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Market movements and the excess cash theory

Ebenezer Asem*, Shamsul Alam

University of Lethbridge, Lethbridge, AB, Canada T1 K 3M4

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ABSTRACT

This study examines the effects of changes in the market's outlook for investment on the returns of dividend payers and non-payers to test the excess cash theory for dividends. When the market's outlook declines, the adverse effect is stronger for non-payers than payers and the difference concentrates among firms with high excess cash. When the outlook improves, the positive effect is stronger for non-payers than payers and the difference also concentrates among firms with high excess cash. These results support the theory that a dividend payment is a signal that the firm will not overinvest.

1. Introduction

Existing literature analyzes abnormal returns around dividend changes or one-time cash transactions for overinvesting and underinvesting firms to investigate the excess cash theory. In contrast, we study abnormal returns of dividend payers and non-payers when the market's outlook for investment changes to examine the theory. Our results show that dividend payers outperform non-payers when investors perceive a decline in investment opportunity, while the non-payers outperform the payers when investors perceive an increase in investment opportunity. Furthermore, the difference in returns between the payers and non-payers increases with excess cash. These results support the notion that a dividend payment is a signal that excess cash will not be wasted.

While it is well established that changes in dividend payout affect firm value, there is considerable debate over the motives and information content of dividends.[1] Jensen's (1986) excess cash theory suggests that dividend payments reduce agency costs by signaling that management will not wastefully invest excess cash. Empirical studies of this focus on the price reaction to dividend changes by firms with excess cash (overinvesting firms) and firms without excess cash (underinvesting firms). The intuition is that a dividend increase by an overinvesting firm will reduce its excess cash and associated agency costs, resulting in a strong positive reaction to the dividend increase. In contrast, a dividend increase by an underinvesting firm will not reduce non-existent excess cash and, hence, should result in a limited price reaction. Similar logic suggests stronger price reaction to a dividend reduction by an overinvesting firm than an underinvesting firm.

Lang and Litzenberger (1989) study the market's reaction to changes in regular dividends by overinvesting and underinvesting firms. They find the price reaction to dividend-change announcements is stronger for overinvesting firms than underinvesting firms, supporting the excess cash theory. However, Denis, Denis, and Sarin (1994) and Yoon and Starks (1995) find no difference in the price reaction to dividend-change announcements by the overinvesting firms and underinvesting firms. Howe, He, and Kao (1992) and Gombola and Liu (1999) study special dividends and they report similar market's reaction to these events by overinvesting and underinvesting firms, while Lie (2000) reports that the reaction is stronger for overinvesting firms than underinvesting firms. Thus, the evidence from both regular dividend changes and special dividend payments is mixed. This makes it important to re-examine the excess cash theory for dividends. We use a new approach to study this theory.

Our approach relies on an implication of the notion that a dividend payment is a signal that the dividend payer will not overinvest. If dividend payers generally do not overinvest compared to their non-payer counterparts, as the excess cash theory suggests, the payers must be more cautious in investing than the non-payers.

* Corresponding author. Tel.: +1 403 382 7142; fax: +1 403 329 2038.
E-mail address: ebenezer.asem@uleth.ca (E. Asem).

[1] More recent studies have linked the motives for changing dividend policy to the demographics of management (Nicolosi (2013)), to investor behavior (Breuer, Rieger, & Soypak, 2014), and to the class of share (Amoako-Adu, Baulkaran, & Smith, 2014).

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This suggests that the negative effects of a decline in investing opportunity will affect firms that do not pay dividends more than firms that do. Thus, a decline in the market's outlook for investment and growth should result in a larger decline in non-payer returns than payer returns. In addition, the excess cash theory predicts that the difference between the payer and non-payer returns should concentrate among firms with high excess cash. Specifically, firms with limited or no excess cash do not face overinvestment problems and, hence, a signal that such a firm will not overinvest (dividend payment) is superfluous. Thus, for these firms, the effect of a decline in the outlook for investment should be similar for dividend payers and non-payers. In contrast, for firms with high excess cash, a signal that the firms will not overinvest should mitigate the negative consequences of a decline in outlook for investment, and result in lower non-payer returns than payer returns.

Regarding an improvement in investment opportunity, the excess cash theory suggests that this should benefit non-payers more than the payers since this should reduce overinvestments by the non-payers more than the payers. This predicts higher returns for non-payers than payers in the face of an increase in the outlook for investments. In addition, the theory suggests the difference in payer and non-payer returns should concentrate among firms with excess cash. In particular, overinvestment problems are minimal among firms with limited excess cash and, therefore, a signal that such a firm will not overinvest (dividend payment) is redundant and should not result in a difference between payer and non-payer returns when the market's outlook for investment improves. In contrast, for firms with excess cash, non-payers overinvest more than the payers and, therefore, non-payers should benefit more a reduction in overinvestment due to improved opportunities and result in higher non-payer returns than payer returns.

