



## Large dividend increases and leverage<sup>☆</sup>



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### ABSTRACT

This study documents the fact that large dividend increases are followed by a significant increase in leverage, consistent with management increasing the dividend to use up excess debt capacity. However, the leverage increase is not captured by a standard partial adjustment model of leverage. Nor does it reflect variables known to be related to dividend increases, such as firm maturity, investment, and risk. Instead, the dividend increase signals a complex change in the way firms adjust to their leverage target, but it does not signal a change in the target.

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Since the work of Benartzi et al. (1997), Grullon et al. (2002) (GMS), and Grullon et al. (2005) there has been a puzzle as to the signal being given by dividend increases. Although dividend *decreases* signal lower future profits, dividend *increases* do not signal an increase in future profits. Rather, GMS find evidence that dividend increases are followed by a move to a more mature phase of the firm: lower growth, declining reinvestment, and declining risk. This raises another important question: Why is this a signal? The age and growth stage of the firm are largely public information. Therefore, the dividend increase must signal private information regarding either exactly how mature the firm is or the intention of changed management behavior that the market does not anticipate.

The signal from a dividend increase comes from the intention to increase payout, and the increase predicts a change in future investment strategy. The sources and uses of funds' identity mean that payout and investment strategy are linked with financing. Therefore, we hypothesize that the signal should also contain information about future financing policy. In this study, we examine leverage changes subsequent to large dividend increases and show that a part of the signal given by a dividend increase is a change in leverage policy.

Using a sample of 4374 firms making large dividend increases, we show that (1) large dividend increases are followed by a significant increase in leverage; (2) although the leverage increase is consistent with these firms having excess debt capacity prior to the dividend increase, the increase in leverage after the dividend increase is not captured by a partial adjustment model of leverage or by a response of leverage to firm maturity, investment, and risk; (3) the change in leverage policy is a change in the *conditional* response to a future financing surplus; and (4) this change does not happen for dividend decreases. Thus, the change in leverage behavior we find is not subsumed by the effects found by GMS. Further, the effect is asymmetric

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