Working Paper

The Impact of Optimistic and Privately Informed Managers on Firm Performance and Corporate Decisions[1]

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This paper investigates if and to which extent managerial behavior, its private information and potential behavioral biases can account for the underperformance of companies in IPOs as well as SEOs. I test a behavioral explanation, the optimistic manager hypothesis, as well as rational theories, the window of opportunity hypothesis as well as empire building. Using data on U.S. IPOs and SEOs going public from 1990 to 2003, I find evidence that optimistic managers as well as privately informed managers seem to drive the long run underperformance of equity offerings. I furthermore investigate the investment decisions taken by these groups of managers after the share issuance. I see distinct investment behavior by each type of manager in terms of capital expenditures, debt rebalancing and cash holdings

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I. Introduction

In this paper, I aim to shed light on if and to which extent managerial behavior, its private information and potential behavioral biases can account for the underperformance of companies. I derive the theoretical predictions for the behavior of the managers both from the behavioral literature as well as from the rational expectations literature. Indeed, several models of these two schools of thought can be found to offer very similar predictions, which seem plausible examined on their own. However, I find these rivaling models standing in stark contrast in their reasoning to each other, while trying to explain the same economic context

An equity issuance constitutes a special event in the lifecycle of a company. During an IPO or SEO a company receives a large influx of money in a short time period. Thus the way and extent to which the proceeds will be invested will impact significantly on the future course and the long term performance of the company. In this setting, I am consequently able relate the amount of new funds raised to the managerial behavior as well as the managerial private information and observe their impact on the firm performance.

This paper seeks to contribute to the existing literature on several dimensions. First, I give for the first time empirical evidence of the impact of Optimistic Managers on underperformance of IPOs respectively SEOs. Second, I show that the amount of free cash which both privately informed managers as well as optimistic managers are able to invest, helps to explain underperformance. Third, I discern whether the underperformance of selling insiders derives from the Free Cash Flow Hypothesis or the Window of Opportunity Hypothesis. Fourth, I investigate the change in firm variables such as debt level, cash holding and capital expenditure, and if this change is consistent with the predicted behavior for each type of manager.

The IPO literature offers different motivations for conducting a public offering. Next to motives which generally seem to promise a positive development of the firm, such as increased liquidity and reduced debt cost (Pagano, Panetta and Zingales (1998)), several motives exist which

at least bear the risk of a future underperformance. Beginning with Ritter (1991), investigating the performance of IPOs, and Loughran and Ritter (1995), researching the performance of SEOs, the literature has found underperformance to be consistent over time and across a variety of countries..

Recent literature, for example Clarke, Dunbar and Kahle (2004), investigate whether managers conducting SEOs take advantage of temporary "windows of opportunity". The manager is hereby trying to time the market and to take advantage of his private information. He believes that the market overvalues the company compared to its real value. The company will return from its inflated share price to its true value on the long run, resulting in a long term underperformance of the stock price. Thus the offering in itself constitutes a positive net present value project which should motivate the manager to maximize the amount of proceeds. Lee (1997) is looking to determine whether insiders of SEOs can time the market. Both papers focus solely on insider selling and if this insider selling has predictive power per se on long term performance. However, insiders trade and, especially, sell share for a variety of reasons. such as diversification, personal liquidity needs etc. Only if their reason for trading company shares is to take advantage of their inside information to time the market, they are correctly identified as behaving according to the window of opportunity hypothesis. In contrast to earlier research, I aim to use a more refined proxy by taking into account the amount of free cash generated in the offering, conditional on insider trading. The higher the perceived undervaluation by the manager, the higher the proceeds he is trying to raise, even at possibly increasing marginal costs of the offering as the market has to absorb a larger than optimal number of offered shares.

A different motive for conducting an equity offering and a possible cause for the underperformance arises from the agency conflict between managers and shareholders. Managers may, according to Jensen (1986), rationally maximize their private benefits at the expense of their shareholders. This implies that the more free cash the manager is able to raise during the offering, the more he can channel away to invest in his pet projects and the worse the performance of the firm will be on the long run. I aggregate these two hypotheses and label managers exhibiting

behavior consistent with either hypothesis as *privately informed*, as both managers according to the Free Cash Flow Hypothesis as well as to the Window of Opportunity Hypothesis know, albeit for different reasons, that the future share price will decrease. Due to this knowledge I expect the informed managers to sell their own shares, my identification for privately informed managers. In contrast, I define managers who are buying shares on the open market or increase the stake in their company as Optimistic Managers.

I predict that additional "free cash" will aggravate long term performance for companies being led by privately informed CEOs. Consequently, my test for privately informed managers is to investigate whether a higher amount of proceeds, conditional on insider selling, predicts a worse long term performance. Taking this assumption to the data, I regress the three year abnormal buy-and-hold return (calculated either as a matched firm approach or in comparison to market-to-book portfolios) on these coefficients. Using US data of companies undertaking either an IPO or a SEO from 1990 up to 2001, I find that insiders trade according to their private information after the lockup period. All results are robust when I add year dummies to account for economic changes or industry dummies.

Recent papers in the behavioral finance literature seek to lay open the effect and impact of optimistic managers, called managerial hubris by Roll (1986), on corporate decisions, as for example theoretically described by Heaton (2002). An optimistic manager is defined as a manager who systematically overestimates good firm behavior and underestimates bad firm behavior. Thus, while believing to act in the best interest of shareholders and the firm, the manager will invest the proceeds of the offering into suboptimal projects. However, the manager will believe in the profitability of the investments by the company.

Even though the concept of overconfident / optimistic managers has been picked up in other strands of the literature several years ago, only recently I see a growing number of empirical studies in corporate finance. Examples are Malmendier and Tate (2005), Brown and Sarma (2007) or Puri and Robinson (2007). To my best knowledge, no empirical study exists so far which investigates

the impact of overconfident managers in SEOs and IPOs on their long time performance. The aim of this study is to fill this gap. One has to note, however, that privately informed and optimistic managers, while being mutually exclusive on the firm level, may both help to explain part of the underperformance phenomenon.

To test the Optimistic Manager Hypothesis on my data, I measure the impact of the amount of new cash raised from primary shares on firm performance, conditional on insider buying. My regressions show that Optimistic Managers have a negative impact on firm performance.

Following, I investigate the differences in corporate investment decisions by these types of managers. I analyze the debt level, cash holdings as well as capital expenditures around the offering, both for IPOs as well as for SEOs. I find that Optimistic Managers show a much higher propensity to increase debt than both the control group of non-trading managers as well as the privately informed managers . This can be observed both in the IPO and SEO sample. The decrease in debt which I observe for privately informed managers supports the Window of Opportunity Hypothesis and contradicts the Free Cash Flow Hypothesis. I find no significant different behavior □□□as non-trading However, I detect a decrease in cash levels of optimistic managers after IPOs and SEOs, supporting the Optimistic Manager Hypothesis. In contrast, I find that privately informed managers tend to increase their cash holdings, supporting once more the Window of Opportunity Hypothesis.

The paper is organized in the following structure: in Section II, I describe the data and give the sample description. In Section III I illustrate the announcement day effect and the insider trading data. In Section IV I explain the methodology and the results of the long term performance study. Section V discusses the theoretical implications for debt, cash and capital expenditures development and Section VI shows the empirical findings. Section VII concludes.

II. Sample

A. Equity Offering Data

My sample consists of initial public offerings (IPOs) and seasoned equity offerings (SEOs) recorded by the Security Data Company (SDC) during the years 1990 to 2001. To be included in my sample, firms have to have monthly returns listed at the Center for Research in Security Prices (CRSP) database and on Compustat. I consider firms issuing common class A shares up to 2001 in order to execute a three year performance study. Firms included in my sample have to be traded on the New York Stock Exchange (NYSE), American Stock Exchange (AMEX) or NASDAQ. I exclude unit offers as well as real estate investment trusts (REITS), American depository receipts (ADRs) and closed end mutual funds. In addition, I exclude offerings of financial institutions as well as of utility companies (SIC codes 4910-4949). Issuers with no listed or negative book value on either Compustat or the SDC database have been excluded. I screen the data for possible errors and use third party sources, for example as provided by Jay Ritter (2006), to correct my sample.

