The Bright Side of Financial Fragility

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We highlight an important but overlooked characteristic of financial fragility: "fragile" stocks are more liquid because they are sensitive to non-fundamental liquidity shocks. This makes them less sensitive to corporate actions with price impact and therefore affects firms' incentives to engage in those actions. We show that fragile firms have lower share repurchases but invest more, the effects stronger for financially constrained firms. We establish causality by relying on exogenous changes in fragility induced by mergers of asset managers with portfolio overlap in the stocks. Our results suggest that financial fragility has direct but unexpected real implications for corporate actions.

Version: This version: November 12, 2020
JEL Classification: G11, G12, G14, G15, G23.
Keywords: Financial Fragility, Liquidity, Share Repurchases, Corporate Investment.

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Massa and Schumacher are grateful for research support from the Social Sciences and Humanities Research Council of Canada (SSHRC; grant number 435-2015-0615). All errors are our own.

Following the global financial crisis, the concept of "financial fragility" has attracted considerable attention because it recognizes how the ownership structure of stocks and the liquidity needs of its owners can create non-fundamental price impact which, in turn, exacerbates financial crises. Following Greenwood and Thesmar (2011), a stock is considered "fragile" if it is sensitive to non-fundamental liquidity shocks by its owners. This sensitivity is attributed to ownership by investors subject to volatile and correlated liquidity needs. It is particularly severe in the presence of institutional owners with open-ended structures because these owners can be subject to strategic complementarities[1] that magnify, for example, the effect of volatile fund flows (Chen, Goldstein, and Jiang 2010; Goldstein, Jiang and Ng 2017). The key result of this line of reasoning is that fragile stocks tend to exhibit higher return volatility because their prices are more sensitive to non-fundamental demand shocks (Greenwood and Thesmar 2011). The resulting folk theorem is that fragility can have detrimental effects on financial markets and the economy as a whole.

We argue that this negative view of financial fragility is appealing but incomplete because it only focuses on "volatility-related" consequences. Instead, we highlight another important but overlooked implication of the elevated sensitivity of "fragile" stocks to non-fundamental demand shocks: its effect on market depth. Indeed, while non-fundamental demand shocks make fragile stocks more volatile, the same demand shocks also have a positive effect on stock liquidity. This is simply because, by the very definition, these demand shocks are volatile but ultimately non-fundamental (i.e., unrelated to firm characteristics) with little to no information content about the future cash flows or fundamental sources of firm risk. To belabor the literature on trading under asymmetric information (Kyle 1985), one might think of such non-fundamental demand shocks simply as "noise trading" – they increase both return volatility and liquidity.

From this argument emerges an important but overlooked "bright side" of financial fragility: Fragile stocks, while exhibiting higher return volatility, should be less sensitive to corporate actions because high liquidity reduces the expected price impact that specific corporate actions might have. A related analogy to this argument is to think of fragile stocks as stocks with a "flat" demand curve because the elevated "noise

[1] The decisions of two or more players are strategic complements if they mutually reinforce one another, and they are strategic substitutes if they mutually offset one another (Bulow, Geanakoplos, and Klemperer 1985).

trading" created by non-fundamental liquidity shocks reduces the market impact of informed trades. In this paper, we argue that firms with fragile stocks are not only aware of this aspect of fragility but take advantage of it by adjusting specific corporate actions in response to changes in financial fragility.

We center our analysis on key corporate actions that are known to have stock price impact, in particular share repurchases. We argue that the high liquidity of fragile stocks reduces firms' incentives to repurchase their own stocks simply because the high liquidity reduces the positive stock price reaction of share repurchases. This behavior in the stock market has implications for other corporate policies, in particular corporate investment. That is, we argue that firms with fragile stocks invest more instead of repurchasing their own stock. Likewise, a reduction in stock price fragility, by shifting firms' incentives towards repurchasing their own stock, lowers corporate investment. Since our argument implies a substitution between repurchase behavior and corporate investment, we expect these effects to be stronger for financially constrained firms (e.g., Stein 1996; Baker, Stein and Wurgler 2003).

We begin our analysis with motivating panel regressions on the global equity universe from the Worldscope database and document several empirical associations that should follow from our reasoning. First, we document that stock price fragility in the sense of Greenwood and Thesmar (2011) is indeed associated with both higher return volatility (as established by prior literature) and higher stock liquidity (i.e., the Amihud (2002) measure of price impact). The most fragile stocks are both the most volatile and the most liquid stocks in our sample.

Second, we document that firms with fragile stocks engage in fewer share repurchases and have higher capital expenditures (CAPEX) and total investment than firms with less fragile stocks. In economic terms, we find that the quintile of most fragile (and liquid) stocks execute 56% fewer share repurchases but have 25% higher CAPEX compared to the average stock in our sample. All these associations are robust to several multivariate and fixed effect specifications.

The key challenge in our line of argument is establishing the direction of causality because all involved quantities are all jointly determined – ownership structure, stock price fragility, stock liquidity, share repurchases, and investment. Our main contribution is to pin down this direction of causality by relying on

established natural experiments that lead to exogenous changes in stock price fragility and stock liquidity. We exploit such events to establish a causal link between stock price fragility and the repurchase and investment behavior of firms.

In particular, we build on prior work in Massa, Schumacher, and Wang (2020, MSW hereafter) who use mergers between asset management firms as experiments that lead to exogenous changes in financial fragility at the firm level. MSW show that these natural experiments lead to significant portfolio rebalancing of especially open-end mutual funds and lasting capital market effects that lead to a reduction in realized stock price fragility. Our contribution in this paper is to show that such induced changes in fragility have direct implications for corporate policies as the firms most affected by such exogeneous shocks to fragility adjust both their repurchases and investment policies over the subsequent 2 to 3 year periods.

We focus on the firms most heavily affected by these mergers because their expected fragility changes induced by the pre-merger holdings of buyer- and target-affiliated funds are the largest. MSW show that these firms suffer from the most severe financial market reactions with the biggest reductions in liquidity and fragility. We match these "treated" firms with "control" firms from the lowest quintile of pre-merger holdings. Since pre-merger ownership is correlated with observable characteristics, we use propensity score matching to create treated and control samples with similar observable characteristics and then estimate a difference-in-difference specification to relate differences in the treatment status to repurchase and investment behavior in the years following the merger events.

Our first main finding is that treated firms significantly increase their overall payout relative to the control firms in the two years following the mergers. The increase in payout is (i) detectable only after the merger events and not before which indicates that the parallel trend assumption likely holds and (ii) driven exclusively by increases in stock repurchases. In economic terms, we find that treated firms increase their stock repurchases by 22% relative to control firms – an economically sizeable effect.

To highlight the opportunistic nature of these capital market actions, we perform a falsification test using changes in dividends. We find no corresponding changes in dividend policy, confirming that firms selectively use share repurchases in order to improve the stock price rather than dividends that would also

create investor expectations of higher dividends in the future. Moreover, increased price impact will be better exploited by corporate actions that are expected to have bigger impact on the demand curve and the relatively larger size and lumpiness of share repurchases makes them the ideal candidate.

To substantiate that this increase in repurchase behavior is indeed induced by changes in financial fragility, we examine the cross-section of treated firms along their pre-merger ownership characteristics. MSW show that funds with a high exposure to financial fragility rebalance the most. Such funds include open-end funds, funds with large positions in the stock, volatile flows, or flows that are correlated with the flows of other funds holding the stock. We find that firms with high pre-merger ownership of funds with precisely those characteristics – i.e., the firms that experienced the heaviest rebalancing and strongest reduction in fragility as per MSW – most aggressively increase their stock repurchases in the two years following an asset management merger. For dividends, instead, there is no significant effect, suggesting that stock repurchases are the action of choice for firms to take advantage of the changed financial market conditions of their stock.

Next, we turn to corporate investment and show that the same treated firms, while increasing share repurchases, reduce total investment, and in particular CAPEX. In economic terms, we find that treated firms reduce CAPEX by 6% relative to control firms – again, an economically sizeable effect. Related to that, treated firms experiences lower total asset growth compared to control firms. When we implement the same tests to examine the cross-section of treated firms along pre-merger ownership characteristics, we find that the same pre-merger ownership characteristics that lead to an increase in share repurchases also lead to a more pronounced reduction in CAPEX. Specifically, we find that treated firms with a pre-merger ownership structure characterized by open-ended funds with volatile flows and concentrated positions in the stock register a more severe decline in CAPEX in the post-merger periods.

Next, we expand our view and test if these events impact other corporate policies, in particular other financing policies that would seem directly affected by the substitution of CAPEX by share repurchases. Specifically, we examine if the same firms also change their equity issuances. If a reduction in financial fragility (i.e., an increase in price impact) incentivizes firms to repurchase their own stock, it should

simultaneously disincentivize equity issuances given their expected negative market impact. And indeed, we find that treated firms experience a stronger reduction in equity issuances relative to control firms, thereby potentially magnifying the reduction in CAPEX under our hypothesis. Apart from a drop in equity issuances, we find no significant changes in other financing policies (leverage, debt issuances) or cash holdings.

These findings support our conjecture that a reduction in financial fragility, by shifting firm's incentives towards repurchasing their own stock, takes place at the time in which also equity issuances are reduced. It is therefore interesting to know whether the contemporaneous reduction in equity issuances and increases in repurchases is due to the steepening of the demand slope for stocks or whether it is mostly concentrated in firms that are already financially constrained as predicted by Stein (1996) and Baker, Stein, and Wurgler (2003). Indeed, given that financially constrained firms lack the financial flexibility to finance share repurchases through other means, we would expect a reduction in financial fragility to lead to a stronger substitution away from corporate investment and towards share repurchases. We would also expect financially constrained firms to experience a larger reduction in equity issuances.

