i>STOCK</i>	Indicator variable that equals 1 if the deal was financed only through stocks and 0 otherwise.
<i>SALE_GROWTH</i>	Current year sales of acquiring firms less prior year sales, divided by prior year assets.
<i>HORIZON</i>	Equals 1 if the acquirer and target firm are in the same industry (we use firms' two-digit SIC codes) and 0 otherwise.

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Table 1: Frequency Distribution of M&As.

Year	N	Percent	Cumulative Percentage
2000	1035	0.119	0.119
2001	815	0.094	0.213
2002	758	0.087	0.300
2003	739	0.085	0.385
2004	827	0.095	0.480
2005	808	0.093	0.573
2006	792	0.091	0.664
2007	807	0.093	0.757
2008	55	0.006	0.763
2009	405	0.047	0.810
2010	505	0.058	0.868
2011	594	0.069	0.937
2012	530	0.063	1.000
Total	8670	1.000	1.000

Note: This table reports the annual incidence of firms having M&As. The sample comes from the SDC M&A Database from 01/01/2000 to 12/31/2012. The M&A sample limits to the completed deals which the percentage of shares acquired in M&As is equal or more than 50% and the deal value is larger than 1 million. In this table, we limit observations should have managerial ability, accounting performance and control variable data so as to see the general trends.

Table 2: Descriptive Statistics

	N	MEAN	MIN	Q1	MEDIAN	Q3	MAX	STD
Panel A: Operating Accounting Performance								
<i>ROA1</i>	7907	-0.008	-0.601	-0.037	0.012	0.060	0.295	0.139
<i>ROA2</i>	7907	-0.003	-0.719	-0.033	0.015	0.066	0.422	0.158
<i>ROA3</i>	7907	0.007	-0.948	-0.028	0.019	0.072	0.734	0.202
<i>CFO1</i>	7907	-0.004	-0.282	-0.044	-0.002	0.044	0.217	0.084
<i>CFO2</i>	7907	-0.003	-0.308	-0.046	-0.001	0.047	0.229	0.089
<i>CFO3</i>	7907	-0.001	-0.350	-0.049	0.000	0.052	0.264	0.099
<i>MTB1</i>	7907	-0.128	-2.666	-0.870	-0.342	0.295	5.384	1.271
<i>MTB2</i>	7907	-0.101	-2.535	-0.877	-0.355	0.346	5.772	1.318
<i>MTB3</i>	7907	-0.059	-2.333	-0.897	-0.352	0.355	6.458	1.440
Panel B: Long-term Buy-and-Hold Abnormal Returns								
<i>BHAR1</i>	7907	0.021	-0.799	-0.260	-0.031	0.213	1.807	0.450
<i>BHAR2</i>	7907	0.050	-1.042	-0.377	-0.061	0.293	2.802	0.660
<i>BHAR3</i>	7907	0.079	-1.301	-0.471	-0.097	0.349	4.201	0.903
Panel C: Managerial Ability								
<i>MA_SCORE</i>	7907	0.021	-0.212	-0.064	-0.015	0.063	0.545	0.141
Panel D: Control Variables								

<i>SIZE</i>	7907	6.701	2.310	5.398	6.660	7.913	11.600	1.905
<i>LEV</i>	7907	0.370	0.053	0.224	0.366	0.492	0.825	0.182
<i>MB</i>	7907	4.015	0.449	1.618	2.510	4.096	32.730	5.069
<i>TAX_LOSS</i>	7907	0.109	0.000	0.000	0.000	0.041	2.608	0.352
<i>SALE_GROWTH</i>	7907	0.397	-0.861	0.000	0.099	0.259	16.110	1.820
<i>CASH</i>	7907	0.398	0.000	0.000	0.000	1.000	1.000	0.489
<i>STOCK</i>	7907	0.076	0.000	0.000	0.000	0.000	1.000	0.265

Note: This table reports the basic descriptive statistics of main variables related to post-acquisition performance, managerial ability, and other control variables. Variable definitions are provided in the appendix. All the continuous variables are winsorized at the top and bottom 1%.

