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Price delay premium and liquidity risk ☆

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Abstract

Hou and Moskowitz (2005) document that common stocks with more price delay in reflecting information yield higher returns and that the delay premium cannot be explained by the CAPM, Fama-French three-factor model, or Carhart's four-factor model. It cannot be explained by conventional liquidity measures either. They contend that the premium is attributable to inadequate risk sharing arising from lack of investor recognition, as Merton (1987) suggests. Using a parsimonious and powerful asset pricing model developed by Liu (2006), we re-examine the issue and find that firms with greater price delay have more difficulty attracting traders (higher incidents of non-trading) and their investors face higher liquidity risk, which accounts for their anomalous returns. Our findings suggest that the price delay premium is due to systematic liquidity risk, not inadequate risk sharing.

JEL classifications: G12

Keywords: Liquidity risk; Price delay premium; Investor recognition

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1. Introduction

Does the speed at which information gets reflected in prices affect expected returns on common stocks? Hou and Moskowitz (2005) contend that the delay in price response to market-wide information can capture the essence of market frictions. Intriguingly, they find that firms with higher price delay yield significantly higher stock returns, and that the delay premium cannot be explained by the capital asset pricing model (CAPM), the Fama-French (1993) three-factor model, or Carhart's (1997) four-factor model. Hou and Moskowitz argue that the delay effect on stock returns is largely attributable to market frictions associated with investor recognition.

Their argument supports Merton's (1987) hypothesis that investors faced with incomplete information require a higher premium to hold less recognized stocks,[1] and the delay premium is due to inadequate risk sharing arising from lack of investor recognition. In this study, we offer and test an alternative view, based on systematic liquidity risk, to explain why firms whose stock prices respond slower to information (more "delayed" firms) earn higher returns.

Specifically, we argue that while facing the investor recognition problem, more delayed firms generally have lower liquidity, lower levels of monitoring from institutional investors, and less analyst coverage. These factors make the stock prices of such firms less informative with a longer price delay in reflecting information. Consequently, more delayed firms would be more sensitive to shocks to market liquidity because their intrinsic values have greater uncertainty and thus fewer traders would step up to absorb the shocks.

Further, when shocks to market liquidity occur, market makers of more delayed stocks face more order imbalance because such stocks attract fewer traders to absorb the shocks. It also causes market makers to face higher inventory holding risk, as well as higher adverse selection risk, which force them to impose wider spreads and lower depths on more delayed stocks. This effectively raises the transaction costs, resulting in a greater incidence of non-trading and more price delay in reflecting information.

In sum, we hypothesize that firms with more price delay tend to attract fewer traders to absorb shocks to market liquidity,[2] causing their shareholders to face higher liquidity risk and to accept a lower price if they need to sell in a bad market.[3] Accordingly, to hold stocks with more price delay, investors require higher returns to compensate them for the greater liquidity risk they face.[4]

[1] In Merton's (1987) model, investors of less recognized firms hold undiversified positions in the stocks, and thus require higher expected returns to compensate them for the increased idiosyncratic risk associated with their positions. However, recently, Bali and Cakici (2008) show that there is no robustly significant relation between idiosyncratic volatility and expected returns.

[2] According to Chien and Lustig (2009), if a large fraction of agents encounter binding solvency constraints, the economy is said to be hit by a negative liquidity shock. More generally, as Chordia, Roll, and Subrahmanyam (2000) point out, there is strong commonality in liquidity among individual stocks. And, shocks to market liquidity are manifested in unexpected changes in aggregate liquidity. Amihud (2002) and Liu (2006) demonstrate that large negative shocks to market liquidity tend to occur when the market experiences substantial declines [see also Pastor and Stambaugh (2003) and Acharya and Pedersen (2005)].

[3] Eisfeldt (2004) argues that, in a bad market characterized by low productivity and adverse selection, agents are more likely to sell claims to low quality projects, resulting in lower claim price and lower liquidity.

[4] Our hypothesis is in line with Pastor and Stambaugh (2003) and Acharya and Pedersen (2005), who argue that investors will require higher expected returns for holding assets that are difficult to sell when aggregate liquidity is low.