



# Assessing the effects of Long Run Stock Performance on Earnings Management

Mehdi Azemi<sup>1</sup>, Fardin Hafezi<sup>2</sup>, Reza Mohammadi<sup>1</sup> and Mahdi Golestani<sup>2</sup>

<sup>1</sup>Islamic Azad University Kermanshah Investigations Sciences, Iran.

<sup>2</sup>Department of Accounting, Payam Noor University, Iran.

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## ABSTRACT

We evaluate monetary cost to explore the reasons and find that using venture capitalists as specialized investors with lower monitoring costs than other institutional investors, earnings management is less likely for low investor beliefs but more likely for high investor beliefs for VC-backed firms relative to non-VC-backed firms. Numerous studies conclude that firms manage earnings upward prior to issuing equity Securities in an effort to minimize the dilution effect on existing shareholders (Theo, Welch and Wong, 1998a and 1998b). Erickson and Wang (1999) extend this line of reasoning to corporate mergers in which the acquiring firms pay for the target with stock. Similar to an equity offering for cash, they suggest that acquirers inflate earnings prior to the merger in order to increase stock prices, and thereby reduce the number of shares they must exchange in the stock swap. We can also obtain the same results as former study that auditor's quality negatively related with earnings management. Considering above consequence, we documents IPOs firms engaged in managing earnings with high investor beliefs have an influence on the long-run abnormal stock return performance. These findings have implications for investors, firms, and accounting standard setters. More prudential monetary is important during market booming periods. We founded that firms have incentives to engage in earnings management before the announcement date of private equity offerings. The manipulation direction may be upward or downward according to the types of placement. Our empirical results indicated that management tended to manage reported earnings upward when the private placement was subscribed by non-insiders; whereas management tended to downward manage earnings when the private placement was subscribed by insiders.

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## Introduction

Although long-run underperformance following equity issues is shared by both public and private issues of equity, the market reaction to the equity issuance is not. Unlike public issues, the market reaction to a private placement announcement is positive, as shown by Wrack (1989) and Herzl and Smith (1993). The positive market reaction being the result of reduction in agency problems of free cash flow, as suggested by Wrack (1989) is inconsistent with long-term underperformance. Likewise, the signaling model presented by Hertz and Smith (1993) is also inconsistent with long-term underperformance. In order to explain the positive market reaction combined with post-offering performance, which Hertz, Lemmon, Lick and Rees describe as "troubling", they attribute the combination to investor over optimism about the "turnaround prospects" of issuing firms. When the turnaround prospects do not materialize, investor disappointment is manifested in poor stock returns.

Our test examine relationship between investor beliefs and earnings management using spline regression, and find that the incidence of earnings management is at first increasing in the level of investor beliefs but decreasing once beliefs are sufficiently positive. Especially in the booming year, investor beliefs are more optimistic, the earnings management turns into much more seriously. We also find that two important characters during IPOs influence earnings management: venture capitalists

and auditor. Venture capitalists as specialized investors with lower monitoring costs than other institutional investors, can affect the incidence of earnings management, also the auditor with good reputation and strict auditing will lead management more to report its financial statement. Our findings suggest that the presence of investors with lower monitoring costs decreases the likelihood of earnings management when investor beliefs about business conditions are higher. Auditor's influence under investor belief is not certain, but good auditor can effectively eliminate earnings management.

The following test is to examine the firm's long run stock performance which suffers the co-effects from both earnings management and investor beliefs. We relate the accruals from the first fiscal year financial statements of the IPO firm to the stock market performance from four to six months after the fiscal year end (we chose IPOs sample firm in years 2000-2001 to make sure there is time to exam long-run stock performance). We find that these discretionary current accruals are good predictors of subsequent year stock return performance in a wide variety of specifications. Depending on benchmark specification, IPO firms that are ranked in the highest quartile based on IPO-year discretionary current accruals (aggressive quartile) with higher investor belief earn a cumulative abnormal return and buy and hold return much less than the firm with lowest quartile (conservative IPOs).

### The mechanism between earnings management and investor beliefs

Shedding more light on the study of investor psychology, behavioral finance clarifies that the behavior and decision of investors can affect the asset-pricing and financial market and not influenced by company fundamentals. Great amount of account literature focus on the factors that determine reporting qualities and its function.

