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Dividends and price momentum

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ABSTRACT

Stock market evidence shows that momentum profits are lower among dividend-paying firms than their non-paying counterparts due to differences in losers' returns. Additionally, dividend maintenance is associated with higher returns for losers but not for winners. Finally, buying winners that increased their dividends and shorting losers that decreased their dividends enhances momentum profits. Consistent with the evidence, the behavioral models suggest that investors underreact to the losers' positive dividend-maintaining news, reducing their return momentum and shrinking the payers' momentum profit. Also, underreaction to positive news from winners' dividend-increasing announcements as well as to negative news from losers' dividend-decreasing announcements explains the higher momentum profits for strategies based on these stocks. The results do not appear consistent with risk-based explanations.

1. Introduction

Several studies, starting with Jegadeesh and Titman (1993), document stock return momentum over the medium term. Although it is clear that winners tend to win and losers tend to lose over this horizon, there is substantial debate over the source of the profits and the interpretation of the evidence. New evidence from the markets show that stocks that do not pay dividends generate higher momentum profits than those that do, suggesting managerial dividend policy influences momentum profits. Furthermore, increases in dividends exacerbate the return momentum of winners while dividend cuts increase losers' momentum, enhancing the profits for portfolios conditioned on past performance and dividend change. These results support the theories, and add to the evidence, that psychological bias underpins momentum profits.

The study of the relation between dividend payment and momentum profit is motivated by results in the literature that suggest asymmetry in the dividend information conveyed by winners and losers. Chan et al. (1996) and Chordia and Shivakumar (2006) report that losers tend to experience declines in earnings while winners tend to display increases in earnings, suggesting dividend maintenance by winners and losers conveys different information. Specifically, dividend maintenance in the face of declining earnings signals that management does not expect the deterioration in earnings to be long-lived, which is positive information for the dividend-maintaining losers. On the other hand, dividend maintenance by winners does not indicate that the increases in their earnings are persistent and, hence, it does not convey good news.[1] This points to asymmetry in the dividend news conveyed by winners and losers. Evidence presented in Fuller and Goldstein (2006) supports these contentions. In particular, they find that dividend payers outperform non-payers in down markets (when firms are generally losing), but not in up markets (when firms are generally winning). Consequently, they conclude that dividends are more valuable when firms are losing than when they are winning. This paper examines whether the asymmetry in winners' and losers' dividend-maintenance news and dividend change news affect momentum profits.

Evidence from the stock markets shows that momentum profits are on average 0.42% per month lower among dividend payers than non-payers. Furthermore, the difference in profits is driven by the

[1] Several studies (e.g., Bhattacharya, 1979) indicate that changes in dividends convey managerial information about their future earnings. DeAngelo et al. (1992) note that firms generally cut dividends when their performance is poor and they conclude that these actions provide information in that they suggest persistent poor performance. Thus, maintaining dividends when performance is poor also conveys information; that is, management does not expect the poor performance to persist. This is significant positive news which, by definition, non-dividend-paying losers do not convey. By contrast, firms tend to increase dividends when managers expect their strong performance to persist (Miller and Modigliani, 1961) and, hence by implication, not increasing dividends in the face of increasing earnings does not indicate that their good performance will persist. Consequently, dividend maintenance by winners does not convey the good news conveyed by the same announcements by losers. Thus, unlike losers, dividend maintenance by winners does not offer them any information advantage over their non-payer counterparts.

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higher returns for the dividend-paying losers relative to their non-paying counterparts. Finally, a momentum strategy that buys winners which increased their dividends and shorts losers which reduced their dividend yields an average of 3.08% monthly profit. This is in excess of the approximately 1% profit from the standard momentum strategy, and is unlikely to be swamped by transaction costs since the strategy involves a smaller number of stocks and only dividend payers, which are generally large stocks.

The behavioral models for momentum profits (e.g., Daniel et al., 1998; Barberis et al., 1998; Hong and Stein, 1999) indicate that the differential valuation of dividend-maintaining announcements by winners and losers would lead to different momentum profits for the dividend payers and non-payers. This reasoning results directly from the models' prediction that stock prices drift in the same direction as the announcement day return.[2] That is, if a dividend announcement increases a stock's price, the post-announcement price will drift upward due to underreaction.

The Daniel et al. (1998) model suggests that confirming public information leads to continuing overreaction to private information due to overconfidence and biased self-attribution. They show that in the presence of these psychological biases, a positive non-selective event (Proposition 4) or selective event (Proposition 6) leads to a favorable event-date price change as well as a positive future average price trend.[3] Furthermore, the post-event average return will be higher the more the event and the pre-event stock price run-ups are in the opposite direction. In the Barberis et al. (1998) model, conservatism bias leads to slow updates of models in the face of new information, resulting in underreaction. In addition, representativeness bias results in subsequent overreaction to the information.