Indeed, we find that our results are stronger for financially constrained firms. We use several established measures for financial constraints including the measure by Whited and Wu (2006), the "size and age" measure of Hadlock and Pierce (2010), and the book-to-market ratio. We show that treated firms that are financially constrained exhibit a stronger increase in share repurchases and stronger decreases in CAPEX and equity issuances.

Finally, we implement additional tests to rule out the alternative hypothesis that changes in share repurchases are a response to changes in governance driven by the changes in ownership induced by the asset management mergers. Consolidated evidence (e.g., Grullon and Michaely 2012, Hoberg, Phillips and Prabhala 2013, Crane, Michenaud, and Weston 2016)) suggests that governance, including ownership structure, can affect payout policy. We rule out this alternative via two direct tests: First, if our results were driven by governance consideration, we would expect our results to be stronger among firms with poor governance prior to the mergers. However, we find no significant differences in share repurchases along

several pre-event governance characteristics (i.e., number of block holders, G-index and E-index). Second, we directly examine the changes in corporate voting outcomes at the annual meetings around the merger events and find no changes in shareholder participation or voting against management that could point to more shareholder influence for treated firms following the mergers.

We also provide a large battery of robustness tests for our results including alternative criteria of assigning stocks to the treatment group as in MSW and validation tests showing that treated firms indeed experience a decline in fragility and liquidity in the post-merger periods as in MSW. We also show that treated stocks experience changes in ownership composition that are conducive of the changes in stock price fragility and liquidity that we document: While total institutional ownership remains constant for treated stocks, the changes in the composition in institutional ownership point towards a stronger representation of institutional owners with a longer investment horizon and a lower level of portfolio turnover that comes at the expense of the open-ended mutual fund ownership and ownership of institutions with a shorter investment horizon and a high portfolio turnover.

We make several important contributions to the literature. First, we provide direct evidence that financial fragility has real implications by driving corporate actions, in particular, share repurchases and investment. Key to this contribution is the observation that while "fragile" stocks are known to be more volatile (Greenwood and Thesmar 2011), they also have a "bright side" because the same forces that increase return volatility also improve stock liquidity and reduce the price impact of corporate actions. Our paper is the first one to document this "bright side" of financial fragility because by reducing firms' incentive to repurchase their own stock, fragility encourages corporate investment. By relying on the natural experiments of mergers between asset management firms that induce exogenous reductions in *realized* fragility, we are able to establish a direct and causal link between financial fragility and corporate behavior. Our results also relate to a contemporary working paper (Friberg, Goldstein, and Hankins 2020) that exploits the BlackRock-BGI merger to examine short-term changes in cash holdings for US firms following the merger announcement and that interprets the increase in cash holdings as precautionary behavior driven by *expected* (but *unrealized*) changes in fragility induced by the merger announcement.

Second, we contribute to the literature that examines how opportunistic behavior in the stock market shapes corporate policies and outcomes by showing how changes in financial fragility shift firms' incentives to repurchase shares. Our results go further by documenting how these incentives to repurchase stock then have ramifications for corporate investment and equity issuances, especially for financially constrained firms. These findings are consistent with theories of capital budgeting of financially constrained firms, such as Stein (1996) or Baker, Stein, and Wurgler (2003), and empirical evidence in Almeida, Fos, and Kronlund (2016) and others.

Third, we contribute to the literature on share repurchases. This literature has long established that share repurchases lead to positive stock price reactions (Vermaelen 1981, Dann 1981, Lakonishok and Vermaelen 1990, Ikenberry, Lakonishok, and Vermaelen 1995) and survey evidence presented in Brav et al. (2005) corroborates that corporate executives are motivated to repurchase their firm's stock to increase stock value. We take these long-standing results as given and add to the part of this literature that debates the relationship between share repurchases and stock liquidity. Most of this literature though focuses on the question of how repurchases themselves affect stock liquidity (for example, Cook, Krigman, and Leach 2004 or Hillert, Maug, and Obernberger 2016). Our focus is different in that we show how exogenous changes in fragility and liquidity directly affect repurchase behavior due to the changes in the expected stock price benefits that are associated with repurchases when stock liquidity changes.

I. Data & Main Variables

Our main dataset relies on two primary data sources. First, we collect firm and stock information for the global universe of listed firms from the Worldscope and Datastream databases. From Worldscope, we collect firm-level accounting information on share repurchases, dividend policy, capital expenditure as well as several other balance sheet and income statement items (e.g., total assets, book equity, leverage, cash holdings, and others). From Datastream, we collect information on stock prices, returns, and trading volume for this global sample of firms. To compute stock return volatility and Amihud's (2002) measure of price

impact, we rely on daily volume, price, and return data but we also collect those items at the monthly frequency for some control variables. As in MSW, we apply the filters suggested by Ince and Porter (2006) to the data collected from Worldscope and Datastream. We convert all accounting, price, and return information into US$ terms.

The second main data source is the FactSet Ownership Database from which we collect data on institutional ownership. For each firm, we download holdings information to construct annual measures of institutional ownership for all institution and fund types. This universe includes a large variety of institutions including open-end funds, insurance funds, closed-end funds, and other types.

Most variables we employ are standard measures of corporate payout (actual repurchases and dividends), investment (capital expenditure, total investment), and other firm characteristics and policies, including firm size, book-to-market, cash flow, total institutional ownership, age, cash holdings, leverage and others. For brevity, we present a complete list of variables including their definitions in Appendix A.

To capture the key concept of "financial fragility", we estimate the stock-level measure of fragility developed by Greenwood and Thesmar (2011) but for the global universe of firms and using the holdings and flows of all fund types in FactSet. While Greenwood and Thesmar (2011) construct the measure of stock price fragility from holdings and flow information of open-end funds (i.e., mutual funds) only, we follow the steps outlined in MSW who emphasize that changes in ownership composition can have important effects on stock price fragility. For example, MSW show that the rebalancing of open-end funds leads to changes in the composition of ownership that cannot be captured by relying exclusively on mutual fund holdings and flow information (thereby excluding all the other fund types).[2]

[2] One challenge in constructing stock price fragility using the complete FactSet universe is the missing information on portfolio flows for many different fund types. To overcome this challenge, MSW proxy flows for all fund types using reported holdings and holdings-based returns (instead of total fund returns that are unobservable for many fund types). MSW show that (i) such holdings-based flows are highly correlated with true flows (the correlation exceeds 70% for mutual funds), (ii) the dynamics of stock price fragility do not depend much on how flows are estimated, but (iii) the more comprehensive inclusion of all fund types is the key to capture composition effects from the changes in ownership structure and this ultimately affects a comprehensive measure of financial fragility.

To be included in the sample, we require a firm to have non-missing information for stock-level fragility, liquidity, and volatility as well as the main corporate outcome variables for share repurchases, capital expenditures as well as control variables. This delivers a final firm-year panel with 61,123 observations attributable to 12,722 individual firms for the sample period 2002 to 2012. Our sample period is dictated by the global sample of asset management mergers that we describe in detail in Section III.

Table 1 presents the summary statistics for this global sample. In the average firm-year, actual share repurchases amount to 1.1% of book assets and capital expenditures amount to almost 6% of book assets. The average firm has institutional ownership of almost 33% and is a growth firm with a book-to-market ratio smaller than 1, consistent with other corporate finance studies that use a global universe of listed firms (e.g., Pinkowitz, Stulz, and Williamson 2015).

II. The Bright Side of Financial Fragility: Motivating Evidence

We begin our analysis with simple motivating panel regressions to highlight key empirical associations that are implied by our argument on the "bright side" of financial fragility. We start with the relationships between fragility, volatility, and liquidity and estimate the following specification for our firm-year panel:

$$Y_{ft+1} = \beta\sqrt{Fragility_{ft}} + \gamma Controls_{ft} + \alpha_c + \alpha_i + \alpha_t(+\alpha_f) + \epsilon_{ft+1}, \quad (1)$$

where Y_{ft+1} measures outcome variables (including return volatility, liquidity, repurchases, or investment), $\sqrt{Fragility_{ft}}$ is the lagged square root stock price fragility as in Greenwood and Thesmar (2011) but computed using holdings and return information from all funds holding firm *f* in Factset in year *t* and the vector $Controls_{ft}$ includes additional firm-level controls. We present fixed effect specifications including effects for the primary listing country *c* of firm *f* (denoted by α_c), the industry affiliation *i* of firm *f* based on the Datastream global industry classification (denoted by α_i), year *t* (denoted by α_t), and in some specifications firm fixed effects (denoted by α_f), and compute inference from standard errors clustered at the firm level.

Table 2 presents these first estimates. To relate to the original study of Greenwood and Thesmar (2011), we first replicate the already established effect of fragility on return volatility. Columns 1 to 3 document that fragile stocks exhibit more volatile returns, this effect is robust to different fixed effect specifications along with several control variables. The specifications in column 1 include our list of firm-level covariates as well as country and industry fixed effects. Column 2 adds year fixed effects and column 3 replaces the country and industry fixed effects with firm fixed effects. The results are robust across specifications and document that, as expected, more fragile stocks exhibit higher return volatility because these stocks have ownership structures that are concentrated and characterized by owners with volatile and correlated flows. As such, these stocks are subject to potentially volatile liquidity shocks that render their prices more volatile.

In the remaining columns, we replace the dependent variable and use instead the Amihud (2002) measure of stock (il)liquidity. The first element in our argument posits that fragile stocks, while more volatile, should also exhibit higher liquidity for the simple reason that the same liquidity shocks that render those stocks volatile are uninformative about either future cash flows or sources of firm risk. As such, these liquidity shocks capture "noise trading". If so, they should render the stocks liquid. In terms of the Amihud (2002) measure, we expect fragile stocks to have a lower measure of price impact.

