Dividend Signaling and Pecking Order When “Style” Is All That Matters

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Abstract

This paper uses “style investing” by mutual funds to test for the impact of adverse selection on corporate policies, as described by the classic theories of dividend signaling and the pecking order of capital structure. When investors allocate their portfolios purely on the basis of broad “styles” (e.g. value/growth, small-cap/large-cap), they make the stock price less sensitive to information about the individual firm. Thus when the firm belongs to a “hot” style and faces investors driven solely by style considerations, it gains less from signaling, and bears a smaller dilution cost when issuing equity. The test exploits the cross–sectional difference in stock price sensitivity to information between firms in “hot” and “cold” styles to bring to the data the predictions of dividend signaling and the pecking order, and addresses two empirical anomalies: underreaction to dividend increases, and the large volume of equity issues that apparently contradicts the prediction of the pecking order that equity should be the source of financing of last resort. Using mutual fund flows to identify “hot” styles, I find that in a “hot” style the firm will less likely signal its value through a dividend increase. When it does, the stock price underreacts, with small announcement returns followed by positive abnormal returns in the long run. At the same time, in a “hot” style the firm will also cover a greater fraction of its external financing by issuing equity. A number of robustness checks distinguish these results from alternative explanations, based on market timing or investment opportunities.
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1 Introduction

This paper studies the impact of "style investing" on two classic adverse selection theories: dividend signaling and the pecking order of capital structure. Traditionally, adverse selection plays a major role in corporate finance, as a friction giving rise to violations of the Modigliani–Miller propositions. Recent literature has pointed to other sorts of friction, arising for example from behavioral biases and limits of arbitrage (Baker et al., 2007; Baker, 2009). An example is "style investing" — the fact that some investors allocate their portfolios on the basis of broad categories of stocks such as "value" or "growth", ignoring information about the individual stocks (Froot and Teo, 2004; Barberis et al., 2005; Cooper et al., 2005; Mullainathan et al., 2008). Can style investing explain the empirical difficulties of dividend signaling and the pecking order?

Dividend signaling and the pecking order of capital structure are classic corporate finance theories. In the presence of adverse selection, the "good" firm, on the one hand, will want to signal its value by paying higher dividends — on the other hand, it will prefer debt to equity financing, to avoid the dilution costs due to pooling with the "bad" firms. Both theories, however, have long been challenged by empirical evidence. In particular, the market underreacts to dividend increases, with small announcement returns followed by significantly positive long–run price drift. On the other hand, the pecking order theory cannot account for the large amounts of equity issued by US firms. I take a novel look at these problems, and show how the dividend signaling and pecking order equilibria can break down in the presence of style investing.

Style investing arises from the fact that investors suffer from "coarse thinking", in that "they group situations into categories and apply the same model of inference to all situations within a category" (Mullainathan et al., 2008). The implication is that investors hold the shares of the firm just because it belongs to a "hot" style, ignoring fundamental information (Barberis and Shleifer, 2003; Froot and Teo, 2004; Barberis et al., 2005; Cooper et al., 2005). As a consequence, the presence of "style" investors in the market makes the stock price less sensitive to such information. The result is the breakdown of the dividend signaling and pecking order equilibria: when the firm faces a large fraction of "style" investors in the market for its shares, it stands to gain little from signaling, while at the same time it can issue equity and invest without bearing the dilution costs that give rise to the pecking order.

Armed with this reasoning, I lay out a set of testable predictions. First, in a "hot" investment style the firm will less likely signal through a dividend increase. Second, if the firm does announce a dividend increase, in a hot style there will be smaller announcement returns, as the presence of style investors prevents the stock price from immediately incorporating the information contained in the announcement. This will be followed by positive abnormal returns in the long run, when fundamental valuation prevails. Third, in a hot style the firm will resort to more equity financing. Fourth, as style investing induces the "good" firm to pool with the "bad" ones and issue equity and invest, the equity issuers driven by style investing will be on average more profitable.

I use mutual fund flows, aggregated at the investment style level, to proxy for the presence of style–driven investors — the style's "hotness". This empirical strategy is motivated by three reasons. First, the literature shows that mutual funds chase investment styles in their portfolio choices, and effectively operate in a market segmented by style (Chan et al., 2002; Teo and Woo, 2004; Froot and Teo, 2004; Cooper et al., 2005; Cremers and Petajisto, 2009). Second, mutual fund flows do not appear to follow fundamental information about stocks, but rather track investor "sentiment" — they act as "dumb money" (Frazzini and Lamont, 2008). Third, relying on aggregate flows at the investment style level, as opposed to firm– or mutual fund–specific quantities, mitigates endogeneity concerns.

I start by looking at signaling through dividend increases. First, style investing reduces the likelihood of a dividend increase announcement. A one–standard–deviation increase in the hotness of the firm's investment style reduces the probability of a dividend increase by 16% (about 1 percentage point in absolute terms). Second, style investing results in a smaller market reaction to the dividend increase announcement: the announcement return for the average dividend increase in a "hot" investment style (top hotness tercile) is only 39% as large as in a "cold" style (bottom hotness tercile). Third, the positive long–run abnormal returns are larger when the firm belongs to a hotter style at the announcement date: dividend increases in the top hotness tercile are followed by two–year cumulative abnormal returns of 10–20%, as opposed to 4–6% for the bottom tercile.

I then turn to the impact of style investing on the choice of financing, and to the investment and profitability of equity issuers driven by style investing. In a hot style, the firm relies on equity, rather than debt, for external financing. The effect is economically significant. If we break down the sample into quintiles based on hotness, for every dollar of debt financing by a firm in the bottom hotness quintile, a top quintile firm (a firm in the "hottest" style) issues only about 70 cents of debt. Conversely, for every dollar of equity financing by the bottom quintile firm, the top quintile firm issues more than 2 dollars of equity.

Turning to investment and profitability, I find that equity issuers driven by style investing increase their investment both directly, in terms of capital expenditure, as well as indirectly, in terms of M&A expenditure and M&A announcements. The effect is substantial in economic terms: the average equity issue driven by style investing raises capital expenditure by 9%, increases M&A expenditure by 8%, and increases the number of M&A announcements by 6%. Moreover, style investing–driven equity issuers are more profitable — they have a 32% higher three–year ROE than the other equity issuers.

Using patent citations data as a proxy for the firm's investment opportunities, I can rule out two alternative explanations for these results: a special case of the standard pecking order, where firms with "extremely" good investment opportunities can find it convenient to issue equity, and the market timing theory of Baker and Wurgler (2002). I find that in a hot style firms issue equity even when their investment opportunities are not "extremely" good (ruling out the special case of the standard pecking order), while firms with more limited investment opportunities issue *less* equity than firms with better investment opportunities (ruling out pure market timing). Moreover, all the results still hold when the sample is restricted to undervalued firms (where market timing considerations should not apply), or to firms characterized by high information asymmetry (where the classic signaling and pecking order predictions should be most relevant).

This paper makes three main contributions. First, it contributes to the literature on signaling and payout policy. Theoretical work has long argued (at least since Bhattacharya, 1979) that the firm uses dividends to signal its value to the market. The main empirical difficulty with this theory is that "the market doesn't get it" (Allen and Michaely, 2003), i.e. it underreacts to dividend increase announcements: dividend increases are associated with small announcement returns (Amihud and Li, 2006), and followed by significantly positive long–run returns (Grullon et al., 2002). This paper advances a novel explanation for these findings. It suggests that style investing, by making the stock price less sensitive to information in the short run, accounts for the small announcement returns, and explains the long–run abnormal returns as "style" investors leave the market when sentiment for the style fades, allowing the stock price to incorporate information.

Second, this paper contributes to the literature on capital structure and the pecking order theory. One way to wrap up the available empirical evidence is that it is unclear "where and when the pecking order succeeds (...). Further, in situations where the pecking order struggles it is unclear why it struggles" (Leary and Roberts, 2007). In particular, most firms issue equity every year, and the volume of equity issues is comparable to that of debt issues (Fama and French, 2002, 2005). These findings contradict the pecking order's central prediction that equity is the source of financing of last resort. This paper shows that style investing can reduce the dilution costs that give rise to a preference for debt over equity in the pecking order theory, thus inducing the firm to resort to equity financing.

Third, this paper is related to the growing literature on "catering", or "market–driven" corporate finance (Baker and Wurgler, 2002, 2004, 2006; Greenwood, 2005; Li and Lie, 2006; Massa and Zhang, 2008; Baker, 2009; Chernenko and Sunderam, 2009; Kahn et al., 2009; Polk and Sapienza, 2009), which looks at the impact of investor behavioral biases and limits to arbitrage on firm policies. This literature has mainly focused on the effect of misvaluation. To the best of my knowledge, this is the first paper that considers an alternative channel: the stock price sensitivity to information. Moreover, this paper suggests that the predictions of the catering theory are empirically as relevant as those of classic theories of corporate finance, based on adverse selection — such as dividend signaling and the pecking order.

The remainder of the paper is organized as follows. Section 2 fleshes out the main testable predictions, with the aid of a simple model. Section 3 describes the data and main measures used in the empirical analysis. Section 4 is devoted to the main empirical tests. Section 5 considers alternative explanations for the findings of this paper. A brief conclusion follows.

2 Dividend signaling, pecking order, and style investing

In the dividend signaling model of Bhattacharya (1979), the "good" firm separates from the "bad" ones by committing to a dividend payment. Conversely, in the pecking order model of Myers and Majluf (1984) it is the choice to refrain from issuing equity that separates the wheat from the chaff. This Section provides a simple illustration of how style investing can break down both these equilibria.

2.1 Illustration

Consider a model with three periods ($t = 0, 1, 2, 3$). The timeline of the model is illustrated in figure 1. At dates 0–2 the firm's shares are traded on the market. The risk–free rate of return is zero. At date 3 the firm generates terminal earnings–per–share $X \sim \mathcal{N}(\mu, 1)$, $\mu \in \{\mu_G, \mu_M, \mu_B\}$, where $\mu_G > \mu_M > \mu_B$ distinguish "good" (G), "average" (M), and "bad" (B) firms. It is then liquidated, and the earnings are distributed to the shareholders.

2.1.1 Investors and stock prices

There are two classes of investors. The first class consists of active investors, who have constant absolute risk aversion, and risk tolerance equal to γ. They care about the terminal earnings–per–share generated by the firm, hence each of them demands a number of shares equal to $\gamma(\mu - P)$.

The second class consists of "style" investors, who trade at dates 0 and 1 only, and leave the market thereafter. The style investors also have constant absolute risk aversion with risk tolerance γ, but they differ from the active investors in the argument of their utility function. Namely, they have a private valuation $F \sim \mathcal{N}(\varphi, 1)$ for every share of the firm that they hold, that derives only and exclusively from the fact that the firm belongs to their preferred investment style.Each style investor therefore demands a number of shares equal to $\gamma(\varphi - P)$.[1]

At dates 0 and 1, there is a continuum of style investors with mass $w_s \in (0,1)$, and $1 - w_s$ active investors. Their aggregate demands are therefore $Q_A = \gamma(1 - w_s)(\mu - P)$ for the active investors, and $Q_S = \gamma w_s(\varphi - P)$ for the style investors. Let Q be the total supply of stocks of the firm. Market clearing requires $Q = Q_A + Q_S$, so that we can solve for the stock price:

$$P = \mu + w_s(\varphi - \mu) - Q/\gamma \tag{1}$$

The style investors make the stock price less sensitive to fundamental information about firm quality, i.e. about the expected terminal earnings–per–share: $\partial^2 P/\partial\mu\partial w_s < 0$.

2.1.2 *Firm policies*

Firm policies are decided by a manager, who trades off the short–run and the long–run value of the firm. The manager's utility function is:

$$\lambda V_1 + (1 - \lambda)V_3 \tag{2}$$

where V_1 and V_3 are the fraction of firm value to the time–0 incumbent shareholders at dates 1 and 3, and λ measures the manager's horizon.

At date 0, the firm can announce a dividend payment that takes place at date 1, at a per-share cost $\delta \in \{\delta_G, \delta_M, \delta_B\}$, which is to be subtracted from the terminal earnings–per–share. The dividend is a credible signal that the firm is more valuable, as $\delta_G < \delta_M < \delta_B$. To avoid that price pressure from the style investors render signaling trivially useless, assume $\mu_G - \delta_G > \varphi$.

At date 0, the firm also faces an investment opportunity. It can invest a total amount I, to increase the terminal earnings–per–share up to $\mu + \vartheta$, with $\vartheta > 0$. The firm, however, is initially cashless and must therefore issue new shares and obtain financing on the stock market. It needs

[1] This paper is ultimately silent on what induces the style investors to allocate their portfolios based on styles only — the focus is on using this friction to test for the impact of adverse selection on firm policies. The presence in the market of investors that are exclusively interested in the style of the stocks in their portfolio, neglecting information about the quality of the individual firms, can be justified from a number of angles. For example, Dimensional Fund Advisors (DFA) offer funds based on categories such as size and book–to–market, and explain on their website that these funds are charecterized by "minimal style drift", in that their managers have "no discretion" to deviate from the strategy of holding a portfolio that is representative of the entire investment style. The existence of practitioner tools such as the Morningstar "style box" or indexes tracking the size and book–to–market dimensions provided for example by Russell and MSCI–BARRA lends further support for this assumption. Finally, the literature indicates that style considerations are an important determinant of mutual fund portfolio choices (Froot and Teo, 2004; Cooper et al., 2005; Cremers and Petajisto, 2009), and that a large fraction of the mutual fund industry consists of pure "sector rotators", i.e. funds that rotate across different sectors (e.g. value vs. growth), but within each sector hold very diversified portfolios (Cremers and Petajisto, 2009). There could be a number of reasons why the style investors do not do any "stock picking" within their favored style (see for example Berk and Green (2004) for a rational explanation).

to issue N shares, where N is the minimum $\tilde{N}$ such that $\tilde{N}P = I$, $\tilde{N} > 0$.[2] For a given $\mu + \vartheta$, this equals:

$$N \equiv \frac{1}{2}\left\{\gamma[\mu + \vartheta + w_s(\varphi - \mu - \vartheta) - Q/\gamma] - \sqrt{\gamma^2[\mu + \vartheta + w_s(\varphi - \mu - \vartheta) - Q/\gamma]^2 - 4I\gamma}\right\} \quad (3)$$

As shown in Appendix A, $\varphi > \mu + \vartheta$ ensures that $\partial N/\partial w_s < 0$. In other words, the dilution cost associated with the equity issue (N) will be smaller when the style investors form a greater fraction of the overall investor population.

2.1.3 *Equilibria*

The above assumptions lead to an equilibrium that encompasses the standard signaling and pecking order predictions. The G firm signals its value by paying a dividend, the M firm does nothing, and the B firm issues equity and invests. The M and B firms refrain from paying a dividend due to their higher costs of payout. Conversely, the G and M firms refrain from issuing equity due to their higher dilution costs.

As the style investors make up a larger fraction of the investor population (as w_s increases) two things happen. First, the increase in price that the firm obtains by signaling becomes smaller, as the price becomes less sensitive to fundamental information ($\partial^2 P/\partial\mu\partial w_s < 0$). Second, since $\partial N/\partial w_s < 0$, the dilution cost is also smaller. Thus, a sufficiently large w_s will lead to a violation of the incentive compatibility constraints for the G and M firms, breaking down the equilibrium. This intuitition can be wrapped up as follows (see Appendix A for a detailed derivation).

Proposition 1 *There exists a separating equilibrium in which the G firm pays a dividend, the M firm does nothing, and the B firm issues and invests. For sufficiently large w_s, the equilibrium breaks down.*

The flip side of the coin is that, when the mass of style investors is sufficiently large, the G and M firms can find it convenient to pool with the B firm, and issue equity and invest. The reason is that the dilution cost borne by G and M is now smaller. This intuition can be stated more precisely as follows (again, see Appendix A for the derivation).

Proposition 2 *There exists a pooling equilibrium, where all firms issue equity and invest.*

[2] The assumption of a fixed increase in earnings–per–share ϑ is a convenient simplification. One could make the increase in terminal earnings–per–share a function of the share issue, e.g. $\tilde{\vartheta}(N)$, with $\tilde{\vartheta}' < 0$. As will be clear in what follows, as the style investors make up a larger fraction of the investor population, the firm needs to issue fewer new shares — but then $\tilde{\vartheta}(N)$ should increase, further reducing the dilution cost. This would lead the model to essentially the same predictions, at the cost of considerably more convoluted algebra.