B. Data on Insider Trading

For each of my sample firms I collect the insider trading data from Thomson Financial. I examine all open market transactions. To check for the robustness of my data, I use four different definitions of insiders according to the company hierarchy:

CEO: CEO

Directors: Directors

Managers: CEO, COO, CFO, CIO, CTO and (Executive-)Vice President

Insiders: Definition as in *Managers* plus officers and directors

Throughout the paper, I consider two distinct time periods in which I analyse the trading by insiders:

Trading Before: six months before the equity issuance up to one day before the issuance

Trading After: Beginning from the end of the lock-up period for three months. In case I lack the exact duration of the lock-up period, I assume a six month lock-up period.

I add the second time period *Trading After* as insiders might refrain from trading before the offering for fear of a possible negative market reaction. Brau and Fawcett (2006) show in their interviews with CFOs that insiders are well aware of this possibility. Thus insiders, instead of revealing their true beliefs about the future of the company and selling before the offering, might time their selling until after the offering has taken place.

I aggregate the number of shares traded by insiders during each period. A positive *Buy* (*Sell*) dummy variable for a specific firm signifies that the sum of all shares bought minus shares sold by insiders in the respective time period is positive (negative). *Pure Buys (Pure Sells)* is a dummy variable taking the value of 1 if at least one insider buys (sells) and no insider sells (buys) in the respective time period for the firm event. I run all tests and regressions by summarizing the number of trades committed. Using the number of shares traded instead of counting the trades yields similar results.

C. Summary Statistics

Table 1 shows the basic sample description of the full sample as well as the sample description per type of insider trading. The vast majority of shares issued, both for SEOs (85%) and IPOs (91%), are primary shares, which are generating new funds for the firm. The median for new shares issued, both SEO and IPO, is with 100% even higher. This indicates that either the company uses these offerings mainly to raise money for future projects or that insiders and managers are well aware of the possible negative signal of cashing out shareholders.

INSERT TABLE 1 HERE

I find that insiders sell more shares than they buy. Over my sample period from 1990 up to 2001, I see a steady increasing amount of insider trading. These observations are consistent with the literature on insider trading (Seyhun (1998)).

INSERT TABLE 2 HERE

Trading patterns across all four groups of insiders are remarkably similar. As the sample size of the trading by CEOs is small, I use for the later statistical analysis the trading behaviour of the broader insider definitions of *Manager* and *Insider*. To see trading activities by managers before an IPO might strike the reader as curious. However, this has two possible reasons:

All public firms registered at the SEC have to report under Section 16a/2a trading by insiders and owners with a stake of 10% or more in the company, beginning with the first registration of their shares by the SEC (Forms 3, 4 and 5) as demanded by the Securities Act of 1933. However, the insider has to declare a trade before the registration of the company ex post, if this insider traded again in a 6 month period while the company is registered.

Example: A company registers on January 1st. An insider trades in November, thus two months before registration. If he doesn't trade until May, he does not have to publish his November trade. But if he would trade again in February, he would have to declare the February trading as well as the November trading. In this case I would see a pre-IPO insider trading in November, two month before the offering took place.

Furthermore, it is possible that a company is public and listed with the SEC, for example at Over the Counter Bulleting Board (OTCBB), and then decides to list at NYSE. In this case, I have

the history of insider trading dating back to the point in time when the company registered with the SEC for the first time, which would be the registration with the OTCBB.

III. Optimistic and privately informed managers and the announcement day reaction

If privately informed and optimistic managers underperform the market on the long run and the two types of managers can be identified on the basis of their personal trading, the market could show a negative announcement reaction. Additionally, the insiders themselves should be aware of the signal they are sending to the market by trading shares of their own company beforehand. CFOs interviewed by Brau and Fawcett (2006) state that selling insider shares before and / or during the IPO sends a bad signal to the market. Does the market react accordingly? To answer this question, I conduct a short term event study. I split my sample into three portfolios depending on the type of trading before the offering (sells / no trades / buys). Subsequently, I measure the cumulative average abnormal return (CAAR) with respect to the market portfolio around the announcement date of the offering. .

INSERT FIGURE 1 HERE

I limit this investigation to SEOs, because stock prices prior to the offering of IPOs are not available.

INSERT TABLE 3 HERE

As I show in Table 3, the market does not react significantly different to SEO announcements whether insiders sell or trade beforehand. Confining my sample to managers or

CEOs, the market reacts to offering announcements 50 basis points more negative if insiders buy in contrast to when they sell. However, a t-test of comparison of the means yields no statistical significance between these announcement effects.

Instead of considering trades *before* the offering, I now look into the market reaction of the SEO announcement if insiders change their ownership share *during* the equity offering. Because the change in ownership during the equity offering is already published in the prospectus at the time of the filing with the SEC, the market should take this information into consideration and react according to this information. I use two different methods to define a sell, one approach taking the raw difference in ownership and a second approach accounting for the dilution during the SEO:

Change in Ownership (without dilution) = % of Insider Shares After Offering - % of Insider Shares Before Offering

Change in Ownership (with dilution) = Number of shares owned by insiders before the offering – number of shares owned by insiders after the offering[3]

Thus the variable *Change in Ownership (without dilution)* indicates whether the total percentage insider ownership decreases during the offering, regardless of the dilution due to primary shares issued. On the other hand, the variable *Change in Ownership (with dilution)* takes

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[3] alternatively: % Of Insider Shares After Offering – (% Of Insider Shares Before Offering / (1 + Primary Shares as Percentage of Shares out Before Offering))

the dilution due to new shares issued into account by focusing on the shares held by insiders before and after the offering.

INSERT TABLE 4 HERE

Similar to the announcement day reaction whether insiders trade before the offering (Table 3), I see in Table 4 a remarkably constant negative announcement abnormal return of -2% across all five portfolios along the degree in change of ownership. The market reacts even more negative if insiders sell a low percentage of shares during the offering. The difference between the two extreme portfolios is 5 basis points and not significant. Thus, the market views a SEO on average as negative news. The value of the company drops by approximately 2% on the four days around the announcement date. The lack of a significant different market reaction whether insiders buy or sell could be due to different reasons:

a) The sells of the insiders which I observe have a true, or at least believable, story such as diversification, liquidity needs: Thus, the market does not believe the trades incorporate inside information concerning the future performance of the company. Consequently, the market does not judge the insider trades as a bad signal
b) The insiders who suspect their trades to cause a negative impact on the market refrain from selling (at least from selling known to the public ex ante the offering, hence before or during the offering)
c) The market believes that insiders fear juridical consequences from trading on inside information and thus expects that insiders refrain from trading on their inside information
d) I can measure only legal insider trading which has been reported to the SEC. Insiders might trade on their most valuable inside information on different channels.

IV. Long term performance

A. Methodology

I calculate the three year abnormal buy and hold returns (BHRs) based on monthly returns as reported by the Center for Research on Security Prices (CRSP). For the long term performance calculation I use BHRs instead of cumulative average abnormal returns (CAARs) as Barber and Lyon (1997) show that CAARs suffer from a systematic bias. BHR returns are calculated in respect to two different reference returns: size and book-to-market matched firms as well as size and book-to-market matched portfolios

Portfolio construction:

My sample firms are matched into 14 size and five book-to-market portfolios as described in Barber and Lyon (1997) and Clarke, Dunbar and Kahle (2004). The portfolios are created once every year in June. First, I calculate the firm size (shares outstanding * share price in CRSP) in June of each year. Following, all NYSE stocks are ranked each year in 10 portfolios according to their firm size. Afterwards, the NASDAQ and AMEX stocks are sorted into these 10 portfolios according to their size. As companies listed at the NASDAQ or AMEX tend to be smaller than the average company listed on the NYSE, the smallest size portfolio becomes disproportionately large. Hence I split this portfolio furthermore into 5 size portfolios without respect on which exchange the companies are listed.