The results in columns 4 to 6 of the same table support this reasoning. Across the specifications, we find fragile stocks to be associated with a lower level of Amihud (2002) price impact. In terms of economic impact, we find that a 1 standard deviation (STD) increase in fragility is both related to a 3.3% of a STD increase in volatility (column 2) and a 6.6% of a STD increase in liquidity (i.e., a lower Amihud (2002) price impact, column 4). We present additional robustness tests to these first motivating regressions in the Internet Appendix, Table IA.1. For example, when we transform the fragility measure into quintiles, we find that the difference in volatility (liquidity) between stocks in the highest and lowest fragility quintile amounts to 12% (32%) of a STD of these variables.

In Table 3, we turn to the core of our argument that firms are not only aware of the consequences that financial fragility has on their stock prices but also that it in fact influences corporate policies. The reason

is that the increased liquidity of fragile stocks reduces the stock price impact of corporate actions. Indeed, corporate actions such as share repurchases can be seen as actions of an "insider" and, as such, are expected to have a significant market impact. However, this market impact is attenuated for fragile stocks. As an alternative analogy, the high liquidity / low price impact of fragile stocks is equivalent to a "flatter" demand curve for those stocks.

Columns 1 to 3 of Table 3 present the same specifications as in Table 2 but now replace the dependent variable with the first corporate policy of interest: share repurchases. The past literature has amply shown that share repurchases are associated with a positive stock price impact (e.g., Vermaelen 1981, Dann 1981, Lakonishok and Vermaelen 1990, Ikenberry, Lakonishok, and Vermaelen 1995). Our argument predicts that firms with fragile stocks should engage in fewer share repurchases because the expected positive effect of share repurchases is muted due to the higher fragility. Columns 1 to 3 confirm that this is indeed the case, even after controlling for a large number of corporate characteristics that are expected to affect repurchases (including growth opportunities, cash flows, dividend policy or institutional ownership). The estimate in column 2 suggests that a 1 STD increase in fragility is associated with a 4.2% of a STD reduction in share repurchases.

Specifications in the remaining columns 4 to 6 of Table 3 go one step further and show that fragile firms not only repurchase less of their own stock but also invest more. Using the same specifications but using capital expenditures as the dependent variable, we find in column 4 that a 1 STD increase in fragility is associated with a 4.0% of a STD increase in capital expenditures. We again present robustness tests of these motivating regressions in the Internet Appendix, Table IA.1. For example, when we transform the fragility measure into quintiles, we find that the difference in repurchases (CAPEX) between stocks in the highest versus the lowest fragility quintile amounts to 19% (18%) of a STD of these variables. Put differently, share repurchases (CAPEX) of stock in the highest fragility quintile are 57% (26%) lower (higher) compared to the average stock in our sample.

III. Causal Evidence from Mergers between Asset Management Firms

A. Empirical Design

The central challenge in our line of argument is establishing the direction of causality. We posit a causal relationship between changes in fragility and corporate policies – in particular share repurchases and capital expenditure / investment – because changes in fragility directly imply changes in stock liquidity that affect the expected price impact of corporate actions and hence shift corporate incentives. Clearly, this argument is centered on quantities that are all jointly determined. It is for this reason that we have labelled the results presented in Section II as "motivating evidence" – all the tests presented in Tables 2 and 3 are subject to reverse causality concerns.

To solve this problem and to pin down our argument that changes in fragility drive corporate policies, we rely on established natural experiments that lead to exogenous changes in stock price fragility. Specifically, we build on prior work in MSW who use mergers between asset management firms as experiments that lead to exogenous changes in financial fragility at the firm level. These authors establish that asset management mergers happen for reasons that are exogenous to the portfolio holdings of affiliated buyer and target funds. This is a key observation as it validates the exclusion restriction that these mergers do not happen in anticipation of future changes in share repurchases or capital expenditures. MSW show that these natural experiments lead to significant portfolio rebalancing of especially open-end mutual funds and lasting capital market effects. Important for our study, MSW show that these rebalancing and capital market effects lead to a reduction in realized stock price fragility. As such, we expect that the same events should lead to an increase in share repurchases because lower fragility implies lower liquidity and a higher price impact for share repurchases. Further, since our argument suggests a substitution away from corporate investment and towards repurchases, we expect that increases in repurchases come at the expense of capital expenditure.

To implement our empirical strategy, we obtain the global sample of mergers between asset management firms. This sample was first presented in Luo, Manconi, and Schumacher (2020) and is also

employed in MSW. We include all mergers in our sample for which we have holdings information of buyer and target funds in the year prior to the merger completion date. For those mergers, we include all stocks that are held by at least one buyer- or target affiliated fund in FactSet in the year prior the merger completion and for which we have complete information on the main dependent and explanatory variables over the 4 year event window for each merger. This event window is centered on the year in which the merger completes and includes the 2 years prior to the merger year and the 2 years following the merger year.[3] These inclusion restrictions deliver a sample of 77 different mergers between asset management firms where funds have positions in 6,008 different stocks over the time period 2002 to 2012.

From this sample, we construct our treatment and control groups as follows. First, we conjecture that these financial market effects will have a real impact on corporate policies especially for the firms most heavily affected by these mergers – i.e., the firms in which the concentration increases attributable to the pre-merger holdings of buyer- and target-affiliated funds are the largest. We therefore designate "treated" firms as those in the top quintile of expected ownership concentration increases because of asset management mergers. MSW show that these firms suffer the most severe financial market reactions with the biggest subsequent *reductions* in liquidity and fragility. As in MSW, we measure the expected increase in ownership concentration due to a merger as the hypothetical increase in the Herfindahl-Hirschman Index of firm-level ownership concentration based on the pre-merger holdings of all buyer- and target-affiliated funds. For each stock-deal observation, we define $DHERF_{fd} = \left(IO\ Acq_{fd} + IO\ Targ_{fd}\right)^2 - IO\ Acq_{fd}^2 - IO\ Targ_{fd}^2$ and set $Treat_{fd} = 1$ if firm *f* affected by deal *d* falls in the highest quintile of $DHERF_{fd}$ and 0 otherwise. The variables $IO\ Acq_{fd}$ and $IO\ Targ_{fd}$ are the combined holdings of all funds affiliated with the acquirer (target) asset management firm scaled by shares outstanding. That is, we measure the hypothetical change in ownership concentration from aggregate holdings at the asset management firm level (rather than individual fund level), consistent with MSW. Following MSW, we also construct an

[3] Because our outcome variables are measured at the annual frequency, we exclude, for each deal, the year in which the merger completes to avoid confounding the pre- and the post-event periods.

alternative definition of treatment (IO_Total_{fd}) as the sum of buyer and target ownership and assign stocks to the treatment group if they fall in the highest quintile of combined ownership. We present robustness tests for all our main results using this alternative treatment definition in the Internet Appendix.

Second, we match these "treated" firms with "control" firms from the lowest quintile of expected ownership concentration. Given that MSW show that pre-merger ownership is correlated with observable firm characteristics, we use propensity score matching by selecting control stocks from the sample of stocks in the lowest treatment quintile. This allows us to construct treatment and control samples with otherwise similar observable characteristics.

We present the results of the propensity score matching in Table 4. In Column 1 of Panel A, we show that before the matching, treated firms exhibit different stock characteristics than the remaining stocks because it is well known that institutional investors have a preference for specific stock characteristics. As such, some firms are more heavily held in the portfolios of both buyer- and target-affiliated funds. Such stocks tend to be older and larger cap stocks with high institutional ownership and strong cash flows. Since many of these characteristics can be expected to affect corporate policies, including share repurchases and capital expenditures, we implement one-to-one nearest neighbor propensity score matching. The matching characteristics include country and industry affiliation, log of total assets, log of book-to-market ratio, cash flows, and total institutional ownership.

Having selected control stocks for all the treated stocks, we obtain a final sample that contains 2,291 treated stocks plus their corresponding control stocks. For these stocks, Column 2 of Panel A in Table 4 confirms that observable characteristics no longer predict the treatment status, including characteristics that were not included in the propensity score matching exercise. In Panel B of Table 4, we directly present the summary statistics in terms of average observable characteristics both before and after propensity score matching. As expected, there are strong and significant differences in observables between treatment and control firms before but no longer after the propensity score matching.

Our main empirical specification is a difference-in-difference estimation at the annual frequency for treatment and control firms of the following form:

$$Y_{fdt} = \beta_1 T_{fd} + \beta_2 Post_{dt} + \beta_3 T_{fd} \times Post_{dt}$$
$$+\gamma_1' X_{ft-1} + \gamma_2{}' \left(Post_{dt} \times X_{ft-1}\right) + \alpha_t + \alpha_f + \alpha_d + \epsilon_{fdt,} \quad (2)$$

where Y_{fdt+1} measures several outcome variables for firm *f* affected by deal *d* in year *t*, T_{fd} is the treatment indicator that equals 1 if firm *f* is in the top quintile of the treatment variable for deal *d* and 0 otherwise, $Post_{dt}$ is an indicator equal to 1 for the years following the completion of deal *d* and 0 otherwise as well firm-level control variables and the interaction with the post-indicator to control for any residual effect observables could have on firm outcomes in the post-merger periods. We include year, firm, and deal fixed effects (denoted by α_t, α_f and α_d respectively) and cluster the standard errors by firm.

Given that our focus is on corporate policies, we include an event window of 4 years around each merger event. This spans the 2 years prior to the year in which deal *d* completes and the 2 years following the deal completion. The main coefficient of interest in equation (2) is β_3, the coefficient on the interaction term between the post and treatment indicators. We interpret this coefficient as the causal effect that changes in financial fragility have on the outcome variable of interest.

