

# DISSERTATION DEFENSE

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## Incorporation of Information in Asset Prices: Dynamic Trading and Manipulation

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324 GSIA (new wing)

### **Chapter 1: Manipulation and Information Acquisition**

I analyze the behavior of an agent (the manipulator) who makes announcements based on his private information in order to maximize the profit from short-term trades. Truthful announcement strategies can be supported with positive probability but only if investors have another source of information in addition to the manipulator's announcement and/or if manipulation is occasionally punished. The manipulator is shown to benefit from announcing/trading on more regulated markets with better informed investors, because both help the manipulator to commit to announce more truthfully. The presence of a manipulator increases price efficiency and decreases risk premium, even if the manipulator manipulates the announcement. Therefore, regulation to prevent manipulation is only beneficial if it forces the manipulator to announce more truthfully, and not if it forces the manipulator to stop announcing. I also analyze how the presence of the manipulator impacts investors' decisions to purchase information. Some investors substitute the costly information for the manipulator's announcement, even though that decreases the manipulator's incentive to announce truthfully. Nevertheless, price efficiency improves and risk premium decreases with the presence of the manipulator.

### **Chapter 2: Differential Interpretation of Information and the Post-Announcement Drift: A Story of Consensus Learning**

I show how post-announcement drift can be generated in a model with fully rational investors who interpret public information differently. Differential interpretation of information transforms public raw information into private interpreted information. If investors recognize their limited ability to interpret information, they will look for other investors' opinions in prices. Noise trading prevents investors from learning the market consensus interpretation of the announcement from the observation of a single price. But if noise trading is mean-reverting, investors can gradually learn the market consensus from the observation of a series of prices. As investors become more confident about their interpretation of the announcement, they put more weight on it, and the information is gradually incorporated into

prices, which generates the post-announcement drift. The model accounts for all salient empirical facts related to the post-announcement drift. If, in addition, investors make mistakes in extracting information from prices, the model also generates momentum.

### **Chapter 3: The Role of Information in the Discrepancy Between Average Prices and Expectations**

I show how the existence of short-term trading causes a divergence between the average price and the average expectation of the fundamental value by embedding higher-order expectations --expectations of expectations of expectations...-- into prices. Short-term trading arises when investors receive private information and (i) either net supply mean reverts or (ii) the release of additional information related to existing information is combined with residual uncertainty. Mean-reversion of net supply brings the average expectation closer to the fundamental value than the average price after the release of private information. By the contrary, residual uncertainty and an incoming release of information bring the average price closer to the fundamental value than the average expectation before the new information is released. When both (i) and (ii) are present, the average expectation tends to be closer to the fundamental value than the average price in the periods immediately after information releases, but the opposite happens in the periods immediately before information releases.