2.2 Testable hypotheses

Based on the above analysis, I can now lay out a set of testable hypotheses. The first one follows directly from Proposition 1: when the firm faces a larger fraction w_s of style investors in the market for its shares, the separating equilibrium of Proposition 1 is less likely to hold. Thus:

H1 *As the intensity of style investing increases (in a "hot" style), there will be fewer dividend increase announcements.*

Let the ex ante expected earnings–per–share be $\bar{\mu} \equiv \sum_{i \in \{G,M,B\}} \mu_i \Pr(\mu = \mu_i)$. The announcement of a dividend reveals that the firm is a G firm. The market reaction to the dividend announcement then equals:

$$\Delta P_1 \equiv P_1 - P_0 = (1 - w_s)(\mu_G - \delta_G - \bar{\mu}) \tag{4}$$

so that $\partial \Delta P_1 / \partial w_s = -(\mu_G - \delta_G - \bar{\mu}) < 0$. Thus:

H2 *In a "hot" investment style, the market reaction to the dividend increase is smaller.*[3]

In the "long run" (at date 2) the style investors leave the market, and all investors are active investors, i.e. $w_s = 0$. If at date 0 the firm announced a dividend, therefore, at date 2 its stock price rises to $P_2 = \mu_G - \delta_G - Q/\gamma$. The price change between dates 1 and 2 is thus:

$$\Delta P_2 \equiv P_2 - P_1 = w_s(\mu_G - \delta_G - \varphi) \tag{5}$$

so that $\partial \Delta P_2 / \partial w_s = (\mu_G - \delta_G - \varphi) > 0$. Thus:

H3 *The long–run returns following the dividend announcement are higher when the announcing firm belongs to a "hot" investment style.*

Turning to financing and investment, when faced with a larger fraction w_s of style investors the G and M firms are more likely to choose to pool with the B firm, and issue equity and invest (Proposition 2). Thus:

H4 *In a "hot" investment style, the firm will resort to more equity financing.*

[3] Note that the effect of an increase in w_s on the market reaction to an equity issue is, on the other hand, ambiguous. The market reaction to an equity issue will be: $\Delta P_1' \equiv (1 - w_s)(\mu_B + \vartheta - \bar{\mu}) - N/\gamma$. Thus:

$$\frac{\partial \Delta P_1'}{\partial w_s} = -(\mu_B + \vartheta - \bar{\mu}) - \frac{1}{\gamma}\frac{\partial N}{\partial w_s}$$

$-\frac{1}{\gamma}\frac{\partial N}{\partial w_s}$ is positive, and we expect $(\mu_B + \vartheta - \bar{\mu})$ to be positive as well. But then the sign of the above expression is ambiguous.

In the absence of style investing, only the B firm invests. The profitability of equity issuers is therefore proportional to $\mu_B + \vartheta$. Once the fraction of style investors in the market w_s is sufficiently large, however, the G and M firms invest too, and the average equity issuer has profitability proportional to $\bar{\mu} + \vartheta$. Thus:

H5 *Style investing–driven equity issuers issue equity to invest, and are more profitable.*

3 Data and main measures

The empirical analysis centers on the sample of all firms appearing in the merged CRSP/Compustat dataset over the years 1980 through 2006, excluding regulated utilities (SIC codes 4900–4999) and financial firms (SIC codes 6000–6999). I also exclude firms with book equity below \$250,000 or total assets below \$500,000 and require that all variables, and relevant lags thereof, are available for all observations. I supplement this sample with mutual fund equity holdings and returns from the CDA/Spectrum and CRSP Mutual funds data sets. I finally collect data on dividend increase announcements from the CRSP daily events tape, and on acquisitions announcements from the Security Data Corporation's (SDC) Mergers and Acquisitions (M&A) data set.

3.1 Measuring the "hotness" of the investment style

I use data on aggregate mutual fund investment flows and redemptions to construct three proxies for the "hotness" of a given investment style at any point in time, i.e. w_s in the notation of the previous Section (similar proxies are used, for example, by Coval and Stafford, 2007; Frazzini and Lamont, 2008; Kahn et al., 2009). The choice to focus on mutual fund flows is motivated by three reasons. First, the literature has shown that mutual funds operate in a style-segmented market, and cater to investor sentiment about styles in their portfolio choices (Froot and Teo, 2004) and even in the choice of their own names (Cooper et al., 2005). Second, mutual fund flows provide a proxy for the overall market sentiment for a given style. Indeed, they have been shown to be associated with short–run increases in stock prices (Teo and Woo, 2004; Coval and Stafford, 2007; Kahn et al., 2009). Third, they do not appear to be driven by fundamental information, but rather seem to act as "dumb money" (Frazzini and Lamont, 2008). This suggests that mutual fund flows are a good approximation for the style investors of the previous Section.

I first define six investment styles, grouping firms based on their location on the Fama–French size and book–to–market grid.[4] The firm will be large, medium, or small, and value or growth.

[4] This choice is not above criticism, as size and book–to–market may be related to unobserved firm characteristics that drive payout and financing choices. For robustness, in unreported results I re-run all of my tests constructing style investing proxies based on industry (2–digits SIC code). All results still hold.

This classification mimics that adopted by market practitioners (see for example Morningstar's "style box"). It also allows to define, for each investment style, an *opposite* style. The opposite style of large–growth will be small–value, that of medium–growth will be medium–value, and that of small–growth will be large–value. I assign an investment style to each mutual fund in the CDA/Spectrum dataset, based on its stock holdings. The fund's investment style is simply the investment style that represents the largest fraction, in terms of market value, of the fund's portfolio at any given date.

I then define three hotness proxies as follows. As a first building block, define the dollar flow into a given mutual fund as:

$$\$\text{Flow}_t = \text{TNA}_t - (1 + R_t) \times \text{TNA}_{t-1} \tag{6}$$

i.e. the difference between current total net asset value (TNA) and the total net asset value of the previous period, scaled up by the return over the intervening period (R_t; the data on total net asset values and fund returns are from CRSP Mutual funds). The dollar flow represents the net "new money" into the mutual fund. The percentage flow into the mutual fund is $\$\text{Flow}_t$ divided by the previous–period total net asset value.

For each firm–year observation, the first hotness proxy is the weighted average of the percentage flows into all mutual funds belonging to the same investment style as the firm, where the weights are given by the funds' total net asset values. I call this variable Own style flow.

I also consider two further hotness proxies, based on the redemptions from the funds belonging firm's opposite style. Let j denote a given investment style, and k its opposite. The second hotness proxy is then:

$$\text{Opposite style flow}_{jt} = -\frac{\$\text{Flow}^{-}_{kt}}{\text{TNA}_{jt}} \tag{7}$$

where $\$\text{Flow}^{-}_{kt}$ is the dollar net redemptions from mutual funds belonging to investment style k (i.e. the dollar flow from mutual funds of style k that experience negative flows). TNA_{jt} is the total net asset value of all funds belonging to investment style j. I call this variable Opposite style flow.

Finally, the third hotness proxy is:

$$\text{Projected flow}_{jt} = \frac{\text{proj}(\$\text{Flow}^{+}_{jt} \mid \$\text{Flow}^{-}_{kt})}{\text{TNA}_{jt-1}} \tag{8}$$

where $\text{proj}(y \mid x)$ denotes the predicted values from a regression of y on x, without an intercept. Flow^{+}_{jt} (Flow^{-}_{kt}) denotes the total dollar flow from mutual funds belonging to investment style j (k), which experience positive flows (negative flows — net redemptions). I call this variable

Projected flow.[5]

3.2 *Other variables of interest*

I look at a number of variables related to capital structure. Following Fama and French (2005), I define the financial deficit (DEF) as the yearly change in total assets (Compustat item 6) minus the yearly change in retained earnings (item 36) divided by total assets. I compute net debt issues (dL) as the yearly change in total liabilities (Compustat item 181) divided by total assets (item 6). Net book equity issues (dS_B) are equal to DEF minus net debt issues, or equivalently the yearly change in stockholders' equity (Compustat item 216) minus the yearly change in retained earnings (item 36), divided by total assets. Net market equity issues (dS_M) are the product between the split–adjusted growth in shares outstanding (Compustat item 25, adjusted using Compustat's split adjustment factor) and the average split–adjusted stock price at the beginning and the end of the fiscal year (item 199), again divided by total assets (item 6). I finally define leverage as long-term debt (Compustat item 9) plus short-term debt (item 34), divided by long-term debt plus short term debt plus stockholders' equity (Compustat item 216).

I consider three measures of investment. The first measure is Capex, equal to capital expenditure (Compustat item 128) divided by lagged total assets (Compustat item 6). The second measure is M&A expenditure, equal to acquisition expenditure (Compustat item 129) divided by lagged total assets (item 6). The third measure is M&A count, the number of M&A announcements retrieved from the Security Data Corporation's (SDC) Mergers and Acquisitions data set.

I look at two measures of profitability, return on equity (ROE) and return on assets (ROA). I define ROE as the ratio between net income (Compustat item 172) and prior-year stockholders' equity (item 216). Likewise, I define ROA as the ratio between net income (Compustat item 172) to prior-year total assets (item 6).

I construct three proxies for the firm's investment opportunities using data from the NBER Patent Citations Data File (Hall et al., 2001). These data comprise detail information on almost 3 million US patents granted up to 1999, and their citations. I look at three different indices of the firm's investment opportunities based on patent citations. The first one is the total number of citations received by the patents that the firm applies for in a given year (Citations). If the firm applies for a patent in 1992, I count all the citations received by that patent in the years following 1992. I then sum across all patents that the firm applies for in 1992, thus obtaining the value of Citations for 1992. If the firm's 1992 patents receive many citations in the years subsequent to 1992, the firm has good investment opportunities as of 1992. The other two proxies

[5] As a robustness check, in unreported tests I re-run the entire analysis using a version of Frazzini and Lamont's (2008) flow (net of the "counterfactual" flow) aggregated by investment style. All the results still hold.

are constructed along the same lines, but instead of looking at the total number of citations, they are based on the patents' average "generality" index (Generality), and their average "originality" index (Originality), defined in detail in the Appendix. The number of citations is a loose measure of the quality of the patents, while the generality and originality indexes have been proposed in the literature (see Hall et al., 2001) as more accurate measures of the innovativeness of the firm's research and development.

I supplement these data with a comprehensive set of control variables: firm size (log total assets), Tobin's Q, cash holdings, cash flow, dividend payout, the fraction of shares held by institutional investors (% Inst. Hold), the stock return, the tax clientele index (ratio of after-tax income from a dollar in long-term capital gains to a dollar in dividends), the Baker and Wurgler (2004) dividend premium, the Baker and Wurgler (2006) sentiment indicator. All variables are described in greater detail in the Appendix, and their summary statistics are reported in Table I.

4 Empirical analysis

4.1 Style investing and dividend increases

I start by looking at signaling through payout policy, in the form of dividend increases. Hypothesis H1 implies that in a "hot" style the firm will be less likely to announce a dividend increase.[6]

I retrieve dividend increase announcement dates from the CRSP Events tape, for the period 1980 through to 2006. Following standard practice (Benartzi et al., 1997; Grullon et al., 2002; Amihud and Li, 2006, among others) I restrict the sample to ordinary, quarterly, taxable cash dividends (CRSP distribution code 1232) paid in US dollars. I exclude financial firms (SIC codes 6000–6999) and regulated utilities (SIC codes 4900–4999). I also exclude American trust components, closed-end funds, and REIT's, as well as dividend intiations and omissions (requiring at least four consecutive payments per year per firm). I require that there is no announcement of other distributions in a 30-day window around the announcement. Furthermore, I exclude percentage dividend increases by less than 12.5% and more than 500%. I finally require that all the variables used in the subsequent analysis are available for all firms announcing a dividend increase.

The resulting sample consists of 4,820 dividend increase announcements. The main features

[6] An earlier draft of this paper also looked as share repurchases, as an alternative form of signaling through the payout policy. The predictions of the model of Section 2 for the market reaction to share repurchases, however, are ambiguous. On the one hand, in a "hot" style the price is less sensitive to information, so that the market reaction should be smaller. On the other hand, in a "hot" style the firm needs to repurchase a larger number of shares to make a given payout (just think of repurchases as a negative equity issue to see this), so that there could be a larger increase in the stock price in response to the repurchase. This result makes the interpretation of tests based on repurchases less clear.

of the sample are reported in Table II (Panel A). The magnitude of the mean (median) percentage dividend increase is about 16% (12%). In line with the prior literature, I find a mean (median) cumulative abnormal return (CAR) of 0.62% (0.63%) over a three-day horizon (days –1 to +1) around the announcement date, highly statistically significant, and CAR's of similar magnitude over alternative event windows.

I estimate a probit model for the probability of a dividend increase announcement. The dependent variable is a dummy that takes the value of 1 if the firm announces at least one dividend increase in a given year, 0 otherwise. The explanatory variables are the hotness proxies Own style flow, Opposite style flow and Projected flow, along with a set of standard controls variables, including industry and year fixed effects. All explanatory variables are expressed in their beginning–of–the–year values, and the standard errors are clustered around firms (Petersen, 2009).

Table III reports the estimation results. Consistent with hypothesis H1, across all specifications the coefficients on the hotness proxies are significantly negative. The effect of style investing is also strongly economically significant: a one–standard–deviation increase in Own style flow (Opposite style flow, Projected flow) reduces the probability of a dividend increase announcement by 16% (21%, 12%) relative to the unconditional probability (about 1 percentage point in absolute terms). These findings are consistent with my working hypothesis, and indicate that in a "hot" style the firm is less likely to signal. Next, I turn to what happens when the firm does signal.

4.2 *Style investing and the market reaction to dividend increases*

Price pressure from the style investors makes the stock price less sensitive to information about the firm's profitability. As a consequence, the hotter the investment style, the smaller the market reaction to a dividend increase announcement (hypothesis H2). To test this hypothesis, I run:

$$\text{CAR}_i = \alpha + \beta \Delta \text{Div}_i + \gamma \text{Hotness}_i + \delta \left(\Delta \text{Div}_i \times \text{Hotness}_i \right) + \zeta' x_i + \varepsilon_i \tag{9}$$

where CAR denotes the cumulative abnormal return over windows $(-1, +1)$, $(-2, +2)$, and $(-3, +3)$ around the announcement date, ΔDiv is the percentage dividend increase, and Hotness denotes the hotness proxy (Own style flow, Opposite style flow, or Projected flow). x is the vector of standard control variables, including industry fixed effects, used throughout the paper, and the regression is based on the sample of dividend increase announcements described in the previous Section. I account for the endogeneity of the decision to increase dividends by a Heckman (1979) two–stage procedure, where the inverse Mills ratio is obtained from the probit regressions of Table III. The expectation is that $\hat{\delta} < 0$, i.e. that the hotter the investment style, the smaller the market reaction to a given percentage increase in dividends.

The results are reported in Table IV. Consistent with hypothesis H2, across all specifications the coefficient on the ΔDiv–Hotness interaction term is negative, and statistically significant. To provide a better sense of the economic impact of style investing on the market reaction to the dividend increase announcement, I split the sample between announcements with high vs. low (top vs. bottom tercile) hotness, and re-run (9) separately on the two subsamples. In the high–hotness subsample, the mean percentage dividend increase results in a market reaction that is only 39% as large as in the low–hotness subsample.[7] Therefore, style investing results in a smaller market reaction to the dividend increase announcement in the short run. The next Section looks at what happens in the long run.

4.3 Style investing and the long–run returns following the dividend increase

In the long run, market sentiment about the "hot" style fades, and the style investors are no longer active — hence, the stock price will incorporate the full information content of the dividend increase. Therefore, when the firm belongs to a hot style at the announcement date, the dividend increase should be followed by positive long–run returns (hypothesis H3).

I provide two pieces of evidence consistent with this hypothesis. First, I form portfolios of stocks that announce a dividend increase, based on the level of the hotness proxies at the time of the announcement. For each hotness proxy, I apply Ibbotson's (1975) Returns Across Time and Securities (IRATS) method, combined with a Carhart (1997) four–factor model, to three portfolios: "Hot" (hotness above the 70^{th} percentile), "Lukewarm" (hotness between the 70^{th} and 30^{th} percentiles), and "Cold" (hotnessg below the 30^{th} percentile). In figure 2, I plot the cumulative IRATS alphas for the three portfolios, based on Own style flow (similar graphs obtain with the portfolios based on Opposite style flow and Projected flow). The results are described in greater detail in table II, panel B. Consistent with hypothesis H3, the "Hot" portfolio outperforms the "Lukewarm" and "Cold" portfolios, earning a significant 24–month cumulative abnormal return of up to 20%.[8]

Second, I regress the abnormal stock return following the dividend increase on the firm's style's hotness at the time of the announcement, along with the standard set of controls used throughout, including the inverse Mills ratio obtained from the probit regressions of Section 4.1

[7] Amihud and Li (2006) find that the market reaction to the dividend increase announcement is smaller in the presence of high institutional holdings. In order to control for confounding effects that could arise from the correlation between style hotness and institutional holdings, all specifications of Table IV include the fraction of institutional holdings % Inst. Hold. among the control variables. In unreported tests, I augment (9) to include an interaction term between ΔDiv and % Inst. Hold. The results are unaltered, showing that style investing affects the market reaction to the dividend increase announcement through a channel that is separate from the effect of institutional holdings.

[8] As a robustness check, I repeat the exercise estimating the calendar–time alphas for a portfolio that is long in the "Hot" portfolio, and short in the "Cold" portfolio. The results are consistent with the ones presented here, and are omitted in the interest of brevity.

(Table III). The abnormal stock return is computed as the stock return minus the return on the firm's size–, beta–, or size–and–beta decile portfolio, over a 24–month horizon (similar results obtain on different horizons).

The results are reported in Table V. Across all hotness proxies, the long–run abnormal return is positively related to the firm's style's hotness at the announcement date. A one–standard–deviation increase in Own flow results in an increase in the long–run abnormal return net of the size decile portfolio of about 3 percentage points (3 percentage points for the net–of–beta portfolio return, and 5 for the net–of–beta–and–size portfolio return; similar effects obtain for Opposite flow and Projected flow).

Thus, style investing makes the firm less likely to signal its value through a dividend increase, and reduces the market reaction to the increase announcement in the short run. In the long run, as the investment style is no longer "hot", the stock price incorporates the information contained in the announcement, and there are positive abnormal returns. This provides an explanation for the underreaction to dividend increases. In the next Section, I turn to the impact of style investing on the choice of financing.

