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Why do insiders trade? Evidence based on unique data on Swedish insiders

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ABSTRACT

In this paper, we examine if corporate insiders have other motives for trading besides exploitation of private information. Our results show that insiders' portfolio re-balancing objectives, tax considerations and behavioral biases play the most important role in their trading decisions. We also find that insiders who have allocated a great (small) proportion of their wealth to insider stock sell more (less) before bad news earnings disclosures. Finally, insider selling is informative for future returns among those insiders who have the greatest proportion of wealth allocated to insider stocks.

1. Introduction

Many studies, both in accounting and finance, examine whether insiders' trading activity is informative regarding future return on stocks (e.g. Jaffe, 1974; Seyhun, 1986; Lin and Howe, 1990; Jeng et al., 2003; Ke et al., 2003; Huddart et al., 2007). An underlying hypothesis tested in these studies is whether insider trades are driven by insiders' superior information about the prospects of their firm and whether these trades are informative in generating abnormal returns.[1] However, it is also widely recognized in the literature that insiders may trade for reasons other than maximizing stock returns (e.g. Ke et al., 2003; Huddart and Ke, 2007; Huddart et al., 2007). For instance, insiders may sell their insider stocks in an attempt to better diversify their holdings and because of personal liquidity needs.

However, research on alternative motives for insider trading is largely impeded by data limitations. For instance, direct tests of portfolio diversification/re-balancing and liquidity hypotheses require comprehensive data on insiders' personal

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[1] Ex ante, it is not actually for certain that insiders earn abnormal stock returns by trading in the stock of their insider firm. First, insider legislation imposes significant limits on insider trading. Second, insiders' legal use of their insider information does not yield abnormal returns if stock prices fully reflect that information (strong market efficiency). In other words, insider trading is informative for future returns if insider legislation and enforcement allow insiders to utilize specific information in their trading *and* strong form market efficiency does not hold.

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wealth and income in addition to data on their stockholdings in their insider firm and in other firms. Such data, to the best of our knowledge, have so far been unavailable.

In this paper, we utilize unique data on Swedish insiders to explore the various motives underlying insiders' decisions to trade their insider stocks. In particular, we examine whether insiders' diversification and other personal reasons have an incremental role relative to their information advantage in explaining their trading behavior. Our data comprise detailed information on all Swedish insiders' personal wealth including their holdings in their insider and outsider stocks and their other wealth. Moreover, the data include information on insiders' salaries and other taxable income as well as gender. Furthermore, in our study we are able to control for several other potential factors affecting insider trading, such as the number of granted stocks and options, the number of stock acquired through the exercise of options and earnings announcements. This comprehensive data set allows a thorough investigation of the incremental role of the various motives for insider trading proposed in the literature.

We find strong support for the portfolio-diversification/re-balancing hypothesis. That is, insiders with unbalanced portfolios (towards insider stock) relative to their average holdings over the sample period have a higher propensity to sell their insider stocks and they sell in larger trade sizes than insiders with less unbalanced portfolios. Regarding the behavioral biases in insiders' trading decisions, we find that insiders tend to hold on to their losing insider stocks (the disposition effect) and that male insiders trade more frequently than female insiders (overconfidence). These interesting findings suggest that insiders exhibit similar behavioral biases as regular investors (Shefrin and Statman, 1985; Odean, 1998; Grinblatt and Keloharju, 2001). We also find that tax burden associated with the selling of insider stockholdings deters insiders from selling these stocks, thereby supporting the result reported by Jin and Kothari (2008) for CEOs' selling of vested equity.

Our results further show that insiders' information advantage and portfolio re-balancing objectives have an interaction effect in their selling decisions. Specifically, consistent with Huddart et al. (2007), we find that, on average, insiders avoid selling before bad news earnings announcements. However, among those insiders who actually sell before bad news earnings announcements, insiders who have allocated a greater (smaller) proportion of their wealth to insider stock sell more (less) before bad news earnings disclosures. Furthermore, our results show that insider selling is the most informative for future returns among those insiders who have allocated a relatively large proportion of their wealth to insider stock or who have the largest insider holdings. These later results suggest that insiders having the strongest economic incentives successfully time their selling to maximize their returns.

In sum, our paper contributes to the literature on insider trading by showing that insiders do not trade solely on the basis of their superior information relative to other market participants. Insiders trade, especially sell, for many personal reasons, such as for portfolio-diversification needs. They even seem to show some of the behavioral biases that have been reported to occur among regular investors. We believe that our results are of interest for academics, practitioners and policymakers. For instance, returns for stock market trading strategies that are based on monitoring what insiders are doing are likely to be affected by insider trades made for other reasons than information asymmetry.

The remainder of this paper is divided into five sections. In Section 2, we review the relevant literature on the determinants of insider trading. Section 3 describes the data, discusses their features and presents the methodology and research design. Section 4 contains our results of the analyses on insiders' motives to trade. Finally, we provide concluding remarks in Section 5.

2. Review on the determinants of insider trading

In this section, we review the relevant accounting and finance literature to identify potential determinants of insider trading. The earlier literature abounds in research reporting that insider trading is driven by insiders' superior information about the prospects of their firm. However, it has been suggested in other contexts that various personal motives may affect insiders' and regular investors' trading decisions. Most of these personal motives pertain to insider selling, but some of them also apply to the buying of insider stocks. Jin and Kothari (2008) provide an excellent discussion on various determinants of CEO insiders' decision to sell their vested equity. Appendix 2 summarizes the determinants of insider trading that we incorporate in our analyses.

2.1. Insiders' portfolio re-balancing and liquidity needs

Despite the lack of the empirical evidence, it has been suggested in the literature that some insider trading is due to insiders' portfolio re-balancing objectives and liquidity needs (e.g. Ke et al., 2003; Huddart et al., 2007). According to the 'portfolio-diversification hypothesis', insiders sell to diversify the risk related to their wealth, because insider stockholdings often constitute a great part of their total wealth. There are many reasons why insider stockholdings constitute a great part of an insider's total wealth. For example, an insider may have been required to make a significant investment in the stock of her firm for incentive purposes or large increases in the stock price of the firm may have significantly increased the value of her insider stockholding. Selling of insider stocks is a natural way for insiders to diversify the risk related to their wealth when company policy (and the insider legislation) allows stocks to be sold. The level of an insider's personal liquidity is