This interpretation hinges on the identifying parallel-trend assumptions in the outcome variables. MSW already show that this parallel trend assumption holds in their setting and we will provide additional validation tests that hold for the outcome variables we consider. In addition, we highlight that our sample construction further addresses any remaining concerns in this respect. For example, similarities in observable characteristics between treatment and control stocks mitigate omitted variable concerns that changes in corporate policies are ultimately driven by differences in firm characteristics rather than differences in the treatment status. This increases the likelihood that the parallel trend assumption is met. In this respect, we highlight the last 2 rows of Table 4, Panel B. They show that there are no significant differences in the dynamics of share repurchases or CAPEX for treated versus control for in the pre-event period. This corroborates our identifying assumption that the parallel trend condition is met. We will provide further tests as we discuss our main findings.

Before estimating equation (2) for our outcome variables of interest, we provide two validation tests that treated firms indeed experience a reduction in financial fragility and a reduction in liquidity in the post-merger periods relative to control firms. These results are not new to our study – they are already documented in MSW – but we seek to confirm that our selection of treatment and control stocks still witnesses the same changes that are at the core of our argument. Therefore, in a first step, we estimate equation (2) with the dependent variables $\sqrt{Fragility_{ft}}$ or $Amihud_{ft}$ and present these results in the Internet Appendix, Table IA.2, Panels A and B respectively. Consistent with MSW and across different fixed effect specifications, we find that treated firms experience both a decline in fragility and a decline in liquidity – i.e., an increase in the Amihud (2002) measure of price impact – in the post-merger periods relative to control firms.

In the second validation test, reported in Table IA.3 in the Internet Appendix, we replicate that treated firms undergo the same changes in the composition in institutional ownership that MSW document: While treated firms do not experience a change in the total level of institutional ownership (Table IA.3, column 1), they register a drop in "short term" ownership (i.e., primarily mutual fund ownership) that is compensated by an increase in "long-term" institutional ownership (columns 2 to 4). This is very important as changes in ownership composition drive the changes in stock liquidity following these merger events that drive the ultimate effects on stock fragility, and therefore on the expected price impact of the corporate policies we are interested in here.

In line with MSW, the results in Table IA.3 show that a reduction in fragility and liquidity is associated with changes in the ownership structure towards more "long-term" investors that trade less – i.e., reduce noise trading – but that also increase price impact by reducing liquidity.

B. Main Result: Changes in Share Repurchases and Capital Expenditures

Having laid out our empirical strategy, we seek to substantiate the motivating results from Section II via difference-in-difference estimates. We begin with the effect on share repurchases and estimate equation (2) with the dependent variable $Repurchase_{ft}$. Table 5, Panel A presents the results. Column 1 starts with

the simplest specification with only the key explanatory variables $Treat_{fd}$, $Post_{dt}$, and the interaction term between the two. We immediately find a positive and significant effect – treated firms register more share repurchases in the post-merger periods compared to the control firms. The point estimate in column 1 of 0.0056 on the interaction term suggests that treated firms increase their actual share repurchases by 0.56% of total assets relative to control firms. To put this estimate into economic perspective, both treated and control firms, on average, repurchase shares worth 2.6% of book assets per year prior to the merger event. Therefore, an increase of 0.56% represents a 22% increase in repurchase behavior, which is an economically sizeable effect, significant at the 1% level.

In the remaining columns, we successively add control variables and the various fixed effects to the specification until we arrive at the fully saturated difference-in-difference estimate as specified in equation (2) in column 5 of the table. Across these specifications, we find the difference-in-difference estimate to be remarkably stable – the point estimate fluctuates very little and remains at 0.0055 in column 5, almost identical to the simple estimate in column 1.

In column 6, we provide additional evidence that the parallel trend assumption is likely met in our empirical setting. We decompose the $Post_{dt}$ indicator into individual indicators for each event year and then include event-period indicators for each year separately: $Before1_{dt}$ is the year prior to the deal completion date of deal *d*, $After1_{dt}$ is the first year following deal completion year, and $After2_{dt}$ is the second year following the deal completion year. The omitted year is the year 2 years prior to the deal completion. The estimates in column 6 show no significant change in share repurchases in the year prior to the merger but a sharp increase in the 2 years after – the coefficients on the interaction terms between $After1_{dt}$ and the treatment indicator and $After2_{dt}$ and the treatment indicator are positive and statistically significant but the interaction term between $Before1_{dt}$ and the treatment indicator is insignificant, giving no reason to think that the parallel trend assumption is violated.

In Panel B of Table 5, we provide a falsification test to support our argument that firms opportunistically take advantage of changes in financial fragility and stock liquidity when they operate in

the stock market. We repeat the same specifications as in Panel A but use as dependent variable the dividend payout of the firm. We postulate that the change in fragility shifts incentives towards repurchases to take advantage of current stock market conditions. Share repurchases are known to be more opportunistic than dividend increases because the latter, while creating a positive stock price impact, also create an expectation for higher future dividends that may be undesirable in this context. Moreover, increased price impact will be better exploited by corporate actions that are expected to have bigger impact on the demand curve and the relatively larger size and lumpiness of share repurchases makes them the ideal candidate. And indeed, when we repeat our estimation using changes in dividends, we find no significant difference between treatment and control firms when it comes to dividend policy – the difference-in-difference estimates are statistically insignificant throughout in Panel B of Table 5.

We now turn to the second main corporate policy that is the "companion policy" to share repurchases in our argument: corporate investment. We ask: if changes in financial fragility shift firms' incentives to engage in share repurchases, do they also change firms' investment policies by changing the availability of funds for investment? In the context of our natural experiments that lead to an increase in share repurchases – should we expect to see a negative impact on corporate investment for treated relative to control firms? Our motivating results from Section II do suggest that fragile firms invest more. We now seek to clarify if this empirical association holds in our stringent difference-in-difference estimation.

We present the results of these tests in Table 6. The layout of the table is analogous to Table 5 with only the dependent variable changed to $CAPEX_{ft}$. Beginning from column 1, we find a negative and significant effect on capital expenditures for treated relative to control firms that is robust to saturating the specification with controls and fixed effects. The fully specified estimation in column 5 suggests that treated firms register a reduction in capital expenditures of 0.34% of total assets. In economic terms, this reduction amounts to about 6% of the average annual capital expenditures for both treatment and control firms prior to the merger events. Again, a sizeable economic effect.

Consistent with this drop in capital expenditures, column 6 and 7 of the same table show that these firms also register lower total investment and lower total asset growth. Column 8 finally confirms that the

parallel trend assumption is likely met for these specifications as the drop in capital expenditures occurs sharply in the year following the asset management merger completion date but is not detectable in the year before.

We present additional robustness tests on these first main results in the Internet Appendix. Tables IA.4 and IA.5 replicate Tables 5 and 6 but assign stocks to the treatment status based on the alternative treatment variable IO_TOTAL_{fd} rather than the main treatment variable $DHERF_{fd}$ – all our results hold.

C. Cross-Sectional Heterogeneity among Treated Firms

These first results establish that changes in stock price fragility and liquidity have a direct impact on the share repurchase and investment behavior of the treated firms. We now examine cross-sectional heterogeneity among treated firm. MSW identify specific ownership characteristics that lead to more aggressive portfolio rebalancing and therefore stronger reductions in fragility and liquidity. Such funds include funds with open-end structures, funds with volatile and correlated flows, as well as funds with concentrated positions in a stock. Funds with these characteristics have the highest exposure to changes in financial fragility. As a result, MSW find that these funds rebalance their portfolio the most following the announcements of asset management mergers. We now postulate that stocks with high pre-merger ownership by funds with these same characteristics experience a stronger increase in share repurchases and a stronger decrease in capital expenditures.

To operationalize this conjecture, we first create four additional measures that summarize these ownership characteristics for each firm prior to a merger event. We define IO_OEF_{ft} as the institutional ownership of firm *f* in year *t* attributable to open-end funds, $IO\_flowvola_{ft}$ as the institutional ownership of firm *f* in year *t* attributable to funds in the top quartile of the standard deviation of monthly flows (estimated over the previous 3 years for each fund) across all funds in our data, $Flow\ correlation_{ft}$ as the position weighted-average flow correlation of each pair of funds that hold the firm *f* in year *t* where the flow correlation for each pair is computed using the previous 3 years of monthly fund flows, and $IO\_excessweight_{ft}$ as the institutional ownership of firm *f* in year *t* attributable to funds in the top quartile

of positive excess weights in the stock relative to the fund's benchmark. To infer the benchmark weights for each fund, we follow Cremers et al. (2016) and infer benchmark weights for each benchmark index from the aggregated portfolio weights of all the physical-replication ETFs that report their holdings in FactSet and we map those benchmark weights to each funds using the benchmark index assigned to each fund by Morningstar, as in MSW. We then expand the estimation of equation (2) and focus on the triple interaction terms between $Post_{dt}$, $Treat_{fd}$, and these four dimensions of pre-merger institutional ownership.

We report the results in Table 7. Panel A presents the specifications with $Repurchase_{ft}$ as the dependent variable, Panel B the specifications with $CAPEX_{ft}$ as the dependent variable. In Panel A, we find that all the four measures that capture pre-merger ownership characteristics related to more aggressive portfolio rebalancing and, by extension, stronger stock market effects lead to a stronger increase in repurchase behavior. Specifically, treated firms with high open-end fund ownership or ownership by funds with concentrated positions in the stock and volatile and correlated flows exhibit the strongest increases in share repurchases in the post-merger periods. The triple interaction terms reported in columns 1 to 4 are all positive and statistically significant. In column 4, when we include all 4 ownership characteristics jointly, we find that 3 out of 4 remain positive and statistically significant with only the triple term with $IO\_excessweight_{ft}$ falling below the significant cutoff.