4.4 *Style investing and the choice of financing*

According to hypothesis H4, style investing induces the firm to issue equity, thus violating the pecking order of capital structure. I test this hypothesis using a standard approach introduced by Shyam-Sunder and Myers (1999). I regress net debt and equity issues on the amount of external financing needed by the firm, or financial deficit:

$$\text{Security issue}_{it} = \alpha + \beta \text{DEF}_{it} + \varepsilon_{it} \tag{10}$$

where the dependent variable is net security issue, equal to net debt issues (dL), net market equity issues (dS_M), or net book equity issues (dS_B), previously defined, and DEF is the financial deficit. The pecking order predicts a coefficient β equal to 1 when the dependent variable is net debt issues dL — i.e., the firm only resorts to external financing in the form of debt. Under hypothesis H4, the DEF coefficient is a function of the firm's style's hotness: a decreasing function when looking at debt issues, and an increasing function when looking at equity issues. I therefore split the sample based on the quintiles of the hotness proxies, and run (10) separately on each subsample.

The estimation results are reported in table VI. Consistent with hypothesis H4, the DEF coefficient in the debt issues regressions decreases monotonically as one moves up the hotness quintiles (panel A). The drop in the DEF coefficient is highly statistically significant, as well as economically sizable: from 0.54 to 0.38 across Own style flow quintiles (from 0.46 to 0.36 across Opposite style flow quintiles; from 0.51 to 0.39 across Projected flow quintiles). The equity issues regressions (panels B. and C. of table VI) mirror the case of debt issues. Under both measures of equity issues, and across the three hotness proxies, the DEF coefficient increases monotonically as one moves up the hotness quintiles. The increase in the DEF coefficient from the bottom to the top style investing quintiles is highly statistically significant, and of similar magnitude as the drop in the DEF coefficient of panel A.[9]

These estimates have a concrete economic meaning for financing choices. Too see this, compare a firm in the bottom Own style flow quintile to a firm in the top quintile. For every dollar of debt financing of the bottom quintile firm, the top quintile firm issues a mere 70 cents of debt. Conversely, for every dollar of equity financing of the bottom quintile firm, the top quintile firm issues $2.15 in terms of market equity.[10] Thus, style investing affects the firm's choice of financing. The next Section looks at the investment and profitability of the equity issuers driven by style investing.

4.5 Investment and profitability of style investing–driven issuers

Hypothesis H5 predicts that in a hot style the firm issues equity to invest, and the pool of style investing–driven equity issuers is on average more profitable. I look at the investment and profitability of the equity issuers diven by style investing as follows. I decompose equity issues into a component due to style investing, dS^{Style}, and a residual component orthogonal to dS^{Style}, $dS^{\perp}$. dS_M^{Style} is obtained as the predicted values from a regression of net market equity issues (dS_M) on the three hotness proxies (Own style flow, Opposite style flow, Projected flow). $dS_M^{\perp}$ is the vector of residuals from this regression. dS_B^{Style} and $dS_B^{\perp}$ are obtained by the same procedure, replacing dS_M with net book equity issues dS_B. I then estimate:

$$\text{Investment}_{it} = \alpha + \beta dS_{it-1}^{\text{Style}} + \gamma dS_{it-1}^{\perp} + \delta' x_{it-1} + \varepsilon_{it} \tag{11}$$

where dS^{Style} and $dS^{\perp}$ are the component of market (book) equity issues driven by style investing and the residual component, and x is the set of standard control variables used throughout. The dependent variable is one of three measures of investment: Capex, M&A expenditure, and M&A count (all previously defined).

[9] As a robustness check, in unreported tests I use the information of the entire sample and re-run (10) interacting the financial deficit DEF with the hotness proxies Own style flow, Opposite style flow, and Projected flow. Consistent with the results of table VI, when the dependent variable is net debt issues dL, the coefficient on the financial deficit–hotness interaction term is negative, and highly statistically significant. Conversely, when the dependent variable is net equity issues (dS_M or dS_B), the coefficient on the financial deficit–hotness interaction term is positive, and highly significant.

[10] In robustness tests omitted in the interest of brevity, I find that style investing, by inducing the firm to issue equity rather than debt, significantly reduces leverage, in the short run (based on yearly changes in leverage), as well as in the long run, through the cumulative impact of equity issues driven by style investing.

When the dependent variable is Capex, (11) is estimated using firm, industry, and year fixed–effects. When the dependent variable is M&A, (11) is estimated as s Tobit regression with industry and year fixed effects, considering the dependent variable censored below zero. Finally, when the dependent variable is M&A count, (11) is estimated as a Poisson regression, with industry and year fixed effects, to account for the discrete nature of M&A count. In order to account for the fact that dS^{Style} and $dS^{\perp}$ are generated regressors (Murphy and Topel, 1985), in all regressions the t–statistics are based on bootstrapped standard errors, clustered around firms (Kayhan and Titman, 2007; Petersen, 2009).[11]

The results are reported in table VII. Consistent with hypothesis H5, across all specifications the coefficient on dS^{Style} is positive, and statistically significant. Style investing–driven equity issuers, therefore, issue equity to invest — the average style investing–driven market equity issue results in a 9% increase in Capex, an 8% increase in acquisitions expenditure M&A, and a 6% increase in the yearly number of acquisitions M&A count (similar effects obtain for book equity issues).

I then compare the profitability of style investing–driven equity issuers to that of the other issuers. Profitability is measured by ROE and ROA over one–, two– and three–year horizons. The ROE over an n–year horizon is defined as:

$$\text{ROE}_{it}^{(n)} = \left(\prod_{s=t+1}^{t+n} (1 + \text{ROE}_{is}) \right)^{\frac{1}{n}} - 1 \tag{12}$$

The multi-year ROA is defined analogously. I estimate the same specification as (11), replacing investment by ROE and ROA. The t–statistics are again based on bootstrapped standard errors, clustered at the firm level, to account for the generated regressor problem.

The results are reported in table VIII. Consistent with hypothesis H5, the coefficient on dS^{Style} is always larger than that on $dS^{\perp}$, and their difference is statistically significant at the 1% level. The average market equity issue driven by style investing is associated to a 32% (30%) larger three–year ROE (ROA) than the residual equity issues (similar effects obtain for one– and two–year horizons, and for book equity issues). These results are consistent with my working hypothesis, and suggest that the firms that issue equity due to the presence of style investing in the market are indeed more profitable.

[11]More precisely, for each specification I run 500 bootstrap replications that account for clustering at firm level. Bootstrapped standard errors clustered at firm level have been used by Kayhan and Titman (2007), with the same number of replications. Kayhan and Titman (2007) argue that their robustness is comparable, if not superior, to that of the conventional clustered standard errors advocated by Petersen (2009). In unreported tests, I find that, with these data and specifications, the conventional clustered standard errors are close in magnitude to the bootstrapped ones.

5 Alternative explanations and robustness checks

This Section considers two alternative explanations for the results on the choice of financing, and presents evidence supporting the style investing theory. Next, it tests the robustness of the results, by repeating the analysis of Section 4 on sub-samples of firms that are undervalued relative to their investment style or industry, or characterized by high information asymmetry.

5.1 Alternative explanations

There are two potential competing explanations for the results on the choice of financing (Section 4.4). The first is a special case of the pecking order theory: when the firm has "extremely" good investment opportunities, it can find it convenient to issue and invest, even in the original Myers and Majluf (1984) framework. The second explanation is the market timing theory of Baker and Wurgler (2002): the firm could issue equity when it is overvalued, even when it does not have any investment opportunities.

Neither of these alternative explanations has immediate implications for dividend signaling, nor do they predict any significant impact of mutual fund redemptions from the firm's "opposite" style (Opposite style flow and Projected flow). They can become relevant, however, when looking at the equity issues.

One way to counter both alternative explanations is to show that in a hot investment style: (1) firms will issue equity even when their investment opportunities are not "extremely" good; and (2) firms with more limited investment opportunities will issue *less* equity than firms with greater investment opportunities.

I use data from the NBER Patent Citations Data Set (Hall et al., 2001) to proxy for the firm's investment opportunities. Patent citations data present the advantage that they are not immediately correlated to the stock price or overvaluation, unlike traditional proxies for investment opportunities such as Tobin's Q. The proxies for investment opportunities based on patent citations are the number of citations received by the patents that the firm applies for in a given year (Citations), and their average "generality" index (Generality), and "originality" index (Originality), all described above (as well as in greater detail in the Appendix).

I re-run the equity issues regressions (10) on four separate sub-samples: firms in "hot" vs. "cold" styles (Own flow, Opposite flow, or Projected flow above/below the median) and with high vs. low investment opportunities, proxied for by their patents citations data (Citations, Generality, or Originality above/below the median). The two alternative explanations are rejected in favor of the style investing story if both "hot" sub-samples display more equity issues than the "cold" sub-samples *and* both low investment opportunities sub-samples display less equity issues than the high investment opportunities sub-samples.

The results are summarized in table IX. Consistent with the style investing explanation, and inconsistent with the two alternative hypotheses, the "hot"–low investment opportunities firm resorts to 26% *less* equity financing than the "hot"–high investment opportunities firm, and to 28% *more* equity financing than the "cold"–low investment opportunities firm (based on the comparison of the DEF coefficients from the regressions on sub-samples based the Own style flow and Citations proxies — similar results obtain for different proxies). Therefore, both the "extreme" pecking order and the pure market timing hypotheses should be rejected, in favor of a scenario in which style investing impacts signaling and the choice of financing by making the stock price less sensitive to new information.

5.2 *Robustness checks: undervalued and informationally opaque firms*

In a first set of robustness checks, I repeat the analysis of Section 4, restricting the sample to firms that are undervalued relative to their investment style or industry. Market timing (Baker and Wurgler, 2002) should not apply to these firms, as they are undervalued. Therefore style investing would impact with signaling and the pecking order mainly by reducing the sensitivity of the stock price to new information. I identify undervalued firms using the misvaluation proxies of Rhodes-Kropf et al. (2005), based on the firm's market–to–book ratio relative to its investment style or industry (the construction of the misvaluation proxies is described in greater detail in the Appendix).

The results are reported in tables X (dividend increases probit regressions), XI and XII (short and long–run market reactions to the dividend increase), XIII (financial deficit regressions), XIV (investment and profitability regressions). In all cases, and across all misvaluation proxies, the results are confirmed, thus ruling out the simple market timing explanation for these findings.

In a second set of robustness checks, I restrict the sample to firms characterized by high information asymmetry. In this sub-sample, the effects predicted by dividend signaling and the pecking order should be most relevant. I use five different information asymmetry proxies: Amihud's (2002) illiquidity, Llorente et al.'s (2002) c_2 coefficient, Pástor and Stambaugh's (2003) γ coefficient, analyst following (the yearly average number of analysts' forecast of earnings–per–share from I/B/E/S), and Easley et al.'s (1996) PIN (all defined in the Appendix). I restrict the sample to the opaque firms, i.e. those firms whose information asymmetry is higher than the median.

Next, I repeat the tests of Section 4 on the opaque firms. The results are reported in tables XV (dividend increases probit regressions), XVI and XVII (short and long–run market reactions to the dividend increase), XVIII (financial deficit regressions), XIX (investment and profitability regressions). In all cases, and across all information asymmetry proxies, the results of the previous Sections are largely confirmed. Therefore, even when the classic dividend signaling and pecking order models would be most favored, style investing can reverse their predicted effects.

6 Conclusion

This paper studies the interaction between adverse selection and style investing for firm policies, by looking at how style investing affects the predictions of the classic dividend signaling and pecking order theories. When investors allocate their portfolios on the basis of "style" considerations, they make the stock price less sensitive to information about the individual firm. As a consequence, the firm stands to gain little from signaling, while it can issue equity bearing smaller dilution costs. Hence the breakdown of both dividend signaling and the pecking order.

I present empirical evidence consistent with this theory. Using aggregate mutual fund investment flows and redemptions as proxies for the "hotness" of a given investment style (i.e. the extent to which the firm faces "style" investors in the market for its shares), I find that in a "hot" style the firm is less likely to signal its value through a dividend increase. Furthermore, when it does announce a dividend increase, the market reaction is smaller, and followed by significantly positive abnormal returns, as the market price cannot immediately incorporate the information contained in the announcemend, due to the effect of style investing. Moreover, style investing makes the firm resort to more equity financing, and less debt financing. Finally, by breaking down the pecking order, style investing results in a pool of equity issuers that is on average more profitable, in terms of ROE and ROA.

While shedding new light on the empirical difficulties of two classic theories, these findings suggest that the implications of "catering", or "market–driven" corporate finance (Baker, 2009) can be empirically as relevant as those of the traditional corporate finance theories based on adverse selection arguments — such as dividend signaling and the pecking order.

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A Detailed derivations

A.1 Equity issue N and its properties

The equity issue N must be large enough to cover the required investment I. Let $\mu^* \equiv \mu + \vartheta$ for a given μ. N must satisfy:

$$N[\mu^* + w_s(\varphi - \mu^*) - (Q+N)/\gamma] = I \tag{A.1}$$

N is the minimum of the two solutions to the above equation, and is given by (3).

Let us first show that $\varphi > \mu^*$ guarantees that $\partial N/\partial w_s < 0$ — i.e. as long as the presence of style investing involves some overvaluation, the dilution cost associated with the equity issue will be smaller in the presence of a greater mass of style investors. To see this, observe that:

$$2\frac{\partial N}{\partial w_s} = \gamma(\varphi - \mu^*) - \frac{\gamma^2[\mu^* + w_s(\varphi - \mu^*) - Q/\gamma](\varphi - \mu^*)}{\sqrt{\gamma^2[\mu^* + w_s(\varphi - \mu^*) - Q/\gamma]^2 - 4I\gamma}} \tag{A.2}$$

The above is less than zero if $\varphi > \mu^*$ and:

$$\sqrt{\gamma^2[\mu^* + w_s(\varphi - \mu^*) - Q/\gamma]^2 - 4I\gamma} < \gamma[\mu^* + w_s(\varphi - \mu^*) - Q/\gamma] \tag{A.3}$$

The RHS is proportional to the stock price, and is therefore positive, so that we can square both sides of the inequality. Re–organizing and simplifying yields the condition $4I\gamma > 0$, which is always satisfied. Replacing the generic μ^* by $\mu_B + \vartheta$ and $\bar{\mu} + \vartheta$ yields the desired properties of N for propositions 1 and 2. From this follows the requirement that $\varphi > \bar{\mu} + \vartheta > \mu_B + \vartheta$. □

A.2 Proof of proposition 1

The equilibrium requires three pairs of incentive conditions. Given the market beliefs implied by the equilibrium, we require that the G firm does not want to mimic either the M or the B firm, that the M firm does not want to mimic either the G or the B firms, and that the B firm does not want to mimic either the G or the M firms.

The manager maximizes $\lambda V_1 + (1-\lambda)V_3$, which is equal to: $\lambda Q \times$ Stock price at date $1 + (1-\lambda)Q \times$ Terminal EPS. Thus, straightforward calculations show that the G firm will not mimic the M firm if:

$$\lambda(1-w_s)(\mu_G - \delta_G - \mu_M) > (1-\lambda)\delta_G \tag{A.4}$$

Likewise, the M firm will not mimic the G firm if:

$$\lambda(1-w_s)(\mu_G - \delta_G - \mu_M) < (1-\lambda)\delta_M \tag{A.5}$$

Observe that the LHS of the above conditions are decreasing in w_S — as the style investors make up a larger fraction of the investor population, it is less and less convenient for the G firm to signal its true value. Why? Because the price increase relative to the price of an M firm is smaller, since the price is less responsive to the dividend signal. This comes directly from the fact that $(\partial^2/\partial\mu\partial w_S)P < 0$.

By the same token, the G firm will not mimic the B firm if:

$$\lambda\{(1-w_s)[(\mu_G-\delta_G)-(\mu_B+\vartheta)]+N/\gamma\} > (1-\lambda)(\delta_G+\vartheta) \quad \text{(A.6)}$$

Likewise, the B firm will not mimic the G firm if:

$$\lambda\{(1-w_s)[(\mu_G-\delta_G)-(\mu_B+\vartheta)]+N/\gamma\} < (1-\lambda)(\delta_B+\vartheta) \quad \text{(A.7)}$$

What happens when w_s increases? The LHS of the above inequalities decreases, as long as $\varphi > \mu_B+\vartheta$ and thus $\partial N/\partial w_s < 0$, up to the point where the incentive constraint of the G firm is violated, and the equilibrium breaks down.

The conditions that ensure that the B firm does not mimic the M firm and vice versa have a similar form, and they are affected in the same way by style investing — i.e. in the presence of a greater mass of style investors w_s it is more likely that M will deviate and mimic the B firm, issuing and investing. □

A.3 Proof of proposition 2

The proof of proposition 2 follows the same lines as the previous one. The form of the incentive conditions is identical, except that the signs of the inequalities are reversed. There is a different value for the equity issue N, where μ is replaced by the ex ante expected earnings–per–share $\bar{\mu}$. The pooling equilibrium is more likely to hold when w_s is higher. □

B Variable definitions

"Hotness" proxies

Own style flow Flow into mutual funds belonging to the same investment style as the firm. I define six investment styles, partitioning the Compustat universe along the size (market value of equity) and book–to–market dimensions, using the Fama–French breakpoints. The firm will then be small, medium, or large, as well as value or growth. A mutual fund's investment style is the investment style that represents the largest fraction (in terms of market value) of the mutual fund's portfolio. The dollar flow into the mutual fund at date t is given by:

$$\$\text{Flow}_t = \text{TNA}_t - (1 + R_t) \times \text{TNA}_{t-1}$$

where TNA denotes the total net asset value of the mutual fund, and R the fund return from date $t-1$ to date t. The percentage flow is the dollar flow, scaled by the previous period total net asset value. Finally, the flow into a given investment style is the total net asset value–weighted average of the flows into all mutual fund belonging to the same investment style.