To create the market-to-book portfolios, I use the book value of common equity (COMPUSTAT item 60) as reported in the balance sheet of the company in December in t - 1, divided by the market value of its common equity (see above) in December in t - 1. I subsequently create five market-to-book quintiles

In case the issuing firm is delisted before the end of the three year period I calculate the BHR until the delisting date.

Reference firms:

To check for the sensitivity and robustness of my data, I use as a second benchmark the long term performance of size and market-to-book matched reference firms. For each company from my sample, I select the matching firm from a pool of firms listed on CRSP and which have not issued equity in the prior three year period. In a second step I create a pool of firms which have a firm size +/- 30% of the firm size of the sample firm in its issuing month. Out of this subsample, I choose the company which has the closest market-to-book value, in absolute terms, in respect to the market-to-book value of the issuing firm. If the matched firm, but not the issuer itself, is delisted during the three year period, I replace it with the next best fitting firm at the delisting time (chosen in the same procedure described above). Should the issuing firm be delisted before the end of the three year period, I calculate the BHR up to that point in time.

Fama-French three factor model:

As a third benchmark I calculate abnormal return as proposed by Fama and French (1993). Fama (1998) strongly advocates the use calendar time portfolios to measure long term performance as this methodology is more robust as other asset pricing models. In addition, the distribution of calendar time portfolios is better suited for traditional statistical calculation as it resembles better the normal distribution. Additionally, this methodology accounts for the cross-correlation of firm returns, which otherwise creates a potential bias in the statistical interferences. I calculate the abnormal long term results using the following model:

$$R_t - R_{ft} = \alpha + \beta(R_{mt} - R_{ft}) + sSMB_t + hHML_t + \varepsilon$$

with R_t the calendar time sample return in month t, R_{ft} the risk free rate in month t and the three monthly Fama-French factors excess market return (R_{mt}-R_{ft}), size factor (small minus large firms = SMB_t) and book to market factor (high BM firms minus low book to market firms = HML_t)

B. Long term performance results

INSERT TABLE 5 HERE

As I illustrated in Table 5, IPOs as well as SEOs underperform their respective benchmark in the three year period following the offering. This finding is robust independent of the methodology employed or the reference measure chosen. I find a more pronounced underperformance of SEOs, which trail their benchmarks by 15% in a three year period. The IPOs underperform in a three year period by a lesser amount of 3% in case of the BHR portfolio firm approach as well as the Fama-French methodology, respective 9% with the matched firm approach.

V. Insider Trading and Underperformance

For my empirical tests I combine the long run performance of IPOs and SEOs with the insider trading behvaior. In particular, I want to test three hypotheses possibly causing underperformance of IPOs and SEOs:

Optimistic Managers Hypothesis:

The optimistic manager hypothesis was first developed by Roll (1986), who called it the hubris hypothesis. In his paper, Roll looks into corporate takeovers and argues that bidders will pay more than the actual stock price for a company, even if no synergies arise in the merger. This behavior is caused by the hubris of the managers. According to Roll, this behavioral bias explains the negative stock reaction of bidders at the announcement in an efficient capital market. Heaton (2002) advances this idea. His theory is based on the assumption that managers are optimistic, that is managers suffer from a cognitive bias. The markets are in contrast efficient (or at least less biased than the managers). The optimistic manager is defined as a manager who systematically overestimates good firm performance and systematically underestimates bad firm performance.

This theory derives from well established evidence in psychological research as shown foe example by Weinstein (1980). His experiments demonstrated that people have a tendency to be more optimistic about processes which they believe they can control. Additionally, people tend to be more optimistic about projects they are highly committed to. Both specifications are typical for the job as a manager, who decides on the course and the future path of the firm and is thus responsible for its projects.

Proposition I:

The Optimistic Manager Hypothesis predicts that companies with overconfident managers will underperform on the long run. This implies that the more proceeds from primary shares are raised in the offering, conditional on insider buying, the worse the future performance will be.

This prediction is an extension to the existing literature. Earlier papers focused solely on the predictive power of insider trading per se and were not able to detect a significant effect. As insiders might trade for very different reasons, linking insider trading to the amount of free cash raised identifies optimistic managers at a reduced level of noise.

Finding a proxy for optimistic managers is challenging. Malmendier and Tate (2003) use the trading pattern and the timing of CEOs of the execution of their stock option. However, this data is not available for my sample. Instead, I identify optimistic managers in my sample by means of their share trading. An optimistic manager believes in the good performance of the company he is leading. He consequently assess it as a good investment for his private funds as well.

My proposition 1 translates into the following regressional test:

Long term performance = $\alpha + \beta$ (Proceeds from primary shares x Dummy Insider Buy) + ε

with β negative and significant

In terms of corporate decision-making, optimistic managers will be more likely to invest the proceeds in projects resulting in an increase in Capital Expenditures and decrease in cash and cash equivalents.

Window of Opportunity Hypothesis (Privately informed managers)

In case the market is too optimistic about the future prospects and projects of a company and thus values the stock of a company higher than its true value, the managers will be tempted to take advantage of this "window of opportunity". One possibility to profit in such a situation would be to sell overvalued shares, either in form of an SEO or IPO. The managers assume that, in the long run, the share price will revert back to its true value and consequently fall. Thus issuing overvalued shares will be in itself a positive NPV project, which they will try to optimise by maximising the proceeds.

Because managers are primarily raising money in this scenario not to fund future projects but because raising funds is in itself the objective, I expect managers to use the proceeds mainly to reduce debt or to keep a high amount of cash to fund possible future projects. Managers according to this hypothesis sell part of their shares of the company to avoid its expected decrease in value.

However, managers may sell due to a wide variety of reasons. Besides selling because of inside information, managers might sell part of their shares for liquidity reasons or risk diversification. Those reasons might have different impact on long term performance. Thus to isolate how the window of opportunity effects long term performance, I am focusing on the crossproduct proceeds from primary shares conditional on insider selling.

Proposition 2:

The window of opportunity hypothesis predicts that managers of overvalued companies will take advantage of this miss-pricing by selling new shares. Thus, the higher the proceeds raised,

conditional on insiders selling, the worse the long run underperformance of the company. Debt levels will decrease and cash levels will stay high.

Free Cash Flow / Empire Building Hypothesis (Privately Informed Managers):

The Free Cash Flow theory has been first developed by Jensen (1986). He claims that a reduction of the free cash flow, corresponding to internal revenues in the original setting, subjects him increasingly to the monitoring of the stock market. Jensen assumes managers act in their self-interest and will thus grow the company beyond its optimal size, the so-called empire-building, in order to gain more power, prestige and to increase their salary. In such a setting, the manager will consciously act in his own interest at the expense of his shareholders.

Free cash flow is defined by Jensen as "cash flow in excess of that required to fund all projects that have a positive net present value when discounted at the relevant cost of capital" (p.323). However, I argue that at least part of the money raised in an equity offering causes similar agency conflicts. The *use of proceeds* as elaborated in the prospectus of the equity offering describes only very vague at best the intended investments by the company. This gives the manager leeway on how to invest the generated funds.

Proposition 3

The Free Cash hypothesis predicts that managers will knowingly invest into projects in order to maximise their own benefits on the expense of their shareholders. Consequently, the more proceeds from primary shares are raised in an offering, conditional on insiders selling, the worse the company will perform on the long term. Capital Expenditure will increase and cash holdings will be low or decreasing.