We gauge a change in the market's outlook for investment by the market's movement. In particular, a firm's stock price captures its expected investment and growth opportunities and, hence, changes in the market's direction should reflect changes in aggregate investor outlook for investment opportunity. Consequently, declining markets capture declining outlook for investment from investors' (the market's) perspective. In contrast, advancing markets reflect periods when aggregate investor outlook for investment is improving. A change in the market's movement is, therefore, a natural proxy for a change in aggregate outlook for investment.

By focusing on the effects of changes in investment outlook on dividend-paying and non-paying firms, our study sidesteps the difficulties with discerning the effects of dividend changes on agency costs of excess cash. These difficulties, which contribute to the mixed evidence on the excess cash theory include: (i) small incremental dividend changes relative to excess cash (e.g., Lie, 2000; Opler, Pinkowitz, Stulz, & Williamson, 1999), (ii) the direct relation between dividend changes and earnings changes (e.g., Nissim and Ziv, 2001), and (iii) the lack of motivation for self-interested managers to discipline themselves by increasing dividends (e.g., Harford, Satter, & William, 2008). In addition, we use Opler et al. (1999) model to estimate excess cash, and this provides a more direct measure of excess cash than the Tobin's Q proxy used in prior studies. Our study therefore provides cleaner set of tests of the excess cash theory for dividends.

We proceed by partitioning the universe of CRSP and Compustat industrial firms by dividend payment and excess cash, and analyzing the returns of these portfolios in advancing and declining markets. Consistent with our propositions, we find that dividend payers display lower returns than non-payers during declining markets. Furthermore, the difference between the payer and non-payer returns increases with excess cash. In contrast, in advancing markets, the non-payer returns are higher than the payer returns and the difference in returns increases as excess cash increases. These results survive several robustness checks and they support the theory that a dividend payment is a signal that the firm will not overinvestment.[2]

The rest of the paper is organized as follows: Section 2 reviews the literature and develops the hypotheses, Section 3 presents data and initial evidence and Section 4 discusses the results. Section 5 considers robustness checks and Section 6 concludes.

2. Related literature and main hypotheses

Jensen's (1986) excess cash theory suggests that firms tend to wastefully invest their excess cash and, hence, a reduction in a firm's excess cash should increase its value. Accordingly, for firms with excess cash, an unexpected reduction in free cash reduces the market's estimate of the amount of cash that they will misuse, leading to increases in value for these firms. On the other hand, an unexpected increase in free cash increases the market's estimate of the amount of cash that they will invest unprofitably, thereby, reducing the value of these firms. These suggest that the market's reaction to events that change firms' cash positions should be more pronounced for firms with excess cash than firms without excess cash. Events used to study this implication can be classified into two broad groups: (i) changes in regular dividends and (ii) one-time cash flow transactions (e.g., special dividends).

Lang and Litzenberger (1989) are the first to study the market's reaction to changes in regular dividends. They proxy overinvestment by Tobin's Q and classify firms with Q less than one as overinvesting firms and firms with Q greater than one as underinvesting firms. They find that the price reaction to dividend changes by the overinvesting firms is greater than the price reaction to dividend changes by the underinvesting firms, supporting the excess cash theory. However, Denis et al. (1994) and Yoon and Starks (1995) argue that the negative relation between Tobin's Q and stock price reaction to dividend changes is convoluted by the fact that Tobin's Q is also a measure of a firm's growth opportunity. In particular, firms with growth opportunities (firms with $Q > 1$) tend to pay lower dividends than those with no growth opportunities (firms with $Q < 1$), resulting in the lower reaction to dividend changes by the former firms. In fact, they find that the difference in reaction to dividend changes by firms with $Q > 1$ and firms with $Q < 1$ disappears when they control for the dividend yield and the magnitude of the dividend change.

Evidence on the predictions of the excess cash theory from one-time cash flow transactions is unclear. Lehn and Poulsen (1989) examine going-private transactions and find that the price reaction to these events is stronger for overinvesting firms than underinvesting firms. Subsequent studies that examine the price reaction to one-time cash flow events and reach the same conclusion include: Lang, Stulz, and Walkling (1991) who study tender offers, Perfect, Peterson, and Peterson (1995) who investigate self-tender offers, Nohel and Tarhan (1998) who analyze share repurchases, and Lie (2000) who investigates self-tender offers and special dividends. In contrast to these results, Howe et al. (1992) find no difference in the market's reactions to stock repurchases by overinvesting and underinvesting firms and Gombola and Liu (1999) arrive at the same conclusion using evidence from special dividends. The mixed evidence from regular dividend changes and

[2] Also, Jin (2000), DeAngelo, DeAngelo, and Stulz (20006) and Denis and Osobov (2008) also find support for the excess cash theory. In particular, using evidence from the decline in proportion of dividend payers, they find that dividend payments may in fact be motivated by excess cash in the context of a firm's life cycle.