Opposite style flow (Minus) net redepmtions from mutual funds belonging to the investment style opposite to that of the firm, scaled by the current total net asset value of all mutual funds beloning to the same investment style as the firm; denoting by k the investment style opposite to investment style j:

$$\text{Opposite style flow}_{jt} = -\frac{\$\text{Flow}^-_{kt}}{\text{TNA}_{jt}}$$

where $\$\text{Flow}^-_{kt}$ is the total dollar flow from mutual funds belonging to investment style k, which experience negative flows.

Projected flow The component of the flow into the firm's investment style's mutual funds, explained by the redeptions from mutual funds belonging to the opposite investment style. Letting style k be the style opposite to style j, it is defined as:

$$\text{Projected flow}_{jt} = \frac{\text{proj}(\$\text{Flow}^+_{jt} \mid \$\text{Flow}^-_{kt})}{\text{TNA}_{jt-1}}$$

where $\text{proj}(y|x)$ denotes the predicted values from a regression of y on x, with no intercept; Flow^+_{jt} (Flow^-_{kt}) denotes the total dollar flow from mutual funds belonging to investment style j (k), which experience positive flows (negative flows).

Variables related to the choice of financing

DEF Financial deficit. Following Fama and French (2005), define the financial deficit as:

$$\text{DEF}_t = \frac{(\text{Total assets}_t - \text{Total assets}_{t-1}) - (\text{Retained earnings}_t - \text{Retained earnings}_{t-1})}{\text{Total assets}_t}$$

i.e. the difference between the yearly change in total assets (Compustat item 6) and the yearly change in retained earnings (Compustat item 36), scaled by total assets.

dL Net debt issues; again following Fama and French (2005), define dL as the change in total liabilities (Compustat item 181) scaled by total assets (Compustat item 6):

$$dL_t = \frac{\text{Total liabilities}_t - \text{Total liabilities}_{t-1}}{\text{Total assets}_t}$$

dS_B Net book equity issues; again following Fama and French (2005), define dS_B as the financing deficit DEF minus the net debt issues/change in liabilities dL, or equivalently the change in stockholder's equity (SE, Compustat item 216) minus the change in retained earnings (Compustat item 36), again scaled by total assets (Compustat item 6):

$$dS_{B,t} = \text{DEF}_t - dL_t =$$

$$= \frac{(\text{SE}_t - \text{SE}_{t-1}) - (\text{Retained earnings}_t - \text{Retained earnings}_{t-1})}{\text{Total assets}_t}$$

dS_M Net market equity issues; again following Fama and French (2005), define dS_M as the product between (i) the split–adjusted growth in shares outstanding and (ii) the average of the split–adjusted stock price at the beginning and end of the fiscal year, both from Compustat, again scaled by total assets (Compustat item 6):

$$dS_{M,t} = \frac{(\text{Shares}_t\text{Adjust}_t - \text{Shares}_{t-1}\text{Adjust}_{t-1}) \times (\text{Price}_t/\text{Adjust}_t + \text{Price}_{t-1}/\text{Adjust}_{t-1})/2}{\text{Total assets}_t}$$

where Shares is total shares outstanding (Compustat item 25), Price is the share price at fiscal year end (Compustat item 199) and Adjust is the Compustat split adjustment factor.

Patent citation indices

Citations Total number of citations received by patents that the firm applies for in a given year. Patent citation data are retrieved from the NBER Patent Citations Data File (Hall et al., 2001), available for download from http://-www.nber.org/patents/.

Generality Average generality index (Hall et al., 2001) for the patents that the firm applies for in a given year. For a given patent, the generality index is defined as:

$$1 - \sum_j^{n_i} s_{ij}^2$$

where s_{ij} denotes the percentage of citations received by patent i that belong to patent class j, out of n_i patent classes. Thus, if a patent is cited by subsequent patents that belong to a wide range of fields the measure will be high, whereas if most citations are concentrated in a few fields it will be low (close to zero). I average the above index across all patents that the firm applies for in a given year. Patent citation data are retrieved from the NBER Patent Citations Data File (Hall et al., 2001).

Originality Average originality index (Hall et al., 2001) for the patents that the firm applies for in a given year. For a given patent, the originality index is defined as the generality index, except that it is based on citations *made*, as opposed to *received*. Patent citation data are retrieved from the NBER Patent Citations Data File (Hall et al., 2001).

Investment and profitability measures

Capex Capital expenditure, equal to the ratio of Capital expenditure (Compustat item 128) to lagged total assets (item 6).

M&A M&A expenditures, equal to the ratio of acquisitions expenditure (Compustat item 129) to lagged total assets (item 6).

M&A count Number of acquisitions announced by the firm in a given year. Data on acquisition announcements is retrieved from the Security Data Corporation's (SDC) M&A data set.

ROA Return on assets, equal to the ratio of net income (Compustat item 172) to lagged total assets (item 6).

ROE Return on equity, equal to the ratio of net income (Compustat item 172) to lagged stockholders' equity (item 216).

Misvaluation and information asymmetry proxies

MS_1, MS_2, MS_3 Measures of misvaluation, based on short-run deviations from firms' long-run market value to book. Following Rhodes-Kropf et al. (2005), I construct the misvaluation measure as follows. For each sample year and each investment style, I estimate cross-sectional regressions:

$$\begin{aligned} m_{it} &= \alpha_{0jt} + \alpha_{1jt} b_{it} + \varepsilon_{it} \\ m_{it} &= \alpha_{0jt} + \alpha_{1jt} b_{it} + \beta_{1jt} \ln\left(\text{NI}_{it}^{+}\right) + \beta_{2jt} \ln\left(-\text{NI}_{it}^{-}\right) + \eta_{it} \\ m_{it} &= \alpha_{0jt} + \alpha_{1jt} b_{it} + \beta_{1jt} \ln\left(\text{NI}_{it}^{+}\right) + \beta_{2jt} \ln\left(-\text{NI}_{it}^{-}\right) + \gamma_{jt}\text{Leverage}_{it} + \xi_{it} \end{aligned}$$

where i denotes firms, j style, and t sample years. m_{it} is firm i's log–market value in year t, and b_{it} firm i's log–book value in year t (market and book values of equity are defined as above); NI_{it}^{+} and NI_{it}^{-} denote the positive and negative parts of firm i's net income (Compustat data item 172), respectively; leverage is defined below. Misvaluation is then given by:

$$\begin{aligned} MS_{1,it} &\equiv m_{it} - (\hat{\alpha}_{0jt} + \hat{\alpha}_{1jt} b_{it}) \\ MS_{2,it} &\equiv m_{it} - [\hat{\alpha}_{0jt} + \hat{\alpha}_{1jt} b_{it} + \hat{\beta}_{1jt} \ln(\mathrm{NI}^+_{it}) + \hat{\beta}_{2jt} \ln(-\mathrm{NI}^-_{it})] \\ MS_{3,it} &\equiv m_{it} - [\hat{\alpha}_{0jt} + \hat{\alpha}_{1jt} b_{it} + \hat{\beta}_{1jt} \ln(\mathrm{NI}^+_{it}) + \hat{\beta}_{2jt} \ln(-\mathrm{NI}^-_{it}) + \hat{\gamma}_{jt}\text{Market Leverage}_{it}] \end{aligned}$$

where $\hat{\alpha}_{0jt}$, $\hat{\alpha}_{1jt}$, $\hat{\beta}_{1jt}$, $\hat{\beta}_{2jt}$ and $\hat{\gamma}_{jt}$ denote the estimates of the models' parameters.

MI_1, MI_2, MI_3 Alternative measures of misvaluation, again based on short-run deviations from firms' long-run market value to book. Here I replace invesment styles by the Fama–French 12 industries in the construction of each misvaluation measures.

Illiquidity Amihud (2002) measure of stock illiquidity, defined as:

$$\text{Illiquidity}_t = 1000 \times \sqrt{\frac{|R_t|}{\$V_t}}$$

where R_t is the stock return over period t, and $\$V_t$ is the dollar volume corresponding to the same period.

c_2 Information asymmetry coefficient of Llorente et al. (2002); it is the estimate of coefficient c_2 from a regression:

$$R_t = c_0 + c_1 R_{t-1} + c_2 R_{t-1} V_{t-1} + \varepsilon_t$$

where R_t is the stock return on day t, and V_t the corresponding (de–trended) log–trading volume. I estimate the above regression stock by stock, year by year, so as to obtain for each stock a series of yearly estimates of c_2.

γ Information asymmetry coefficient of Pástor and Stambaugh (2003); it is the estimate of coefficient γ from a regression:

$$R_t - R_{mt} = \alpha + \beta R_{t-1} + \gamma \, \mathrm{sign}\{R_{t-1} - R_{mt-1}\} \$V_{t-1} + \varepsilon_t$$

where R_t is the stock return on day t, $\$V_t$ the corresponding dollar volume, and R_{mt} is the daily return on the value–weighted market return. I estimate the above regression stock by stock, year by year, so as to obtain for each stock a series of yearly estimates of γ.

PIN Private information measure of Easley et al. (1996, 2002); data available from http://www.rhsmith.umd.edu/-faculty/hvidkjaer/.

Analyst following Yearly mean number of analysts' forecasts of earnings–per–share, as retrieved from I/B/E/S.

Other control variables

ΔDiv Percentage change in dividends (dividend increase announcements sample), as retrieved from the CRSP events data set.

Size Natural logarithm of total assets (Compustat item 6).

Tobin's Q Define: Preferred stock = preferred stock, liquidating value (Compustat item 10) [or Compustat item 56, redemption value, or Compustat item 130, carrying value]; Book Equity (BE) = stockholders' equity (Compustat item 216) [or common equity (Compustat item 60) + preferred stock – carrying value (Compustat item 130); or total assets (Compustat item 6) – total liabilities (Compustat item 181)] – Preferred stock + deferred taxed and investment tax credits (Compustat item 35, if available) – net postretirement denefit asset (Compustat item 330, if available); Market Equity (ME) = closing price at fiscal year end (Compustat item 199) times shares outstanding (Compustat item 25); Market value of the firm (MV) = total assets (Compustat item 6) – BE + ME; Q = MV/BE.

Cash flow Depreciation and amortization (Compustat item 14) + income before extraordinary items (Compustat item 18) divided by lagged total assets (Compustat item 6).

Leverage Leverage, computed as long-term debt (Compustat item 9) + short-term debt (Compustat item 34) divided by long-term debt + short-term debt + stockholders' equity (Compustat item 216).

Div. payout Dividend payout ratio, defined as common dividends (Compustat item 21) + preferred dividends (Compustat item 19) divided by lagged total assets (Compustat item 6).

Cash Cash balances, equal to cash and short term investments (Compustat item 1) divided by lagged total assets (Compustat item 6).

% Inst. Hold. Fraction of the firm's shares outstanding (CRSP SHROUT data item) held by institutional investors whose holdings are reported in TFN's 13F data.

Tax clientele The ratio of after-tax income from a dollar in long-term capital gains to a dollar in dividends; I obtain information on dividend and capital gains tax rates from NBER's TAXSIM (data available for download at: http://www.nber.org/∼taxsim/taxsim-calc8/index.html).

Dividend premium Baker and Wurgler (2004) dividend premium variable, equal to the difference in the natural logarithms of the value–weighted average market–to–book value ratios of dividend payers and non–payers. Data available for download at http://pages.stern.nyu.edu/∼jwurgler/.

Sentiment Baker and Wurgler (2006) market sentiment index. It is based on the principal component of six sentiment proxies: the closed-end fund discount, NYSE share turnover, the number and average first–day returns on IPOs, the equity share of new issues, and the Baker and Wurgler (2004) dividend premium. Data available for download at http://pages.stern.nyu.edu/∼jwurgler/.

Table I: Descriptive statistics

The table reports the mean, median, standard deviation, max, min and number of observations for the variables used in the subsequent analysis. The sample consists of all non-financial, non-public utility firms appearing in the merged CRSP/Compustat dataset for the period 1980–2006. Firms with book equity below $250,000 or total assets below $500,000 are excluded; for robustness, all variables are censored at their 1st and 99th percentiles to remove outliers.

Variable	Mean	Median	St. Dev.	Min	Max	N. Obs.
Own style flow	0.1486	0.0527	0.2542	–0.0070	0.6913	108421
Opposite style flow	0.0444	0.0125	0.0927	0.0001	0.7497	108421
Projected flow	0.0249	0.0046	0.0690	0.0001	2.8255	108421
ΔDiv	0.1611	0.1376	0.1800	0.0289	0.3929	4820
Net debt issues (dL)	0.0401	0.0289	0.1439	–0.6114	0.5630	139807
Net market equity issues (dS_M)	0.0440	0.0031	0.1351	–0.5502	0.8463	123364
Net book equity issues (dS_B)	0.0113	–0.0176	0.1159	–0.4016	0.6422	140413
Financial deficit (DEF)	0.0479	0.0214	0.1726	–0.3913	0.5787	139043
Leverage	0.2970	0.2750	0.2466	0.0006	0.9998	179501
Capex	0.0804	0.0463	0.1123	0.0000	0.9993	141854
M&A	0.0199	0.0000	0.0816	0.0000	0.4517	141854
M&A count	0.1427	0.0000	0.4638	0.0000	3.0000	181083
ROE	0.0423	0.0933	0.2153	–0.7199	0.4600	140137
ROA	–0.0245	0.0275	0.4653	–0.4269	0.4112	144861
Size (log–Total Assets)	5.0770	5.0360	2.0572	–0.6112	10.946	179069
Q	4.5517	7.1958	4.9502	0.0284	33.049	153144
Cash flow	0.0703	0.0668	1.4360	–1.1316	2.0687	147514
Cash	0.2687	0.0685	2.8621	0.0000	3.9403	154801
Dividend payout	0.0097	0.0000	0.0644	0.0000	0.0933	174554
Idiosyncratic volatility	0.1369	0.1115	0.1054	0.0295	0.5106	136427
Q_{EFWA}	3.5577	3.1251	2.1713	0.0197	9.5316	108247
% Inst. Hold.	0.3196	0.2215	0.3026	0.0000	0.9999	181083
Citations	171.74	19.000	662.90	0.0000	12795	12045
Generality	0.3392	0.3501	0.2066	0.0000	0.9056	12045
Originality	0.3931	0.4020	0.1891	0.0000	0.9071	12045
Amihud (2002) Illiquidity	0.8141	0.3590	1.5570	0.0107	6.5049	137222
Llorente et al. (2002) c_2	0.0161	0.0185	0.0833	–0.2121	0.2119	79669
Pástor and Stambaugh (2003) γ	0.0065	–0.0001	0.1043	–0.3392	0.4600	79669
Analyst following	2.9228	1.0000	4.8951	0.0000	48.000	181083
PIN	0.2083	0.1970	0.0791	0.0775	0.8947	31747

Table II: Dividend increase announcement and long–run returns

The sample consists of dividend increase announcements reported by the CRSP Events tape throughout the period 1980–2006. The sample is restricted to ordinary, quarterly, taxable cash dividends (CRSP distribution code 1232), paid in US dollars, and exclude regulated utilities (SIC codes 4900–4999) and financial companies (SIC codes 6000–6999). There must be no other distribution announcement in a 30-days window (days –15 to 15) around the announcement. Furthermore, American trust components, closed-end funds, and REIT's, dividend initiations, dividend omissions are excluded, as well as percentage dividend increases by less than 12.5% or more than 500%. Finally, complete data on stock returns must be available, as well as data on the firm–specific variables used in the subsequent analysis.

Panel A. reports mean and median cumulative abnormal returns (CAR) for different horizons around the dividend increase announcement date. Abnormal returns fare computed as residuals from a market model for daily returns, where the market return is the equal–weighted CRSP index; the market model parameters estimates are based on an estimation window between –285 and –30 trading days relative to the event date.

Panel B. reports the long–run cumulative abnormal returns on a number of portfolios of dividend increasing stocks. The dividend increasing stocks are sorted based on the level of the hotness proxies (Own style flow, Opposite style flow, Projected flow) at the time of the announcement, and then grouped into three portfolios: "Hot" (hotness above the 75th percentile), "Lukewarm" (hotness between the 30th and 75th percentiles), and "Cold" (hotness below the 30th percentile). The procedure is repeated for all hotness proxies (Own flow, Opposite flow, Projected flow), yielding nine portfolios. The long–run abnormal returns of each portfolio are then computed using Ibbotson's Returns Across Time and Securities (IRATS) procedure, combined with a Carhart (1997) four–factor model for returns. For each month t, the following four–factor model is estimated:

$$R_{it} - R_{ft} = \alpha_t + \beta_{1t}(R_{mt} - R_{ft}) + \beta_{2t}HML_t + \beta_{3t}SMB_t + \beta_{4t}UMD_t + \varepsilon_{it}$$

where R_{it} is the stock return of firm i in month t, with $t = 0$ being the announcement month for each stock. R_{mt} and R_{ft} are the market return and risk free rate, and HML, SMB, and UMD are the returns on the size, book–to–market, and momentum factor–mimicking portfolios. The cumulative alpha reported in Panel B. is the sum of the alphas of the individual cross–sectional regressions of the IRATS procedure; the t–stat is computed using the time–series standard deviation of the IRATS alphas as an estimate of their standard error (Peyer and Vermaelen, 2005). The symbols *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels.