In my regressional analysis I aggregate the Free Cash Flow Hypothesis and the Windows of Opportunity Hypothesis as they both predict a long term underperformance after the offering, which the managers expect. I name these to groups the *privately informed managers* and test it on my data as follows:

Long term performance = $\alpha + \beta$ (Proceeds from primary shares x Dummy Insider Sell) + ε

with β negative and significant

INSERT TABLE 6 HERE

VI. Empirical Results

A. Long term performance by optimistic and privately informed managers

In a first effort to screen my data and see the effects of insider trading, I create a two-by-two table to detect any striking difference in performance whether and how insider trade before or after the offering. I find no significant differences in the long-term performance of a company whether insiders were selling or buying. In both cases the company tends to underperform in the three year period following its equity offering. Lee (1999) finds a significant difference in long term performance, but only when focusing on a subgroup of SEOs which issue more than 50% secondary shares. As highlighted in Figure 7, both IPOs and SEOs underperform independent of the expectations by their managers (and thus their trading behavior). I even see that managers who buy shares underperform selling managers on average. Companies, in which no insiders trade, perform better than companies in which insider do trade, but still underperform their reference group of non-issuing companies. However, the difference between the three insider trading portfolios is not statistically significant.

INSERT FIGURE 2 HERE

To get a more detailed picture I now use an ordinarily least square (OLS) analysis to shed light on the influence of privately informed and optimistic managers on firm performance. To correct for potential heteroskedacity, I employ the White (1980) methodology when estimating my standard errors. Eliminating outliers and taking the three year-matched-firm BHR as a left hand variable, I focus on the variables of insider trading, the proceeds from primary shares and the cross product of both. Insider trading variables are created for each distinct time period (before the offering, during, after the lock up period ended) and are split up into sells and buys. I include furthermore control variables such as the log of firm size, log of the market-to-book-value and the exchange where the shares will be listed. Including dummy years do not change the results. To take into account the proportion of new cash to the size of the firm, I created the variable *Primary to shares out*. This measure calculates the ratio of primary shares (=new shares) offered to all shares outstanding after the offering. Insiders in this regression are defined as *managers*.

The degree of insider ownership may give an indication what type of manager is heading the company. The Free Cash Flow hypothesis is assuming a conflict of interest between the owner of the company and the management. Consequently, I assume this type of manager to have a minor ownership stake in the company. Thus, I create quintiles based on the managerial ownership of the company and inter-act this variable with the primary shares to shares outstanding. I find a negative coefficient (at the 10% percent level significant) for the latter cross product, supporting the above reasoning. Consistent with the previous studies, I find a positive coefficient for the log MB variable and a negative coefficient for the log of the firm size, both significant at the 1 percent level.

In Table 7 (see Annex B for a complete overview of the regression) I observe a (at the 5% level significant) negative coefficient of the crossproduct “insider pure buy after lock up * Primary to shares out”, as predicted by my P*roposition 1*. Thus the more proceeds are raised by the

company, conditional on insiders buying shares in the open market after the offering, the worse the long term performance will be. This finding supports the Optimistic Managers Hypothesis for SEOs as described earlier. While I observe a negative coefficient for the same variable for IPOs as well, the coefficient lacks statistical significance (using robust t-statistics).

Testing my data for the p*rivately informed managers*, I find a negative coefficient (significant at the 5% level) "*Insider Pure Sell after Lockup x Primary to Shares out*" for IPOs. Hence, the higher the proceeds in relation to the size of the company (conditional on insider selling), the worse the firm performance will be. This finding supports the privately informed manager hypothesis and my *Propositions II* and *III*, as I argue that the managers have a negative expectation of the company and consequently raise as much money as possible before the downturn of the share price.

INSERT TABLE 7 HERE

One might argue that Director Share Programs (DSP), known as well as family and friends programs, might distort my identification of optimistic and privately informed managers. These programs became increasingly popular during the late 90's. Employed in only 24.7% of all IPOs in the US in 1996, they were used in 92.6% of all IPOs in the US in 2000 (Ljungqvist and Wilhelm (2003)). Due to these program, managers might participate and thus buy shortly after the offering not because they believe in a positive performance of the company (my identification for optimistic managers), but merely because they want to profit on the short term due to the expected under-pricing. In a Director Share Program, a manager is allowed to buy a certain number of shares of his company at the offer price. Additionally, shares of the DSP are not subject to the lock up agreement (Ray (2006)). Considering the average large first day returns of equity offerings, managers participate in such a program for the short term profit, not because of their long term beliefs and

will sell their shares shortly after the IPO. Thus they do not influence my insider trading variables as I neither count these as buys during the offering nor do they distort my analysis of insider selling after the lock up period, because they will already sell shortly after the offering during the lockup period. Furthermore, my identification of Optimistic Managers as well as privately informed managers are not distorted by insiders who flip their shares on a short time horizon. Indeed, insiders have to adhere by law to a six month waiting period before being allowed to sell shares after they executed a buy (and vice versa)). In addition, insiders are not allowed to short sell stocks of their own companies, which additionally reduce noise in my insider trading variable.

B. Corporate decisions by optimistic and privately informed managers

After showing the impact of optimistic respectively privately informed managers on long term performance, I aim to shed light on how these three types of managers differ in terms of the corporate decisions they take. To do this, split my sample into three portfolios, Optimistic Managers, Neutral Managers (who do not trade around the equity offering) as well as privately informed managers.

Along these three groups of managers I compare the change of key firm variables before the offering to two years following the offering: the debt level, capital expenditure and cash holding. According to my Proposition I – III, I expect a different trading pattern by each type of manager. I summarize these differences in Figure 3.

INSERT FIGURE 3 HERE

Focusing on corporate decisions, I am now able to clearly distinguish and identify managers acting as predicted by the Free Cash Flow Hypothesis or the Window of Opportunity Hypothesis.

While the Window of Opportunity Hypothesis predicts a reduction of debt and a stable or insignificant increase in capital expenditures, the Free Cash Flow Hypothesis predicts an increase in capital expenditures and a constant level or insignificant reduction in debt.

Debt level post-development

I create two portfolios (increase, decrease) according to the debt development one year after the offering compared to the level before the offering. I use the data item 9 of Compustat to measure the debt level in a given year and normalize this figure by the assets in place in the same year (data item 6 in Compustat). I then tabulate the debt development with the trading behavior of the managers.

I compare the frequency, with which each type of manger decreases respectively increases debt. Interestingly, privately informed managers tend to decrease their debt with a 55% (237 to 153) higher likelihood than increase debt in IPOs. In contrast, optimistic managers are 80% more likely to increase debt after the IPOs, supporting my predictions of Optimistic Managers and Market Timer. Figure 4 illustrates this finding.

The development of debt in SEOs is more evenly distributed. As with IPOs, the post performance does not significantly differ whether insiders are optimistic or privately informed and how debt levels change.

INSERT FIGURE 4 HERE

Capital Expenditure post development

In a next step I look into the capital expenditure development after the offering. Taking the identical methodology as to investigate the debt development, I partition my sample into two groups: companies which increase their capital expenditures and those which decrease capital expenditures (Data item 128 in the Compustat database) in the year prior to the offering compared

to one year after the offering, normalized by the assets in place in the respective year (data item 6 in Compustat).

INSERT FIGURE 5 HERE

I see a remarkably similar pattern in capital expenditure by insider trading portfolios. While optimistic managers in SEOs overestimate their investment possibilities and increase their investments accordingly, two different forces are at play for privately informed managers. While Market Timers (Windows of Opportunity Hypothsis) are inclined to reduce their investments, empire builders will increase investments in their pet projects. This might explain that I see no significant differences.

Cash development:

In the same spirit I examine the cash holding development by type of manager. Cash is measured by data item 1 in Compustat and normalized each year by the assets in place (data item 6) Sorting my sample in two portfolios, decreasing and increasing cash holdings, I compare the frequency with which each type of manager is represented in each portfolio.

INSERT FIGURE 6 HERE

Optimistic managers and privately informed managers appear to have a very different propensity towards cash. While companies of privately informed managers increase their cash holdings in 69% of all observations, only 50% of optimistic managers increase their cash holdings. While Optimistic Managers will reduce their cash holdings to invest into new projects, managers of the window of opportunity hypothesis will refrain from doing so.