Table 3: Correlation Matrix

	<i>MA_SCORE</i>	<i>ROAI</i>	<i>CFOI</i>	<i>MTBI</i>	<i>BHARI</i>	<i>HORIZON</i>	<i>SIZE</i>	<i>LEV</i>	<i>MB</i>	<i>LOSS</i>	<i>SALE_GROWTH</i>	<i>CASH</i>	<i>STOCK</i>
<i>MA_SCORE</i>	1.000												
<i>ROAI</i>	0.170***	1.000											
<i>CFOI</i>	0.235***	0.709***	1.000										
<i>MTBI</i>	0.189***	0.153***	0.304***	1.000									
<i>BHARI</i>	-0.052***	0.188***	0.176***	0.138***	1.000								
<i>HORIZON</i>	0.053***	0.023**	0.028***	-0.001	0.028**	1.000							
<i>SIZE</i>	0.297***	0.246***	0.324***	0.221***	-0.077***	-0.052***	1.000						
<i>LEV</i>	-0.101***	0.111***	0.022**	-0.026**	0.082***	-0.006	0.024**	1.000					
<i>MB</i>	0.188***	-0.057***	0.046***	0.280***	-0.132***	-0.037***	0.242***	0.082***	1.000				
<i>LOSS</i>	-0.084***	-0.157***	-0.179***	-0.030***	0.021*	0.022**	-0.280***	0.049***	-0.066***	1.000			
<i>SALE_GROWTH</i>	0.010	-0.007	-0.018	-0.003	-0.021*	-0.009	-0.017*	0.063***	0.069***	-0.015	1.000		
<i>CASH</i>	0.006	0.113***	0.125***	0.034***	0.061***	0.035***	0.111***	0.005	-0.086***	-0.068***	-0.025**	1.000	
<i>STOCK</i>	0.046***	-0.149***	-0.140***	0.034***	-0.109***	-0.023**	-0.045***	-0.065***	0.213***	0.066***	0.027***	-0.237***	1.000

Note: This table presents the correlation matrix. Variable definitions are provided in the appendix. The statistical significance of the estimates is denoted with asterisks: ***, ** and * correspond to 1%, 5% and 10% levels of significance, respectively.

Table 4: Managerial Ability and Post-Acquisition Operating Performance

Dep. Var. =	<i>ROA1</i>	<i>ROA2</i>	<i>ROA3</i>	<i>CFO1</i>	<i>CFO2</i>	<i>CFO3</i>	<i>MTB1</i>	<i>MTB2</i>	<i>MTB3</i>
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<i>MA</i>	0.029*** (3.901)	0.034*** (3.998)	0.043*** (3.588)	0.025*** (7.367)	0.028*** (8.108)	0.030*** (8.113)	0.263*** (4.786)	0.280*** (5.200)	0.337*** (5.518)
<i>SIZE</i>	0.017*** (9.641)	0.016*** (8.164)	0.015*** (6.411)	0.013*** (11.983)	0.013*** (11.703)	0.013*** (11.366)	0.102*** (5.777)	0.109*** (5.931)	0.111*** (5.632)
<i>LEV</i>	0.116*** (6.071)	0.138*** (6.398)	0.156*** (5.634)	0.014 (1.381)	0.017* (1.713)	0.021* (1.951)	-0.590*** (-3.623)	-0.548*** (-3.336)	-0.531*** (-3.004)
<i>MB</i>	-0.004*** (-2.811)	-0.005** (-2.490)	-0.004* (-1.691)	-0.000 (-0.355)	-0.000 (-0.157)	0.000 (0.239)	0.077*** (7.102)	0.080*** (7.676)	0.089*** (7.178)
<i>TAX_LOSS</i>	-0.037*** (-4.682)	-0.044*** (-5.203)	-0.051*** (-5.180)	-0.021*** (-4.533)	-0.024*** (-5.175)	-0.028*** (-5.448)	0.164** (2.347)	0.169** (2.242)	0.184** (2.276)
<i>SALE_GROWTH</i>	-0.001 (-0.814)	-0.001 (-0.764)	0.000 (0.186)	-0.001 (-0.932)	-0.001 (-0.665)	-0.000 (-0.288)	-0.007 (-0.724)	-0.005 (-0.516)	-0.003 (-0.274)
<i>CASH</i>	0.018*** (5.386)	0.018*** (5.046)	0.018*** (3.897)	0.012*** (6.172)	0.012*** (5.806)	0.013*** (5.773)	0.088*** (2.718)	0.091*** (2.696)	0.102*** (2.810)
<i>STOCK</i>	-0.059*** (-4.431)	-0.068*** (-4.273)	-0.076*** (-3.591)	-0.035*** (-5.969)	-0.038*** (-6.114)	-0.036*** (-5.352)	0.026 (0.291)	-0.037 (-0.407)	-0.033 (-0.326)
Constant	-0.157*** (-10.141)	-0.139*** (-8.215)	-0.069*** (-3.262)	-0.132*** (-11.807)	-0.136*** (-11.250)	-0.125*** (-10.490)	-1.234*** (-2.859)	-1.222*** (-2.834)	-1.313*** (-4.314)
Observations	7,907	7,907	7,907	7,907	7,907	7,907	7,907	7,907	7,907
R ²	0.142	0.124	0.103	0.170	0.168	0.152	0.153	0.153	0.151

