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An unreliable canary: Insider trading, the cash flow hypothesis and the financial crisis

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ABSTRACT

This paper investigates whether measures of aggregated insider trading could have predicted the wider economic change that occurred in the UK around the time of the financial crisis. Seyhun's (1988, 1992) cash flow hypothesis is the underpinning rationale driving the investigation. Within a vector auto-regressive framework, this study disentangles the relationship between returns and the activities of insiders in UK listed firms in order to validate Seyhun's assertions in this context. Findings suggest that, unlike the US, the relationship is not present. Instead, aggregate measures of trading decisions show that insiders are more likely driven by public perception than by private information.

1. Introduction

Share trading by managers and directors within their own companies has fuelled academic debate for some time. Numerous studies show that insiders often trade profitably on the private information that they hold (Finnerty, 1976; Jaffe, 1974; Jeng, Metrick, & Zeckhauser, 2003; Lin & Howe, 1990; Seyhun, 1986; Wisniewski & Bohl, 2005). Not only are individual trades profitable but when aggregated, these can be used to predict changes at an economy wide level (Iqbal & Shetty, 2002; Seyhun, 1988, 1992).

Much of the research on insider trading is concerned with gauging the possible informational value contained in individual trades. However, a small but convincing body of work suggests that aggregated measures of these transactions could be used to pick up on signals which are as yet invisible to outsiders but which herald impending change on a macroeconomic scale (Seyhun, 1988, 1992). The idea is that decision-makers within a firm who pick up on variations in cash flows that signal an alteration in future financial performance will trade on this information. When the event is specific to the firm an aggregated measure would not pick this up but if it were common across all firms it could indicate a shift in economy-wide performance. The argument does not imply that insiders are themselves privy to this wider change. If this were the case, it would be unlikely that they would restrict trading to their own company when a wider less risky investment vehicle might provide a safer investing opportunity (Seyhun, 1992). Rather, the situation is more like that of the 'canary in the coalmine'; the altered circumstance detected by insiders precedes a wider recognition of forthcoming macro-economic fluctuations. The actions of insiders' acting independently but en-masse, rather than those of a conscious collective become the sum of perceived opinions about the financial health of individual companies.

This study's objective is to investigate Seyhun's (1988, 1992) assertions using the transactions of insiders within firms across a number of sectors listed on the London Stock Exchange. Specifically, the study investigates whether an aggregated measure of insider behaviour could have been used to predict the onset of the 2008 financial crisis, a period of uncertainty widely characterised in the British media as the 'Credit Crunch'. The findings produced here offer a perspective which contradicts that posed by Seyhun. In the years surrounding the financial crisis, aggregated measures of insider trading gave no indication of the macroeconomic change that was to come. While this paper does not question the validity of Seyhun's findings it calls into question the applicability of the hypothesis in a jurisdiction outside the US, namely the UK.

The following section provides an overview of existing research, assessing the informational value of declared insider behaviour. The regulatory context in which this research has been undertaken is

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illustrated in Section 3. Section 4 discusses the methodological choices made to conduct the study. Section 5 describes the data sample and how it was obtained. In Section 6 the results are discussed. Section 7 concludes the study.

2. Predicting market returns using insider trades

Much of the existing research on aggregated insider trading concludes that movements of indices constructed using this data pre-empt market movements (Chowdhury, Howe, & Liu, 1993; Iqbal & Shetty, 2002; Seyhun, 1988, 1992). This means that analysing what corporate insiders do on aggregate enables the astute observer to reconstruct their portfolios to account for economy-wide factors that are not as yet reflected in the markets. Trends drawn from an aggregation of individual trades are founded upon the reasoning that because firm-specific reasons cancel each other out, a generalized reaction to events common to all firms by the same netting off process becomes discernible. During periods where circumstances are similar for all firms in the market, an aggregation of trades produces a common direction in trading that responds to slight change in macroeconomic conditions that may not yet be visible (Seyhun, 1988). The insider, from her vantage point is well positioned to observe unexpected changes to cash flows. But, as only firm specific events can be seen, the trading decisions she makes are independent of those made by insiders in other companies.

Previous studies that use this reasoning have traced the link between these aggregated measures and macroeconomic shifts (Jaffe, 1974; Jiang & Zaman, 2010; Seyhun, 1992). These report a positive time differenced relationship between aggregate measures of purchases and sales with subsequent market returns. The connection is facilitated by an insiders' willingness to act upon price sensitive information. This tendency is well documented (John & Lang, 1991; Karpoff & Lee, 1991; Ke, Huddart, & Petroni, 2003) and demonstrates that insiders, informed about future prospects of a firm, adapt their actions to suit the nature of the news they receive. For this study, it is therefore reasonable to hypothesise that insiders may have been able to pick up on the signals relating to changing conditions in each of their institutions. If these variations are consistent across all firms, then insider behaviour signals a reaction to an altered circumstance common to all.