A. Announcement returns

Horizon — days (rel. to ann. date)	No. Announcements	Mean CAR (%)	Median CAR (%)	Patell Z–stat
(–1,+1)	4820	0.62	0.63	18.48***
(–2,+2)	4820	0.74	0.75	17.05***
(–3,+3)	4820	0.85	0.85	16.36***

B. Long–run returns — Hotness–sorted portfolios

Horizon — months (rel. to ann. date)	Hotness Proxy	Portfolio	Cumulative IRATS Alpha (%)	t–stat
(0,+24)	Own flow	"Hot"	20.81	6.82***
(0,+24)	Opposite flow	"Hot"	12.92	3.94***
(0,+24)	Projected flow	"Hot"	10.60	3.71***
(0,+24)	Own flow	"Lukewarm"	6.56	4.52***
(0,+24)	Opposite flow	"Lukewarm"	5.91	4.61***
(0,+24)	Projected flow	"Lukewarm"	5.06	3.80***
(0,+24)	Own flow	"Cold"	3.93	3.01***
(0,+24)	Opposite flow	"Cold"	5.75	4.09***
(0,+24)	Projected flow	"Cold"	6.68	4.94***

Table III: Style investing and the probability of a dividend increase
The table reports the estimates of a probit model for the probability that a firm announces a dividend increase. The dependent variable is a dummy equal to one if the firm announces a dividend increase, zero otherwise. The explanatory variables are the firm's investment style's hotness (Own style flow, Opposite style flow, Projected flow), and a standard set of control variables. Dividend increase announcements are retrieved frm the CRSP events tape throughout the period 1980–2006. Data on dividend increase announcements are retrieved from CRSP as described in Table II. The final sample includes all firms appearing in the merged CRSP/Compustat dataset for the period 1980–2006, excluding regulated utilities (SIC codes 4900–4999) and financial companies (SIC codes 6000–6999), as well as firms with book equity below $250,000 or total assets below $500,000. All variables used in the analysis, and relevant lags thereof, must available for all observations. In columns (4)–(6), the baseline specification of columns (1)–(3) is augmented by including indicators for the 12 Fama–French industries. Standard errors are clustered around firms (Petersen, 2009). The symbols *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels.

	(1)	(2)	(3)	(4)	(5)	(6)
Own style flow	–0.7033***			–0.7245***		
	–3.00			*–3.02*		
Opposite style flow		–2.6037***			–2.6857***	
		–8.36			*–8.60*	
Projected flow			–2.4657***			–2.5884***
			–5.20			*–5.26*
Size	0.3321***	0.3227***	0.3115***	0.3325***	0.3221***	0.3140***
	36.92	*35.56*	*35.45*	*35.62*	*34.21*	*34.16*
Q	–0.0113***	–0.0164***	–0.0034	–0.0052	–0.0094**	–0.0009
	–2.93	*–3.84*	*–0.93*	*–1.45*	*–2.38*	*–0.27*
Leverage	–0.7582***	–0.8118***	–1.2255***	–0.9558***	–1.0119***	–1.2919***
	–9.98	*–10.77*	*–15.16*	*–11.62*	*–12.39*	*–15.48*
Cash	0.0007	0.0008	–1.4771***	0.0010	0.0011	–1.1926***
	0.68	*0.79*	*–12.11*	*1.10*	*1.22*	*–9.54*
Cash flow	–0.0039**	–0.0039**	0.0535**	–0.0046**	–0.0046**	0.0461**
	–2.22	*–2.19*	*2.62*	*–2.41*	*–2.39*	*2.45*
Div. payout	0.6394***	0.6673***	0.5985***	0.5975***	0.6197***	0.5793***
	3.36	*3.16*	*3.46*	*3.44*	*3.16*	*3.48*
% Inst. Hold.	–0.1238**	–0.1182**	–0.1075**	–0.1069**	–0.1011**	–0.9292**
	–2.35	*–2.31*	*–2.36*	*–2.30*	*–2.25*	*–2.27*
Stock return	0.0912***	0.0641***	0.0404***	0.0985***	0.0710***	0.0430***
	10.73	*6.83*	*3.00*	*10.82*	*7.11*	*2.84*
Tax clientele	–1.3118***	–1.2485***	–1.1530***	–1.4519***	–1.4369***	–1.3252***
	–8.32	*–8.05*	*–6.26*	*–7.88*	*–7.72*	*–6.27*
Dividend premium	0.0040***	0.0036***	0.0049***	0.0041***	0.0038***	0.0051***
	4.88	*4.29*	*5.32*	*4.77*	*4.35*	*5.37*
Sentiment	–0.2074***	–0.1882***	–0.2194***	–0.2054***	–0.1830***	–0.2163***
	–11.21	*–9.96*	*–12.96*	*–10.97*	*–9.56*	*–12.57*
Industry fixed effects	No	No	No	Yes	Yes	Yes
Model χ^2	1619.2***	1545.6***	1538.9***	1672.1***	1608.1***	1606.3***
Pseudo–R^2	0.1894	0.1937	0.2025	0.2158	0.2204	0.2229
N. Obs.	82735	81535	81535	82735	81535	81535

Table IV: Market reaction to dividend increases and style investing

The table reports the estimates of:

$$\text{CAR}_i = \alpha + \beta\Delta\text{Div}_i + \gamma\text{Hotness}_i + \delta\,(\Delta\text{Div}_i \times \text{Hotness}_i) + \zeta' x_i + \varepsilon_i$$

where CAR is the cumulative abnormal return around the dividend increase announcement, %ΔDiv is the percentage dividend increase, Hotness indicates the investment style hotness proxies (Own style flow, Opposite style flow, Projected flow), and x is a set of standard control variables, including the inverse Mills ratio for the probability of a dividend increase announcement, obtained from the first–stage probit regressions of Table III. The CAR around the announcement date are estimated based on the residuals from a standard market model, and are computed over the windows $(-1,+1)$ (columns (1)–(3)), $(-2,+2)$ (columns (3)–(6)), $(-3,+3)$ (columns (7)–(9)) around the announcement date. The sample of dividend increase announcements is retrieved from CRSP as in Table II. All explanatory variables are expressed in their values at the beginning of the year in which the announcement takes place. Standard errors are clustered around firms. The symbols *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels.

	CAR(−1,+1)			CAR(−2,+2)			CAR(−3,+3)		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
%ΔDiv.	0.0248***	0.0216***	0.0197***	0.0264***	0.0241***	0.0208***	0.0279***	0.0244***	0.0201***
	3.09	*3.60*	*3.21*	*3.04*	*3.55*	*3.09*	*3.08*	*3.41*	*2.80*
Own style flow	0.0113			0.0123			0.0194		
	1.06			*1.12*			*1.56*		
%ΔDiv.× Own style flow	–0.0496**			–0.0587**			–0.0720**		
	–2.03			*–2.16*			*–2.47*		
Opposite style flow		0.0072			0.0129			–0.0003	
		0.51			*0.67*			*–0.02*	
%ΔDiv.× Opposite style flow		–0.0653**			–0.0919*			–0.0962*	
		–1.98			*–1.90*			*–1.81*	
Projected flow			0.0033			0.0077			0.0011
			0.98			*1.37*			*0.25*
%ΔDiv.× Projected flow			–0.0198**			–0.0443***			–0.0399***
			–2.51			*–4.60*			*–4.72*
Size	0.0000	–0.0009	–0.0005	–0.0013	–0.0013	–0.0013	–0.0013	–0.0030***	–0.0014
	0.01	*–1.16*	*–0.64*	*–1.38*	*–1.22*	*–1.24*	*–1.24*	*–2.83*	*–1.19*
Q	–0.0001	0.0001	–0.0000	–0.0002	–0.0001	–0.0002	–0.0005*	–0.0004	–0.0005*
	–0.61	*0.38*	*–0.19*	*–0.64*	*–0.33*	*–0.60*	*–1.65*	*–1.56*	*–1.65*
Leverage	0.0058*	0.0009	0.0042	0.0102**	0.0025	0.0070	0.0085*	0.0058	0.0056
	1.71	*0.24*	*1.20*	*2.31*	*0.51*	*1.54*	*1.72*	*1.15*	*1.09*
Cash	0.0004	–0.0033	–0.0021	0.0009	–0.0046	0.0016	0.0040	–0.0048	0.0038
	0.05	*–0.42*	*–0.29*	*0.11*	*–0.51*	*0.19*	*0.43*	*–0.50*	*0.40*
Cash flow	–0.0260*	–0.0445***	–0.0313**	–0.0574***	–0.0590***	–0.0568***	–0.0898***	–0.0940***	–0.0920***
	–1.90	*–2.91*	*–2.25*	*–3.62*	*–3.16*	*–3.39*	*–5.17*	*–5.01*	*–5.06*
Div. payout	0.1555***	0.1788***	0.1587***	0.2318***	0.2193***	0.2250***	0.2601***	0.2391***	0.2585***
	3.84	*3.94*	*3.57*	*4.42*	*4.09*	*4.03*	*4.36*	*4.15*	*4.10*
% Inst. Hold.	–0.0094***	0.0992*	0.1011*	0.0711	0.1030	0.1062	0.0905	0.0849	0.0888
	–3.19	*1.86*	*1.68*	*1.16*	*1.52*	*1.43*	*1.23*	*1.28*	*1.11*
Dividend premium	0.0000	–0.0001	–0.0000	–0.0001	–0.0002**	–0.0001	0.0001	–0.0002	–0.0000
	0.08	*–1.11*	*–0.45*	*–0.49*	*–2.04*	*–1.06*	*0.27*	*–1.32*	*–0.34*
Inverse Mills ratio	0.0009	–0.0002	0.0002	–0.0005	–0.0012	–0.0014	–0.0008	–0.0034	–0.0016
	0.60	*–0.14*	*0.14*	*–0.24*	*–0.52*	*–0.60*	*–0.33*	*–1.45*	*0.62*
Industry f.e.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Announcement year f.e.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.0325	0.0257	0.0261	0.0346	0.0277	0.0313	0.0357	0.0329	0.0324
N. Obs.	4820	4820	4820	4820	4820	4820	4820	4820	4820

Table V: Long–run returns following dividend increase announcements

The table reports the estimates of a series of regressions of the long–run cumulative abnormal return (LCAR) following the dividend increase announcement on the hotness proxies (Own style flow, Opposite style flow, Projected flow), along with the standard set of control variables used throughout, including the announcement abnormal return CAR(–3,+3), and the inverse Mills ratio for the probability of a dividend increase announcement obtained from the first–stage probit regressions of Table III. The LCARs are computed as the cumulative return, over a 24–month horizon, net of the return on the firm's beta decile portfolio (columns (1)–(3)), size decile portfolio (columns (4)–(6)), and beta–and–size portfolio (columns (7)–(9)). The sample of dividend increase announcements is retrieved from CRSP as in Table III. All explanatory variables are expressed in their values at the beginning of the year in which the announcement takes place. Standard errors are clustered around firms. The symbols *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels.

	$LCAR_{\beta}$			$LCAR_{Size}$			$LCAR_{\beta\ \&\ Size}$		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Own style flow	0.1201***			0.1454***			0.2073***		
	3.03			*3.18*			*3.19*		
Opposite style flow		0.2000**			0.1455**			0.0685	
		2.33			*1.98*			*0.76*	
Projected flow			0.0545***			0.0370**			0.0826**
			2.84			*2.41*			*2.02*
CAR(–3,+3)	0.3625***	0.2119***	0.3711***	0.4512***	0.2693***	0.4397***	0.3637***	0.4678***	0.4103***
	4.72	*3.08*	*4.64*	*5.94*	*4.03*	*5.52*	*4.64*	*5.29*	*4.80*
%ΔDiv.	0.0259	0.0459***	0.0066	0.0123	0.0247	–0.0048	–0.0030	–0.0073	–0.0038
	1.11	*3.23*	*0.28*	*0.51*	*1.55*	*–0.20*	*–0.13*	*–0.29*	*–0.16*
Size	0.0094*	0.0071	0.0088	0.0041	0.0017	0.0025	0.0184***	0.0155***	0.0182***
	1.78	*1.45*	*1.61*	*0.84*	*0.38*	*0.49*	*3.64*	*2.63*	*3.11*
Q	–0.0019	–0.0013	–0.0021	0.0004	0.0021	0.0009	0.0000	–0.0013	–0.0004
	–1.11	*–0.92*	*–1.11*	*0.21*	*1.48*	*0.47*	*0.02*	*–0.72*	*–0.18*
Leverage	0.0370	0.0463*	0.0338	0.0340	0.0428	0.0289	0.0178	0.0128	0.0231
	1.11	*1.71*	*1.02*	*0.99*	*1.64*	*0.89*	*0.55*	*0.36*	*0.69*
Dividend payout	0.4829**	–0.0145	0.6183***	0.3323	–0.1862	0.3746*	0.7180***	0.5835**	0.7037***
	2.13	*–0.08*	*2.57*	*1.53*	*–1.11*	*1.68*	*2.91*	*2.17*	*2.69*
Cash	0.0605	0.1319	0.0346***	0.0569	0.0969	0.0563**	–0.0501	–0.0479	–0.0331
	0.92	*2.64*	*0.51*	*0.96*	*2.07*	*0.97*	*–0.79*	*–0.68*	*–0.48*
Cash flow	–0.2146*	–0.0855	–0.2300**	–0.2590**	–0.0839	–0.2454**	–0.0128	–0.0296	–0.0034
	–1.84	*–0.95*	*–1.96*	*–2.26*	*–0.98*	*–2.20*	*–0.11*	*–0.23*	*–0.03*
% Inst. Hold.	–0.0159	–0.0187	–0.0363	–0.0445*	–0.0502**	–0.0531**	–0.0298	–0.0413	–0.0284
	–0.60	*–0.86*	*–1.31*	*–1.81*	*–2.51*	*–2.11*	*–1.09*	*–1.44*	*–0.97*
Dividend premium	–0.0028**	–0.0022***	–0.0121**	–0.0035***	–0.0037***	–0.0520***	0.0080**	–0.0011*	0.0026***
	–2.26	*–3.44*	*–2.06*	*–4.32*	*–6.99*	*–7.81*	*2.37*	*–1.68*	*2.97*
Inverse Mills ratio	0.0230**	0.0220**	0.0190*	0.0234**	0.0238**	0.0141	0.0085	0.0035	0.0043
	2.35	*2.29*	*1.81*	*2.50*	*2.50*	*1.42*	*0.92*	*0.31*	*0.37*
Industry f.e.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Announcement year f.e.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.0439	0.0569	0.0558	0.0522	0.0618	0.0724	0.0581	0.0327	0.0403
N. Obs.	4704	4704	4704	4704	4704	4704	4704	4704	4704

Table VI: Style investing and the choice of financing
The table reports the estimates of a series of Shyam-Sunder and Myers (1999) regressions, where security issues are regressed on the financial deficit (DEF, given by the yearly change in total assets (Compustat data item 6) minus the yearly change in retained earnings (Compustat data item 36), scaled by total assets). Security issues are, in turn, net debt issues in panel A (dL, equal to the yearly change in total liabilities (Compustat data item 181), scaled by total assets), net market equity issues in panel B (dS_M, equal to the yearly change in CRSP shares outstanding times the mean of the closing price of the current and previous year, scaled by total assets), or net book equity issues in panel C (dS_B, equal to the difference between the financial deficit and dL, scaled by total assets). For each model specification, the sample is split into five sub-samples, based on the relevant quintile of the hotness proxies Own style flow, Opposite style flow, and Projected flow. The model is then run separately on each sub-sample. Columns (1)–(5) report the estimates of the coefficient on the financial deficit and the corresponding t–statistics, along with the R^2. Column (6) reports the difference $\Delta\beta$ between the estimates of the coefficient on the financial deficit in the top (fifth) and in the bottom (first) quintiles, along with an F test statistic for the null hypothesis of no difference between the two estimates. The sample consists of all non-financial, non-public utility firms appearing in the merged CRSP/Compustat dataset for the period 1980–2006, excluding firms with book equity below \$250,000 or total assets below \$500,000. All variables used in the analysis, and relevant lags thereof, are required to be available for all observations. Standard errors are clustered around firms. The symbols *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels.