Note: This table shows the regression results between managerial ability of acquiring firms and acquirers' post-acquisition accounting performance. The dependent variables are post-acquisition return on assets (*ROA*), cash flow from operation (*CFO*), and market-to-book ratio (*MTB*) for one-, two-, three-year intervals by using industry-median adjusted value. The independent variable is managerial ability of acquiring firms—*MA*. *MA* is a dummy variable which is equal to 1 whose firms have managerial ability above the median of the whole for Compustat firms. Other control variables are defined in Appendix. Coefficient estimates with the t-statistics are reported in parentheses. The t-statistics are computed using the fixed-effects model, controlling for time-specific effects, and standard errors are corrected based on one-way clustering by firm (following Field and Mkrtychyan, 2017). The statistical significance of the estimates is denoted with asterisks: ***, ** and * correspond to 1%, 5% and 10% levels of significance, respectively.

Table 5: Managerial Ability and Long-term Buy-and-Hold Abnormal Returns (BHARs)

Dep. Var. =	<i>BHAR1</i>	<i>BHAR2</i>	<i>BHAR3</i>
	(1)	(2)	(3)
<i>MA</i>	0.030** (2.277)	0.048** (2.278)	0.055* (1.852)
<i>SIZE</i>	-0.018*** (-4.838)	-0.030*** (-5.105)	-0.033*** (-3.886)
<i>LEV</i>	0.291*** (7.324)	0.430*** (6.891)	0.533*** (5.789)
<i>MB</i>	-0.013*** (-9.040)	-0.016*** (-9.159)	-0.018*** (-7.055)
<i>TAX_LOSS</i>	0.044* (1.665)	0.030 (0.804)	-0.002 (-0.037)
<i>SALE_GROWTH</i>	-0.001 (-0.411)	-0.009** (-2.048)	-0.017*** (-3.231)
<i>CASH</i>	0.035*** (3.309)	0.051*** (3.143)	0.049** (2.244)
<i>STOCK</i>	-0.080*** (-3.287)	-0.088*** (-2.595)	-0.110** (-2.384)
Constant	0.067 (0.715)	0.295** (1.972)	0.611* (1.711)
Observations	7,907	7,907	7,907
R ²	0.085	0.085	0.070

Note: This table shows the regression results between managerial ability of acquiring firms and acquirers' post-acquisition long-term *BHARs*. The dependent variables are post-acquisition *BHARs* for one-, two-, three-year intervals by using 2*3 *SIZE*BM* portfolios as benchmarks. The independent variable is managerial ability of acquiring firms. It is a dummy variable which is equal to 1 whose firms have managerial ability above the median of the whole for Compustat firms (denoted as *MA*). Other control variables are defined in Appendix. Coefficient estimates with the t-statistics are reported in parentheses. The t-statistics are computed using the fixed-effects model, controlling for time-specific effects, and standard errors are corrected based on one-way clustering by firm (following Field and Mkrtchyan, 2017). The statistical significance of the estimates is denoted with asterisks: ***, ** and * correspond to 1%, 5% and 10% levels of significance, respectively.

