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Information aggregation in financial markets with career concerns

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Abstract

What are the equilibrium features of a dynamic financial market in which traders care about their reputation for ability? We modify a standard sequential trading model to include traders with career concerns. We show that this market cannot be informationally efficient: there is no equilibrium in which prices converge to the true value, even after an infinite sequence of trades. We characterize the most revealing equilibrium of this game and show that an increase in the strength of the traders' reputational concerns has a negative effect on the extent of information that can be revealed in equilibrium but a positive effect on market liquidity.
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1. Introduction

The substantial increase in the institutional ownership of corporate equity around the world in recent decades has underscored the importance of studying the effects of institutional trade on asset prices.[1] Institutions, and their employees, may be guided by incentives not fully captured by standard models in finance. For example, consider the case of US mutual funds which make up a significant proportion of institutional investors in US equity markets. An important body

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[1] On the New York Stock Exchange the percentage of outstanding corporate equity held by institutional investors increased from 7.2% in 1950 to 49.8% in 2002 (NYSE Factbook 2003). Allen [1] presents persuasive arguments for the importance of financial institutions to asset pricing.

of empirical work highlights the fact that mutual funds (e.g. Chevalier and Ellison [8]) and their employees (Chevalier and Ellison [9]) both face *career concerns*: they are interested in enhancing their *reputation* with their respective principals and sometimes indulge in perverse actions (e.g. excessive risk taking) in order to achieve this. Given the importance of institutions in equity markets, it is plausible to expect that such behavior may affect equilibrium quantities in these markets. What are the equilibrium features of a market in which a large proportion of traders care about their reputation?

While a growing body of literature examines the effects of agency conflicts on asset pricing, the explicit modeling of reputation in financial markets is in its infancy.[2] Dasgupta and Prat [11] present a two-period micro-founded model of career concerns in financial markets to examine the effect of reputation in enhancing trading volume. However, that analysis is done for a static market: each asset is traded only once.

In this paper, in contrast, we study a multi-period sequential trade market in which some traders care about their reputations. We show that the equilibrium properties of this market are very different from those of standard markets. In particular, we show that the presence of career concerned traders limits the extent to which equilibrium prices can aggregate the private information of market participants. The endogenous limits on the informativeness of trades and prices that we derive have important implications for the liquidity and volatility of assets traded by institutions. We delineate these implications and relate them to the strength of institutional career concerns. This paper, therefore, provides a foundation for linking the incentives of delegated financial traders and the equilibrium properties of markets in which they trade over time.

1.1. Summary of results

We present the most parsimonious model that captures the essence of our arguments. Much of our model is standard. We present a T-period sequential trade market for a single (Arrow) asset where all transactions occur via uninformed *market makers* who are risk neutral and competitive (following Glosten and Milgrom [16] and Kyle [18]) and quote bid and ask prices to reflect the informational content of order flow. In addition there is a large group of liquidity-driven *noise traders* who trade for exogenous reasons that are unrelated to the liquidation value of the asset.

Our only innovation is that we introduce a large group of reputationally-concerned traders (whom we call *fund managers*), who trade on behalf of other (inactive) investors. These traders receive a payoff that depends both on the direct profits they produce and on the reputation that they earn with their principals.[3] Their reputation is determined endogenously by Bayesian investors, in a way that will be described shortly.

The fund managers can be of two types (smart or dumb) and receive informative signals about the asset liquidation value, where the precision depends on their (unknown) type. In each trading round either a randomly selected fund manager or a noise trader interact with the market maker. The asset payoff is realized at time T and all payments are made.

At time T, every fund manager is evaluated on the basis of all available information, with the exception of the agent's private signal. This implies that each investor can observe the liqui-