Table VI: Style investing and the choice of financing (cont'd)

A. Net debt issues (dL)

Hotness		Hotness quintile Bottom	2nd	3rd	4th	Top	$\Delta\beta$ *(F–test)*
		(1)	(2)	(3)	(4)	(5)	(6)
Own style flow	DEF coefficient	0.5484***	0.5200***	0.4777***	0.4751***	0.3865***	–0.1619***
		33.01	*47.56*	*37.63*	*29.62*	*33.05*	*(64.47)*
	R^2	0.6068	0.5609	0.3969	0.4352	0.3043	
	N. Obs.	11521	23969	23369	18542	23209	
Opposite style flow	DEF coefficient	0.4676***	0.4256***	0.4037***	0.3965***	0.3679***	–0.0997***
		38.00	*34.86*	*28.30*	*31.33*	*30.25*	*(33.55)*
	R^2	0.4442	0.4093	0.3916	0.3145	0.3553	
	N. Obs.	22075	19608	19196	21359	18728	
Projected flow	DEF coefficient	0.5134***	0.4624***	0.4278***	0.4182***	0.3939***	–0.1195***
		38.44	*32.35*	*28.74*	*31.91*	*29.03*	*(39.99)*
	R^2	0.4837	0.5112	0.3595	0.3572	0.3667	
	N. Obs.	23290	19318	19299	19414	19650	

B. Net market equity issues (dS_M)

Hotness		Hotness quintile Bottom	2nd	3rd	4th	Top	$\Delta\beta$ *(F–test)*
		(1)	(2)	(3)	(4)	(5)	(6)
Own style flow	DEF coefficient	0.1260***	0.1316***	0.2037***	0.2097***	0.2729***	0.1469***
		11.63	*17.08*	*23.45*	*18.66*	*21.89*	*(79.70)*
	R^2	0.0873	0.0775	0.1244	0.1233	0.1633	
	N. Obs.	11521	23969	23369	18542	23209	
Opposite style flow	DEF coefficient	0.1664***	0.2021***	0.2248***	0.2685***	0.2906***	0.1242***
		21.10	*16.55*	*23.26*	*19.24*	*29.79*	*(100.39)*
	R^2	0.1078	0.0999	0.1253	0.1522	0.1997	
	N. Obs.	22075	19608	19196	21359	18728	
Projected flow	DEF coefficient	0.1893***	0.1855***	0.2678***	0.2737***	0.3209***	0.1306***
		24.89	*19.34*	*24.02*	*23.11*	*36.85*	*(135.84)*
	R^2	0.1294	0.1243	0.1708	0.1745	0.2275	
	N. Obs.	23290	19318	19299	19414	19650	

C. Net book equity issues (dS_B)

Hotness		Hotness quintile Bottom	2nd	3rd	4th	Top	$\Delta\beta$ *(F–test)*
		(1)	(2)	(3)	(4)	(5)	(6)
Own style flow	DEF coefficient	0.2656***	0.2758***	0.2706***	0.3233***	0.3495***	0.0839***
		20.67	*21.92*	*37.98*	*44.09*	*47.95*	*(32.65)*
	R^2	0.3476	0.2768	0.1854	0.2944	0.2548	
	N. Obs.	11521	23969	23369	18542	23209	
Opposite style flow	DEF coefficient	0.2268***	0.2378***	0.3011***	0.3362***	0.3815***	0.1547***
		22.21	*22.04*	*40.75*	*45.60*	*46.55*	*(142.79)*
	R^2	0.1917	0.2115	0.2653	0.2407	0.3526	
	N. Obs.	22075	19608	19196	21359	18728	
Projected flow	DEF coefficient	0.2507***	0.2870***	0.3139***	0.3269***	0.3594***	0.1087***
		24.36	*24.93*	*37.49*	*41.96*	*43.96*	*(71.35)*
	R^2	0.2274	0.3171	0.2396	0.2505	0.3234	
	N. Obs.	23290	19318	19299	19414	19650	

Table VII: Investment of equity issuers driven by style investing

The table reports the estimates of a series of regressions of investment on the component of equity issues driven by style investing (dS^{Style}) and the residual component ($dS^{\perp}$), along with the set of standard control variables used throughout. The dependent variable is capital expenditures Capex (columns (1)–(2)), acquisitions expenditure M&A (columns (3)–(4)), and the number of acquisitions announcements M&A count (columns (5)–(6)). Capex is defined as capital expenditures (Compustat data item 128) divided by lagged total assets (item 6); M&A as acquisition expenditures (Compustat data item 129) divided by lagged total assets (item 6); M&A count is the number of acquisitions announcements retrieved from the Security Data Corporation's (SDC) Mergers and Acquisitions data set. Equity issues are measured as net market equity issues (dS_M, columns (1), (3), and (5)), or net book equity issues (dS_B, columns (2), (4), and (6)). dS_M^{Style} (dS_B^{Style}) is obtained as the predicted values from a regression of net market (book) equity issues on the hotness proxies (Own style flow, Opposite style flow, Projected flow). $dS_M^{\perp}$ ($dS_B^{\perp}$) is obtained as the residuals from this regression. When the dependent variable is Capex (columns (1)–(2)), the model is estimated as a linear regression with firm, industry, and year fixed effects. When the dependent variable is M&A, the model is estimated as a Tobit regression with industry and year fixed effects, where the dependent variable is considered censored below zero. When the dependent variable is M&A count, the model is estimated as a Poisson regression with industry and year fixed effects. In order to account for the fact that dS^{Style} and $dS^{\perp}$ are generated regressors (Murphy and Topel, 1985), the t–statistics are based on bootstrapped standard errors, clustered around firms Kayhan and Titman (2007); Petersen (2009). The sample consists of all non-financial, non-public utility firms appearing in the merged CRSP/Compustat dataset for the period 1980–2006, excluding firms with book equity below $250,000 or total assets below $500,000. All variables used in the analysis, and relevant lags thereof, are required to be available for all observations. The symbols *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels.

	Capex		**M&A**		**M&A count**	
Equity issues	**Market**	**Book**	**Market**	**Book**	**Market**	**Book**
	(1)	(2)	(3)	(4)	(5)	(6)
dS^{Style}	0.1616***	0.2072***	0.2602***	0.4315***	1.4130*	4.0323***
	6.37	*5.42*	*4.98*	*6.10*	*1.69*	*3.85*
$dS^{\perp}$	0.0065***	0.0142***	0.0394***	0.0778***	0.3099***	0.6441**
	2.59	*2.86*	*6.45*	*7.10*	*4.18*	*2.49*
Size	–0.0091***	–0.0090***	0.0242***	0.0240***	0.2274***	0.2236***
	–8.40	*–8.05*	*28.76*	*26.60*	*18.50*	*17.08*
Q	0.0017***	0.0018***	–0.0049***	–0.0046***	–0.0354***	–0.0307***
	8.24	*8.57*	*–8.77*	*–8.06*	*–4.43*	*–3.45*
Leverage	–0.0655***	–0.0658***	–0.0046	–0.0054	–0.0219	–0.0471
	–15.90	*–16.27*	*–0.59*	*–0.68*	*–0.21*	*–0.42*
Div. payout	–0.0075	–0.0118	–0.0970**	–0.1013**	–2.5227***	–2.4322***
	–1.60	*–1.05*	*–2.37*	*–2.00*	*–2.98*	*–2.81*
Cash flow	0.0297***	0.0321***	0.1566***	0.1751***	0.9257***	0.9831***
	4.72	*4.06*	*13.46*	*14.59*	*5.21*	*4.99*
Cash	0.0033*	0.0031	0.0042	0.0009	–0.0147	–0.0449
	1.67	*1.49*	*0.94*	*0.19*	*–0.18*	*–0.47*
% Inst. Hold.	0.0064	0.0092	–0.2517*	–0.2318*	–27.603***	–27.666***
	0.26	*0.37*	*–1.79*	*–1.82*	*–3.28*	*–3.39*
Stock return	0.0069***	0.0070***	0.0118***	0.0117***	0.0723*	0.0683*
	9.00	*8.37*	*4.91*	*4.98*	*1.87*	*1.76*
Firm fixed effects	Yes	Yes	No	No	No	No
Year and industry f.e.	Yes	Yes	Yes	Yes	Yes	Yes
N. Obs.	62369	62369	71494	71494	71494	71494
N. bootstrap replications	500	500	500	500	500	500

Table VIII: Profitability of equity issuers driven by style investing
The table reports estimates of a regression of future profitability on the component of equity issues driven by style investing (dS^{Style} and the residual component ($dS^{\perp}$). The dependent variable is profitability, measured as either the ROA (columns (1)–(3)) or the ROE (columns (4)–(6)), over a one–, two–, or three-year horizon. ROE is the ratio of net income (Compustat item 172) to prior-year stockholders' equity (item 216), and ROA is the ratio of net income (item 172) to prior-year total assets (item 6). Equity issues are measured as net market equity issues (dS_M, panel A) or net book equity issues (dS_B, panel B). dS_M^{Style} (dS_B^{Style}) is obtained as the predicted values from a regression of net market (book) equity issues on the hotness proxies (Own style flow, Opposite style flow, Projected flow). $dS_M^{\perp}$ ($dS_B^{\perp}$) is obtained as the residuals from this regression. In order to account for the fact that dS^{Style} and $dS^{\perp}$ are generated regressors (Murphy and Topel, 1985), the t–statistics are based on bootstrapped standard errors, clustered around firms (Kayhan and Titman, 2007; Petersen, 2009). The row labeled F–test reports the F test statistic for the null hypothesis that the coefficients on dS^{Style} and on $dS^{\perp}$ are equal. The sample consists of all non-financial, non-public utility firms appearing in the merged CRSP/Compustat dataset for the period 1980–2006, excluding firms with book equity below $250,000 or total assets below $500,000. All variables used in the analysis, and relevant lags thereof, are required to be available for all observations. All specifications include firm, industry, and year fixed effects. Standard errors are clustered around firms. The symbols *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels.

A. Net market equity issues

	ROE$^{(1)}$	**ROE**$^{(2)}$	**ROE**$^{(3)}$	**ROA**$^{(1)}$	**ROA**$^{(2)}$	**ROA**$^{(3)}$
	(1)	(2)	(3)	(4)	(5)	(6)
dS_M^{Style}	0.3120***	0.3071***	0.2804***	0.2397***	0.1731***	0.1763***
	5.53	*5.71*	*6.31*	*6.19*	*5.41*	*5.82*
$dS_M^{\perp}$	–0.0218***	–0.0171***	–0.0169***	–0.0126**	–0.0084***	–0.0125***
	–3.56	*–2.79*	*–3.65*	*–3.23*	*–2.56*	*–4.07*
Size	–0.0279***	–0.0440***	–0.0488***	–0.0155***	–0.0177***	–0.0236***
	–13.04	*–16.55*	*–18.54*	*–10.90*	*–13.08*	*–15.79*
Q	0.0065***	0.0055***	0.0040***	0.0038***	0.0024***	0.0020***
	8.42	*7.34*	*6.81*	*10.18*	*8.12*	*8.30*
Leverage	–0.0276***	0.0022	0.0283***	–0.0592***	–0.0240***	–0.0090**
	–3.17	*0.23*	*3.20*	*–11.58*	*–5.57*	*–2.12*
Div. payout	–0.0006	0.0152	–0.0068	0.0095	0.0089	–0.0099
	–0.01	*0.84*	*–0.25*	*0.58*	*0.34*	*–0.46*
Cash flow	0.1346***	0.0978***	0.0586***	0.1057***	0.0540***	0.0353***
	4.92	*5.27*	*4.18*	*8.97*	*6.88*	*5.17*
Cash	0.0072	0.0055	0.0015	0.0060	0.0042	0.0004
	1.17	*1.03*	*0.34*	*1.30*	*1.21*	*0.15*
% Inst. Hold.	0.0102	–0.0247	–0.0177	0.0008	0.0024	0.0051
	0.17	*–0.41*	*–0.28*	*0.06*	*0.02*	*0.18*
Stock return	0.0233***	0.0159***	0.0103***	0.0143***	0.0082***	0.0062***
	12.37	*8.40*	*7.40*	*12.75*	*8.23*	*7.70*
F–test [$\hat{\beta}(dS_M^{\text{Style}}) = \hat{\beta}(dS_M^{\perp})$]	33.24***	43.18***	47.15***	37.64***	39.25***	51.26***
Firm, year and industry f.e.	Yes	Yes	Yes	Yes	Yes	Yes
N. Obs.	63208	51143	45436	63208	51143	45436
N. bootstrap replications	500	500	500	500	500	500

Table VIII: Profitability of equity issuers driven by style investing (cont'd)

B. Net book equity issues

	ROE$^{(1)}$	**ROE**$^{(2)}$	**ROE**$^{(3)}$	**ROA**$^{(1)}$	**ROA**$^{(2)}$	**ROA**$^{(3)}$
	(1)	(2)	(3)	(4)	(5)	(6)
dS_B^{Style}	0.4459***	0.4097***	0.3560***	0.3225***	0.2320***	0.2291***
	6.18	*5.89*	*6.00*	*6.81*	*5.84*	*5.96*
$dS_B^{\perp}$	0.0016	–0.0170*	–0.0102	0.0006	–0.0047	–0.0056
	0.19	*–1.93*	*–1.36*	*0.10*	*–0.87*	*–1.29*
Size	–0.0289***	–0.0432***	–0.0489***	–0.0149***	–0.0168***	–0.0237***
	–13.70	*–16.13*	*–17.23*	*–10.53*	*–12.24*	*–15.76*
Q	0.0061***	0.0052***	0.0037***	0.0037***	0.0024***	0.0019***
	6.96	*6.85*	*5.90*	*9.62*	*7.97*	*6.88*
Leverage	–0.0228***	0.0038	0.0305***	–0.0567***	–0.0231***	–0.0072***
	–2.43	*0.40*	*3.63*	*–11.29*	*–5.17*	*–1.56*
Div. payout	–0.0001	0.0132	–0.0082	0.0109	0.0092	–0.0111
	–0.00	*0.64*	*–0.31*	*0.65*	*0.31*	*–0.46*
Cash flow	0.1364***	0.0982***	0.0596***	0.1065***	0.0539***	0.0358***
	5.17	*5.50*	*4.40*	*8.78*	*7.57*	*5.06*
Cash	0.0029	0.0047	–0.0001	0.0038	0.0035	–0.0009
	0.43	*0.80*	*–0.03*	*0.82*	*1.05*	*–0.34*
% Inst. Hold.	0.0159	–0.0228	–0.0144	–0.0001	0.0010	0.0072
	0.22	*–0.34*	*–0.20*	*–0.00*	*0.03*	*0.26*
Stock return	0.0238***	0.0162***	0.0102***	0.0146***	0.0083***	0.0061***
	11.83	*8.81*	*6.88*	*13.17*	*7.76*	*7.48*
F–test $[\hat{\beta}(dS_B^{\text{Style}}) = \hat{\beta}(dS_B^{\perp})]$	37.56***	44.64***	39.08***	38.19***	39.09***	44.70***
Firm, year and industry f.e.	Yes	Yes	Yes	Yes	Yes	Yes
N. Obs.	63208	51143	45436	63208	51143	45436
N. bootstrap replications	500	500	500	500	500	500

Table IX: Equity financing and style investing — firms with high/low investment opportunities

The table reports the estimates of a series of regressions of net market and book equity issues on the financial deficit, as in panels B. and C. of table VI, with a two–way sample split: by "hot" vs. "cold" styles (Own style flow, Opposite style flow, or Projected flow above/below the median), and by high vs. low (above vs. below the median) investment opportunities, proxied by the patent citations indexes Citations, Generality, and Originality. In the interest of brevity, only the coefficients on the financial deficit (DEF), and the corresponding t–statistics are reported (the t–stats are reported in italic font). In panel A., the dependent variable is net market equity issues (dS_M), while in panel B. it is net book equity issues (dS_B). In both panels, the hotness proxy is Own style flow in columns (1)–(3), Opposite style flow in columns (4)–(6), and Projected flow in columns (7)–(9). The *columns* labeled F–stat (columns (3), (6), and (9)) report the F test statistic for the difference between the DEF coefficients in the high– and low–style investing sub-samples, for a given level of investment opportunities (e.g. the difference in the DEF coefficient between the high–Own style flow and low–Own style flow sub-samples, given high-Citations). The *rows* labeled F–stat, in turn, report the F test statistic for the difference between the DEF coefficient in the high and low–investment opportunities samples, holding style investing constant (e.g. the difference in the DEF coefficient between the high–Citations and low–Citations samples, given high–Own style flow). The sample consists of all non-financial, non-public utility firms appearing in the merged CRSP/Compustat dataset as well as in the NBER Patent Citations Data Set for the sample period, excluding firms with book equity below $250,000 or total assets below $500,000. Standard errors are clustered around firms. The symbols *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels.