Table 6: Change Analysis

Panel A: Accounting Performance

Dep. Var. =	$\Delta ROA1$	$\Delta ROA2$	$\Delta ROA3$	$\Delta CFO1$	$\Delta CFO2$	$\Delta CFO3$	$\Delta MTB1$	$\Delta MTB2$	$\Delta MTB3$
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<i>MA_INCREASE</i>	1.486*** (10.942)	1.774*** (13.201)	1.963*** (13.513)	1.425*** (10.639)	1.744*** (12.071)	1.897*** (12.774)	1.612*** (11.374)	1.780*** (12.266)	2.214*** (14.454)
<i>ASIZE</i>	0.201 (1.444)	0.285* (1.738)	0.465*** (2.653)	0.176 (1.364)	0.211 (1.267)	0.615*** (3.429)	0.036 (0.243)	0.099 (0.593)	0.297 (1.414)
<i>LEV</i>	1.961*** (2.644)	1.924** (2.147)	2.710*** (2.792)	2.844*** (3.573)	2.851*** (2.857)	3.856*** (3.641)	0.850 (1.095)	0.785 (0.840)	1.685 (1.588)
<i>MB</i>	-0.014 (-0.623)	-0.017 (-0.477)	-0.056* (-1.690)	-0.069*** (-3.317)	-0.058** (-2.071)	-0.090*** (-3.421)	-0.056*** (-2.804)	-0.047 (-1.623)	-0.105*** (-2.819)
<i>TAXLOSS</i>	0.206 (0.590)	0.099 (0.295)	0.840** (2.488)	0.190 (0.525)	0.491 (1.228)	0.119 (0.248)	0.120 (0.335)	0.187 (0.508)	0.152 (0.338)
<i>SALE_GROWTH</i>	0.633* (1.863)	1.108*** (3.013)	1.624*** (3.465)	0.228 (0.688)	0.903** (2.544)	0.679 (1.585)	0.860** (2.484)	1.175*** (3.097)	2.041*** (5.014)
<i>CASH</i>	-0.055 (-0.571)	-0.104 (-1.058)	-0.028 (-0.248)	-0.182* (-1.917)	-0.181* (-1.871)	-0.079 (-0.688)	-0.155* (-1.654)	-0.150 (-1.477)	-0.188* (-1.682)
<i>STOCK</i>	0.091 (0.495)	-0.047 (-0.232)	-0.105 (-0.443)	0.073 (0.423)	0.025 (0.126)	0.154 (0.664)	0.173 (1.028)	0.135 (0.738)	-0.029 (-0.116)
Constant	-3.168*** (-3.546)	-1.700*** (-3.134)	-2.482*** (-4.240)	-3.102*** (-3.191)	-1.071 (-1.563)	-4.255*** (-8.336)	-4.556*** (-5.440)	-2.603*** (-4.728)	-3.564*** (-6.207)
Observations	4,106	4,106	4,106	4,106	4,106	4,106	4,106	4,106	4,106
Pseudo R ²	0.143	0.111	0.165	0.136	0.112	0.163	0.149	0.108	0.180

Panel B: Long-term BHARs

Dep. Var. =	$\Delta BHAR1$	$\Delta BHAR2$	$\Delta BHAR3$
	(1)	(2)	(3)
<i>MA_INCREASE</i>	-0.005 (-0.079)	0.034 (0.540)	-0.040 (-0.598)
$\Delta SIZE$	-0.783*** (-12.141)	-0.632*** (-9.880)	-0.526*** (-8.272)
ΔLEV	-0.300 (-0.990)	-0.130 (-0.439)	0.158 (0.530)
ΔMB	-0.020** (-2.238)	-0.012 (-1.319)	-0.015* (-1.739)
ΔTAX_LOSS	0.010 (0.094)	0.052 (0.443)	0.089 (0.809)
$\Delta SALE_GROWTH$	0.006 (0.334)	0.005 (0.316)	0.014 (0.818)
<i>CASH</i>	-0.007 (-0.118)	-0.034 (-0.558)	0.011 (0.173)
<i>STOCK</i>	0.303* (1.764)	-0.099 (-0.593)	-0.064 (-0.372)
Constant	-0.488 (-1.495)	-1.010** (-2.228)	-0.883** (-2.044)
Observations	4,106	4,106	4,106
Pseudo R ²	0.063	0.062	0.112

Note: This table presents the change analysis. We require the observations should satisfy the following criteria: (1) firms have multiple acquisitions during the sample period, (2) serial acquisition occurs in different years. *MA_INCREASE* equals 1 if managerial ability increases between two continuous acquisition, otherwise 0. ΔROA , ΔCFO , ΔMTB , $\Delta BHAR$ is denoted as 1 if the acquisition performance increases between the two continuous acquisitions, otherwise 0. Coefficient estimates with the t-statistics are reported in parentheses. The t-statistics are computed using the fixed-effects model, controlling for industry-specific and time-specific effects, and standard errors are corrected based on one-way clustering by firm. The statistical significance of the estimates is denoted with asterisks: ***, ** and * correspond to 1%, 5% and 10% levels of significance, respectively.

Table 7: The Same-Industry Acquisition vs. Cross-Industry Acquisition on the Association between Managerial Ability and Post-Acquisition Performance