Hodge(2003) investigate whether nonprofessional investor beliefs mirror the Securities and Exchange Commission's (SEC) concerns that earnings quality and auditor independence have declined over time. Perceived earnings quality for all publicly traded firm has declined over time, as has perceived auditor independence and the perceived reliability of audited financial information.as investors rely more on audited financial information, they find that information to be less reliable.one of the possible reason for the decline in the perceived reliability of audited financial information is the perceived decline in auditor independence.

Lev and Zeroing (1999)focus on financial information to investors in comparison to the total information in the marketplace. Their evidence indicates that the usefulness of reported earnings, cash flows, and book (equity) values has been deteriorating over the past 20 years, whether driven by innovation, competition, or deregulation, the impact of change on firms' operations and economic conditions is not adequate reflected by the current reporting system.

Some of scholar studied on how the incidence of fraud on corporate financial reporting is affected by investor beliefs about industry business conditions when raising external capital. Powel, Singh, and Winton (2007) predict that the incidence of fraud should be a hump-shaped function of investor beliefs about business conditions, peaking when investors believe conditions are good, but not extremely good. By contrast, Hertzberg (2005) predicts that the incidence of fraud should simply increase as investor beliefs improve. In Hovel's literature, investor beliefs about business conditions influence investor monitoring intensity, which in turn affects managerial fraud incentives, whereas in Hertzberg (2005), more positive investor beliefs lead to more short-term managerial compensation, which in turn exacerbates managerial fraud incentives.

The 'Company Act' as well as 'Securities and Exchange Act' of Taiwan have been amended in October 2001 and January 2002 respectively. The amendment introduces a new way of capital raising – private placement. This is especially important for companies that cannot obtain funds from public capital market. Private placement is preferred because of the following reasons: (1) small and newly-established firms are relatively vulnerable to information asymmetry, and hence cannot raise capital from public capital market (2) firms that are facing financial stress will turn to private placement due to concerns of timeliness and risks (3) when firms intend to attract strategic investors, they also adopt private placement for the sake of convenience (4) family-controlled companies tend to turn to private placement if they are confronting the risk of corporate control (Wu, 2000; Tan et al., 2002; Cronqvist and Nilsson, 2005).

Based on that research, The objective of this research is to provide a more complete examination of the linkage between investor optimism and long-run performance following private placements of equity. First, Tobin's q is employed in addition to

book-to-market as a measure of growth opportunities and investor optimism. Wang, Winton, and Yu (2010; WWY, hereafter) examined the monitoring mechanism and compensation mechanism of manager's fraud and concludes that corporate fraud is likely to have negative externalities, particularly in the IPO market. "Widespread fraud can make investors averse to IPOs, depriving young firms of a critical source of funding, investors are more focused on finding good investments than on preventing fraud." They suggested fraud seems to peak in relatively good times, and even underwriter expertise is least effective in preventing fraud in such times, this suggests that regulators and auditors should be especially vigilant during booms"

Our key objective is to test the relationship between investor belief and company's earnings management during IPOs. Here we use the result of DCA in part IV as the proxy of earnings management. We use Ind. We argue that investor over optimism should be evident only for firms that investors perceive to have high-growth prospects. Conversely, limited investor optimism should prevail for firms not perceived as high-growth firms. Even when their stocks are undervalued and subject to investor pessimism, these firms might be required to issue stock to maintain operating activities. EPS Growth and book-building period as measurement of institutional Investor Beliefs. Based on the above finding, this paper further analyzes various scenarios in order to investigate earnings management. Our findings can be explained in two ways:

From the perspective of the acquiring firm, management must estimate the value of the target with incomplete and inferior information to determine an offer price. The target can reject the bidder's offer if it is too low, but would be inclined to accept the offer if it is too high. Thus, the bidder risks overpayment for the target. The extent of information asymmetry likely depends on the characteristics of the target and the nature of the transaction. In this study, we focus on target listing status, target size, and industrial relatedness between bidders and targets as possible indicators of the bidder's pricing uncertainty and the incentives to engage in earnings management.

when the offerees of private placement are not insiders, companies tend to upward manage earnings before the private placement announcement date; whereas when insiders are involved, companies tend to downward manage earnings before the private placement announcement date. The reasons may be due to insiders' self-interest. Insiders can benefit, via downward earnings management, from depress the subscription prices of private placement. The above result indicates that the confusing effect of earnings management observed from private placement can be explained by two subsamples, namely, the one with insiders and the one without. The directions of earnings management from these two subsamples are exactly opposite. Moreover, we further investigate whether the magnitude of earnings management of insiders that have subscribed all of the stocks from private placement is greater than that of the insiders that have subscribed only part of the stocks from private placement. We find that there is no statistical significant difference between these two subsamples. The two proxy of monitory cost are dummy variable, VC backed and Auditor's quality as mentioned in section 3.2. VC backed stands for whether firms backed by venture capital, (we calculate dummy variable as 1 if backed by VC, otherwise 0). We calculate the Auditor's quality dummy variable as 1, if firm's auditor belongs

to top 3 listed in panel D  $\Delta$ EPS stands for the change between IPO years  $t$  and the year before it ( $t-1$ ).

