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Legal insider trading and market efficiency

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Abstract

Does legal insider trading contribute to market efficiency? Using refinements proposed in the recent microstructure literature, we analyzed the information content of legal insider trading. We used data on 2110 companies subject to 59,244 aggregated daily insider trades between January 1995 and the end of September 1999. Our main finding is that, even though financial markets do not respond strongly in terms of abnormal returns to insider trading activities, the significant change in price sensitivity to relative order imbalance due to abnormal insider trades reveals that price discovery is hastened on insider trading days.

JEL classification: G14; G18

Keywords: Legal insider trading; Market efficiency; Order imbalance; Price discovery

> Our markets are a success precisely because Americans enjoy the world's highest level of confidence. [...] Investors trust that the marketplace is honest. They know that our securities laws require free, fair and open transactions.

A. Levitt, Chairman of the SEC, Address to the "SEC Speaks" Conference, February 1998.

1. Introduction

Does legal insider trading contributes to market efficiency? In this paper, using the refinement suggested by the recent microstructure literature, we propose to analyze the information content of *legal* insider trading. This is an important question since the regulation of insider trading plays an important role in economies with developed stock markets. According to Battacharya and Daouk (2002), the existence of insider trading laws and their enforcement is essentially a phenomenon of the 1990s. One interesting aspect of these regulations is that they allow insiders to trade their own companies' stocks under certain conditions. For example, under US securities laws, legal insider trading occurs every day when corporate insiders – officers, directors or employees – buy or sell stock in their own companies. One of the constraints is that the insiders have to report their trading to the Securities and Exchange Commission (SEC). Once the trading is complete, files have to be sent to the SEC, which publishes them.

The social utility of regulating insiders' trading has been widely debated in the literature, and several important contributions analyze the impact of insider trading and its regulation on economic efficiency. On the one hand, the critics of insider trading regulation argue that restrictions are inefficient because insider trading allows new private information to be priced more quickly. Stock prices, therefore, reflect the intrinsic values of firms more accurately, promoting improved economic decision-making and resource

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allocation (e.g., Manne, 1966; Carlton and Fischel, 1983; Glosten, 1989; Manove, 1989; Leland, 1992). Moreover, Tighe and Michener (1994) argue that only private interests (e.g., those of brokers, arbitrageurs and portfolio managers) are served by insider trading laws, as small investors lack the political organization to lobby for such laws. On the other hand, those in favor of insider trading regulation essentially claim that regulation promotes public confidence and participation in the stock market, and allows outsiders to share in value-enhancing events on an equal footing (Ausubel, 1990).

One clear message which arises from this intensive debate is that authorizing insiders to trade should be based on a balance between allowing private information to be priced (enhancing market efficiency) and preserving market integrity (avoiding unfair enrichment by those with access to privileged information). As pointed out by Huddart et al. (2001), the regulatory objectives of the public disclosure of insider trading are to reduce the information asymmetry between insiders and outsiders. However, there is always a delay between the insider trading and public announcement of such trading.[1] Therefore, to fully justify insider trading for reasons other than diversification, we need to demonstrate a contribution to market efficiency.

Consequently, the research question we are interested in is the following: do legal insider trading activities contribute to market efficiency? In other words, does information affect prices more quickly thanks to legal insider trading activity? This is an important question because previous studies, mainly using portfolio approaches, have shown that insiders outperform the market over a time horizon ranging from one month to several months (e.g., Jaffe, 1974; Finnerty, 1976; Seyhun, 1986; and Seyhun, 1998; Lin and Howe, 1990; Jeng et al., 2003).[2]

Are these abnormal gains really evidence of private information being revealed by the action of better-informed agents? There are at least two other competing explanations. First, these abnormal gains could be the manifestation of some latent risk factors such as size, earnings/price or book-to-market (e.g., Rozeff and Zaman, 1988; Lakonishok and Lee, 2001). The second possible explanation is that these abnormal returns, since they are computed over an event window of several months, could reflect the price reaction to subsequent public announcement (within the event window) of previously private information. Therefore, it is still questionable whether insiders contribute to faster price discovery. Moreover, these portfolio approaches are subject to significant bad-model problems, which are even more serious for long-term returns analysis (see Fama's (1998) comments on long-term event studies).

The relevance of our research question also stems from the fact that (informed) insider trading profit is achieved at the expense of outside investors, even if total welfare may increase or decrease depending on the economic environment (Leland, 1992). Moreover, we do not have a clear-cut answer from the literature as to whether outsiders can profit by using the publicly available information concerning insider trading once it is reported to the SEC (e.g., Seyhun, 1986; Rozeff and Zaman, 1988).[3] Therefore, the necessary condition that needs to be satisfied in order to justify allowing insiders to trade on their private information is that their trading should enhance market efficiency. This is what we propose to test in this paper.

To address this question, we use an extensive US database of legal trading by insiders covering the period from January 1995 to the end of September 1999. Our sample includes 59,244 aggregated insider open market episodes. Previous studies have mostly looked at what happens *after* insider trading, in terms of abnormal gains for insiders and/or outsiders (portfolio performance), while we are more interested in what happens on insider trading days, in terms of price discovery. Our focus on the short-term impact of insiders' trading activities to capture information effects is motivated by recent evidence presented by Chordia et al. (2005). These authors show that it only takes five minutes for astute investors to begin efficiency-creating actions.

There are some studies that appraise the impact of insider trading activities over a shorter period. Seyhun (1986), and more recently Lakonishok and Lee (2001) provide short-term event-study results on legal US insider trading. They observe statistically significant, but economically unimportant, market movements around insider net purchases and net sales.[4] Recently, within the UK context, Fidrmuc et al. (2006) have reported abnormal returns which are three times as high as those reported by Lakonishok and Lee (2001).[5] Jenter (2005) interprets the lack of evidence for economically significant abnormal returns to insiders as indicating that corporate insiders in the US may not make much use of valid inside information.

[1] In the United States, according to Section 16(a) of the Securities and Exchange Act of 1934, insiders are required to report their transactions by the tenth day of the calendar month after the trading month. In our sample, the average reported period is around 22 days. It is important to note that since August 2002, according to the Section 403(a) of the Sarbanes-Oxley Act of 2002, insiders are required to report their transactions before the end of the second business day following the day on which the transaction is executed.

[2] However, there is a notable exception to this general finding, which is the study by Eckbo and Smith (1998). They report that insiders in firms on the Oslo Stock Exchange did not make abnormal profits.

[3] Seyhun (1992) provides evidence that insider trading has some predictive ability for future stock returns. In the same way, Bettis et al. (1997) show that outside investors can earn abnormal profits by analyzing publicly available information about large insider trades by top executives. Lakonishok and Lee (2001) also report that insiders seem to be able to predict cross-sectional stock returns. Their result, however, is driven by insiders' ability to predict returns in smaller firms.

[4] Note that the statistical significance of this result is subject to active debate in the literature (see e.g. Butler et al., 2005; Baker et al., 2006).

[5] One possible explanation provided by the authors is that trading is reported more quickly in the UK than in the US.