Panel A: Accounting Performance—ROA

Dep. Var. =	<i>ROA1</i>	<i>ROA1</i>	<i>ROA2</i>	<i>ROA2</i>	<i>ROA3</i>	<i>ROA3</i>
	<i>HORIZON</i>	<i>HORIZON</i>	<i>HORIZON</i>	<i>HORIZON</i>	<i>HORIZON</i>	<i>HORIZON</i>
	=1	=0	=1	=0	=1	=0
	(1)	(2)	(3)	(4)	(5)	(6)
<i>MA</i>	0.035*** (4.767)	0.019** (2.380)	0.043*** (5.011)	0.024** (2.558)	0.055*** (4.593)	0.034*** (2.657)
<i>SIZE</i>	0.015*** (8.583)	0.018*** (7.134)	0.013*** (7.065)	0.017*** (5.990)	0.012*** (5.412)	0.016*** (4.863)
<i>LEV</i>	0.103*** (5.573)	0.090*** (3.726)	0.114*** (5.290)	0.105*** (3.702)	0.122*** (4.350)	0.107*** (2.992)
<i>MB</i>	-0.004** (-2.440)	-0.005** (-2.351)	-0.004** (-2.128)	-0.004** (-1.962)	-0.003 (-1.313)	-0.003 (-1.043)
<i>TAX_LOSS</i>	-0.032*** (-4.119)	-0.044*** (-2.906)	-0.036*** (-4.357)	-0.053*** (-3.003)	-0.043*** (-4.413)	-0.046** (-2.251)
<i>SALE_GROWTH</i>	-0.002 (-1.307)	0.000 (0.166)	-0.003 (-1.522)	0.001 (0.534)	-0.002 (-0.885)	0.004* (1.814)
<i>CASH</i>	0.021*** (5.612)	0.012** (2.249)	0.022*** (5.222)	0.012** (2.025)	0.022*** (4.153)	0.010 (1.457)
<i>STOCK</i>	-0.055*** (-3.796)	-0.062*** (-3.090)	-0.058*** (-3.450)	-0.076*** (-3.020)	-0.061*** (-2.667)	-0.091*** (-2.809)
Constant	-0.118*** (-7.416)	-0.143*** (-6.643)	-0.098*** (-5.190)	-0.125*** (-4.827)	-0.037 (-1.412)	-0.080** (-2.440)
Observations	4,834	3,073	4,834	3,073	4,834	3,073
R ²	0.129	0.149	0.112	0.126	0.090	0.093
Subgroup						
difference	$\chi^2 = 5.46$		$\chi^2 = 6.00$		$\chi^2 = 4.27$	
test of <i>MA</i>	(p= 0.019)		(p= 0.014)		(p= 0.039)	

Panel B: Accounting Performance—CFO

Dep. Var. =	<i>CF01</i>	<i>CF01</i>	<i>CF02</i>	<i>CF02</i>	<i>CF03</i>	<i>CF03</i>
	<i>HORIZON=</i>	<i>HORIZON=</i>	<i>HORIZON=</i>	<i>HORIZON=</i>	<i>HORIZON=</i>	<i>HORIZON=</i>
	<i>1</i>	<i>0</i>	<i>1</i>	<i>0</i>	<i>1</i>	<i>0</i>
	(1)	(2)	(3)	(4)	(5)	(6)
<i>MA</i>	0.027*** (7.659)	0.017*** (4.211)	0.030*** (8.439)	0.019*** (4.509)	0.033*** (8.426)	0.021*** (4.427)
<i>SIZE</i>	0.012*** (11.278)	0.012*** (8.810)	0.012*** (11.169)	0.013*** (8.317)	0.013*** (11.070)	0.012*** (7.672)
<i>LEV</i>	0.022** (2.197)	0.008 (0.631)	0.028*** (2.709)	0.005 (0.408)	0.031*** (2.760)	0.005 (0.355)
<i>MB</i>	-0.000 (-0.785)	-0.000 (-0.024)	-0.000 (-0.776)	0.000 (0.332)	-0.000 (-0.588)	0.001 (1.051)
<i>TAX_LOSS</i>	-0.019*** (-3.716)	-0.028*** (-4.368)	-0.023*** (-4.299)	-0.030*** (-4.466)	-0.026*** (-4.375)	-0.032*** (-4.398)
<i>SALE_GROWT</i>						
<i>H</i>	-0.001 (-1.042)	-0.000 (-0.408)	-0.001 (-0.817)	-0.000 (-0.177)	-0.000 (-0.408)	0.000 (0.101)
<i>CASH</i>	0.013*** (5.054)	0.010*** (3.320)	0.013*** (4.839)	0.010*** (3.106)	0.014*** (5.052)	0.010*** (2.864)
<i>STOCK</i>	-0.035*** (-5.132)	-0.038*** (-4.054)	-0.035*** (-4.903)	-0.043*** (-4.180)	-0.036*** (-4.603)	-0.037*** (-3.375)
Constant	-0.105*** (-10.612)	-0.107*** (-9.322)	-0.109*** (-10.544)	-0.106*** (-9.091)	-0.108*** (-9.630)	-0.108*** (-8.316)
Observations	4,834	3,073	4,834	3,073	4,834	3,073
R ²	0.150	0.186	0.149	0.188	0.143	0.158
Subgroup						
difference		$\chi^2 = 6.31$		$\chi^2 = 7.16$		$\chi^2 = 7.51$
test of <i>MA</i>		(<i>p</i> = 0.012)		(<i>p</i> = 0.007)		(<i>p</i> = 0.006)