Based on former discussion, Investor Beliefs effect on the extent of earnings management. It can also reflect the fact that, investor belief about market influence manager's behavior to manage earnings, on the other hand, those consequence especially investor's optimistic and manager's fraud will effect on IPOs firm long run stock performance. In this section, we evaluate whether the IPOs firms which engaged managing earnings with the high investor beliefs have an influence on the long-run abnormal stock return performance. This requires an appropriate measure for expected long-run returns, an issue much debated in the asset pricing literature. Depends on the methods of computing abnormal returns (buy-and-hold and cumulative abnormal returns), benchmarks market-adjusted, cumulating periods, sample partitions, and regression test specifications (cross-sectional, time-series).

These findings suggest that the underperformance in stock returns following private placements of equity can be explained, at least partially, by investor optimism of growth prospects of issuing firms.

The calculation process shows in appendix B. Tests indicate that discretionary current accruals reliably predict post-IPO returns.

Table VI reports abnormal long-run returns using a variety of benchmarks. The sample firm is limited on 2000-2001 during which period firm perform IPOs, so the holding period is four months after the release of the first post-IPO financial statements in panels. Depends on former results of investors belief and earnings management, we sort two special sub-samples. Sample 1 include most aggressive earnings management with higher investors belief (between 15%---20%), sample 2 include most conservative accrual with lowest investors belief (less than 10%), noted as aggressive Quartile 4A and conservative Quartile 1A. The final sample for long-run abnormal returns consists of 72 IPOs firm going public in the period of 2000-2001.

On a CAR measure, the aggressive accruals portfolio underperformance the conservative accruals portfolio by 43.33 percent in raw returns, 5.77 percent in CRSP value-weighted market-adjusted returns, and 18.51 percent in Nada composite index-adjusted returns. On a BH measure, the underperformance is somewhat larger, Aaron et al. (1993), Ploughman and Ritter (1997), Theo et al. (1998b), Rang an (1998) and Kim and Park (2005) indicate that, when firms raise capital through public equity offerings, management tends to overstate reported earnings to give false impression of better performance and hence raise the offering price. Management is likely to take on income-increasing earnings management in this case. 14.01 percent in raw returns, but negative 30.99 percent in CRSP market-adjusted returns, and negative 17.22 percent in Nasdaq-adjusted returns. Private equity placement data allow us to determine whether sophisticated investors can uncover the true value of firms. This can be done by defining sophisticated investors as those who meet the stringent participation requirements of the private equity market. Our results show private equity issuing firms overstate their earnings in the quarter preceding private equity placement announcements and that sophisticated investors do not ask for a fair discount when purchasing the shares of the private issuing firms. We also find evidence showing that the reversal of the effects of pre-issue earnings management is a significant determinant of the long-term performance of private issues. Results further show that

post-issue stock performance and operating performance of firms using "aggressive" earnings management significantly underperform those using more "conservative" earnings management.

The figure shows that the aggressive portfolios deteriorate after the first twelve months. During the years thereafter, the conservative portfolios show only a small drift, but the aggressive quartile 4A portfolio enjoys only a ten-month reprieve before resuming its dramatic decline. Compared with Nasdaq composite index benchmark, we can also find that the result using Nasdaq composite index benchmark is also outperform the market valued-weighted benchmark in the long run.

Cumulative return net of Nada composite index return and market value-weighted return of DCA quartiles by event month, in percent. The holding period is four months after the release of the first post-IPO financial statements in panels; the abscissa denotes the starting point as M4. Each interval is 4 month. The sample consist of 72 IPOs and their stock performance since 2001. Firms are divided into two quartiles based on most aggressively DCA with high investor beliefs Q4A and most conservatively DCA with lower investor.

