



The dividend month premium[☆]

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ABSTRACT

We find an asset pricing anomaly whereby companies have positive abnormal returns in months when they are predicted to issue a dividend. Abnormal returns in predicted dividend months are high relative to other companies and relative to dividend-paying companies in months without a predicted dividend, making risk-based explanations unlikely. The anomaly is as large as the value premium, but less volatile. The premium is consistent with price pressure from dividend-seeking investors. Measures of liquidity and demand for dividends are associated with larger price increases in the period before the ex-day (when there is no news about the dividend) and larger reversals afterward.

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1. Introduction

Most theoretical models used in finance assume perfect liquidity, meaning that investors can purchase or sell arbitrary amounts of a firm's securities without affecting the price. However, empirical evidence exists that demand curves for stocks slope downward. A number of papers show price changes around the inclusion of stocks in an index, a one-off event that results in a largely permanent increase in demand but arguably does not contain information (Shleifer, 1986; Wurgler and Zhuravskaya, 2002; Greenwood, 2005, and others). But should price changes

be expected for predictable and temporary shifts in demand? In such cases, arbitrageurs ought to have the best chance of reducing price impact by taking the opposite side of these trades. If predictable price patterns result from demand shifts in large, liquid companies around regularly scheduled, highly salient events, this presents a challenge for notions of market efficiency.

In this paper we study the reaction of stock prices when companies are expected to issue dividends. The lead-up to dividend payment is a period when the demand and supply of shares could shift. Investors who wish to receive the dividend, for whatever reason, must purchase the stock before the ex-day. Conversely, those who do not wish to receive the dividend must sell before the ex-day. At the same time, liquidity suppliers and arbitrageurs could be expected to enter the market to offset any price impact that dividend-motivated trading is having. If dividend-seeking investors are more numerous than dividend-avoiding investors, and if arbitrageurs are unable or unwilling to supply sufficient liquidity to the market (both empirical questions), then excess demand for the shares increases the price.

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Consistent with the above intuition, we find evidence of mispricing of stocks whereby companies have significantly higher returns in months when they are expected to issue a dividend. We term this the dividend month premium. Instead of conditioning on the actual payment of dividends, we forecast a predicted dividend if the company paid a quarterly dividend 3, 6, 9 or 12 months ago, a semi-annual dividend 6 or 12 months ago, or an annual dividend 12 months ago. A portfolio that buys all stocks expected to issue a dividend this month earns abnormal returns of 41 basis points. Other specifications produce even higher returns. For example, a portfolio of companies that had a semi-annual dividend six months ago has a four-factor alpha of 115 basis points per month.

The returns in predicted dividend months are unusually high on two dimensions: first, relative to all other companies and, second, relative to the same set of dividend-paying stocks in months when they are not expected to have a dividend. A portfolio that is long expected dividend payers and short all other companies (between companies) earns abnormal returns of 53 basis points relative to a four-factor model. Meanwhile, a portfolio that is long companies in the month of their predicted dividend and short same companies in other months (within companies) earns abnormal returns of 37 basis points.

These findings make the dividend month premium unlikely to be driven by risk. In particular, the within companies portfolio exploits only the time series variation in the same set of dividend paying companies, resulting in a portfolio with virtually zero loadings on any conventional risk factors. The reason is that the portfolio is long each company with quarterly dividends for four months of the year and short the same companies (at half the weight) for eight months of the year. Hence, any fixed loadings on risk factors tend to cancel out, making systematic risk a less likely explanation. Any explanation relating to risk would need to rely on time-varying risk loadings, with companies being systematically riskier in months of expected dividend payment.

We hypothesize that the dividend month premium is due to price pressure from dividend-seeking investors in the lead-up to dividend payment. Existing theories of dividends can provide some basis for this view. Theories of catering, such as in Baker and Wurgler (2004) and Li and Lie (2006), propose that investors could have an underlying demand for dividends themselves, such as for psychological or institutional reasons. A desire for dividends and a positive discount rate could cause investors to prefer to purchase dividend-paying stocks immediately before the dividend is paid rather than immediately afterward (and prefer to sell the stock after the dividend payment, not before). Price pressure around dividend payment could also arise under dividend clientele theories, whereby groups of investors desire dividend payments for reasons such as different tax treatment, a need for income streams, etc.¹ Trade is likely between investors

with different tax rates in the lead-up to the ex-dividend day (Michaely and Vila, 1996; Michaely, Vila, and Wang, 1996), and such trades could impact prices.

To determine whether price pressure explains our results, we examine daily characteristic-adjusted returns within the dividend month. We find that abnormal returns are present for virtually the entire period between the announcement date and the ex-dividend date. We find abnormal returns on the actual announcement day (12 basis points), on the predicted announcement day (3 basis points) and on the ex-day (26 basis points). Most important, there are also abnormal returns of 17 basis points in the period between the announcement and ex dividend days. While previous research has highlighted the importance of returns on the ex-day, we find that these are less than half of the total abnormal returns during the dividend period.

The abnormal returns in the interim period between the announcement and ex-day are consistent with price pressure due to demand for dividends but are difficult to reconcile with alternative explanations. During this time, no news is being released about the dividend, and no uncertainty exists about the dividend size. In addition, an investor who sells the share before the ex-day does not receive the dividend. Thus, holding dividend-paying shares only for the interim period results in the same tax consequences as holding any other non-dividend-paying stock for the same length of time, and these returns are not limited to investors of a particular tax treatment. As such, it is surprising from an asset pricing perspective that there should be abnormal returns.

If the price increases before payment are a result of price pressure, then there ought to be an increase in selling after dividend payment that results in negative returns. Consistent with this, abnormal returns in the 40 days after the ex-dividend day are –72 basis points. This effect is large enough to offset the gains during the dividend month, reinforcing the conclusion that the main effect is a time series one and that the price increases are reversed by subsequent price decreases.

We also show that the high returns before the ex-day and the subsequent reversals are larger among less liquid securities, for which changes in demand for shares ought to have a bigger effect. Less liquid securities, measured using the Amihud (2002) variable, have more positive interim returns, more positive ex-day returns, and more negative returns (i.e., larger reversals) in the 40 days after the ex-day. Interim and ex-day returns are also significantly lower when a greater length of time passes between the announcement and the ex-dividend day, and returns after the ex-day are higher (i.e., smaller reversals). This is consistent with traders having more price impact when they are forced to buy shares over a shorter period of time. Third, returns are larger for companies with higher dividend yields, consistent with dividend-seeking investors having more demand for shares that pay larger dividends. The fact that these

(footnote continued)

¹ Dividend clienteles have been examined by Black and Scholes (1974), Elton and Gruber (1970), Allen, Bernardo, and Welch (2000),

Graham and Kumar (2006), Becker, Ivković, and Weisbenner (2011), and many others.

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