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Delegated portfolio management with career concerns☆

Massimo Scotti*

Economics Discipline Group, University of Technology, PO Box 123 Broadway, Sydney, NSW 2007, Australia.

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ABSTRACT

The paper proposes a model of delegated portfolio management in which career concerns lead to unprofitable trade by uninformed managers (i.e. *churning*). We find that churning does not necessarily reduce the return that a representative investor expects *ex-ante* from delegating trade to a manager. As uninformed managers churn, the level of noise in the market increases and informed managers generate higher returns than in the absence of churning. When fundamental volatility is relatively low, uninformed managers trade less aggressively and the high returns expected from informed managers more than compensate the losses expected from uninformed managers. While career concerns generally lead to an increase in trade volume, the pattern of churning that we highlight also implies that both the volume of uninformed trade and the aggregate volume of trade are positively related to the level of asset riskiness.

1. Introduction

Most of the standard models in the asset pricing literature typically assume that individuals invest their savings directly into stock exchanges. In these models, financial institutions are often regarded as efficient intermediaries between investors and firms with no real effects on market outcomes. However, casual information suggests that financial institutions are assuming increasing importance in modern financial markets and that very often these institutions are guided by incentives that are not fully considered in the standard models of asset pricing.[1]

This paper proposes a model of delegated portfolio management in which fund managers face career concerns. We consider a financial market for a single risky asset that is traded for two periods of time. At the beginning of each period, a representative investor decides whether to delegate portfolio management to a fund manager who is either informed or uninformed about the underlying value of the asset. The investor is completely uninformed about the value of the asset and does not observe the type of the manager but only the prior probability that a manager is informed. If delegation occurs,

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* Corresponding author: Tel.: +61 2 9514 7776; fax: +61 2 9514 7711.
E-mail address: massimo.scotti@uts.edu.au

1 For a convincing argument in favour of a natural extension of asset pricing models to take into account the role of financial institutions, see Allen (2001).

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the incumbent manager chooses the quantity of the asset to trade and is eventually paid a fixed fee plus a share of fund returns. Career concerns arise since at the end of the first period the investor uses past performance to infer the incumbent manager's type and dismiss the manager if his performance suggests that he is uninformed.

We find that career concerns lead to unprofitable trading by uninformed managers. In equilibrium, informed managers *always* trade based on their knowledge of the underlying asset value. Absence of trade thus signals investors that a manager is uninformed, providing uninformed managers with an incentive to trade. However, trading on no information is expected to generate a negative return. If the compensation of a manager is not too sensitive to performance (so that the share of fund returns that a manager receives is relatively small as compared to the fixed fee), an uninformed manager prefers to engage in unprofitable trading in order to increase his chances of being retained by the investor.

This result is consistent with the findings in Trueman (1988) and Dasgupta and Prat (2006), who both develop models of delegated portfolio management where career concerns induce managers to trade in the absence of information (i.e. to *churn*). While Trueman's analysis is partial equilibrium and exogenously assumes career concerns, Dasgupta and Prat introduce delegation in a quote-driven market in which the trade of fund managers affects asset prices and endogenize career concerns. In Dasgupta and Prat's model, the risky asset is restricted to take on only two values and managers are constrained to trade an exogenously given quantity of the asset.

Our model extends the analysis in Dasgupta and Prat (2006) in two directions. First, we consider an alternative market mechanism by studying a financial market that operates as an order-driven market. In our model, fund managers and noise traders simultaneously submit their orders to a competitive fringe of market makers who set informationally efficient prices based on the observation of aggregate orders. Second, and most importantly, we study the case in which the risky asset can take on more than two values and portfolio managers can choose to trade any desired quantity of the asset. As a result, the size of a manager's order is endogenously determined in equilibrium as each manager maximizes his expected payoff conditional on his information set.

We show that there exists a class of equilibria in which the size of the order submitted by informed managers is strictly increasing in the value of the asset that is observed by the manager.[2] In these equilibria, uninformed managers respond to career concerns by mimicking the orders of informed managers that are more likely to reveal correct *ex-post*.[3] Since the equilibrium strategy of informed managers is strictly increasing in the value of the asset, the mimicking behavior of uninformed managers is found to be sensitive to the volatility of asset values. When the volatility of asset fundamentals is above (below) a certain threshold, uninformed managers maximize their chances of being perceived as informed by placing larger (smaller) orders. This pattern arises because when volatility is high, extreme realizations of the asset values are more likely to occur, and so is the likelihood that an informed manager will trade a large order.

In equilibrium, delegation occurs as long as the representative investor expects *ex-ante* to receive a positive payoff from delegating trade to a manager of unknown type. This expected payoff clearly depends on the return that the investor expects *ex-ante* from a manager, as well as on the compensation that the investors is committed to pay to the manager through the delegation contract.[4]

An interesting finding of the paper is that the unprofitable trade of uninformed managers does not necessarily lead to a deterioration of the return expected by the representative investor. *Ceteris paribus*, when the level of volatility is relatively low, the return that the investor expects from delegation is higher in an equilibrium with churning induced by career concerns than in an equilibrium in which uninformed managers do not trade. Two forces drive this result. First, as uninformed managers churn, the level of noise in the market increases. As noise increases, informed managers are able to better exploit their informational advantage and generate higher returns. Second, we know that when volatility is relatively low, uninformed managers trade small quantities and thus generate small losses. Eventually, these losses are more than compensated by the higher returns that informed managers can generate thanks to the presence of churning.

The strategy that informed managers follow in equilibrium plays a key role in the generation of the positive effects of churning described above. On the one hand, a strategy that is strictly increasing in the value of the asset allows an informed manager to increase his expected return by trading larger quantities when he observes extreme values of the asset. On the other hand, such a strategy implies a one-to-one correspondence between asset values and trade orders and thus allows market makers to infer a great deal of the private information possessed by an informed manager. In the absence of trade by uninformed managers, an informed manager can only use the trade of liquidity traders to disguise his private information. This poses a serious limit to the ability of an informed manager to generate high returns. The situation changes significantly when uninformed managers trade because of career concerns. Indeed, in this case, uninformed managers mimic the orders of informed managers. This significantly increases the effectiveness of the fully separating strategy used by an informed manager. Indeed, while churning does not hamper the ability of an informed manager to tailor his trade to the observed

[2] We define this strategy of the informed manager's to be "fully separating" in the value of the asset since it implies a one-to-one correspondence between the value of the asset and the order size. Instead, we say that a strategy is "pooling" if it prescribes the same order for different values of the asset.

[3] Though our model admits other class of equilibria, in Section 6 we argue that in the presence of career concerns informed managers and investors are likely to coordinate on equilibria in which the strategy of informed managers fully separates in the value of the asset, since these equilibria payoff-dominate equilibria in which the informed managers follows a pooling strategy.

[4] We assume throughout the paper that the delegation contract is exogenously specified.