Panel C: Accounting Performance—MTB

Dep. Var. =	<i>MTB1</i>	<i>MTB1</i>	<i>MTB2</i>	<i>MTB2</i>	<i>MTB3</i>	<i>MTB3</i>
	<i>HORIZON=</i> <i>1</i>	<i>HORIZON=</i> <i>0</i>	<i>HORIZON=</i> <i>1</i>	<i>HORIZON=</i> <i>0</i>	<i>HORIZON=</i> <i>1</i>	<i>HORIZON=</i> <i>0</i>
	(1)	(2)	(3)	(4)	(5)	(6)
<i>MA</i>	0.188*** (3.125)	0.187*** (2.969)	0.209*** (3.587)	0.208*** (3.261)	0.271*** (4.105)	0.279*** (4.087)
<i>SIZE</i>	0.091*** (4.725)	0.109*** (5.014)	0.095*** (4.899)	0.117*** (5.154)	0.096*** (4.669)	0.112*** (4.639)
<i>LEV</i>	-0.155 (-0.971)	-0.476** (-2.365)	-0.097 (-0.611)	-0.529** (-2.521)	-0.082 (-0.474)	-0.565*** (-2.585)
<i>MB</i>	0.072*** (6.301)	0.057*** (4.251)	0.076*** (6.974)	0.059*** (4.526)	0.089*** (6.757)	0.067*** (4.666)
<i>TAX_LOSS</i>	0.147* (1.841)	-0.032 (-0.364)	0.133 (1.598)	0.016 (0.149)	0.157* (1.659)	-0.003 (-0.030)
<i>SALE_GROWT</i>						
<i>H</i>	-0.007 (-0.743)	-0.001 (-0.062)	-0.008 (-0.875)	0.006 (0.425)	-0.011 (-1.022)	0.016 (0.916)
<i>CASH</i>	0.122*** (2.958)	0.040 (0.807)	0.111*** (2.586)	0.055 (1.064)	0.135*** (2.972)	0.041 (0.743)
<i>STOCK</i>	-0.058 (-0.570)	0.045 (0.347)	-0.102 (-0.969)	-0.057 (-0.445)	-0.129 (-1.026)	-0.012 (-0.091)
Constant	-1.463*** (-9.174)	-1.279*** (-7.505)	-1.477*** (-9.166)	-1.317*** (-7.558)	-1.523*** (-9.080)	-1.322*** (-7.123)
Observations	4,834	3,073	4,834	3,073	4,834	3,073
R ²	0.131	0.123	0.135	0.126	0.141	0.129
Subgroup difference test of <i>MA</i>		$\chi^2 = 0.00$ ($p = 0.986$)		$\chi^2 = 0.00$ ($p = 0.978$)		$\chi^2 = 0.02$ ($p = 0.900$)

Panel D: Long-term BHARs

Dep. Var. =	<i>BHAR1</i>	<i>BHAR1</i>	<i>BHAR2</i>	<i>BHAR2</i>	<i>BHAR3</i>	<i>BHAR3</i>
	<i>HORIZON=</i>	<i>HORIZON=</i>	<i>HORIZON=</i>	<i>HORIZON=</i>	<i>HORIZON=</i>	<i>HORIZON=</i>
	<i>1</i>	<i>0</i>	<i>1</i>	<i>0</i>	<i>1</i>	<i>0</i>
<i>MA</i>	0.049 (0.865)	0.075 (1.020)	0.161* (1.945)	0.092 (0.939)	0.252* (1.871)	0.202 (1.388)
<i>SIZE</i>	-0.018*** (-4.096)	-0.011* (-1.839)	-0.039*** (-5.332)	-0.008 (-0.941)	-0.040*** (-3.770)	-0.016 (-1.347)
<i>LEV</i>	0.312*** (6.689)	0.254*** (4.121)	0.421*** (5.627)	0.439*** (4.889)	0.473*** (4.376)	0.634*** (5.171)
<i>MB</i>	-0.014*** (-8.049)	-0.016*** (-6.003)	-0.019*** (-8.267)	-0.022*** (-7.049)	-0.022*** (-7.101)	-0.025*** (-6.336)
<i>TAX_LOSS</i>	0.076** (2.374)	-0.017 (-0.403)	0.065 (1.539)	-0.015 (-0.263)	0.079 (1.339)	-0.102 (-1.295)
<i>SALE_GROWT</i>						
<i>H</i>	-0.005 (-1.252)	0.004 (0.804)	-0.015*** (-3.348)	0.001 (0.117)	-0.024*** (-3.725)	-0.007 (-0.948)
<i>CASH</i>	0.060*** (4.433)	0.006 (0.373)	0.087*** (4.103)	0.013 (0.558)	0.096*** (3.281)	0.017 (0.524)
<i>STOCK</i>	-0.108*** (-3.387)	-0.107*** (-2.774)	-0.151*** (-3.391)	-0.141*** (-2.832)	-0.199*** (-3.590)	-0.167** (-2.299)
Constant	0.180 (1.274)	0.041 (0.457)	0.583** (2.355)	0.137 (0.729)	0.647** (2.076)	0.742** (2.315)
Observations	4,834	3,073	4,834	3,073	4,834	3,073
R ²	0.113	0.108	0.118	0.123	0.096	0.110
Subgroup difference test of <i>MA</i>		$\chi^2 = 1.63$ ($p = 0.202$)		$\chi^2 = 3.12$ ($p = 0.077$)		$\chi^2 = 2.70$ ($p = 0.101$)