In Panel B of the same table, we implement the same tests but use $CAPEX_{ft}$ as the dependent variable. The results are analogous to those found in Panel A – but with the opposite sign. Firms with the same pre-merger ownership characteristics that lead to a stronger increase in share repurchases are now found to be firms with the strongest reduction in capital expenditures. This effect is negative and significant for 3 out of 4 measures that MSW identify, with the strongest effect found among firms with high pre-merger ownership of funds with volatile flows and large excess positions in the stock. Robustness tests using the alternative treatment variable in Table IA.6 in the Internet Appendix confirm these results.

Overall, this section has confirmed that the empirical associations documented in Section II carry over to a stringent difference-in-difference estimation centered on events that lead to exogenous changes in stock price fragility. Furthermore, the changes in share repurchases and capital expenditures are particularly pronounced among those treated firms that MSW identify as firms that experienced the strongest financial market reaction to the merger announcements of asset management mergers. Therefore, our results support our main argument for a "bright side" of financial fragility.

IV. Effects on Other Financing Policies and on Financially Constrained Firms

The evidence presented in Section III supports our argument that the increase in share repurchases triggered by the reduction in financial fragility following asset management mergers comes at the expense of capital expenditures. We now examine (i) if other financing policies are affected as well and (ii) if our results are pronounced for financially constrained firms for which we would expect this substitution to be more severe. We include in this test the "twin policy" to share repurchases: equity issuances. First, if our argument is correct, the reduction in liquidity that comes with the reduction in financial fragility should not only incentivize share repurchases, but also reduce the firm's desire to issue equity – the low liquidity would make the negative price impact of an equity issuance larger. Second, we expect these effects to be more pronounced for financially constrained forms as predicted by e.g., Stein (1996) and Baker, Stein, and Wurgler (2003).

A. Effects on Financing Policies

To implement the first test, we re-estimate equation (2) and use as dependent financing measures: cash holdings, debt issuances (long- versus short-term), leverage, and finally equity issuances. We present the results in Table 8. We find no significant changes in financing policy with the exception for equity issuances. Treated firms significantly reduce their equity issuances relative to control firms in the two years following the merger. The negative and significant result on equity issuances is directly consistent with the

firm's incentives to repurchase more shares – those same firms should have an equally strong incentive not to issue shares as the market impact has now gone up due to the lower fragility! Robustness tests using the alternative treatment variable in Table IA.7 in the Internet Appendix confirm these results.

B. Cross-Sectional Heterogeneity: Financially Constrained Firms

To build on these extended effects on equity issuances, we examine a second dimension of cross-sectional heterogeneity that distinguishes the treated firms as a function of their financial constraints. We expect the shift towards share repurchases and the resulting reduction in capital expenditures and equity issuances to be more severe for financially constrained firms because these firms have few alternative means to finance share repurchases. This conjecture is derived from theories of capital budgeting under financial constraints (Stein 1996; Baker, Wurgler and Stein 2003) and consistent with the empirical evidence in Almeida, Fos, and Kronlund (2016) who document that share repurchases that are implemented to boost earnings-per-share also come at the expense of corporate investment.

To test this conjecture, we construct three established measures of financial constraints: WW_{ft} is the measure of financial constraint developed by Whited and Wu (2006), $S\&A_{ft}$ is the "size and age" measure by Hadlock and Pierce (2010), and $Log\left(\frac{B}{M}\right)_{ft}$ is the natural logarithm of the book-to-market ratio to capture the idea that growth firms are expected to be more financially constrained than value firms (Derrien, Kesckes, and Thesmar 2013). We repeat our tests with these measures of financial constraints and report the results in Table 9. Panel A, as before, uses $Repurchases_{ft}$ as the dependent variable and we find, across all measures, that treated firms with financial constraints witness a stronger increase in share repurchases – the triple interaction terms are significant in columns 1 to 3 in Table 9, Panel A. When we estimate a joint specification in column 4 of the same table, we find that the significance concentrates on the triple interaction term with the book-to-market ratio. In other words, we find that treated growth firms that are presumably more dependent on equity market financing register the strongest increase in share repurchases in the post-merger periods.

In Panel B of Table 9, we implement the same tests using $CAPEX_{ft}$ as dependent variable. We find analogous results as before but with opposite signs. Treated firms that are financially constrained display the strongest reduction in capital expenditures in the post-merger periods. The joint specification in column 4 shows that the significance concentrates on growth firms, consistent with the previous Panel A.

In Panel C of Table 9, we repeat the specification but use $Equityiss_{ft}$ as the dependent variable. We again find that among the treated firms, financially constrained ones reduce equity issuances the most, the effect significant for two of the three measures. Robustness tests for all three panels using the alternative treatment definition are presented in the Internet Appendix, Table IA.8. The results are robust.

V. Alternative Hypothesis: Governance

Finally, we seek to rule out one alternative interpretation of our results, namely that changes in repurchase behavior are not driven by changes in fragility but directly by changes in the composition of institutional ownership that would change, for example, firm governance to increase payout to shareholders. Results in Crane, Michenaud, and Weston (2014) show that institutional ownership can have direct effects on corporate payout, and we seek to rule out that the same mechanisms are at work in our experiments.

To rule out this alternative, we provide two empirical tests. First, we postulate that changes in payout are driven by changes in governance. If this is the case, we expect these changes to be particularly strong for firms with poor corporate governance prior to the merger events. Therefore, we define 3 different measures of firm-level governance: First, the natural logarithm of the number of blockholders (defined as institutions that hold more than 5% of shares outstanding), second, the G-Index of Gompers, Ishii, and Metrick (2003), and third, the E-Index of Bebchuck et al. (2009). Then, we repeat the previous specifications with triple interaction terms for these governance measures. We present the results in Table 10, Panel A. In short, we find no evidence that the increase in share repurchases is particularly strong for

treated firms with poor corporate governance indicators. All the triple interaction terms are statistically insignificant.

In a second test, we directly examine shareholder participation at the firms' annual meetings to examine if the change in the composition of institutional ownership results in more "voice" being exercised during – e.g., corporate voting. Crane, Michenaud, and Weston (2014) find that changes in payout seem at least in part to be driven by changes in shareholder proposals and voting patterns. As such, we seek to test whether changes in shareholder proposals and voting patterns would lead to changes in payout.

To implement this test, we bring in additional data on shareholder proposals and voting patterns from the ISS/RiskMetrics database. We match our treated and control firms to this data to construct measures of shareholder participation and voting from the records at the annual meetings of our treated and control firms. In total, we are able to map approximately 60% of our treated and control firms to this data and we define the following new outcome variables: $\%ShareholderProposals_{ft}$, defined as the number of shareholder proposals divided by the total number of proposals up for voting at the annual meeting of firm *f* in year *t*, $Participation_{ft}$, defined as the average number of ballots case divided by shares outstanding across all proposals voting at the annual meeting of firm *f* in year *t*, $\%AgainstMgmt_{ft}$, defined as the average vote share against management across all proposals the annual meeting of firm *f* in year *t*, and $\%Pass_{ft}$ as the fraction of management proposals that "pass" at the annual meeting of firm *f* in year *t*.

We then re-estimate equation (2) with these different outcome variables and present the results in Panel B of Table 10. Across all of these measures, we find no significant change in voting or shareholder participation for treated versus control firms in the post-merger periods, so we conclude that our results are unlikely driven by changes in governance that could accompany the changes in ownership structure induced by these asset management mergers.

VI. Concluding Remarks

We highlight an important but overlooked characteristic of fragile stocks. While fragile stocks register higher return volatility, they also exhibit higher stock liquidity as measured by the Amihud (2002) measure of price impact. We argue that this "bright side" of financial fragility is ultimately driven by the same forces that make fragile stocks volatile: their exposure and sensitivity to non-fundamental demand shocks from an ownership base that can be concentrated and dominated by owners with volatile and correlated liquidity needs. These liquidity needs, while creating return volatility, are ultimately uninformative about future cash flows or sources of firm risk. They constitute "noise trading".

We posit that firms are aware of this element of stock price fragility and that it affects corporate actions. Specifically, we argue that firms with fragile stocks have a lower incentive to repurchase their shares because the high liquidity of fragile stocks attenuates the positive stock price impact of share repurchases. We show that this is indeed the case in the global cross-section of listed firms. We establish causality by relying on natural experiments that exogenously change stock price fragility and that we show to be directly affected repurchase behavior. We also show that the lower incentives to engage in share repurchases allow firms with fragile stocks to invest more. We interpret this as a direct benefit that results from the "bright side" of financial fragility. Our results shed light on the important but unexpected real implications that are associated with financial fragility.

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Table 1. Summary Statistics

This table presents summary statistics of the variables used in the panel regressions. *Total volatility* is computed as the annualized standard deviation of daily stock returns. *Amihud* is defined as the monthly average of the daily Amihud, which is computed as absolute daily stock return divided by the dollar trading volume (in million US$) on that day. *Repurchase* is the share repurchase of common and preferred stocks scaled by the beginning-of-period total assets. *CAPEX* is capital investments scaled by the beginning-of-period total assets. $\sqrt{Fragility}$ is defined as in Massa, Schumacher, and Wang (2020) where fragility is computed based on the holdings, returns, and flows of all funds in FactSet (i.e., including open-end and non-open-end funds). *Firm size* is the logarithm of total assets. *Log(B/M)* is the logarithm of the book value of equity divided by the market value of equity. *Cashflow* is computed as the income before extraordinary items plus depreciation scaled by the beginning-of-period total assets. *IO* is the total institutional ownership calculated as the sum of all holdings of all funds in FactSet divided by shares outstanding. *Age* is the logarithm of the number of years since a firm appears in DataStream. *Cash holdings* is the total cash holdings divided by the beginning-of-period total assets. *Leverage* is the long-term debt plus current liabilities divided by the beginning-of-period total assets. *Dividend* is the cash dividends paid by a firm scaled by the beginning-of-period total assets. *Mom* is the trailing twelve-month total stock return.