Insiders have shown a propensity to engage in successful market timing (Chowdhury et al., 1993; Piotroski & Roulstone, 2005), yet the decisions to trade are influenced not only by the nature of the information but the regulation that dictates the extent of the action which they can take. As both legislation and enforcement can differ between countries (Bhattacharya & Daouk, 2002), it is possible that the relationship between an aggregated measure of insider trading and market return might not exhibit consistency across states with markedly different legal systems. By this reasoning, one could plausibly suggest that inferences based on studies conducted in the US are not necessarily applicable in a UK context.

In the UK, studies show that insiders can identify mispricing in shares of their own companies (Gregory, Matatko, Tonks, & Purkis, 1994; King & Roell, 1988; Korczak, Korczak, & Lasfer, 2010; Pope, Morris, & Peel, 1990). However, the capacity for outsiders to profit from imitating insider behaviour remains contentious. Hillier and Marshall (1998) and Darpas and Guttler (2011) produce conflicting findings on the announcement effect associate with declared insider trades. A thorough review of the literature reveals that no studies have as yet dealt with the issue of how aggregated measures relate to subsequent market returns. The contribution this study makes is that it investigates whether this phenomenon, which is so much in evidence in the US, is observable in the UK context. The macroeconomic change that grew out of the financial crisis provides a suitable backdrop for this investigation. It is reasonable to ask whether the behaviour of insiders prior to this period provided clues as to what would occur both in this area and the entire economy over subsequent months. In effect, the study asks whether an aggregated measure of insider behaviour could have been used to predict the worst moments of the financial crisis.

Sectoral differences have been noted in the market timing success of insiders and adds a further perspective to our investigation. In particular, insider trading in the banking sector has been shown to be successful both within the US and Canada (Madura & Wiant, 1995; Lee & Bishara, 1989). These studies show that individuals earn greater returns on their personal portfolio transactions than their counterparts from other areas of business (Baesel & Stein, 1979). A higher degree of informational asymmetry also exists between insiders and uninformed traders in smaller banks where the outside focus from analysts and investors is less intense (Madura & Wiant, 1995). Within Europe, Del Brio and Miguel (2010) use a sample taken from firms trading on the Spanish stock market to find that at firm level, mispricing can be identified, however an aggregate measure lends nothing to the predictability of returns. This study is also unique as there are no UK studies which look at the predictive capacity of returns using aggregated banking insider measures around periods of intense economic uncertainty, such as that which occurred in the months leading up to the onset of the recent financial crisis. Findings show that insiders in the banking sector subsample were no more aware of the impending change than those across the entire sample.

3. Regulatory context

In the UK, insider dealing is controlled within a legislative framework that attempts to protect the markets against abuse so that a fair trading environment is ensured for all market participants. Both the Financial Services and Markets Act (2000) (FMSA) and the Criminal Justice Act (1993) endow the Financial Conduct Authority (FCA) with the regulatory, investigative and enforcement powers needed to protect the markets from a range of abuses, insider dealing is of particular concern. For offenders, penalties can extend to a maximum prison sentence of seven years and/or a fine to which there is no set limit (Rider, Alexander, Linklater, & Bazley, 2009). Surveillance is the favoured technique of regulators; the FCA have spent considerable resources developing a monitoring presence which it claims has acted as a strong deterrent against illegal behaviour (Cole, 2007). Despite this, conviction rates are low. While the pursuit of some prosecutions has yielded success, this is not generally the outcome. It is difficult to fully establish all the facts that are required to prosecute a case (Fidrmuc, Goergen, & Renneboog, 2006). Instead, evidence of effectiveness rests on falling measures of illicit activity. This could be seen, for example, in decreasing levels of unusual activity prior to takeover bids (Cole, 2007). One particular aspect of surveillance is to compel directors and executives to disclose the trades that they make within their own firms.

The listing rules published by the FCA, set the standards for participants in the UK financial markets. Within this the conditions governing the use of price sensitive information is contained in the Disclosure and Transparency rules (Section 3.1.2). Under these rules, those persons who discharge managerial responsibilities are required to provide to their company written notification within four working days of all transactions on their accounts involving shares, derivatives or other financial instruments relating to that firm (Listing Rules FSA Handbook 2010). The issuing company is then required to disseminate this information to the markets along Regulatory Information Service newsfeeds no later than the first business day following receipt of the news. In the UK, the term insider is used to cover both executive and non-executive members of the board of directors this is dissimilar to the US in that the definition excludes other employees and large shareholders (Fidrmuc et al., 2006). The Model Code on Director Dealings (2010), which is a non-statutory best practice guideline for listed companies, discourages insiders from trading on their companies own shares without prior