This table presents the subgroup results for the effect of acquisition type on the relationship between managerial ability and post-acquisition performance. The dependent variables of Panel A are post-acquisition *ROA*. Panel B uses post-acquisition *CFO* as the main dependent variable. Panel C uses post-acquisition *MTB* as the main dependent variables. Panel D uses post-acquisition long-term *BHARs* as main dependent variables. The independent variable is managerial ability of acquiring firms. It is a dummy variable which is equal to 1 whose firms have managerial ability above the median of the whole for Compustat firms (denoted as *MA*). *HORIZON* equals 1 if acquirer and target are in the same industry (using 2-digit SIC code), otherwise 0. Other control variables are defined in Appendix. Coefficient estimates with the t-statistics are reported in parentheses. The t-statistics are computed using the fixed-effects model, controlling for time-specific effects, and standard errors are corrected based on one-way clustering by firm (following Field and Mkrtyan, 2017). The statistical significance of the estimates is denoted with asterisks: ***, ** and * correspond to 1%, 5% and 10% levels of significance, respectively.

Table 8: Managerial Ability of Acquiring Firms and Short-run Acquisition Announcement Cumulative Abnormal Returns

Dep. Var.=	[-2, +2]	[-2, +2]	[-2, +2]
		<i>HORIZON=1</i>	<i>HORIZON=0</i>
	(1)	(2)	(3)
<i>MA</i>	0.004 (0.860)	-0.002 (-0.250)	0.011 (1.185)
<i>SIZE</i>	-0.005*** (-2.808)	-0.002 (-1.075)	-0.008*** (-2.702)
<i>LEV</i>	0.014 (0.990)	0.029* (1.717)	-0.024 (-0.993)
<i>MB</i>	-0.001 (-0.865)	-0.000 (-0.437)	-0.001 (-1.174)
<i>TAX_LOSS</i>	-0.002 (-0.339)	-0.004 (-0.841)	0.006 (0.391)
<i>SALE_GROWTH</i>	-0.000 (-0.787)	-0.000 (-0.161)	-0.000 (-0.981)
<i>CASH</i>	-0.000 (-0.068)	0.001 (0.139)	-0.002 (-0.310)
<i>STOCK</i>	-0.013 (-1.117)	-0.017 (-1.185)	-0.011 (-0.544)
Constant	0.075** (2.461)	0.007 (0.246)	0.143*** (3.004)
Observations	3,300	2,188	1,102
R ²	0.027	0.033	0.064

Note: The independent variable is managerial ability of acquiring firms. It is a dummy variable which is equal to 1 whose firms have managerial ability above the median of the whole for Compustat firms. The dependent variables are [-2, +2] announcement cumulative abnormal returns. Column (1) shows the basic regression. Column (2) and (3) show the horizontal effect on the relation between managerial ability and acquisition announcement return. *HORIZON* equals 1 if acquirer and target are in the same industry (using 2-digit SIC code), otherwise 0. Other control variables are defined in Appendix. Coefficient estimates with the t-statistics are reported in parentheses. The t-statistics are computed using the fixed-effects model, controlling for time-specific effects, and standard errors are corrected based on one-way clustering by firm (following Field and Mkrtyan, 2017). The statistical significance of the estimates is denoted with asterisks: ***, ** and * correspond to 1%, 5% and 10% levels of significance, respectively.