	Mean	P25	Median	P75	SD	Obs.
Total volatility	0.4149	0.2802	0.3743	0.5133	0.1810	61,123
Amihud	0.2174	0.0021	0.0167	0.1484	0.4659	61,123
Repurchase	0.0113	0.0000	0.0000	0.0034	0.0330	61,123
CAPEX	0.0587	0.0158	0.0349	0.0697	0.0795	61,123
$\sqrt{Fragility}$	0.3805	0.1042	0.3005	0.5736	0.3379	61,123
Firm size	6.4973	5.2911	6.4058	7.6392	1.7347	61,123
Log(B/M)	-0.5188	-1.0081	-0.4781	0.0187	0.7898	61,123
Cash flow	0.0932	0.0482	0.0933	0.1520	0.1382	61,123
IO	0.3288	0.0553	0.1823	0.5809	0.3289	61,123
Age	2.4705	1.9459	2.6391	3.1355	0.8855	61,123
Cash holdings	0.2020	0.0504	0.1262	0.2618	0.2536	61,123
Leverage	0.2243	0.0073	0.1707	0.3830	0.2220	61,123
Dividend	0.0182	0.0000	0.0074	0.0210	0.0339	61,123
Mom	0.2051	-0.1489	0.1084	0.4174	0.6153	61,123

Table 2. Fragility, Return Volatility, and Illiquidity

This table presents the results of the relation between total return volatility, illiquidity, and fragility for the global sample of stocks from the Worldscope universe. All variables are as defined in Table 1. Columns 1 and 4 present the results of the specification including country and industry fixed effects. Columns 2 and 5 present the results of the specification including country, industry, and year fixed effects. Columns 3 and 6 present the results of the specification including the stock and year fixed effects. * / ** / *** indicate statistical significance at the 10% / 5% / 1% level respectively, computed from standard errors that allow for clustering at the stock level.

	(1) Total Volatility	(2) Total Volatility	(3) Total Volatility	(4) Amihud	(5) Amihud	(6) Amihud
$\sqrt{Fragility}$	0.0142***	0.0178***	0.0107***	-0.0981***	-0.0911***	-0.0227***
	(4.52)	(6.27)	(3.51)	(-9.27)	(-8.46)	(-2.60)
Firm size	-0.0251***	-0.0255***	-0.0287***	-0.1154***	-0.1168***	-0.1256***
	(-33.98)	(-36.91)	(-11.93)	(-50.26)	(-50.27)	(-19.59)
Log(B/M)	0.0244***	0.0028**	0.0211***	0.1174***	0.1054***	0.1119***
	(17.19)	(2.12)	(11.62)	(28.45)	(24.90)	(22.84)
Cash flow	-0.1367***	-0.1658***	-0.0816***	-0.0877***	-0.0806***	-0.2463***
	(-20.63)	(-27.77)	(-11.48)	(-4.51)	(-4.13)	(-12.14)
IO	-0.0720***	-0.0881***	-0.0786***	-0.3102***	-0.3218***	-0.1966***
	(-11.74)	(-15.37)	(-8.29)	(-16.29)	(-16.81)	(-8.15)
Age	-0.0202***	-0.0190***	-0.0133***	0.0301***	0.0295***	0.0398***
	(-18.62)	(-19.15)	(-4.82)	(10.08)	(9.80)	(5.86)
Cash holdings	0.0413***	0.0232***	-0.0199***	-0.1186***	-0.1262***	-0.0976***
	(10.53)	(6.82)	(-4.75)	(-12.20)	(-12.85)	(-9.85)
Leverage	0.0859***	0.0747***	0.0724***	0.1249***	0.1233***	0.0840***
	(18.09)	(17.32)	(12.33)	(9.82)	(9.68)	(6.16)
Dividend	-0.4218***	-0.5679***	-0.1741***	-0.1424*	-0.2321***	-0.4581***
	(-13.96)	(-21.01)	(-6.68)	(-1.90)	(-3.07)	(-5.29)
Mom	-0.0334***	0.0209***	0.0225***	-0.0490***	-0.0450***	-0.0367***
	(-25.52)	(17.70)	(19.00)	(-17.88)	(-14.61)	(-13.15)
Country F.E.	Yes	Yes	No	Yes	Yes	No
Industry F.E.	Yes	Yes	No	Yes	Yes	No
Year F.E.	No	Yes	Yes	No	Yes	Yes
Stock F.E.	No	No	Yes	No	No	Yes
N	61,123	61,123	61,123	61,123	61,123	61,123
adj. R^2	0.26	0.54	0.72	0.37	0.38	0.71

Table 3. Fragility, Repurchase, and Capital Expenditures

This table presents the results of the relation between share repurchases, capital expenditures, and fragility for the global sample of stocks from the Worldscope universe. All specifications are as in Table 2, only the dependent variables are exchanged: Columns 1 to 3 use *Repurchase* as the dependent variable, columns 4 to 6 use *CAPEX*. * / ** / *** indicate statistical significance at the 10% / 5% / 1% level respectively, computed from standard errors that allow for clustering at the stock level.

	(1) Repurchase	(2) Repurchase	(3) Repurchase	(4) CAPEX	(5) CAPEX	(6) CAPEX
$\sqrt{Fragility}$	-0.0037***	-0.0041***	-0.0033***	0.0117***	0.0096***	0.0033*
	(-4.49)	(-5.01)	(-3.71)	(6.42)	(5.17)	(1.75)
Firm size	0.0002	0.0002	0.0029***	-0.0056***	-0.0053***	-0.0311***
	(1.00)	(1.26)	(4.94)	(-14.14)	(-13.35)	(-17.95)
Log(B/M)	-0.0079***	-0.0078***	-0.0051***	-0.0086***	-0.0070***	-0.0087***
	(-18.97)	(-18.07)	(-10.77)	(-11.92)	(-9.24)	(-9.32)
Cash flow	0.0343***	0.0339***	0.0164***	0.1010***	0.0977***	0.0556***
	(18.66)	(18.14)	(7.44)	(20.48)	(19.88)	(12.39)
IO	0.0244***	0.0245***	0.0112***	0.0013	0.0027	0.0339***
	(15.61)	(15.67)	(3.82)	(0.41)	(0.86)	(6.52)
Age	0.0010***	0.0010***	0.0025***	-0.0058***	-0.0058***	-0.0064***
	(4.25)	(4.19)	(3.68)	(-9.12)	(-8.96)	(-3.77)
Cash holdings	0.0001	0.0001	-0.0038***	0.0036	0.0038	0.0138***
	(0.16)	(0.13)	(-3.22)	(1.06)	(1.15)	(3.11)
Leverage	-0.0172***	-0.0172***	-0.0294***	0.0217***	0.0217***	-0.0280***
	(-15.78)	(-15.76)	(-16.68)	(7.85)	(7.88)	(-8.28)
Dividend	-0.0328***	-0.0327***	-0.0203**	-0.1553***	-0.1463***	0.0579***
	(-3.76)	(-3.73)	(-2.00)	(-10.27)	(-9.68)	(3.62)
Mom	-0.0036***	-0.0029***	-0.0012***	0.0029***	0.0064***	0.0001
	(-15.60)	(-11.06)	(-4.49)	(4.42)	(8.21)	(0.10)
Country F.E.	Yes	Yes	No	Yes	Yes	No
Industry F.E.	Yes	Yes	No	Yes	Yes	No
Year F.E.	No	Yes	Yes	No	Yes	Yes
Stock F.E.	No	No	Yes	No	No	Yes
N	61,123	61,123	61,123	61,123	61,123	61,123
adj. R^2	0.17	0.17	0.42	0.25	0.26	0.63

Table 4. Propensity Score Matching

This table reports the results of the propensity score matching to construct the sample of treated and control firms for the difference-in-difference tests. We first define the treatment and control samples as follows: for each merger deal, firms are sorted into quintiles based on their changes in ownership concentration induced by the merger. The hypothetical increase in the Herfindahl-Hirschman index (HHI) of firm-level ownership concentration for firm f induced by asset management merger d is defined as $DHERF_{fd} = \left(IO\ Acq_{fd} + IO\ Targ_{fd}\right)^2 - IO\ Acq_{fd}^2 - IO\ Targ_{fd}^2$ as in Massa, Schumacher, and Wang (2020). The variables $IO\ Acq_{fd}$ and $IO\ Targ_{fd}$ are the combined holdings of all funds affiliated with the acquirer (target) asset management firm scaled by shares outstanding. Firms in the top (bottom) quintile of *DHERF* are considered treatment (control) firms. We then match firms in the top quintile (i.e., firms with largest change in HHI) with the firms in the bottom quintile (i.e. firms with zero or smallest change in HHI) using one-to-one nearest neighbor propensity score matching. The matching firm characteristics include country and industry affiliation, log of total assets, log of book-to-market ratio, cash flows, and total institutional ownership. All variables are as defined in Appendix A. Panel A presents estimates from the Probit model for treated and control firms before and after propensity score matching. Panel B reports the univariate comparison of the matching firm characteristics between treated and control firms before and after propensity score matching and their corresponding *t*-statistics. * / ** / *** indicate statistical significance at the 10% / 5% / 1% level respectively. Standard errors cluster at the firm level.