VII. Conclusion

This paper is contributing to the existing literature in two ways. First, I give empirical evidence of the impact of optimistic and privately informed managers on firm performance. In a second step I show how the corporate decisions of these managers differ from non-biased managers.

For this purpose I formulate three hypotheses predicting their impact on the firm performance and test these on the data. I use US data of companies undertaking either an IPO or a SEO from 1990 up to 2001 and which were subsequently listed on NYSE, NASDAQ or AMEX.

My first hypothesis is the Optimistic Managers Hypothesis. Hereby is an optimistic manager defined as a manager who systematically overestimates good firm behavior and underestimates bad firm behavior. Thus the Optimistic Manager Hypothesis predicts that the more proceeds are generated, the worse the future performance will be. In a new approach to test the impact on the long run performance and to enhance the identification of this effect, I focus on the cross product *proceeds from primary shares x insider selling*. And indeed, I find a significant negative effect on the long term performance of the firm for SEOs. Still being negative, I lose significance of this effect for my IPO sample. Furthermore I see that Optimistic Managers take different corporate decisions: they tend to increase debt and reduce their cash holdings.

As a second possible explanation for the underperformance of the offering firms, I investigate the impact of the Window of Opportunity Hypothesis. Managers believe in a temporary over-valuation of their company by the stock market and try to profit from it by issuing overpriced shares. According to the Free Cash Flow Hypothesis managers pursue their own interests on the expense of their shareholders. These managers prefer to invest readily available funds into pet projects to increase their perquisites or social status instead of maximizing the return for their shareholders. Consequently, the more proceeds from primary shares the manager can raise in the offering, the worse will be the performance of the company. I label managers of both hypotheses as

privately informed managers. Both predict a negative performance, which the manager foresees. I find significant impact on underperformance of privately informed managers for IPOs and loose some significance for SEOs. Additionally, privately informed managers retain a higher level of cash holdings after the offering and have a higher propensity to reduce debt level after the offering compared to their optimistic counterparts. I show that both Optimistic Managers as well as privately informed managers help to explain the underperformance of equity offerings and show a distinct behavior in corporate decisions after the offering.

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IX. Annex

A. Long Term Performance Calculation

I calculate the three year abnormal buy and hold returns (BHRs) based on monthly returns as reported by the Center for Research on Security Prices (CRSP). The returns are calculated as follows:

r(t) = [(p(t)f(t)+d(t))/p(t')]-1

For time t (a holding period), let:

t' = time of last available price < t

r(t) = return on purchase at t', sale at t

p(t) = last sale price or closing bid/ask average at time t

d(t) = cash adjustment for t

f(t) = price adjustment factor for t

p(t') = last sale price or closing bid/ask average at time of last available price < t.

For my long term performance calculation I use BHRs instead of cumulative abnormal returns (CAARs) as Barber and Lyon (1997) show that CAARs suffer from a systematic bias.

The Abnormal Returns are calculated as follows

$$AR_{i\tau} = R_{i\tau} - E(R_{i\tau})$$

with $R_{i\tau}$ = Buy and Hold Return (BHR) of firm i for period τ (one or three years or till the company is delisted)

$E(R_{i\tau})$ = Expected (=reference) BHR of firm i for period τ (one or three years)

BHR is hereby defined by the following formula

$$\text{BHR} = \sum_{i=1}^{n} \frac{\text{p}_\text{i}(\text{T}) - \text{p}_\text{i}(t)}{p_{Index}(T) - p_{Index}(t)}$$

with p_i = price of stock i

t = month after Issue

T = end of time period (one / three years) or delisting date of the issuing firm

BHR returns are calculated in respect to two different reference returns: size and book-to-market matched firms as well as size and book-to-market matched portfolios

B. Regression analysis on insider trading

I employ the different regressions depending if I regard the whole sample, SEO subsample and the IPO subsample. The variable PS, which represents my normalized free cash proxy, stands for ratio of primary shares offered to shares outstanding after the offering.

Whole Sample:

$$BHR3y_i = \alpha_0 + \alpha_1 NYSE + \alpha_2 NASDAQ + \alpha_3 IPOdummy + \alpha_4 \log MB + \alpha_5 \log firm\_size$$
$$+ \alpha_6 \Pr imaryShare + \alpha_7 PS + \alpha_8 LowOwner + \alpha_9 LowOwner * PS + \alpha_{10} HighOwner$$
$$+ \alpha_{11} HighOwner * PS + \alpha_{12} InsBuyBef + \alpha_{13} InsBuyBef * PS + \alpha_{14} InsSellBef + \alpha_{15} InsSellBef * PS$$
$$+ \alpha_{16} NetSell\_in\_Offer(no\_dilution) + \alpha_{17} NetSell\_in\_Offer(no\_dilution) * PS$$
$$+ \alpha_{18} InsBuyAfter + \alpha_{19} InsBuyAfter * PS + \alpha_{20} InsSellAfter + \alpha_{21} InsSellAfter * PS + \varepsilon_i$$

IPO Subsample:

$$BHR3y_i = \alpha_0 + \alpha_1 NYSE + \alpha_2 NASDAQ + \alpha_4 \log MB + \alpha_5 \log firm\_size + \alpha_6 \Pr imaryShare + \alpha_7 PS +$$
$$+ \alpha_{12} InsBuyBef + \alpha_{13} InsBuyBef * PS + \alpha_{14} InsSellBef + \alpha_{15} InsSellBef * PS$$
$$+ \alpha_{16} NetSell\_in\_Offer(no\_dilution) + \alpha_{17} NetSell\_in\_Offer(no\_dilution) * PS$$
$$+ \alpha_{18} InsBuyAfter + \alpha_{19} InsBuyAfter * PS + \alpha_{20} InsSellAfter + \alpha_{21} InsSellAfter * PS + + \varepsilon_i$$

SEO Subsample:

$$BHR3y_i = \alpha_0 + \alpha_1 NYSE + \alpha_2 NASDAQ + \alpha_4 \log MB + \alpha_5 \log firm\_size + \alpha_6 \Pr imaryShare$$
$$+ \alpha_7 PS + \alpha_8 LowOwner + \alpha_9 LowOwner * PS + \alpha_{10} HighOwner + \alpha_{11} HighOwner * PS$$
$$+ \alpha_{12} InsBuyBef + \alpha_{13} InsBuyBef * PS + \alpha_{14} InsSellBef + \alpha_{15} InsSellBef * PS$$
$$+ \alpha_{16} NetBuy\_in\_Offer(with\_dilution) + \alpha_{17} NetBuy\_in\_Offer(with\_dilution) * PS$$
$$+ \alpha_{16} NetSell\_in\_Offer(with\_dilution) + \alpha_{17} NetSell\_in\_Offer(with\_dilution) * PS$$
$$+ \alpha_{18} InsBuyAfter + \alpha_{19} InsBuyAfter * PS + \alpha_{20} InsSellAfter + \alpha_{21} InsSellAfter * PS$$

