The effects of ownership and stock liquidity on the timing of repurchase transactions

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ABSTRACT

We analyze detailed monthly data on U.S. open market stock repurchases (OMRs) that recently became available following stricter disclosure requirements. We find evidence that OMRs are timed to benefit non-selling shareholders. We present evidence that the profits to companies from timing repurchases are significantly related to ownership structure. Institutional ownership reduces companies’ opportunities to repurchase stock at bargain prices. At low levels, insider ownership increases timing profits and at high levels it reduces them. Stock liquidity increases profits from timing OMRs.

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1. Introduction

In this study, we investigate the timing of open market repurchase (OMR) transactions. We use novel data from SEC quarterly filings on the repurchase transactions of U.S. listed companies. The data recently became available following changes in mandatory disclosure in 2004. Past research suggests that companies seek to repurchase stock at low prices.1 Companies can time repurchases to buy back stock at favorable prices when corporate decision makers have better information than outside shareholders. Repurchases can redistribute wealth among existing shareholders depending on shareholders’ decisions to sell or retain their shares. Because wealth is transferred from selling to non-selling shareholders, repurchases that are timed using private information resemble insider trading.2

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1 According to Brav et al. (2005), U.S. executives often state that the market price of their stock is an important or a very important factor influencing their repurchase decisions and that “their firm tracks repurchase timing”. The belief that companies attempt to repurchase stock when it is cheap is so widespread that the SEC has encouraged companies to announce repurchases during times of crisis to reassure the market (SEC, 2001).
2 Rule 10b-5 under the Securities and Exchange Act of 1934 requires insiders to refrain from trading in the firm’s shares while in possession of “material” non-public information regarding share value. This prohibition theoretically applies to share repurchases (Securities Exchange Act Release No. 19244, November 17, 1982, 47 FR 55333, 53334, November 26, 1982). However, the bar for materiality is high, repurchase programs are widespread, and we are not aware of any case in which repurchases under a board-approved repurchase program have led to regulatory sanctions for insider trading. In fact, the SEC actively encourages stock repurchases by providing safe harbors to anti-manipulation rules through Rule 10b-18.
In the first part of this article, we analyze whether repurchasing companies time repurchases by executing OMRs at relatively low prices. Previous research on the timing of repurchase transactions by U.S. listed companies is limited given the historical lack of reliable data. Before 2004, U.S. companies were not required to disclose detailed price and volume data on repurchase transactions. Hence, most previous studies use data on the announcements of repurchase programs rather than data on completed repurchase transactions. Effective 17 December 2003, the SEC requires U.S. listed companies to report monthly volume and price data on their repurchase activity in their quarterly filings (10-Ks and 10-Qs). We take advantage of this recent regulatory change and hand-collect unique data on the monthly OMR activity from quarterly filings of a sample of U.S. companies listed on the NYSE, NASDAQ or AMEX over the period between February 2004 and July 2006. Specifically, we collect monthly data on the volume of OMR transactions for 265 U.S. companies and 5035 firm-months, and monthly OMR price data for 214 companies and 4066 firm-months.

We use these data to test whether companies time OMRs by repurchasing stock at comparatively low prices. We find that stock repurchases follow abnormal price declines and precede abnormal price increases. Moreover, average repurchase prices are lower than comparable average market prices, and the total cost of a company's repurchases is lower than a benchmark based on naive trading strategies. Our findings suggest that companies achieve economically significant cost savings by timing OMRs. Estimated average cost savings over a trading period of 19 months amount to around 0.25% of the market capitalization of a company's equity, and 0.54% of the book value of a company's total assets. The maximum values of the 19-month cost savings are staggering at 7.76% of market capitalization and 28.21% of total assets. We show that most of these cost savings derive from companies selecting the most favorable months in which to make repurchases. Based on this evidence and after considering alternative explanations (such as price support and signaling), we conclude that companies time repurchases on the open market.

Next, we examine the determinants of repurchase timing. We argue that insider and institutional ownership are crucial determinants of the profits realized by companies that time OMRs (through price advantages and cost savings). A company should have fewer opportunities to time repurchases when a higher proportion of its outstanding shares are held by informed investors. More informed ownership is likely to result in more informed trading that renders the stock price more informative, offering less scope for temporary undervaluation. Both insiders and institutions are normally considered well-informed investors (e.g., Seyhun, 1986; Sias et al., 2006). In sum, we expect an “information effect” of both insider and institutional ownership; either type of ownership may have a negative impact on the price advantages and cost savings realized by repurchasing companies.

For insider ownership, we may also expect an opposite effect. Fried (2005) highlights the wealth transfers from selling to non-selling shareholders through repurchases of undervalued shares. He argues that by repurchasing shares at less than fair value, informed insiders (who are unlikely to sell at such prices) extract wealth from selling shareholders (who tend to be less informed). Fried argues that non-selling shareholders benefit from this wealth transfer pro rata in relation to their pre-repurchase shareholdings. The higher the insiders' shareholdings the more they stand to benefit and the greater their incentive to time repurchases. This "wealth transfer effect" predicts a positive relation between profits from repurchase timing and insider ownership.

It is reasonable to expect that both effects, the wealth transfer and the information effect, exist at the same time but the relative strengths of the two effects may vary with ownership levels. It is possible that the relation between insider ownership and repurchase timing is non-linear. For instance, at low levels of informed ownership the positive wealth transfer effect of inside information may offset its negative information effect; while the information effect may prevail at high levels of inside information. We have no ex ante expectations regarding the relative strengths of the two effects over various ranges of inside ownership; instead we expect our empirical analysis to shed light on the matter.

We also expect a positive relation between market liquidity and companies' opportunity to time repurchases. In less liquid markets, transactions have larger price impacts and are subject to higher transaction costs (i.e. wider bid–ask spreads). As higher price impact and transaction costs increase the price at which stock can be bought back, less liquid stocks will provide less opportunity for cost savings from OMR timing than more liquid stocks.

We estimate the impact of ownership structure (insider and institutional ownership) and market liquidity (Amihud illiquidity ratio (Amihud, 2002) and bid–ask spread) on several novel “timing measures” designed to capture the price and cost advantages from OMR timing. These timing measures are computed as differences between the actual repurchase price or cost and several benchmarks based on market price and volume data. We find results that support our expectations. We report an inverse u-shaped relation between repurchase timing and insider ownership: at low levels of insider ownership there is a positive association between insider ownership and our timing measures, while at high levels there is a negative association. This suggests that at low levels of insider ownership, the wealth transfer effect dominates the information effect and insider ownership encourages timing, while at high levels the negative information effect offsets the positive wealth-transfer effect as more informed ownership and trading provides companies less opportunity to time repurchases. We also find evidence for an information effect of institutional ownership: we document a monotonic, negative relation between our timing measures and institutional ownership. Finally, we find that greater stock liquidity (measured by a lower Amihud illiquidity ratio or a lower bid–ask spread) facilitates repurchase timing supporting our prediction that companies benefit more from timing OMRs when their stock is more liquid.

This study contributes to the existing literature in several ways. The existing literature on the timing of repurchases is limited, and the literature on repurchase transactions (as opposed to announcements of repurchase programs) is scarce in the U.S.A. due to the lack of disclosure of detailed repurchase-transaction data. Prior to 2004, U.S. researchers had to rely on either Compustat-based or CRSP-based repurchase measures. These measures are known to be biased (e.g., Banyi et al., 2008) and they cannot be

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