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Limited attention, share repurchases, and takeover risk

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ABSTRACT

We hypothesize that announcing open market share repurchases (OMRs) to counter negative valuation shocks reveals repurchasing firms' lost growth opportunities or underperforming assets to potential bidders, making them more likely to become takeover targets. This also leads their investors to face higher takeover risk, a systematic risk associated with economic fundamentals that drive takeover waves, as proposed by Cremers et al. (2009). Indeed, we find that repurchasing firms tend to face higher takeover probability in the first few years following their OMR announcements, and that the increase in takeover risk can largely explain their post-announcement long-run abnormal returns documented in the literature. The increase in takeover risk is larger for smaller firms, firms with poorer pre-announcement stock performance, and those attracting more attention of market participants. Our results suggest that OMRs, which are used by many firms to counter undervaluation, could make the firms more sensitive to takeover waves and raise their cost of equity capital.

1. Introduction

Studies have suggested that undervaluation and lack of growth opportunities are two of the main motivations for firms to conduct open market share repurchases (OMRs),[1] and that the market seems inefficient as abnormal returns are available in the post-announcement years (see, e.g., Peyer and Vermaelen, 2009; Ikenberry et al., 1995). In this paper, we propose a risk-based hypothesis to help explain the post-announcement stock price behavior of repurchasing firms.

Our basic idea is that when firms announce to buy back their shares to counter negative valuation shocks, the announcement may reveal lost growth opportunities or underperforming assets, which could interest other firms. Specifically, we hypothesize that bidders in the market for corporate control may be unaware of potential targets, and that announcing OMRs brings repurchasing firms to the attention of bidders, who may be able to re-capture some of the lost growth opportunities or re-deploy the underperforming assets. Being on the radar screen of bidders, repurchasing firms would face higher likelihood of becoming takeover targets. This would also lead their investors to face higher takeover risk, a systematic risk proposed by Cremers et al. (2009) to capture fluctuations in firm value caused by changes in economic fundamentals that drive takeover waves. Consequently, a higher required rate of return is needed to compensate investors for bearing higher risk in the post-announcement period.

Our hypothesis suggests that Billett and Xue's (2007) argument that OMRs could deter takeover threats is incomplete. While announcing OMRs may attract market attention to undervaluation perceived by managers, the increase in stock price due to market corrections at the announcement could deter takeover bids motivated by undervaluation. However, the announcement effect would not be able to restore much of lost valuation due to lost growth opportunities or poor corporate performance occurring prior to the OMR announcement. Indeed, Fig. 1 illustrates the median M/B (the market equity to book equity ratio) of our sample firms before and after their OMR announcements. It shows that large negative valuation shocks occur prior to the announcements,[2] and that while

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[1] Previous studies have identified numerous motivations for firms to engage in OMRs, including undervaluation (Brav et al., 2005), lack of growth opportunities (Grullon and Michaely, 2004), liquidity providers of last resort for their own stocks (Hong et al., 2008), takeover deterrence (Billett and Xue, 2007), adjusting capital structure toward a target (Dittmar, 2000), distributing excess cash to shareholders (Skinner, 2008), funding employee stock options (Kahle, 2002), attracting the market's attention (Almazan et al., 2008), and earnings management (Gong et al., 2008).

[2] Similarly, Peyer and Vermaelen (2009) report an average abnormal return of −9.05% over 6 months prior to OMR announcements, and Ikenberry et al. (1995) show an average abnormal return of −3.07% over days −20 to −3 relative to the OMR announcement day.

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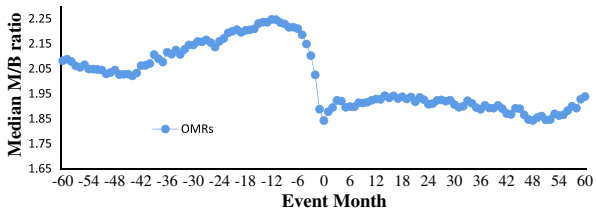

Fig. 1. The median firm valuation for repurchasing firms surrounding their OMR announcements. This figure plots the median firm valuation, as measured by market equity to book equity ratio (M/B), for the 6870 OMR sample firms from month −60 through month 60, where month 0 is the OMR announcement month. Our sample period is from 1991 to 2006, and we measure a firm's M/B as its market equity at the end of an event month divided by its latest quarterly book value of equity. The book value of equity is stockholders' equity (SEQQ), plus balance sheet deferred taxes and investment tax credit (TXDITCQ; if available), minus the book value of preferred stock. Depending on availability, we use the redemption (PSTKRQ), or par value (PSTKQ) for the book value of preferred stock.

the market reacts positively to the announcements,[3] the post-announcement valuation level remains much lower than before for five years. Therefore, OMR announcements could reveal repurchasing firms' weaknesses or missteps, and could attract, rather than deterring, bidders who may be able to improve repurchasing firms' weaknesses or reallocate their resources more efficiently.[4] Thus, our hypothesis predicts that using OMRs to counter negative valuation shocks could lead to a higher takeover probability.

Our hypothesis also predicts that the post-announcement abnormal returns documented in the literature are at least partially due to increased takeover risk, and that the addition of a takeover factor to the CAPM or Fama–French three-factor model (FF3) would reduce the abnormal returns.

Our third prediction is that the post-announcement increase in takeover risk would be larger for smaller firms, firms with larger pre-announcement negative valuation shocks, and firms that announce larger repurchase programs. These firms are likely to attract more attention from bidders.