Independant Variables	Dependant Variable: 3 year BHR (matched firm approach) with robust t-stats		
	Full Sample	IPO	SEO
NYSE dummy	0.1369 (0.93)	0.6030*** (3.59)	-0.1281 (-0.69)
NASDAQ dummy	-0.1054 (-0.82)	0.2236+ (1.51)	-0.3012* (-1.85)
IPO dummy	0.0526 (0.84)	(dropped)	(dropped)
log MB	0.2537*** (6.09)	0.2272*** (6.12)	0.2611*** (4.07)
log firm size	-0.1228*** (-4.54)	-0.1633*** (-6.56)	-0.0934** (-2.28)
% of primary shares to total shares offered	-0.08 (-0.60)	-0.2699 (-1.07)	0.2040+ (1.52)
Primary shares to shares out after offering	-0.0728 (-0.44)	0.021 (0.49)	-0.1186 (-0.21)
Insider ownership lowest quintile			0.1621 (1.18)
Insider ownership lowest quintile x primary shares to shares out			-1.1536* (-1.68)
Insider ownership highest quintile			-0.0682 (-0.56)
Insider ownership highest quintile x primary shares to shares out			0.277 (0.41)
Insider Buy before offering	-0.2796* (-1.71)	-0.1006 (-0.62)	-0.7722** (-2.35)
Insider Buy before offering x primary shares to shares out	0.2295 (0.79)	0.3605+ (1.59)	2.4804* (1.72)
Insider Sell before offering	-0.146 (-1.37)	-0.1645 (-0.70)	-0.2952** (-2.18)
Insider Sell before offering x primary shares to shares out	-0.3252 (-0.76)	0.2355 (0.41)	-0.0099 (-0.01)
NetSell in offering (without dilution)	-0.0131 (-0.13)	0.151 (1.32)	
NetSell in offering (without dilution) x primary shares	0.1476 (0.64)	-0.2863* (-1.83)	
Insider Buy after lockup	0.3432* (1.77)	0.1555 (0.88)	0.8175*** (2.73)
Insider Buy after lockup x primary shares to shares out	-1.2003** (-2.48)	-0.3933 (-1.18)	-1.9837** (-2.40)
Insider Sell after lockup	0.3050*** (3.26)	0.1035 (1.06)	0.4695*** (3.15)
Insider Sell after lockup x primary shares to shares out	-0.6544*** (-2.78)	-0.4055** (-2.42)	-1.1306 (-1.35)
NetBuy in Offering (with dilution)			-0.2779+ (-1.48)
NetBuy in Offering (with dilution) x primary shares			0.6211 (1.00)
NetSell in Offering (with dilution)			0.2998** (2.32)
NetSell in Offering (with dilution) x prim shares			-1.5686** (-2.04)
Constant	1.1573*** (3.14)	1.4993*** (3.89)	0.7442 (1.38)
R-squared	0.024	0.024	0.046
N	3031	2473	1273

+ p<0.15, * p<0.10, ** p<0.05, *** p<0.01

C. Tables

Table 1: Summary Statistics whole sample

The sample consists of companies issuing equity, either in an IPO or an SEO, starting January 1st, 1990 until December 31st, 2001 as listed by the Security Data Corporation (SDC Platinum). We consider only firms up to 2001 in order to perform a three year abnormal long term performance study. Firms included have to trade on the New York Stock Exchange (NYSE), American Stock Exchange (AMEX) and the NASDAQ. We excluded unit offers as well as Real Estate Investment Trusts (REITS), American Depository Receipts (ADR), closed end mutual funds, utility companies and offerings by financial institutions. Furthermore we restrict equity offerings to common class A shares. Issuers with no listed or negative book value on either Compustat or the SDC database have been excluded. We exclude the 2.5% highest / lowest outliers in terms of MB values.

Proceeds are shown in million $. Age reports the age of the firm in years when it issues equity. Firm size is calculated with the Compustat variables "Shares outstanding" * "Share Price" as of July of each respective year

	SEO's			IPO's			Total		
	Obs	Mean	Median	Obs	Mean	Median	Obs	Mean	Median
N	3412			2895			6307		
Number of employees	1'912	6'484	898	1'615	1'695	300	3'527	4'291	519
Age	1'530	14	11	1'200	9	6	2'730	12	8
Proceeds	3'412	124	60	2'895	63	36	6'307	96	45
Shares out after the offering	3'016	64'000'000	21'000'000	2'823	19'000'000	9'236'694	5'839	42'000'000	14'000'000
Primary Shares offrd	3'412	2'986'382	2'000'000	2'895	4'170'937	2'800'000	6'307	3'530'109	2'300'000
Primary Shares as Shares offered (in%)	2'896	85	100	2'868	91	100	5'764	88	100
Secondary Shares offerd	3'412	1'538'808	50'000	2'895	407'032	0	6'307	1'019'307	0
Firm Size	3'331	2'574'217	474'598	2'599	536'940	135'349	5'930	1'681'319	263'151
MB 5% wins	3'331	5.50	3.40	2'599	5.90	3.70	5'930	5.70	3.60

Table 2: Insider trading before, during and after the offering

Insider trading is obtained via the Thompson Financial database for every firm of our sample. For robustness checks we form four groups of insiders according to their level in the hirachy of the company: CEOs, Directors, Managers (CEO, COO, CFO, CIO, CTO and (Executive-)Vice President) and Insiders (Managers plus officers and directors).

We consider two distinct periods during which we analyse the trading by insiders. Trading Before: six months before the equity issuance up to one day before the issuance. Trading After: Beginning from the end of the lock-up period for three months. (In case we lack the exact duration of the lock-up period, we assume a six month lock-up period). Insider Pure Buys (Sells) equals one for a firm event if we see insiders buying and NO insider selling in the company during the specified time period.

The dummy variable NetSelling in Offering (without dilution) equals one if the share of insider ownership in percent of the company (as reported by SDC database) decreased after the offering. This variable does not take the dilution of their ownership stake due to newly issued primary shares into consideration. The dummy variable NetSelling (Netbuying) in Offering (with dilution) equals one if the number of shares owned by insiders of the company (as reported by SDC database) decreased (increased) after the offering. This variable accounts for the decrease in the ownership of insiders due to newly issued primary shares. # of Shares equals the number of shares traded per firm event in the given time period

		Type of Offering							
		SEO				IPO			
		Type of Insider				Type of Insider			
		Director	CEO	Manager	Insider	Director	CEO	Manager	Insider
Ins Pure Buys before	obs	113	25	48	99				
Ins Pure Sell before	obs	802	321	728	1'099				
NetBuying in Offering (with dilution)	obs	-	-	-	122	-	-	-	489
NetSelling in Offering (with dilution)	obs	-	-	-	670	-	-	-	628
NetSelling in Offering (without dilution)	obs	-	-	-	1'735	-	-	-	969
Ins Pure Buys after lockup	obs	132	39	63	113	138	48	79	144
Ins Pure Sell after lockup	obs	731	368	772	1'024	386	216	388	560
# of Shares traded by Insiders before	mean	-312'608	-20'548	-29'826	-377'975	-4'446	-2'350	-2'881	-12'361
# of Shares traded by Insiders after	mean	-270'803	-29'152	-38'996	-377'975	-86'933	-17'433	-25'592	-132'395

Table 3

Announcement period (-2d to +2d) abnormal return by type of insider trading BEFORE the offering

SEO Announcement effect: Event study of cumulative abnormal returns (CARs), calculated on basis of the market model, starting 2 days before the announcement day up to +2 days after the announcement date (=filing date in SDC) for a SEO. Our sample is divided into insider selling respectively insider buying in a time period 6 months prior up to the SEO offering. We discern between three different groups of insiders: CEOs, Managers (CEO, COO, CFO, CIO, CTO and (Executive-)Vice President), as well as Insiders in general (Managers plus officers and directors).

The sample consists of companies issuing equity in a SEO, starting January 1st, 1990 until December 31st, 2001 as listed by the Security Data Corporation (SDC Platinum). We consider only firms up to 2001 in order to perform a three year abnormal long term performance study. Firms included have to trade on the New York Stock Exchange (NYSE), American Stock Exchange (AMEX) and the NASDAQ. We excluded unit offers as well as Real Estate Investment Trusts (REITS), American Depository Receipts (ADR), closed end mutual funds, utility companies and offerings by financial institutions. Furthermore we restrict equity offerings to common class A shares. Issuers with no listed or negative book value on either Compustat or the SDC database have been excluded. We exclude the 2.5% highest / lowest outliers in terms of MB values. Aggregate insider selling (buying) equals one for a firm event if the diference of insider sells - buys are positive (negative) for a given company in the respective time period. Insider Pure Buys (Sells) equals one for a firm event, if we see insiders buying and NO insider selling of the same company during the time period.