In the figure 4, we test buy and hold return, the result is robust with Nasdaq composite index benchmark and market valued-weighted benchmark return. In long-run, the conservative quartile outperform dramatically than aggressive quartile. Especially during 2003-2007, based on the market booming the difference increased by average 5%, after 2007 the gap shirked because of the market volatility during financial crisis.

## Conclusions

The objective of this research is to provide a more complete examination of the linkage between investor optimism and long-run performance following private placements of equity. First, Tobin's  $q$  is employed in addition to book-to-market as a measure of growth opportunities and investor optimism. Second, abnormal returns are estimated as cumulative abnormal returns and the abnormal return from the Fama-French (1993) three factor model in addition to buy-and-hold abnormal returns. Third, the relation between growth opportunities and abnormal long-term operating performance is examined in addition to stock performance. Finally, the sample period of 1980-1996 employed by Hertz et al. (2002) is extended by four years to 1980-2000, over which time period underperformance following private placements of equity is not as distinct. If the findings of Hertz et al. (2002) are robust to alternate measures of abnormal stock performance, and operating performance measures, sample period and alternate measures of growth opportunities, such findings will provide additional support for the investor overoptimism hypothesis. Since earnings management seems to peak in relatively good times when investor beliefs is higher, and even auditor's expertise is least effective in preventing fraud in such times, this suggests that regulators and auditors should be especially vigilant during booms. These findings have implications for investors, firms, and accounting standard setters. Investors may want to use information contained in the pre-offering accounting accruals to discriminate among issuers. Entrepreneurs may want to consider how legitimate accounting choices can lower the firm's cost of equity capital or increase their own welfare.

We investigate whether investor perception of the growth opportunities of firms issuing equity privately can explain the

documented long-run underperformance following private placements of equity. To the extent that Tobin's  $q$  and book-to-market of equity can proxy for growth prospects of firms, our results indicate that investor perception of the growth prospects of issuing firms can explain, at least in part, long-run stock price performance and operating performance following private placements of equity. Our results show that underperformance is concentrated in issuing firms that are high-growth firms. In general, the pricing of offering price will refer to current accounting earnings and future prospect. This will lead to manage earnings by management. But the motivation of earnings management of private equity offerings for subscription from outsiders and insiders may be different. Chen et al. (2009) suggested that agency problems will be more serious if the private equities are subscribed by insiders. Insiders try to downward manage earnings to depress subscription price; whereas the management may upward manage earnings to window dress financial statements, and thus attract outside subscribers or inflate subscription prices. We speculate that the direction of earnings management for inside subscribers and outside subscribers of private equity offerings are different. For high-growth firms, we find substantial evidence of negative, significant abnormal stock returns following private placements of equity, regardless of the return methods and benchmarks used. For high-growth firms, we also find strong evidence of poor, negative operating performance that is substantially lower than the median operating performance of the control sample. These results suggest that investors might be overoptimistic about future growth prospects of firms issuing equity, but only when the issuing firms are high-growth firms. With such poor post-offering performance it would be difficult to believe that investors would view such post-offering operating results with anything but disappointment. We further segregate the sample to examine the earnings management behavior of private equity offerings firms under various case scenarios. We found that there is upward earnings management for firms that have private equity offerings without insiders' subscription before the announcement date, but downward earnings management was found for firms that have private equity offerings with insiders' subscription before the announce-mint date. We conjecture the reason being that insiders can benefit from downward earnings management to depress the subscription prices. The above findings indicate that the direction of earnings management is exactly opposite, providing a good explanation for the mixed effects of earnings management for the private equity offering firms. Finally, public listing itself can serve as a credible signal of firm quality. Several studies have argued that pricing uncertainty surrounding private firms would motivate those owners wishing to divest to first take the firm public as part of a two-stage divestiture (Ellingsen and Rydqvist, 2000, Reuer and Shen, 2003). Through the IPO process, the firm must garner the support of an investment bank and bear significant registration and disclosure costs, such that market listing serves as a screening device in the market for corporate control. Going public can be viewed as a means of alleviating potential bidders' pricing uncertainty.<sup>4</sup> Given these fundamental differences between public and private firms, we posit that bidders will have greater difficulty and more uncertainty in estimating the value of a private target than in estimating the value of a public target. For example, compared to the valuation of a public target, cash flow projections and discount rate assumptions are likely to be more susceptible to error in the valuation of a private target.

Finally, accounting standard setters may find these results useful for evaluating how much discretion they should allow corporate managers to adjust reported earnings.

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