Panel A: Probit model

	Before matching	After matching
Dependent variable	Treat = 1	Treat = 1
Firm size	0.2225***	0.0271
	(17.55)	(1.34)
Log(B/M)	-0.0259	-0.0155
	(-1.08)	(-0.39)
Cash flow	0.4717***	0.1004
	(3.13)	(0.37)
IO	1.7285***	0.1832
	(17.55)	(1.03)
Age	0.0540***	0.0112
	(2.78)	(0.34)
Cash holdings	0.5134***	-0.0072
	(6.19)	(-0.05)
Leverage	-0.2493***	-0.2337
	(-3.25)	(-1.64)
Dividend	-0.8435	-1.6310
	(-1.32)	(-1.70)
Mom	-0.0175	0.0885
	(-0.62)	(1.63)
Industry F.E.	Yes	Yes
Country F.E.	Yes	Yes
Observations	9,493	4,343
Pseudo R^2	0.190	0.032

Panel B: Comparison of firm characteristics and outcome variables before and after propensity score matching

	Before matching				After matching			
	Treat	Control	Difference	*t*-stats	Treat	Control	Difference	*t*-stats
Firm size$_{-2}$	7.751	7.078	0.672***	(10.06)	7.763	7.755	0.007	(0.15)
Log(B/M)$_{-2}$	-0.880	-0.747	-0.133***	(-4.60)	-0.866	-0.859	-0.007	(-0.25)
Cashflow$_{-2}$	0.123	0.119	0.004	(1.23)	0.119	0.118	0.001	(0.45)
IO$_{-2}$	0.614	0.377	0.236***	(15.80)	0.651	0.622	0.029	(1.19)
Age$_{-2}$	2.706	2.530	0.176***	(5.88)	2.629	2.635	-0.007	(-0.17)
Cash holdings$_{-2}$	0.188	0.187	0.001	(0.02)	0.179	0.175	0.003	(0.75)
Leverage$_{-2}$	0.295	0.255	0.039***	(3.70)	0.281	0.287	-0.005	(-0.84)
Dividend$_{-2}$	0.016	0.019	-0.003***	(-3.29)	0.017	0.018	-0.001	(-0.87)
Mom$_{-2}$	-0.005	0.021	-0.027	(-1.49)	-0.074	-0.098	0.024	(0.85)
D_Repurchase$_{-2 \text{ to } 0}$	-0.004	-0.002	-0.002***	(-3.49)	-0.005	-0.005	0.001	(0.73)
D_CAPEX$_{-2 \text{ to } 0}$	-0.007	-0.008	0.001	(1.03)	-0.008	-0.007	-0.001	(1.32)

Table 5. Difference-in-Difference Analysis of Changes in Payout Policy

This table reports the regression estimates of changes in payout policy from the post-matching difference-in-difference analysis. The estimated regression is as follows:

$$Payout_{fdt} = \beta_1 T_{fd} + \beta_2 Post_{dt} + \beta_3 T_{fd} \times Post_{dt} + \gamma_1' X_{ft-1} + \gamma_2' \left(Post_{dt} \times X_{ft-1}\right) + \alpha_t + \alpha_f + \alpha_d + \epsilon_{fdt,}$$

where $Payout_{fdt}$ refers to one of the two payout measures of firm *f* affected by deal *d* in year *t*, namely, dividends, or share repurchase. The treatment variable T_{fd} is equal to 1 for treated stocks and 0 for control stocks. $Post_{dt}$ is an indicator equal to 1 for two years after merger *d* and 0 for two years before the mergers and the main coefficient of interest is β_3 on the interaction term between $Post_{dt}$ and T_{fd}. The regression further includes year fixed effects denoted by α_t, stock fixed effects denoted by α_s, deal fixed effects denoted by α_d, stock characteristics denoted by the vector X_{ft-1} and additional interaction terms between the stock characteristics and the $Post_{dt}$ indicator. The vector X_{ft-1} includes the following stock characteristics introduced in Table 2. Panel A (Panel B) reports the regression estimates of difference-in-difference analysis of changes in share repurchase (dividends). The use of fixed effects is indicated at the bottom of each column. In Column 6, the variable $Post_{dt}$ is decomposed into period-specific indicator variables: $Before1_{dt}$ is equal to 1 for one year before the mergers and 0 otherwise, $After1_{dt}$ is equal to 1 for one year after the mergers and 0 otherwise, and $After2_{dt}$ is equal to 1 for two years after the mergers and 0 otherwise. All variables are as defined in Appendix A. * / ** / *** indicate statistical significance at the 10% / 5% / 1% level respectively, computed from standard errors that cluster at the firm level.

Panel A: Repurchase

	(1) Repurchase	(2) Repurchase	(3) Repurchase	(4) Repurchase	(5) Repurchase	(6) Repurchase
POST x Treat	0.0056***	0.0059***	0.0061***	0.0054***	0.0055***	
	(4.22)	(4.34)	(4.53)	(3.82)	(3.88)	
Before1 x Treat						-0.0028
						(-1.63)
After1 x Treat						0.0045**
						(2.29)
After2 x Treat						0.0037*
						(1.84)
Before1						0.0125**
						(2.07)
After1						-0.0090
						(-1.03)
After2						-0.0078
						(-0.82)
POST	-0.0039***	-0.0079*	0.0010	-0.0112*	-0.0183**	
	(-3.69)	(-1.77)	(0.19)	(-1.79)	(-2.57)	
Treat	-0.0009	-0.0028*	-0.0029**	-0.0016	-0.0018	-0.0004
	(-0.57)	(-1.96)	(-2.04)	(-1.36)	(-1.57)	(-0.26)
Firm size		-0.0009*	-0.0008	0.0042**	0.0055***	0.0059***
		(-1.80)	(-1.53)	(2.11)	(2.69)	(2.74)
Log(B/M)		-0.0154***	-0.0148***	-0.0110***	-0.0083***	-0.0105***
		(-12.11)	(-10.71)	(-8.06)	(-5.69)	(-6.04)
Cashflow		0.0681***	0.0663***	0.0347***	0.0307***	0.0487***
		(8.65)	(8.45)	(4.22)	(3.75)	(4.46)
IO		0.0343***	0.0342***	0.0224*	0.0181	0.0260**
		(13.88)	(13.79)	(1.87)	(1.55)	(2.20)
Age		0.0019**	0.0020**	-0.0005	0.0084**	0.0077**
		(2.31)	(2.39)	(-0.14)	(2.32)	(2.08)
Cash holdings		-0.0041	-0.0029	-0.0190***	-0.0145***	-0.0142**
		(-0.98)	(-0.69)	(-3.27)	(-2.61)	(-2.11)
Leverage		-0.0386***	-0.0385***	-0.0557***	-0.0527***	-0.0565***
		(-9.31)	(-9.26)	(-8.88)	(-8.51)	(-8.22)
Dividend		-0.0821**	-0.0879***	-0.0005	-0.0094	-0.0065
		(-2.57)	(-2.76)	(-0.02)	(-0.29)	(-0.17)
Mom		-0.0011	0.0039***	-0.0061***	-0.0004	0.0037
		(-0.82)	(2.68)	(-5.71)	(-0.21)	(1.62)
Deal F.E.	No	No	No	No	Yes	Yes
Firm F.E.	No	No	No	Yes	Yes	Yes
Year F.E.	No	No	Yes	No	Yes	Yes
N	18,328	17,723	17,723	17,723	17,723	17,723
adj. R^2	0.00	0.22	0.22	0.58	0.58	0.59

Panel B: Dividend

	(1) Dividend	(2) Dividend	(3) Dividend	(4) Dividend	(5) Dividend	(6) Dividend
POST x Treat	0.0006	0.0008	0.0008	0.0004	0.0005	
	(0.95)	(1.15)	(1.22)	(0.60)	(0.73)	
Before1 x Treat						0.0000
						(0.05)
After1 x Treat						0.0004
						(0.41)
After2 x Treat						0.0006
						(0.64)
Before1						-0.0060
						(-1.62)
After1						-0.0039
						(-0.68)
After2						-0.0029
						(-0.44)
POST	-0.0008	-0.0010	-0.0013	-0.0068*	-0.0041	
	(-1.27)	(-0.32)	(-0.37)	(-1.77)	(-1.07)	
Treat	-0.0011	-0.0009	-0.0009	-0.0010*	-0.0011*	-0.0011
	(-1.23)	(-1.09)	(-1.18)	(-1.76)	(-1.91)	(-1.27)
Firm size		-0.0009**	-0.0007*	-0.0012	-0.0015	-0.0018
		(-2.57)	(-1.95)	(-0.70)	(-0.88)	(-1.07)
Log(B/M)		-0.0088***	-0.0098***	-0.0035***	-0.0032***	-0.0035***
		(-10.22)	(-10.25)	(-3.59)	(-3.01)	(-2.60)
Cashflow		0.0678***	0.0663***	0.0250***	0.0249***	0.0286***
		(8.10)	(8.06)	(3.54)	(3.53)	(3.53)
IO		-0.0211***	-0.0214***	-0.0057	-0.0075	-0.0087
		(-12.75)	(-12.86)	(-0.95)	(-1.24)	(-1.47)
Age		0.0028***	0.0029***	0.0023	-0.0007	-0.0007
		(5.22)	(5.38)	(1.33)	(-0.38)	(-0.34)
Cash holdings		-0.0040	-0.0033	-0.0025	-0.0021	-0.0041
		(-1.46)	(-1.22)	(-0.93)	(-0.78)	(-1.47)
Leverage		-0.0096***	-0.0102***	-0.0132***	-0.0132***	-0.0125***
		(-3.93)	(-4.14)	(-3.43)	(-3.45)	(-2.89)
Repurchase		-0.0311**	-0.0331**	-0.0191**	-0.0210**	-0.0254**
		(-2.35)	(-2.50)	(-2.19)	(-2.36)	(-2.13)
Mom		-0.0021***	-0.0001	-0.0016***	-0.0004	-0.0005
		(-3.03)	(-0.12)	(-2.82)	(-0.61)	(-0.40)
Deal F.E.	No	No	No	No	Yes	Yes
Firm F.E.	No	No	No	Yes	Yes	Yes
Year F.E.	No	No	Yes	No	Yes	Yes
N	18,328	17,723	17,723	17,723	17,723	17,723
adj. R^2	0.00	0.22	0.23	0.69	0.69	0.69

Table 6. Difference-in-Difference Analysis of Changes in Investment Policy

This table reports the regression estimates of changes in investment policy from the post-matching difference-in-difference analysis. The specifications are identical to those presented in Table 5, only the dependent variables are exchanged. Columns 1 to 5 and 8 use *CAPEX* as the dependent variable, column 6 uses *Total Investment*, and column7 uses *Total Asset Growth*. All variables are as defined in Appendix A and the use of fixed effects is indicated at the bottom of each column. * / ** / *** indicate statistical significance at the 10% / 5% / 1% level respectively, computed from standard errors that cluster at the firm level.