		Insider		Managers		CEO	
		Aggr.	Pure	Aggr.	Pure	Aggr.	Pure
	obs	1223	1064	729	707	317	314
Sell	mean	-2.90%	-2.90%	-2.80%	-2.90%	-3.60%	-3.60%
	median	-2.80%	-2.80%	-2.70%	-2.80%	-2.80%	-2.80%
	obs	1817	1998	2377	2401	2812	2816
Neutral	mean	-3.30%	-3.20%	-3.20%	-3.20%	-3.10%	-3.10%
	median	-3.20%	-3.10%	-3.00%	-3.00%	-2.90%	-2.90%
	obs	115	93	49	47	26	25
Buy	mean	-2.50%	-2.90%	-3.30%	-3.60%	-4.10%	-4.00%
	median	-1.90%	-2.70%	-3.30%	-3.60%	-3.30%	-3.30%
Difference	mean	0.40%	0.00%	-0.50%	-0.70%	-0.50%	-0.40%
Buy - Sell	median	0.90%	0.10%	-0.60%	-0.80%	-0.50%	-0.50%

Table 4: Announcement period (-2d to +2d) abnormal return by type of insider trading DURING the offering

SEO Announcement effect event study of cumulative abnormal returns (CARs, in percentage points), calculated on basis of the market model, starting 2 days before the announcement day up to +2 days after the announcement date (=filing date in SDC) for a SEO. Our sample is divided into 5 portfolios according to the degree of change of ownership by insiders DURING the offering (Source: SDC). The degree of change in insider ownership is calculated in two possible ways: by comparing the percentage ownership of the firm before and after the offering (= *Change in ownership without dilution*) and by comparing the number of shares held before and after the offering by insiders (= *Change in ownership with dilution*).

The sample consists of companies issuing equity in a SEO, starting January 1st, 1990 until December 31st, 2001 as listed by the Security Data Corporation (SDC Platinum). We consider only firms up to 2001 in order to perform a three year abnormal long term performance study. Firms included have to trade on the New York Stock Exchange (NYSE), American Stock Exchange (AMEX) and the NASDAQ. We excluded unit offers as well as Real Estate Investment Trusts (REITS), American Depository Receipts (ADR), closed end mutual funds, utility companies and offerings by financial institutions. Furthermore we restrict equity offerings to common class A shares. Issuers with no listed or negative book value on either Compustat or the SDC database have been excluded. We exclude the 2.5% highest / lowest outliers in terms of MB values.

Degree of change of insider ownership during SEO		Change in Ownership with dilution	Change in Ownership without dilution
	obs	224	301
highest decrease	mean	-1.60%	-2.10%
	median	-1.20%	-1.40%
	obs	280	250
	mean	-2.00%	-1.80%
	median	-2.10%	-1.90%
	obs	483	360
	mean	-2.00%	-2.10%
	median	1.20%	-2.00%
	obs		219
	mean		-1.70%
	median		-1.40%
	obs	109	218
highest increase	mean	-2.00%	-1.40%
	median	-1.80%	-1.90%

Table 5: Long term performance of issuing firms

BHR matched firm **is the Buy and Hold return (BHR) compared to a matched firm. If an offering firm is delisted prior to its 1st respectively 3rd anniversary, the BHR is calculated from the issuing date until the delisting date. If the matched firm delists during the one respectively three year period, I choose the best matching firm to the offering firm in the delisting month. Matching firms are chosen from all firms listed on the NYSE not having undertaken an IPO or SEO in the prior three year period, if their firm size is +/-30% of the issuing firm size. From this group the firm with the closest MB Value is selected. BHR portfolio is the abnormal BHR of the issuing firms in comparison to a rebalanced portfolio of firms with similar size and MB values. Each June 70 portfolios (14 size and 5 MB portfolios) are calculated and matched to each issuing firm. For robustness checks I calculate the Cumulative Average Abnormal Return (CAAR) benchmarked against the Value-Weighted Return as well as Equally-Weighted return of the S&P 500. Fama-French AR is the abnormal return of the issuing firm calculated on the basis of the Fama-French three factor model. I omitted firms with no or negative Book Value as well as the 5 % outliers in MB value**

	Obs	Mean	Std. Dev.	Min	Max
SEO					
BHR matched firm 1y	1629	-0.75%	0.946	-6.860	8.822
BHR matched firm 3y	1629	-14.98%	1.703	-18.011	15.543
BHR Portfolio 1y	1744	0.89%	0.701	-1.629	7.355
BHR Portfolio 3y	1744	-15.90%	1.136	-3.153	16.452
CAAR market portf (equal weighted) 3y	1797	-14.06%	0.883233	-4.180764	4.772244
CAAR market portf (value weighted) 3y	1797	-5.77%	0.90449	-3.779643	5.281382
BHR Issuer 3 y	1744	19.76%	0.171	0.003	18.625
Fama French AR	*179*	*-15.30%*			
IPO					
BHR matched firm 1y	2674	-2.32%	1.152316	-8.582929	10.94406
BHR matched firm 3y	2674	-9.04%	2.990897	-40.23777	54.56193
BHR Portfolio 1y	2599	-0.92%	0.860	-2.694	10.307
BHR Portfolio 3y	2599	-2.83%	2.210	-2.712	53.122
CAAR market portf (equal weighted) 3y	2895	-11.85%	1.202	-4.450	6.521
CAAR market portf (value weighted) 3y	2895	-8.55%	1.196	-4.161	6.595
BHR Issuer 3 y	2599	23.36%	2.272	0.002	55.591
Fama French AR	*179*	*-3.80%*			

Table 6: Predictions of each hypothesis on the effect on long term performance and corporate decision making

		Optimistic Mgr	Privately Informed Manager	
			Free Cash Flow	Windows of Opportunity
Dependant Variable: Long-Term Performance	Insiders Buy x Primary Shares (=Free Cash)	—		
	Insiders Sell x Primary Shares (=Free Cash)		—	—
	Insiders Sell Or Insiders Sell x % Sec Shares offered to total Shares outstanding			—
Change in Level	Capital Expenditures	+	+	
	Cash Holdings	—	—	—
	Debt Level	+	+	—

Table 7: Regressional analysis: Dependant variable is the 3-year BHR calculated with the matched-firm approaches. Insiders are defined as managers and officers in the respective firm as defined by Thompson Financial. The sample consists of companies issuing equity, either in an IPO or an SEO, starting January 1st, 1990 until December 31st, 2001 as listed by the Security Data Corporation (SDC Platinum). I consider only firms up to 2001 in order to perform a three year abnormal long term performance study. Firms included trade on the New York Stock Exchange (NYSE), American Stock Exchange (AMEX) and the NASDAQ. I excluded unit offers as well as Real Estate Investment Trusts (REITS), American Depository Receipts (ADR), closed end mutual funds and offerings by financial institutions. Furthermore I restrict equity offerings to common class A shares. Issuers with no listed or negative book value on either Compustat or the SDC database have been excluded. I consider two distinct periods during which I analyse the trading by insiders: Trading Before: six month before the equity issuance up to one day before the issuance. Trading After: Beginning from the end of the lock-up period for three months. (in case I lack the exact duration of the lock-up period, I assume a six months lock-up period).The dummy variable Pure Sells (Buys) equals one if all insiders only sell (buy) in the respective period. Prim_to_share_out represents the ratio of primary shares offered to all shares outstanding. The highlighted numbers represent evidence for the below detailed hypotheses.

