Does stealth trading coexist with high levels of insider trading? Evidence from Kuwait

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Stealth trading has been found to exist in the US, where informed investors submit medium-sized trades to reduce price impacts and camouflage their information. This paper reexamines this finding by placing the analysis in a different setting in which insider trading and private information sharing is very common during two different time periods—bull and bear markets. Using data on 34 stocks listed on the Kuwait Stock Exchange, I find that stealth trading exists in these two time periods. However, during bullish periods, stealth trading occurs through small-sized trades, while in bear markets, it occurs through medium-sized trades.

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1. Introduction

Since the introduction of the Kyle model in 1985, an extensive stream of literature has developed that aims to model, observe, and explain the behavior of informed traders, uninformed traders, and dealers, both theoretically and empirically. A strand of this research has specifically investigated the trading behaviors and strategies of informed traders. Kyle (1985) shows that informed traders trade slowly and steadily until all of their private information is incorporated into the price of the security they are trading. In other words, informed traders try to conceal their private information so that it is not rapidly incorporated into the security's price, and they can therefore maximize their profit. Based on this approach, Barclay and Warner (1993) (hereafter BW) present the stealth trading hypothesis, which is a joint hypothesis that proposes that because stock prices move due to private information, and because private information holders try to mask their

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identity, then we should observe that medium-sized trades cause the largest proportion of a stock’s cumulative price change. Hence, the percentage of the cumulative price change for medium-sized trades should disproportionately exceed its corresponding proportion of trades and/or volume. However, BW do not find support for this hypothesis, although it was later supported through findings by Chakravarty (2001) (hereafter CH) and Hasbrouck (1995). However, more recent evidence indicates that stealth traders use small-sized trades instead of medium-sized trades (Hansch & Choe, 2005; O’Hara, Yao, & Ye, 2012). This paper tries to re-examine these findings by analyzing the stealth trading hypothesis in a market with a high level of unrestricted insider trading during bullish and bearish periods.

The literature has shown that markets with high levels of insider trading display stark differences compared with more developed markets where there are more stringent and enforceable laws against insider trading. For example, Bhattacharya, Daouk, Jorgenson, and Kehr (2000) show that in the Mexican stock market, any material information in corporate news announcements is reflected in stock prices prior to the public announcement, with no price impact on the announcement date or in the post-announcement period, which the authors show is due to insider trading. These differences could also indicate a different type of behavior by informed traders.

The market analyzed in this paper, the Kuwait Stock Exchange (KSE), observes not only pervasive levels of insider trading but is also a setting in which informed traders regularly share information with each other because of a lack of insider trading laws, at least until recently (Anon., 2008; International Monetary Fund, 2004).

The results indicate that stealth trading exists, but its level is different during bullish and bearish periods. During bull markets, and similar to recent findings for the US, I find that small-sized trades actually account for most of the price changes, with a 68% share of the cumulative price change. However, during bearish periods, medium-sized trades account for most of the cumulative price change, with a share of 125%, which is disproportionately higher than its corresponding share of trades and/or volume. Most of the stealth trading found in both periods is mainly concentrated in large-cap firms.

Two further hypotheses are also investigated — the public information hypothesis and the volume trading hypothesis. The public information hypothesis states that most stock price changes are driven by public announcements, and therefore we should observe that the percentage of the cumulative price change due to a certain trade-size category is proportional to the percentage of trades in that category. The volume trading hypothesis states that based on the notion that large trades move prices rather than small trades, then we should find a positive relationship between the cumulative price change due to a trade-size category and its corresponding share of the volume. Both of these alternative hypotheses fail to gain support from the data.

The remainder of the paper proceeds as follows. Section 2 discusses the data used in this paper, Section 3 presents the empirical analysis, Section 4 presents robustness tests, and Section 5 concludes.

### Table 1
KSE movement over time.

<table>
<thead>
<tr>
<th>Year</th>
<th>Market cap (in millions)</th>
<th>Number of companies</th>
<th>Average daily volume (in millions)</th>
<th>Average daily trading value (in millions)</th>
<th>Percentage of daily volume due to institutional investors</th>
<th>Percentage of trading value due to institutional investors</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>$59,409</td>
<td>108</td>
<td>204</td>
<td>$220</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>2004</td>
<td>$69,366</td>
<td>128</td>
<td>135</td>
<td>$199</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>2005</td>
<td>$130,080</td>
<td>162</td>
<td>211</td>
<td>$490</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>2006</td>
<td>$128,940</td>
<td>180</td>
<td>154</td>
<td>$295</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>2007</td>
<td>$125,323</td>
<td>195</td>
<td>564</td>
<td>$1097</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>2008</td>
<td>$107,168</td>
<td>204</td>
<td>361</td>
<td>$557</td>
<td>53%</td>
<td>64%</td>
</tr>
<tr>
<td>2009</td>
<td>$95,938</td>
<td>200</td>
<td>434</td>
<td>$309</td>
<td>45%</td>
<td>53%</td>
</tr>
<tr>
<td>2010</td>
<td>$119,621</td>
<td>210</td>
<td>299</td>
<td>$178</td>
<td>45%</td>
<td>54%</td>
</tr>
<tr>
<td>2011</td>
<td>$100,869</td>
<td>201</td>
<td>90</td>
<td>$102</td>
<td>41%</td>
<td>57%</td>
</tr>
<tr>
<td>2012</td>
<td>$97,091</td>
<td>211</td>
<td>331</td>
<td>$95</td>
<td>34%</td>
<td>48%</td>
</tr>
<tr>
<td>2013</td>
<td>$110,478</td>
<td>206</td>
<td>526</td>
<td>$164</td>
<td>32%</td>
<td>43%</td>
</tr>
</tbody>
</table>

Table 1 reports the movement of the KSE during the period from 2003 to 2013. The market capitalization figures are annual and are reported in dollars (USD). Column (3) is the number of companies listed in each year. Column (4) is the average daily volume, and column (5) is the average daily trading value in dollars (USD). The data were obtained from the KSE.
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