While our hypothesis proposes that raising bidders' attention is a main channel through which OMRs could likely lead repurchasing firms to become takeover targets, at least two other factors may also be at work. First, De Cesari et al. (2012) note that when firms conduct OMRs, retail investors are more likely than institutional investors to sell their shares to the firms. Consequently, institutional ownership and particularly block ownership by institutions tend to increase following OMRs. Shivdasani (1993) and Greenwood and Schor (2009) suggest that sophisticated institutional or block shareholders may facilitate takeovers to capture the potentially large takeover premiums.[5]

Second, Grullon and Michaely (2004) and Jagannathan and Stephens (2003) show that, relative to their peer firms, the operating performance of OMR firms tends to deteriorate following their OMR announcements. Deterioration in OMR firms' investment opportunity set or the inability to manage their assets efficiently could give acquirers more room to improve corporate governance or re-deploy firm assets more efficiently after takeovers.

Indeed, taking into account the endogeneity issue, we find robust evidence that repurchasing firms tend to be associated with higher takeover probability for at least three years following their OMR announcements, and that the more shares repurchased, the higher the probability of becoming takeover targets. We also examine takeover probability before and after the OMR announcement year (Year 0) for the propensity score matched non-repurchasing firms, and show that the increase in takeover probability following OMR announcements is unique to repurchasing firms.[6]

The post-announcement increase in takeover probability has an important implication for systematic risks and expected returns of repurchasing firms, and can help us understand the persistent anomalous behavior of post-announcement long-run stock returns documented in the literature. In particular, Ikenberry et al. (1995) report an average abnormal return of 12.1% over the 4 years following OMR announcements between 1980 and 1990, leading them to suggest that the market underreacts to buy-back announcements. Peyer and Vermaelen (2009) further link the abnormal returns to the pre-OMR undervaluation, and propose an overreaction hypothesis in which post-announcement abnormal returns are a result of correcting market overreactions to substantial analyst downgrades on earnings forecasts prior to OMR announcements. These market inefficiency arguments do not consider takeover risk proposed by Cremers et al. (2009),[7] and thus are subject to an omitted-variable problem.

Cremers et al. (2009) suggest that when a takeover wave arrives, firms facing higher takeover probability are likely to gain more in value as investors bid up their share prices in anticipation of large takeover premiums associated with potential takeover bids. Conversely, when the takeover wave is gone, firms with higher takeover probability would suffer greater value losses if a bid does not materialize. The takeover risk of Cremers et al. (2009) captures the fluctuation in firm value associated with shifts in takeover waves. This takeover risk is a systematic risk because takeover waves are affected by economic fundamentals and thus cannot be diversified away. Our hypothesis suggests that takeover waves would also affect repurchasing firms' stock prices.

To test our hypothesis, we follow Cremers et al. (2009) to construct a takeover factor, which is a hedge portfolio long in high takeover-probability firms and short in low takeover-probability firms. Using calendar-time factor-model portfolio regressions, we find that adding the takeover factor to the standard factor models substantially reduces the alphas and makes them insignificantly

[3] According to our hypothesis, in addition to the market corrections to undervaluation perceived by managers, the positive announcement effect of OMRs should also reflect the market's expectation that a large takeover premium is more likely to be realized in the next few years. Many studies have shown that, on average, target shareholders could gain a takeover premium in the rage of 30–40%. For instance, if takeover probability of repurchasing firms increases by 10% in the first year following OMR announcements, the market expected takeover premium in the first year could be in the range of 3–4%. Discounting it at a required rate, say 10%, would make the expected takeover premium in the rage of 2.73–3.64%. However, if investors require a higher rate of return for a few years following OMR announcements, as our hypothesis suggests, it would mitigate market reactions at announcement to undervaluation perceived by managers and to the market expected takeover premium. In addition, the future cash flows in the next few years will also be discounted at a higher rate, which would further dampen the announcement effect. Peyer and Vermaelen (2009) report a positive OMR announcement effect of 2.39%, which implies that the positive factors, including undervaluation and the expected takeover premium, outweigh the negative factor associated with the increase in discount rate. While tedious, it could be interesting to do a detailed decomposition of the OMR announcement effect. We leave it for future research.

[4] In fact, Babenko et al. (2012) report only six cases out of 5827 OMRs in their sample in which managers claim that the stated motive for OMRs is to deter takeovers.

[5] Shivdasani (1993) finds a positive relation between ownership by block-holders unaffiliated with management and the likelihood of a hostile takeover. Greenwood and Schor (2009) show that activism conducted by large institutional shareholders forces target firms into a takeover.

[6] Note that Ikenberry et al. (1995) do not find a significant increase in the likelihood of takeovers after buybacks. While Ikenberry et al. (1995) use size and B/M to identify comparable non-repurchasing firms between 1980 and 1990, we use a propensity score matching technique, which we believe is a better method, and may in part explain the different results. Also, some institutional factors related to takeovers may have changed over time. For example, staggered boards are recognized as the most potent takeover defense; and Cohen and Wang (2013) document that the number of Standard & Poor's (S&P) 500 companies with staggered boards declined by more than 50% from 2000 to 2012.

[7] Bebchuk et al. (2013) and Giroud and Mueller (2011) recently confirm the pricing ability of the takeover factor proposed by Cremers et al. (2009).