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Does the market matter for more than investment?☆

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ABSTRACT

Market effects on corporate investment are well documented. Low disagreement implies high investment, but we know little about what high disagreement implies, other than the implied flip side (low investment). This paper adds to this literature in several ways. A new dimension of corporate behavior that is related to disagreement is documented. Higher disagreement precedes a lower cost structure. Empirical tests reveal that the results are not driven by forced production efficiency due to financial constraints.

1. Introduction

Traditional finance theory argues that corporations make decisions, and efficient markets adjust prices accordingly. Recent research takes a more contemporary view that managers also use the market for guidance in making corporate decisions. Morck et al. (1990), Baker et al. (2003), Polk and Sapienza (2009), and others consider how the market affects corporate investment. This paper addresses a related question: Does the market affect more than just corporate investment? In particular, is there an effect on production efficiency? This paper demonstrates that disagreement between the market and the manager can also influence firms to improve cost productivity.

Since all firms should strive to lower costs and improve production efficiency, why would the market affect the costs of the firm? The key is that the manager and the market may disagree over the investment opportunities and challenges the firm will experience. In some instances, the manager will be concerned with the opinion of the market simply because the firm is financially constrained and cannot procure funding without agreement. Without financial constraints, a manager who cares about the current stock price will also care about the level of market disagreement. One such instance is when the manager has limited amounts of effort and must choose between new investment and production efficiency. The disagreement would cause the stock price to drop if the manager chooses investment which rationally could lead the manager to choose to improve production efficiency. Frequently the firm is faced with a decision to improve an existing product or create a newer version. With market agreement on investment of any kind for the firm, the manager will create the new product. Disagreement can lead the manager to improve the cost structure while reducing new investment. Finally, the manager may not have any positive net present value projects when there is large disagreement, but there are still plenty of opportunities to improve production efficiency.

Whether or not the market will concur with investment is central. Why would the market disagree with the manager's investment choices? One possible reason is that the manager and the investors have asymmetric information. However, with sufficient communication, both rational agents will agree on the investment decision leaving no reason for the stock price to

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decrease prior to the decision. Even if asymmetric information does drive some of the divergence between the manager and investors, Dittmar and Thakor (2007) find that agreement between investors and the manager provides incremental explanatory power over asymmetric information in a firm's issuance decision.

Agency problems could also lead to the manager's sub-optimal investment and high disagreement, but agency issues should keep disagreement high and need not give rise to negative covariance between disagreement and corporate decisions. Funding should be more difficult to acquire when agency issues are present and attempts should be made to align the manager's and investors' incentives. Disagreement may arise from differing prior beliefs about the project payoff. This type of situation will tend to occur when the project is fairly new and there is a minimal amount of objective history to guide the formation of initial beliefs (prior distributions). Agreement is more likely if the project is familiar to both parties and there is less room for subjective formation of priors. Intuitively, if the market agrees with investing, then the manager will grow the firm by investing. If the market disagrees with investing, the manager will grow the firm by managing costs and operational efficiency.

Identifying agreement is a challenge. The first measure of agreement is the dispersion of analysts' forecast earnings. Since analysts are presumably analyzing the same information, the more dispersed the forecasts, the more likely it is that the investors will disagree with the manager. The second and third measures are constructed following Chen et al. (2002). The second measure is the change in the number of mutual funds holding the stock divided by the total number of mutual funds in existence that period. The third measure is the change in the percent of the total outstanding shares held by mutual funds. Mutual funds will sell the stock or hold less of it if the manager will invest in value destroying investments. Since the universe of mutual funds has grown tremendously, only funds that existed in both periods are included.

Empirical results provide strong support for lower agreement followed by lower costs, investments, and higher cash flows. Since the focus of this paper is on the interaction between agreement and production efficiency, and the results on investment have already been established, the latter two are untabulated. Net equity and debt issues combined with many different measures of financial constraints, including measures developed by Hadlock and Pierce (2010), Whited and Wu (2006), Almeida et al. (2004), and Kaplan and Zingales (1997), which are used as controls to ensure explicit dependence on the external market do not force increased production efficiency improvement.

The remainder of the paper is organized as follows: Section 2 summarizes the related literature and outlines the empirical predictions, Section 3 discusses the data, Section 4 provides the empirical results, Section 5 discusses robustness, and Section 6 concludes.

2. Related literature and predictions

The idea that the corporate manager may glean useful information from the market is not new. For instance, Boot and Thakor (1997) argue that firms extract information from the market from trading in financial markets. Subrahmanyam and Titman (2001) show that feedback from market prices to cash flows occurs due to non-financial stakeholders' decisions based on market prices; for example, when a supplier decides to not extend trade credit because the market price declined. Allen (1993) suggests that an important role of the financial market is to provide managers with information that would be otherwise unavailable. Holmström and Tirole (1993) argue that a firm's stock price incorporates information about performance that cannot be obtained from the firm's current or future profit data.

Much of the focus in the literature has been primarily on the relationship between investment and the market. To my knowledge, no one has considered the effect on costs. Subrahmanyam and Titman (2001) show "how a firm's stock price affects how the firm is perceived by its customers, suppliers, and employees, and how this, in turn, influences their decisions". In their model, managers can have an impact on the feedback effect by controlling the precision of public information or reducing the cost of acquiring information. One finding is that young firms that wish to attract stakeholders have an incentive to increase the precision of information and reduce the cost to avoid a negative cascade. In contrast, more established firms wish to decrease precision and increase information acquisition cost to avoid losing key stakeholders, such as, customers and employees. Their paper theoretically considers how stock prices influence other stakeholders and subsequently affect the firm's cash flows, whereas, here the manager learns of agreement directly. The empirical results show that agreement still matters for firms that are not *financially constrained*. In Subrahmanyam and Titman (2001) the theory indicates that other stakeholders' views of the firm affect the cash flows indirectly, which is less likely to be the case in financially unconstrained firms. It should be noted that this does not refute their theory, but instead provides support for agreement.

Lamont (2000) considers the effect of time-varying discount rates on aggregate investment plans. Investment plans are shown to positively covary with stock returns.[1] Intuitively, a low stock price (high discount rate) implies less investment in the future which is captured by the investment plan today. Lamont primarily considers aggregate and not firm-specific investment and focuses on the time-varying discount rate as the source of the investment change. The focus here is on the firm level after the manager assesses how likely it is that the investors will agree with the decision.

Morck et al. (1990) use firm level data to consider whether market mispricing matters for real economic activity or is just an interesting sideshow. They find that although the market may not be a complete sideshow, it doesn't appear to be very central. Blanchard et al. (1993) use aggregate data and conclude that market mispricing plays a limited role in the investment decisions of firms. Extending this literature, Baker et al. (2003) use the Kaplan and Zingales (1997) (KZ) index to rank firms from least to most

[1] If the discount rate decreases, then future cash flow increases causing the stock price and the return to increase. The low discount rate implies lower expected returns in the *future*. In support of this fact, Lamont empirically finds negative correlation between investment plans today and future stock returns. The source of the varying discount rate is a change in the equity risk premium, which is inferred from time-series covariation between investment and stock returns.