Table 9: Managerial Ability and Long-term Post-Acquisition Returns Performance –Using A Matching Sample

Panel A: Accounting Performance

Dep. Var.=	ROA1	ROA2	ROA3	CFO1	CFO2	CFO3	MTB1	MTB2	MTB3
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<i>MA_SCORE</i>	0.032*** (6.303)	0.040*** (6.922)	0.048*** (6.628)	0.027*** (8.101)	0.029*** (8.185)	0.034*** (8.477)	0.175*** (3.429)	0.201*** (3.865)	0.269*** (4.797)
<i>SIZE</i>	0.019*** (11.468)	0.018*** (10.075)	0.018*** (8.453)	0.013*** (11.434)	0.013*** (10.936)	0.014*** (10.668)	0.073*** (4.199)	0.076*** (4.358)	0.068*** (3.698)
<i>LEV</i>	0.117*** (6.475)	0.136*** (6.564)	0.156*** (5.994)	0.018 (1.632)	0.021* (1.843)	0.032** (2.529)	-0.687*** (-4.112)	-0.611*** (-3.543)	-0.594*** (-3.121)
<i>MB</i>	-0.004*** (-3.873)	-0.004*** (-3.547)	-0.004** (-2.531)	-0.000 (-0.157)	-0.000 (-0.347)	-0.000 (-0.659)	0.108*** (10.108)	0.113*** (10.194)	0.127*** (10.786)
<i>TAX_LOSS</i>	-0.032*** (-3.625)	-0.038*** (-3.848)	-0.048*** (-4.106)	-0.022*** (-4.398)	-0.027*** (-4.945)	-0.029*** (-4.867)	0.152* (1.868)	0.201** (2.324)	0.252*** (2.694)
<i>SALE_GROWTH</i>	-0.001 (-0.665)	-0.000 (-0.199)	0.001 (0.460)	-0.000 (-0.147)	0.000 (0.197)	0.001 (0.485)	-0.010 (-1.055)	-0.008 (-0.771)	-0.011 (-0.756)
<i>CASH</i>	0.022*** (4.944)	0.025*** (5.031)	0.019*** (3.015)	0.016*** (5.291)	0.016*** (4.819)	0.016*** (4.520)	0.122** (2.545)	0.120** (2.479)	0.123** (2.422)
<i>STOCK</i>	-0.068*** (-4.894)	-0.067*** (-4.313)	-0.071*** (-3.693)	-0.036*** (-4.566)	-0.038*** (-4.436)	-0.035*** (-3.935)	0.010 (0.097)	0.024 (0.223)	0.022 (0.182)
Constant	-0.157*** (-7.939)	-0.145*** (-6.351)	-0.040 (-1.377)	-0.154*** (-12.287)	-0.157*** (-11.913)	-0.136*** (-9.375)	-1.719*** (-8.764)	-1.558*** (-7.859)	-1.177*** (-5.328)
Observations	3,049	3,049	3,049	3,049	3,049	3,049	3,049	3,049	3,049
R ²	0.194	0.176	0.171	0.194	0.184	0.173	0.191	0.197	0.187

Panel B: Long-term BHARs

Dep. Var.=	<i>BHAR1</i>	<i>BHAR2</i>	<i>BHAR3</i>
	(1)	(2)	(3)
<i>MA_SCORE</i>	0.037** (2.163)	0.055** (2.156)	0.069* (1.899)
<i>SIZE</i>	-0.027*** (-5.219)	-0.041*** (-5.200)	-0.050*** (-4.377)
<i>LEV</i>	0.347*** (6.533)	0.508*** (6.337)	0.603*** (5.253)
<i>MB</i>	-0.010*** (-4.443)	-0.016*** (-5.996)	-0.018*** (-4.493)
<i>TAX_LOSS</i>	0.033 (0.957)	0.025 (0.530)	-0.033 (-0.506)
<i>SALE_GROWTH</i>	-0.005 (-1.417)	-0.011** (-2.055)	-0.017** (-2.371)
<i>CASH</i>	0.047*** (2.689)	0.066** (2.497)	0.070* (1.930)
<i>STOCK</i>	-0.110*** (-3.208)	-0.102** (-2.056)	-0.150** (-2.268)
Constant	0.097** (2.092)	0.254*** (3.574)	0.007 (0.062)
Observations	3,049	3,049	3,049
R ²	0.077	0.087	0.073

Note: The matching sample is constructed as: we use top 50% of firms in terms of managerial ability as main treatment group, and then match each of these firms to a 2-digit SIC, fiscal year, and firm size among the remaining 50% of firms with relatively lower managerial ability. The independent variable is managerial ability of acquiring firms which is calculated by Demerjian et al. (2012). Other control variables are defined in Appendix. Coefficient estimates with the t-statistics are reported in parentheses. The t-statistics are computed using the fixed-effects model, controlling for industry-specific and time-specific effects, and standard errors are corrected based on one-way clustering by firm. The statistical significance of the estimates is denoted with asterisks: ***, ** and * correspond to 1%, 5% and 10% levels of significance, respectively.

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