Table IX: Equity financing and style investing — firms with high/low investment opportunities (cont'd)

A. Net market equity issues (dS_M)

		Own style flow			Opposite style flow			Projected flow		
		High	**Low**	**F–stat**	**High**	**Low**	**F–stat**	**High**	**Low**	**F–stat**
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Citations	**High**	0.2904***	0.2077***	7.35***	0.2833***	0.2004***	3.02*	0.3106***	0.2063***	4.97**
		9.12	*6.51*		*7.54*	*6.12*		*7.07*	*8.84*	
	Low	0.2332***	0.1864***	1.28	0.2648***	0.1283***	5.55**	0.2704***	0.1593***	2.87*
		5.96	*9.28*		*9.99*	*5.45*		*9.20*	*9.19*	
	F–stat	3.29*	0.36		3.08*	3.27*		7.28***	5.54**	
Generality	**High**	0.3515***	0.2901***	6.15**	0.3592***	0.1680***	44.53***	0.4096***	0.1957***	53.80***
		8.33	*12.43*		*8.13*	*6.05*		*8.31*	*9.88*	
	Low	0.2230***	0.2079***	0.13	0.2220***	0.1540***	2.31	0.2434***	0.1748***	3.31*
		5.96	*9.18*		*9.03*	*5.70*		*8.23*	*8.16*	
	F–stat	4.85**	7.00***		5.74**	0.14		9.89***	3.64***	
Originality	**High**	0.3540***	0.2015***	10.11***	0.3776***	0.1970***	15.30***	0.4074***	0.2188***	14.56***
		8.55	*6.96*		*9.66*	*6.88*		*9.03*	*8.63*	
	Low	0.2306***	0.1900***	1.12	0.2374***	0.1327***	4.80**	0.2556***	0.1576***	3.53*
		6.82	*9.05*		*9.11*	*4.51*		*8.99*	*8.76*	
	F–stat	5.50**	0.12		8.68***	2.94*		11.41***	3.91**	

B. Net book equity issues (dS_B)

		Own style flow			Opposite style flow			Projected flow		
		High	**Low**	**F–stat**	**High**	**Low**	**F–stat**	**High**	**Low**	**F–stat**
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Citations	**High**	0.3779***	0.2764***	6.11**	0.3901***	0.3189***	3.78*	0.4211***	0.3700***	3.57*
		12.71	*9.08*		*15.80*	*10.84*		*15.41*	*17.65*	
	Low	0.2683***	0.2834***	0.08	0.2249***	0.1283***	0.14	0.3200***	0.2567***	0.35
		5.91	*10.14*		*5.37*	*5.45*		*13.52*	*11.20*	
	F–stat	4.19**	0.03		11.56***	8.04***		14.75***	13.83***	
Generality	**High**	0.3754***	0.3258***	3.29*	0.4191***	0.3278***	9.30***	0.4476***	0.3879***	3.63*
		10.54	*12.40*		*14.55*	*11.66*		*14.10*	*22.42*	
	Low	0.3081***	0.2517***	1.72	0.1840***	0.1540***	0.04	0.3828***	0.2892***	5.48**
		10.97	*7.51*		*4.10*	*5.70*		*17.32*	*15.34*	
	F–stat	4.48**	3.06*		12.15***	38.23***		4.10**	16.35***	
Originality	**High**	0.3968***	0.2947***	5.89**	0.3880***	0.3105***	3.67*	0.3931***	0.3543***	1.14
		10.98	*12.31*		*13.01*	*10.94*		*12.35*	*15.88*	
	Low	0.2747***	0.2662***	0.03	0.1947***	0.1327***	1.46	0.3259***	0.2806***	0.30
		7.39	*7.85*		*4.18*	*4.51*		*14.37*	*15.24*	
	F–stat	5.72**	0.44		8.78***	5.94**		4.52**	6.57**	

Table X: Probability of a dividend increase — Undervalued firms
The table reports results from re-running the probit specifications of table III on subsamples of undervalued firms; in the interest of brevity, only the coefficients on the hotness proxies (Own style flow, Opposite style flow, Projected flow) and the corresponding t–statistics are reported. Undervalued companies are identified as those for which the misvaluation proxy of Rhodes-Kropf et al. (2005) (MI_1, MI_2, MI_3, or their style–based counterparts MS_1, MS_2, MS_3) is negative. In columns (1)–(3) undervaluation is pinned down by industry–based proxies; in columns (4)–(6), it is pinned down by investment style–based proxies. The sample consists of all non-financial, non-public utility firms appearing in the merged CRSP/Compustat dataset for the period 1980–2006, excluding firms with book equity below $250,000 or total assets below $500,000. All variables used in the analysis, and relevant lags thereof, are required to be available for all observations. Finally, the relevant misvaluation proxy is required to be negative. The t–statistics are based on standard errors clustered around firms. The symbols *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels.

	Industry–based undervaluation			Style–based undervaluation		
	MI_1	MI_2	MI_3	MS_1	MS_2	MS_3
	(1)	(2)	(3)	(4)	(5)	(6)
Own style flow	–1.4380**	–1.0040**	–0.3106*	–0.2660*	–0.3264**	–0.3890**
	–2.36	*–2.23*	*–1.83*	*–1.79*	*–2.18*	*–2.54*
Opposite style flow	–1.3189***	–1.4041***	–1.3424***	–2.2563***	–2.0252***	–1.7864***
	–4.35	*–4.86*	*–4.67*	*–5.33*	*–4.91*	*–4.81*
Projected flow	–1.0646**	–1.2564***	–1.2718***	–2.4474***	–2.3110***	–2.0655***
	–2.26	*–2.61*	*–2.76*	*–3.01*	*–2.83*	*–2.89*

Table XI: Market reaction to the dividend increase — Undervalued firms
The table reports results from re-running the regressions of table IV on subsamples of undervalued firms. In the interest of brevity, the table focuses on the results concerning the three–day cumulative abnormal returns (CAR($-1, +1$)), and only the coefficients on the interaction term between hotness (Own style flow, Opposite style flow, Projected flow) and the percentage dividend increase ΔDiv, and the corresponding t–statistics, are reported. Undervalued firms are identified as those for which the misvaluation proxy of Rhodes-Kropf et al. (2005) (MI_1, MI_2, MI_3, or their style–based counterparts MS_1, MS_2, MS_3) is negative. In columns (1)–(3), undervaluation is pinned down by industry–based proxies; in columns (4)–(6), it is pinned down by investment style–based proxies. The t–statistics are based on standard errors clustered around firms. The symbols *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels.

	Industry–based undervaluation			Style–based undervaluation		
	MI_1	MI_2	MI_3	MS_1	MS_2	MS_3
	(1)	(2)	(3)	(4)	(5)	(6)
ΔDiv×						
Own style flow	–0.0552**	–0.0928***	–0.0983***	–0.0445**	–0.0401**	–0.0799**
	–2.16	*–2.84*	*–3.08*	*–2.27*	*–2.16*	*–2.42*
Opposite style flow	–0.0671	–0.1399**	–0.1157*	–0.0578	–0.0490	–0.1347**
	–1.33	*–2.47*	*–1.94*	*–1.22*	*–1.10*	*–2.37*
Projected flow	–0.0128**	–0.0227***	–0.0232***	–0.0174***	–0.0174***	–0.0256***
	–2.28	*–2.93*	*–3.22*	*–5.69*	*–4.78*	*–4.55*

Table XII: Long–run abnormal returns following the dividend increase — Undervalued firms
The table reports results from re-running the regressions of table V on subsamples of undervalued firms. In the interest of brevity, only the cumulative abnormal returns based on the beta–and–size decile portfolios are considered, and only the coefficients on the hotness proxies (Own style flow, Opposite style flow, and Projected flow) and the corresponding t–statistics are reported. Undervalued firms are identified as those for which the misvaluation proxy of Rhodes-Kropf et al. (2005) (MI_1, MI_2, MI_3, or their style–based counterparts MS_1, MS_2, MS_3) is negative. In columns (1)–(3), undervaluation is pinned down by industry–based proxies; in columns (4)–(6), it is pinned down by investment style–based proxies. The t–statistics are based on standard errors clustered around firms. The symbols *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels.

	Industry–based undervaluation			Style–based undervaluation		
	MI_1	MI_2	MI_3	MS_1	MS_2	MS_3
	(1)	(2)	(3)	(4)	(5)	(6)
Own style flow	0.2361**	0.2176***	0.1863**	0.3477***	0.2622**	0.2083**
	2.51	*2.81*	*2.42*	*2.92*	*2.41*	*1.99*
Opposite style flow	0.2196**	0.1322	0.1319	0.2138**	0.1485	0.1390
	1.97	*1.28*	*1.29*	*2.03*	*1.46*	*1.30*
Projected flow	0.1069*	0.0838	0.0767	0.0778*	0.0758*	0.0776*
	1.92	*1.47*	*1.39*	*1.78*	*1.72*	*1.74*

Table XIII: Choice of financing — Undervalued firms

The table reports results from re-running the regressions of table VI on subsamples of undervalued firms. The financial deficit regressions (10) are augmented to include an interaction term between the financial deficit DEF and the hotness proxies Own style flow, Opposite style flow, or Projected flow:

$$\text{Security issue}_{it} = \alpha + \beta \text{DEF}_{it} + \gamma(\text{DEF}_{it} \times \text{Hotness}_{it}) + \delta \text{Hotness}_{it} + \varepsilon_{it}$$

In the interest of brevity, only the coefficients on the interaction term between the hotness proxies and the financial deficit DEF (γ), and the corresponding t–statistics, are reported. Undervalued companies are identified as those for which the misvaluation proxies of Rhodes-Kropf et al. (2005) (MI_1, MI_2, MI_3, or their style–based counterparts: MS_1, MS_2, MS_3) is negative. Panel A. focuses on financial deficit regressions where the dependent variable is net debt issues (dL); in panel B., the dependent variable is net market equity issues (dS_M); finally in panel C. the dependent variable is net book equity issues (dS_B). In all panels, in columns (1)–(3) undervaluation is pinned down by industry–based proxies; in columns (4)–(6), it is pinned down by investment style–based proxies. The sample consists of all non-financial, non-public utility firms appearing in the merged CRSP/Compustat dataset for the period 1980–2006, excluding firms with book equity below $250,000 or total assets below $500,000. All variables used in the analysis, and relevant lags thereof, are required to be available for all observations. Finally, the relevant misvaluation proxy is required to be negative. The t–statistics are based on standard errors clustered around firms. The symbols *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels.

A. Net debt issues (dL)

	Industry–based undervaluation			Style–based undervaluation		
	MI_1	MI_2	MI_3	MS_1	MS_2	MS_3
DEF×	(1)	(2)	(3)	(4)	(5)	(6)
Own style flow	–0.0623**	–0.1210**	–0.1178**	–0.1532***	–0.0739*	–0.0699*
	–2.01	*–1.96*	*–1.98*	*–5.13*	*–1.83*	*–1.72*
Opposite style flow	–0.5785***	–0.4298***	–0.4019***	–0.3036***	–0.5379***	–0.6236***
	–7.12	*–5.97*	*–5.64*	*–3.11*	*–3.62*	*–4.18*
Projected flow	–2.1390***	–0.7761**	–0.7075**	–1.6103***	–0.5833**	–0.6477**
	–12.03	*–2.37*	*–2.13*	*–7.67*	*–1.97*	*–2.29*

B. Net market equity issues (dS_M)

	Industry–based undervaluation			Style–based undervaluation		
	MI_1	MI_2	MI_3	MS_1	MS_2	MS_3
DEF×	(1)	(2)	(3)	(4)	(5)	(6)
Own style flow	0.1760***	0.1107***	0.1203***	0.2668***	0.1715***	0.1910***
	9.49	*4.55*	*4.76*	*12.88*	*6.38*	*6.88*
Opposite style flow	0.5455***	0.4807***	0.4784***	0.1932***	0.3511*	0.4433**
	10.11	*7.22*	*7.21*	*3.75*	*1.75*	*2.08*
Projected flow	1.3179***	1.7592***	1.7345***	0.6613***	0.6415**	0.4754*
	9.07	*6.53*	*6.53*	*4.32*	*2.29*	*1.86*

C. Net book equity issues (dS_B)

	Industry–based undervaluation			Style–based undervaluation		
	MI_1	MI_2	MI_3	MS_1	MS_2	MS_3
DEF×	(1)	(2)	(3)	(4)	(5)	(6)
Own style flow	0.0391**	0.1723***	0.1420***	0.1121***	0.2422***	0.0488*
	2.02	*3.88*	*3.00*	*5.46*	*5.90*	*1.84*
Opposite style flow	1.0076***	0.9037***	0.8758***	0.6405***	0.4742***	0.5573***
	9.77	*16.61*	*16.28*	*5.49*	*6.03*	*6.86*
Projected flow	2.6350***	1.3119***	1.2409***	2.0092***	1.2940***	1.5612***
	17.67	*2.94*	*2.71*	*12.75*	*5.71*	*7.03*

Table XIV: Investment and profitability of equity issuers — Undervalued firms

The table reports estimation results from re-running the regressions of tables VII and VIII on subsamples of undervalued firms. Panel A focuses on the investment regressions of table VII. In the interest of brevity, only the coefficients on dS_M^{Style} and dS_B^{Style} (the component of net market and book equity issues driven by style investing) and the corresponding t–statistics are reported. Panel B focuses on the profitability regressions of table VIII. In the interest of brevity, only the three–year average ROE and ROA ($\text{ROE}^{(3)}$ and $\text{ROA}^{(3)}$) are considered, and only the coefficients on dS^{Style} and $dS^{\perp}$ (the component of equity issues driven by style investing, and the residual equity issues), for both market and book equity issues, are reported, along with the corresponding t–statistics. In both panels, undervalued companies are identified as those for which the misvaluation proxy of Rhodes-Kropf et al. (2005) (MI_1, MI_2, MI_3, or their style–based counterparts: MS_1, MS_2, MS_3) is negative. In both panels, in columns (1)–(3) undervaluation is pinned down by industry–based proxies; in columns (4)–(6), it is pinned down by investment style–based proxies. The sample consists of all non-financial, non-public utility firms appearing in the merged CRSP/Compustat dataset for the period 1980–2006, excluding firms with book equity below $250,000 or total assets below $500,000. All variables used in the analysis, and relevant lags thereof, are required to be available for all observations. Finally, the relevant misvaluation measure is required to be negative. In all regressions, the t–statistics are based on bootstrapped standard errors, clustered around firms (Kayhan and Titman, 2007; Petersen, 2009), to account for the fact that dS^{Style} and $dS^{\perp}$ are generated regressors. The symbols *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels.

Table XIV: Investment and profitability of equity issuers — Undervalued firms (cont'd)

A. Investment

Dependent variable		Industry–based undervaluation MI_1	MI_2	MI_3	Style–based undervaluation MS_1	MS_2	MS_3
		(1)	(2)	(3)	(4)	(5)	(6)
Capex	dS_M^{Style}	0.0961***	0.0525	0.0516*	0.0807*	0.1032*	0.0669
		3.14	*1.15*	*1.65*	*1.78*	*1.73*	*1.19*
	dS_B^{Style}	0.1013***	0.0585	0.0516	0.0948	0.1367*	0.0963
		2.64	*1.16*	*1.42*	*1.47*	*1.83*	*1.29*
M&A	dS_M^{Style}	0.1077	0.5128***	0.5412***	0.3381***	0.5335***	0.5960***
		1.47	*5.77*	*6.27*	*4.85*	*5.37*	*6.39*
	dS_B^{Style}	0.2048**	0.7449***	0.7891***	0.5473***	0.8323***	0.9036***
		2.22	*6.04*	*6.77*	*5.67*	*5.90*	*7.82*
M&A Count	dS_M^{Style}	3.1124**	4.1482***	4.3273***	3.5269***	2.8479**	2.8012**
		2.03	*2.74*	*2.69*	*3.24*	*2.04*	*2.17*
	dS_B^{Style}	4.8723**	7.3123***	7.4669***	6.8510***	6.4272***	6.2500***
		2.48	*3.72*	*3.61*	*4.51*	*3.81*	*3.68*

B. Profitability

Dependent variable		Industry–based undervaluation MI_1	MI_2	MI_3	Style–based undervaluation MS_1	MS_2	MS_3
		(1)	(2)	(3)	(4)	(5)	(6)
ROE(3)	dS_M^{Style}	0.2447***	0.2723***	0.2681***	0.2832***	0.3432***	0.3490***
		3.88	*4.43*	*4.15*	*3.65*	*4.22*	*4.59*
	$dS_M^{\perp}$	–0.0003	0.0055	0.0054	–0.0098	–0.0017	–0.0054
		–0.02	*0.33*	*0.34*	*–0.87*	*–0.16*	*–0.45*
	dS_B^{Style}	0.2890***	0.3130***	0.3056***	0.3867***	0.4428***	0.4497***
		3.70	*4.40*	*4.45*	*4.10*	*4.00*	*5.39*
	$dS_B^{\perp}$	–0.0066	–0.0099	–0.0123	0.0083	–0.0139	–0.0220
		–0.45	*–0.49*	*–0.77*	*0.55*	*–1.10*	*–1.49*
ROA(3)	dS_M^{Style}	0.1564***	0.1684***	0.1788***	0.2011***	0.2508***	0.2448***
		3.37	*4.56*	*4.76*	*4.36*	*5.07*	*5.58*
	$dS_M^{\perp}$	–0.0028	–0.0022	–0.0024	–0.0032	0.0071	0.0034
		–0.27	*–0.23*	*–0.25*	*–0.46*	*1.07*	*0.48*
	dS_B^{Style}	0.1874***	0.2045***	0.2141***	0.2555***	0.3138***	0.3061***
		3.85	*4.24*	*4.36*	*4.35*	*5.19*	*5.16*
	$dS_B^{\perp}$	–0.0081	–0.0105	–0.0118	0.0012	0.0028	–0.0053
		–0.96	*–1.07*	*–1.08*	*0.12*	*0.37*	*–0.71*

Table XV: Probability of a dividend increase — High information asymmetry
The table reports results from re-running the probit specifications of table III on subsamples of firms characterized by high information asymmetry; in the interest of brevity, only the coefficients on the hotness proxies (Own style flow, Opposite style flow, and Projected flow) and the corresponding t–statistics are reported. For a given information asymmetry proxy, and for each investment style and sample year, the high information asymmetry firms are the ones whose information asymmetry is higher than the median. Five different proxies for information asymmetry are considered: illiquidity of Amihud (2002), c_2 coefficient of Llorente et al. (2002), γ coefficient of Pástor and Stambaugh (2003), PIN of Easley et al. (1996, 2002), and analyst following. The sample consists of all non-financial, non-public utility firms appearing in the merged CRSP/Compustat dataset for the period 1980–2006, excluding firms with book equity below $250,000 or total assets below $500,000. All variables used in the analysis, and relevant lags thereof, are required to be available for all observations. Standard errors clustered around firms. The symbols *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels.