Independant Variables	Dependant Variable: 3 year BHR (matched firm approach) with robust t-stats		
	Full Sample	IPO	SEO
Insider Buy before offering	-0.2796*	-0.1006	-0.7722**
	(-1.71)	(-0.62)	(-2.35)
Insider Buy before offering x primary shares to shares out	0.2295	0.3605+	2.4804*
	(0.79)	(1.59)	(1.72)
Insider Sell before offering	-0.146	-0.1645	-0.2952**
	(-1.37)	(-0.70)	(-2.18)
Insider Sell before offering x primary shares to shares out	-0.3252	0.2355	-0.0099
	(-0.76)	(0.41)	(-0.01)
NetSell in offering (without dilution)	-0.0131	0.151	
	(-0.13)	(1.32)	
NetSell in offering (without dilution) x primary shares	0.1476	-0.2863*	
	(0.64)	(-1.83)	
Insider Buy after lockup	0.3432*	0.1555	0.8175***
	(1.77)	(0.88)	(2.73)
Insider Buy after lockup x primary shares to shares out	-1.2003**	-0.3933	-1.9837**
	(-2.48)	(-1.18)	(-2.40)
Insider Sell after lockup	0.3050***	0.1035	0.4695***
	(3.26)	(1.06)	(3.15)
Insider Sell after lockup x primary shares to shares out	-0.6544***	-0.4055**	-1.1306
	(-2.78)	(-2.42)	(-1.35)
NetBuy in Offering (with dilution)			-0.2779+
			(-1.48)
NetBuy in Offering (with dilution) x primary shares			0.6211
			(1.00)
NetSell in Offering (with dilution)			0.2998**
			(2.32)
NetSell in Offering (with dilution) x prim shares			-1.5686**
			(-2.04)
Constant	1.1573***	1.4993***	0.7442
	(3.14)	(3.89)	(1.38)
R-squared	0.024	0.024	0.046
N	3001	2473	1273

+ p<0.15, * p<0.10, ** p<0.05, *** p<0.01

Figure 1: The predicted announcement day reaction of SEOs according to different hypotheses

Hypothesis	Observed Insider Trading	Predicted Anouncement Reaction by the Market	
Market values insider trading as a valuable signal for future performance and believes they have private (better) information and trades accordingly	Insider Buy	positiv	
	Insider Sell	negative	
Market believes manager to be optimistic und thus to underperform	No Insider Trading	positiv	
	Insider Buy	negative	

Figure 2: The distinctive corporate decisions per type of manager

Corporate Decisions by Type of Manager				
		Optimistic Manager	**Free Cash Flow**	**Windows of Opportunity**
Change in Level	Capital Expenditures	+	+	
	Cash Holdings	?	?	+
	Debt Level	+	+/const.	?

Figure 3: 3-year BHR long term performance by type of insider trading
IPO respectively SEO 3-year firm-matched BHR split up by aggregated insider trading. The variable buy (sell) equals one if the difference shares bought – sold is positive (negative) in the time period 6 month before the offering up to 3 month after the lock up period expired. I omit BHR outliers at the 5% level.

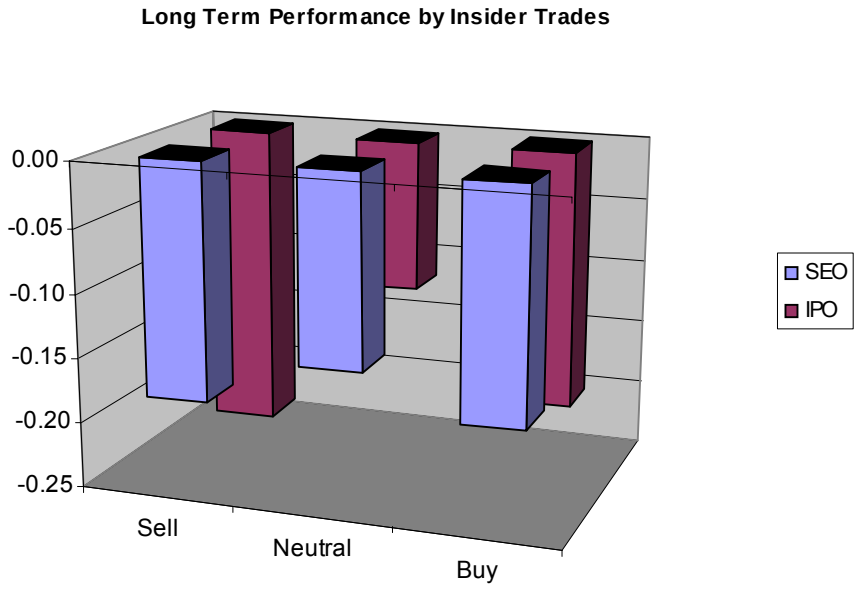

Figure 4: Post-development of debt levels by type of manager
This figure displays the ratio of events in which companies increase to decrease their debt. I hereby compare the debt-level one year before the offering to one year after the offering as described in data item 9 in the Compustat database, normalized by assets in place in the respective year (data item 6). Optimistic (privately informed) managers are defined as such if the managers buy (sell), on an aggregate level, in the six month period before the offering up to three months after the lock-up period has ended

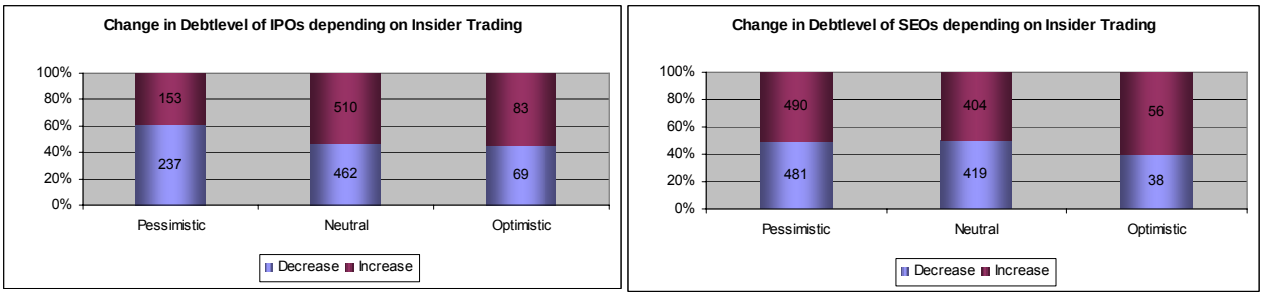

Figure 5: Capital Expenditure development after the offering by type of manager
This figure displays the ratio of events in which company increases and decrease their capital expenditures. I hereby compare the level in capital expenditures one year before the offering to one year after the offering as described in data item 128 in the Compustat database, normalized by assets in place in the respective year (data item 6). Optimistic (privately informed) managers are defined as such if the managers buy (sell), on an aggregate level, in the six month period before the offering up to three months after the lock-up period has ended

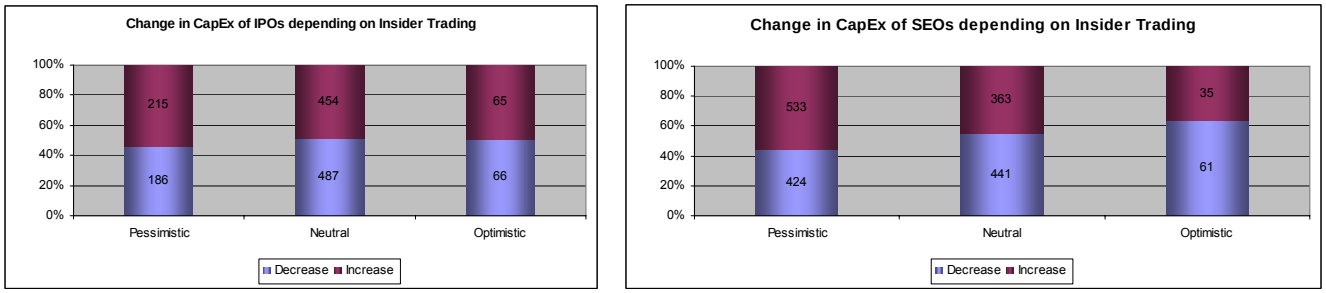

Figure 6: Cash development after the offering by type of manager. This figure displays the ratio of companies which increase their cash holdings compared to the ones who decrease those. I hereby compare the cash level one year before the offering to one year after the offering as described in data item 1 in the Compustat database, normalized by assets in place in the respective year (data item 6). Optimistic (privately informed) managers are defined as such if the managers buy (sell), on an aggregate level, in the six month period before the offering up to three months after the lock-up period has ended