Hong and Stein's (1999) model assumes that private information diffuses slowly among the "news watchers" over time, and this results in underreaction to private news. The resulting positive serial correlation in returns attracts the attention of momentum traders, whose trading activity results in an eventual overreaction to the news. They argue that their model is also consistent with underreaction to public news since investors invariably use some private information to convert public news (such as dividend announcements) into a judgment about value. Thus, underreaction/overreaction from these behavioral models predicts that a positive (negative) price reaction on an event-date should lead to a positive (negative) future price trend.

The behavioral explanations for momentum profits predict that underreaction/overreaction to the good news from dividend maintenance by losers will result in higher post-announcement returns for these stocks relative to those of their non-payer counterparts. In contrast, dividend maintenance by winners does not convey good news, at least not to the extent of losers, and hence their post-announcement price trends should not be significantly higher than those of their non-payer counterparts. That is, if investors underreact to good news, this underreaction should be more pronounced for dividend-maintenance announcements by losers than by winners. Consistent with these predictions, the average dividend-maintaining announcement and post-announcement returns for losers are higher than the corresponding averages for their non-payer counterparts. In contrast, the average dividend-maintaining announcement and post-announcement returns for winners are not significantly higher than the corresponding averages for their non-payer counterparts. Thus, the lower momentum profit among payers is consistent with the behavioral underreaction/overreaction explanation for momentum profits.[4]

Finally, if dividend maintenance conveys information, changes in dividend payment should provide even stronger signals that can enhance momentum profits. Several studies report that dividend increases convey good news while dividend cuts convey bad news (e.g., Bhattacharya, 1979; DeAngelo et al., 1992). If investors underreact to dividend news, underreaction to news from changes in dividends can be exploited to enhance momentum profits. Specifically, underreaction to dividend-increasing announcements by winners will increase their return momentum relative to the other winners. Similarly, underreaction to dividend-decreasing announcements by losers will increase their return momentum. Consistent with these predictions, the event-date returns and post-event returns for the winners that increased their dividends are higher than those of the other winners. Similarly, the event-date returns and post-event returns for the losers that decreased their dividends are lower than those of the other losers. This explains the high profits for portfolios that buys winners that increased their dividends and shorts losers that decreased their dividends.

There is a separate line of research that suggests that momentum profits represent compensation for risk or trading costs of the strategy. These models indicate that the profits can be explained by β (e.g., Conrad and Kaul, 1998), book-to-market values (e.g., Daniel and Titman, 1999), size (e.g., Lesmond et al., 2004), growth options (Sagi and Seasholes, 2007), industrial effects (e.g., Moskowitz and Grinblatt, 1999), trading costs (e.g., Lesmond et al., 2004; Korajczyk and Sadka, 2004), and time variation in risk (Chordia and Shivakumar, 2002; Antoniou et al., 2007; Li et al., 2008). Overall, it does not appear that momentum profits are solely due to higher risks (e.g., Fama and French, 1996) or to time variation in risk (e.g., Grundy and Martin, 2001).

This study reports a link between momentum profit and dividend information, and the relation is robust to size, β, and book-to-market risk factors. Additionally, the dividend effect is unlikely to be confounded by other risk factors. Specifically, if dividend-maintaining news is associated with a particular risk factor, it should have similar effects on winners and losers. Li et al. (2008) suggest that winners incorporate news faster than losers, which could result in different dividend-maintaining announcement effects. However, we see dividend-maintaining announcement effects for losers, which are slower at incorporating news, but not for winners. Thus, the asymmetry in dividend-maintaining announcements by losers and winners is not consistent with different speeds of incorporating the news.

The analysis makes at least three contributions to the ongoing debate on the interpretation of the evidence on price momentum: First, it links a policy variable (dividend payment) to momentum profits. In particular, investors underreact to dividend-maintaining announcements by losers and this mitigates the dividend-payers' momentum profits. Second, an investment strategy that takes long positions in winners that increased their dividends and short posi-

[2] Among others, Cooper et al. (2004), Zhang (2006), and Chuang and Lee (2006) report evidence consistent with the behavioral models.

[3] In the Daniel et al. (1998) model, a non-selective event is an event that is independent of a stock's mispricing while a selective event is driven by the mispricing. These event distinctions, however, are not important for the conclusions drawn in this paper since both event types predict positive event-date and post-event-date price reactions after a positive event if investors are overconfident.

[4] Zhang (2006) reports that information uncertainty affects momentum profits, and he also finds the relation is more consistent with the behavioral explanations. He argues that information uncertainty accentuates the behavioral biases that generate return momentum and he shows that firms with higher uncertainty are associated with higher momentum profits. To the extent that dividend maintenance by losers indicates that their poor performance is not permanent, it reduces uncertainty about their future earnings relative to their counterparts that do not pay dividends. This, too, suggests that return momentum should be lower among dividend-paying losers compared to their non-paying counterparts. By contrast, dividend maintenance by winners does not contain any significant information about their future earnings and, therefore, information uncertainty about them and their non-payer counterparts should be similar. This predicts similar return momentum for winners irrespective of their dividend-payment status, exactly as the evidence indicates. Thus, the results are also consistent with Zhang's information uncertainty argument.