	High Illiquidity	High c_2	High γ	High PIN	Low An. following
	(1)	(2)	(3)	(4)	(5)
Own style flow	–0.4208***	–0.6244***	–0.4075***	–1.5887***	–0.3375***
	–5.27	*–3.59*	*–5.14*	*–5.56*	*–4.44*
Opposite style flow	–2.1539***	–1.7938***	–1.9407***	–1.1879***	–1.9815***
	–4.55	*–2.76*	*–4.67*	*–3.42*	*–5.37*
Projected flow	–2.4200***	–2.0165**	–2.2584***	–1.2027**	–1.9378***
	–2.96	*–2.21*	*–3.00*	*–2.34*	*–2.95*

Table XVI: Market reaction to the dividend increase — High information asymmetry
The table reports results from re-running the regressions of table IV on subsamples of firms characterized by high information asymmetry. In the interest of brevity, the table focuses on the results concerning the three–day cumulative abnormal returns (CAR($-1, +1$)), and only the coefficients on the interaction term between hotness (Own style flow, Opposite style flow, and Projected flow) and the percentage dividend increase ΔDiv, and the corresponding t–statistics, are reported. For a given information asymmetry proxy, and for each investment style and sample year, the high information asymmetry firms are the ones whose information asymmetry is higher than the style–year median. Five different proxies for information asymmetry are considered: illiquidity of Amihud (2002), c_2 coefficient of Llorente et al. (2002), γ coefficient of Pástor and Stambaugh (2003), PIN of Easley et al. (1996, 2002), and analyst following. The t–statistics are based on standard errors clustered around firms. The symbols *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels.

	High Illiquidity	High c_2	High γ	High PIN	Low An. following
	(1)	(2)	(3)	(4)	(5)
ΔDiv×					
Own style flow	–0.1236	–0.0379	–0.0252*	–0.0654*	–0.0542***
	–1.23	*–0.45*	*–1.67*	*–1.80*	*–2.96*
Opposite style flow	–0.0663**	–0.1127	–0.0198	–0.1203**	0.0232
	–2.37	*–0.46*	*–0.60*	*–2.43*	*0.47*
Projected flow	–0.0178***	–0.4767***	–0.5092*	–0.0220***	–0.0174***
	–3.91	*–2.68*	*–1.67*	*–2.69*	*–3.71*

Table XVII: Long–run abnormal returns following the dividend increase — High information asymmetry
The table reports results from re-running the regressions of table V on subsamples of firms characterized by high information asymmetry. In the interest of brevity, only the cumulative abnormal returns based on the beta–and–size decile portfolios are considered, and only the coefficients on the hotness proxies (Own style flow, Opposite style flow, and Projected flow) and the corresponding t–statistics are reported. For a given information asymmetry proxy, and for each investment style and sample year, the high information asymmetry firms are the ones whose information asymmetry is higher than the style–year median. Five different proxies for information asymmetry are considered: illiquidity of Amihud (2002), c_2 coefficient of Llorente et al. (2002), γ coefficient of Pástor and Stambaugh (2003), PIN of Easley et al. (1996, 2002), and analyst following. The t–statistics are based on standard errors clustered around firms. The symbols *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels.

	High Illiquidity	High c_2	High γ	High PIN	Low An. following
	(1)	(2)	(3)	(4)	(5)
Own style flow	0.4052***	0.4255*	0.2469***	0.1838**	0.2218***
	3.00	*1.88*	*2.25*	*2.37*	*2.81*
Opposite style flow	0.1842	0.0162	0.1612	0.2056*	0.1229
	1.24	*0.10*	*1.58*	*1.91*	*1.05*
Projected flow	0.0770**	0.2351	0.1530***	0.0321**	0.0708*
	1.99	*0.61*	*4.01*	*2.11*	*1.81*

Table XVIII: Choice of financing — High information asymmetry
The table reports results from re-running the regressions of table VI on subsamples of firms characterized by high information asymmetry. The financial deficit regressions (10) are augmented to include an interaction term between the financial deficit DEF and the hotness proxies Own style flow, Opposite style flow, or Projected flow:

$$\text{Security issue}_{it} = \alpha + \beta \text{DEF}_{it} + \gamma(\text{DEF}_{it} \times \text{Hotness}_{it}) + \delta \text{Hotness}_{it} + \varepsilon_{it}$$

In the interest of brevity, only the coefficients on the interaction term between the hotness proxies and the financial deficit DEF, and the corresponding t–statistics, are reported. For a given information asymmetry measure, and for each investment style and sample year, the high information asymmetry firms are the ones whose information asymmetry is higher than the median. Five different proxies for information asymmetry are considered: illiquidity of Amihud (2002), c_2 coefficient of Llorente et al. (2002), γ coefficient of Pástor and Stambaugh (2003), PIN of Easley et al. (1996, 2002), and analyst following. Panel A. focuses on financial deficit regressions where the dependent variable is net debt issues (dL); in panel B., the dependent variable is net market equity issues (dS_M); finally in panel C. the dependent variable is net book equity issues (dS_B). The sample consists of all non-financial, non-public utility firms appearing in the merged CRSP/Compustat dataset for the period 1980–2006, excluding firms with book equity below $250,000 or total assets below $500,000. All variables used in the analysis, and relevant lags thereof, are required to be available for all observations. Standard errors are clustered around firms. The symbols *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels.

A. Net debt issues (dL)

	High Illiquidity	High c_2	High γ	High PIN	Low An. following
DEF×	(1)	(2)	(3)	(4)	(5)
Own style flow	–0.2637***	–0.2175***	–0.2371***	–0.2088***	–0.2929***
	–9.46	*-6.00*	*–8.75*	*–2.86*	*–11.21*
Opposite style flow	–0.3654***	–0.4373***	–0.4618***	–1.0703***	–0.4280***
	–3.30	*–4.24*	*–4.81*	*–4.22*	*–5.14*
Projected flow	–0.9231***	–1.2648***	–1.0632***	–0.8027**	–1.1501***
	–3.23	*–5.62*	*–2.85*	*–2.19*	*–4.24*

B. Net market equity issues (dS_M)

	High Illiquidity	High c_2	High γ	High PIN	Low An. following
DEF×	(1)	(2)	(3)	(4)	(5)
Own style flow	0.2713***	0.1583***	0.2267***	0.2064***	0.2269***
	11.05	*4.78*	*9.14*	*4.23*	*10.23*
Opposite style flow	0.2150***	0.3322***	0.1931**	1.1198***	0.3985***
	2.67	*3.01*	*2.05*	*3.87*	*5.00*
Projected flow	0.4960*	0.9164***	0.6066*	0.5653**	0.7869***
	1.72	*3.60*	*1.75*	*2.01*	*2.62*

C. Net book equity issues (dS_B)

	High Illiquidity	High c_2	High γ	High PIN	Low An. following
DEF×	(1)	(2)	(3)	(4)	(5)
Own style flow	0.1659***	0.0705**	0.1045***	0.0998**	0.1384***
	7.04	*2.46*	*4.33*	*2.41*	*7.16*
Opposite style flow	0.8617***	0.8210***	0.8601***	0.5084***	0.9446***
	11.05	*9.55*	*11.34*	*3.28*	*14.29*
Projected flow	1.5729***	1.8026***	1.5985***	1.2779***	1.7992***
	4.00	*8.40*	*3.26*	*3.87*	*4.93*

Table XIX: Investment and profitability of equity issuers — High information asymmetry

The table reports estimation results from re-running the regressions of tables VII and VIII on subsamples of firms characterized by high information asymmetry. Panel A focuses on the investment regressions of table VII. In the interest of brevity, only the coefficients on dS_M^{Style} and dS_B^{Style} (the component of net market and book equity issues driven by style investing) and the corresponding t–statistics are reported. Panel B focuses on the profitability regressions of table VIII. In the interest of brevity, only the three–year average ROE and ROA ($\text{ROE}^{(3)}$ and $\text{ROA}^{(3)}$) are considered, and only the coefficients on dS^{Style} and $dS^{\perp}$ (the component of equity issues driven by style investing, and the residual equity issues), for both market and book equity issues, are reported, along with the corresponding t–statistics. In both panels, for a given information asymmetry measure, and for each investment style and sample year, the high information asymmetry firms are the ones whose information asymmetry is higher than the median. Five different proxies for information asymmetry are considered: illiquidity of Amihud (2002), c_2 coefficient of Llorente et al. (2002), γ coefficient of Pástor and Stambaugh (2003), PIN of Easley et al. (1996, 2002), and analyst following. The sample consists of all non-financial, non-public utility firms appearing in the merged CRSP/Compustat dataset for the period 1980–2006, excluding firms with book equity below $250,000 or total assets below $500,000. All variables used in the analysis, and relevant lags thereof, are required to be available for all observations. In all regressions, the t–statistics are based on bootstrapped standard errors, clustered around firms (Kayhan and Titman, 2007; Petersen, 2009), to account for the fact that dS^{Style} and $dS^{\perp}$ are generated regressors. The symbols *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels.

Table XIX: Investment and profitability of equity issuers — High information asymmetry (cont'd)

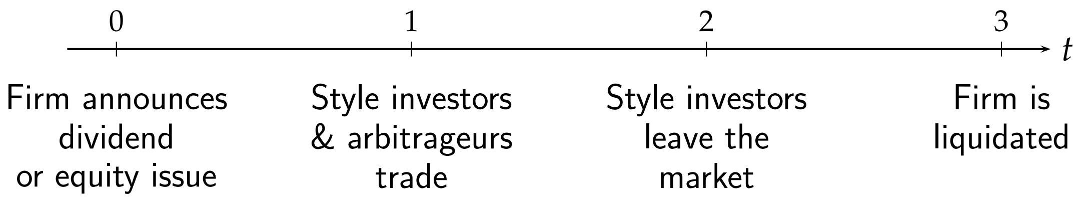
A. Investment

Dependent variable		High Illiquidity	High c_2	High γ	High PIN	Low An. following
		(1)	(2)	(3)	(4)	(5)
Capex	dS_M^{Style}	0.1075**	0.1811	0.1773***	0.1369*	0.1146***
		2.26	*1.56*	*3.10*	*1.72*	*2.77*
	dS_B^{Style}	0.1318**	0.2099	0.2295***	0.1810*	0.1407**
		2.04	*1.28*	*2.74*	*1.80*	*2.50*
M&A	dS_M^{Style}	0.2304***	0.3736***	0.2258***	0.2993**	0.1977***
		3.31	*3.88*	*3.03*	*2.28*	*2.93*
	dS_B^{Style}	0.3829***	0.5981***	0.3833***	0.4540***	0.3379***
		3.86	*3.71*	*4.47*	*2.60*	*4.07*
M&A Count	dS_M^{Style}	3.2213**	2.5834	0.7704	–3.5548	1.9576*
		2.45	*1.38*	*0.50*	*–1.63*	*1.93*
	dS_B^{Style}	5.9092***	2.9791**	2.4400	–0.6668	4.4260***
		3.05	*2.45*	*0.99*	*–0.42*	*3.00*

B. Profitability

Dependent variable		High Illiquidity	High c_2	High γ	High PIN	Low An. following
		(1)	(2)	(3)	(4)	(5)
ROE(3)	dS_M^{Style}	0.2030***	0.3250**	0.3652***	0.3432**	0.2913***
		3.06	*2.01*	*3.64*	*2.06*	*4.48*
	$dS_M^{\perp}$	–0.0080	0.0103	–0.0290**	–0.0246	–0.0106
		–0.81	*0.47*	*–2.13*	*–1.42*	*–1.38*
	dS_B^{Style}	0.2491**	0.3932*	0.4857***	0.4221**	0.3409***
		2.52	*1.84*	*3.26*	*2.01*	*4.06*
	$dS_B^{\perp}$	0.0083	0.0144	–0.0211	–0.0306	–0.0113
		0.66	*0.51*	*–1.51*	*–0.99*	*–1.11*
ROA(3)	dS_M^{Style}	0.1735***	0.2517**	0.2273***	0.2060**	0.1978***
		3.66	*2.06*	*2.86*	*2.32*	*4.96*
	$dS_M^{\perp}$	–0.0052	–0.0060	–0.0157*	–0.0096	–0.0109**
		–0.91	*–0.39*	*–1.69*	*–1.32*	*–2.54*
	dS_B^{Style}	0.1996***	0.1586	0.2958***	0.2492**	0.2458***
		3.31	*1.10*	*3.34*	*2.21*	*4.39*
	$dS_B^{\perp}$	–0.0020	0.0071	–0.0080	–0.0103	–0.0031
		–0.30	*0.58*	*–0.82*	*–0.84*	*–0.57*

Figure 1: Timeline of the model of Section 2



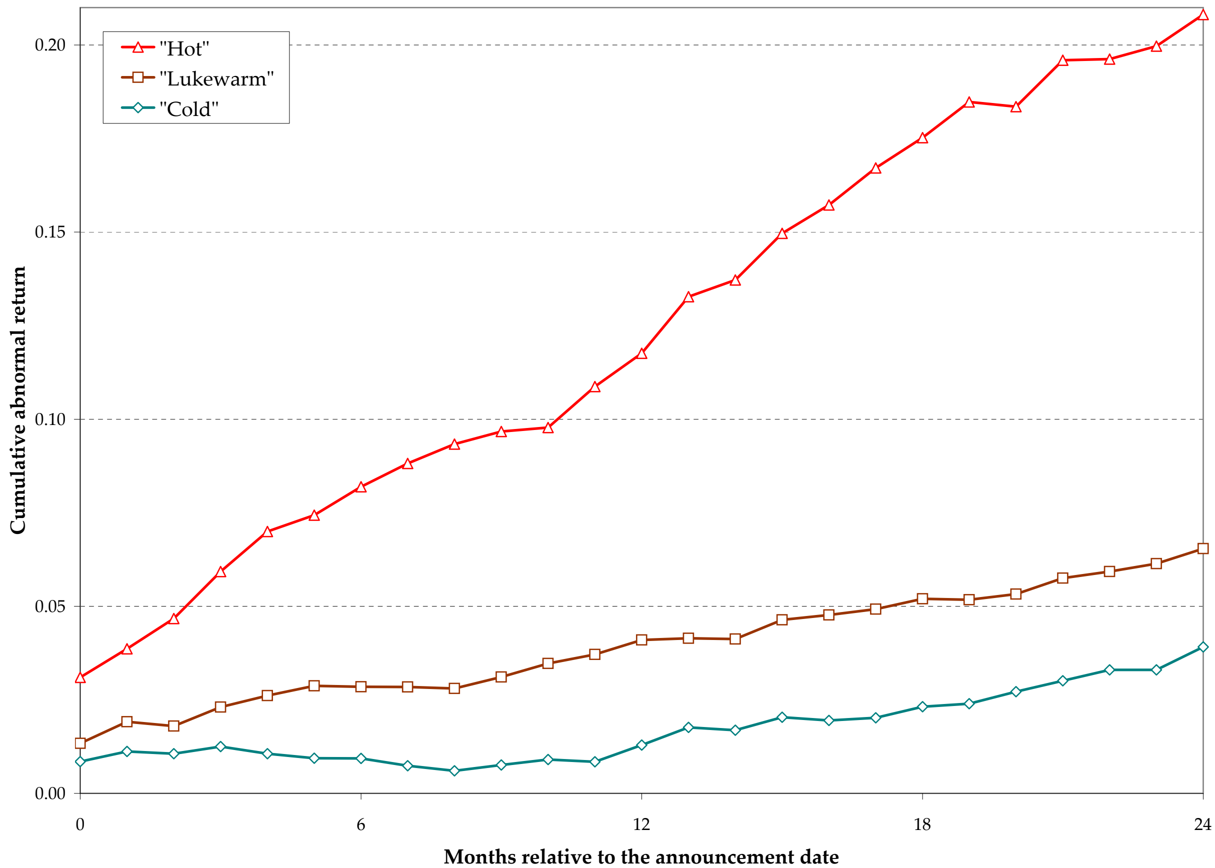


Figure 2: Cumulative abnormal returns following the dividend increase announcement
The graph plots the Cumulative Abnormal Returns (CAR) following the dividend increase announcement date for three portfolios based on the hotness of the announcing firm's investment style at the announcement date. The portfolios are constructed as follows. I rank the announcing firms based on the level of hotness proxy (Own style flow, Opposite style flow, Projected flow) at the announcement date. The "Hot" portfolio contains the stocks of the announcing firms with hotness above the 70th percentile, the "Cold" portfolio the stocks of the announcing firms with hotness below the 30th percentile, and the "Lukewarm" portfolio the ones in between. The sample of dividend announcements is the one used throughout the paper, and described in greater detail in Section 4.1. Monthly abnormal returns are computed using Ibbotson's (1975) Returns Across Time and Securities (IRATS) method combined with a Carhart (1997) four–factor model. The abnormal return in a given month is the IRATS alpha. The cumulative abnormal returns are the cumulative sum of the IRATS alphas. The cumulative abnormal returns plotted in the graph refer to portfolios based on Own style flow (similar graphs obtain for the portfolios based on Opposite style flow and Projected flow).