	(1) CAPEX	(2) CAPEX	(3) CAPEX	(4) CAPEX	(5) CAPEX	(6) Total Investment	(7) Total Asset Growth	(8) CAPEX
POST x Treat	-0.0043***	-0.0049***	-0.0047***	-0.0035**	-0.0034**	-0.0051*	-0.0193*	
	(-2.75)	(-3.13)	(-3.05)	(-2.31)	(-2.25)	(-1.74)	(-1.93)	
Before1 x Treat								0.0008
								(0.40)
After1 x Treat								-0.0041**
								(-2.11)
After2 x Treat								-0.0019
								(-0.89)
Before1								0.0007
								(0.09)
After1								-0.0004
								(-0.04)
After2								0.0036
								(0.32)
POST	-0.0059***	0.0096	0.0119*	-0.0056	-0.0125*	-0.0216	-0.0527	
	(-4.34)	(1.43)	(1.73)	(-0.86)	(-1.75)	(-1.32)	(-0.77)	
Treat	0.0042*	0.0045**	0.0044**	0.0022**	0.0023**	0.0009	0.0081	0.0020
	(1.90)	(2.07)	(2.03)	(2.04)	(2.23)	(0.43)	(1.00)	(1.30)
Firm size		-0.0030***	-0.0030***	-0.0388***	-0.0379***	-0.1137***	-0.5143***	-0.0381***
		(-3.83)	(-3.83)	(-8.83)	(-8.47)	(-14.74)	(-10.03)	(-8.43)
Log(B/M)		0.0020	0.0041	0.0016	0.0032*	0.0077**	0.0860***	0.0048**
		(0.82)	(1.54)	(0.94)	(1.74)	(2.23)	(4.18)	(2.24)
Cashflow		0.1573***	0.1573***	0.0607***	0.0568***	0.1127***	0.3278***	0.0732***
		(9.68)	(9.63)	(5.16)	(4.82)	(4.87)	(3.58)	(4.61)
IO		0.0019	0.0028	0.0239*	0.0240	0.0259	0.0182	0.0262*
		(0.50)	(0.71)	(1.70)	(1.60)	(1.15)	(0.18)	(1.72)
Age		-0.0032**	-0.0032**	0.0056*	0.0106***	0.0080	-0.0085	0.0113***
		(-1.98)	(-2.00)	(1.81)	(3.02)	(0.90)	(-0.20)	(3.03)
Cash holdings		0.0038	0.0049	0.0041	0.0071	-0.0102	0.7782***	0.0031
		(0.33)	(0.43)	(0.30)	(0.53)	(-0.45)	(6.17)	(0.20)
Leverage		0.0345***	0.0354***	-0.0158**	-0.0142*	-0.0768***	-0.0968	-0.0147*
		(3.78)	(3.86)	(-2.03)	(-1.82)	(-5.09)	(-1.63)	(-1.67)
Dividend		-0.0784*	-0.0755*	0.0479	0.0394	0.0371	0.8047	0.0130
		(-1.80)	(-1.71)	(1.14)	(0.94)	(0.63)	(1.55)	(0.26)
Mom		-0.0049**	-0.0013	-0.0088***	-0.0076***	-0.0090**	-0.0365*	-0.0097***
		(-2.57)	(-0.61)	(-7.94)	(-4.71)	(-2.53)	(-1.89)	(-4.07)
Deal F.E.	No	No	No	No	Yes	Yes	Yes	Yes
Firm F.E.	No	No	No	Yes	Yes	Yes	Yes	Yes
Year F.E.	No	No	Yes	No	Yes	Yes	Yes	Yes
N	18,328	17,723	17,723	17,723	17,723	17,723	17,723	17,723
adj. R^2	0.01	0.08	0.08	0.74	0.74	0.58	0.43	0.74

Table 7. Cross-sectional Heterogeneity by Pre-Merger Ownership Characteristics

This table examines changes in payout and investment policies for firms with different ownership characteristics prior to the mergers. The specification is as in Table 5 but augmented with triple interaction terms for different ownership characteristics. Panel A (Panel B) examines repurchases (capital expenditures) for pre-merger ownership characteristics identified in Massa, Schumacher, and Wang (2020). These include: *IO_oef* is the ownership by open-ended funds, *IO_flowvola* is the ownership of funds that are on the top quartile of three-year average monthly flow volatility, where fund flow volatility is the standard deviation of monthly flows over the past three years, *Flow correlation* is the position weighted-average flow correlation of each pair of funds that hold the stock, and *IO_excessweight* is the ownership of funds that overweight the stock relative to their benchmark, specifically, funds in the top quartile of the excess weight in the stock. All other specifications are unchanged. * / ** / *** indicate statistical significance at the 10% / 5% / 1% level, computed from standard errors clustered at the firm level.

Panel A: Repurchase

	(1) Repurchase	(2) Repurchase	(3) Repurchase	(4) Repurchase	(5) Repurchase
POST x Treat x IO_oef	0.0430***				0.0295*
	(3.36)				(1.74)
POST x Treat x IO_excessweight		0.0620***			0.0288
		(2.94)			(1.03)
POST x Treat x IO_flowvola			0.3648***		0.2453**
			(3.29)		(2.02)
POST x Treat x Flow correlation				0.0543*	0.0495
				(1.66)	(1.55)
Treat x IO_oef	-0.0262**				-0.0202
	(-2.19)				(-1.31)
Treat x IO_excessweight		-0.0371**			-0.0215
		(-2.18)			(-0.92)
Treat x IO_flowvola			-0.0122		0.0687
			(-0.14)		(0.76)
Treat x Flow correlation				0.0354	0.0409
				(1.16)	(1.36)
POST x IO_oef	-0.0277**				-0.0135
	(-2.31)				(-0.87)
POST x IO_excessweight		-0.0586***			-0.0466**
		(-3.39)			(-2.08)
POST x IO_flowvola			-0.1426		-0.0368
			(-1.52)		(-0.36)
POST x Flow correlation				-0.0363	-0.0308
				(-1.47)	(-1.28)
IO_oef	0.0203*				0.0085
	(1.66)				(0.56)
IO_excessweight		0.0258*			0.0293*
		(1.81)			(1.70)
IO_flowvola			-0.1461*		-0.2078**
			(-1.86)		(-2.50)
Flow correlation				-0.0738***	-0.0770***
				(-3.17)	(-3.44)
Treat	0.0042*	0.0009	-0.0018	-0.0034**	0.0017
	(1.82)	(0.65)	(-1.22)	(-2.19)	(0.62)
POST x Treat	-0.0041*	0.0009	0.0015	0.0033*	-0.0079***
	(-1.66)	(0.54)	(0.80)	(1.70)	(-2.73)
POST	-0.0132*	-0.0142**	-0.0179***	-0.0161**	-0.0106
	(-1.90)	(-2.13)	(-2.72)	(-2.40)	(-1.54)
Controls	Yes	Yes	Yes	Yes	Yes
Deal F.E.	Yes	Yes	Yes	Yes	Yes
Firm F.E.	Yes	Yes	Yes	Yes	Yes
Year F.E.	Yes	Yes	Yes	Yes	Yes
N	17,723	17,723	17,723	17,723	17,723
adj. R^2	0.58	0.58	0.58	0.58	0.59

Panel B: CAPEX

	(1) CAPEX	(2) CAPEX	(3) CAPEX	(4) CAPEX	(5) CAPEX
POST x Treat x IO_oef	-0.0265*				0.0170
	(-1.86)				(1.00)
POST x Treat x IO_excessweight		-0.0540**			-0.0858***
		(-2.23)			(-2.87)
POST x Treat x IO_flowvola			-0.4395***		-0.4176***
			(-3.13)		(-3.02)
POST x Treat x Flow correlation				0.0051	-0.0131
				(0.13)	(-0.33)
Treat x IO_oef	-0.0086				-0.0343**
	(-0.74)				(-2.51)
Treat x IO_excessweight		0.0297			0.0470**
		(1.59)			(2.12)
Treat x IO_flowvola			0.2842***		0.2664***
			(3.10)		(2.87)
Treat x Flow correlation				0.0101	0.0276
				(0.32)	(0.85)
POST x IO_oef	0.0255**				0.0032
	(2.04)				(0.22)
POST x IO_excessweight		0.0237			0.0391
		(1.08)			(1.52)
POST x IO_flowvola			0.3731***		0.3795***
			(3.52)		(3.88)
POST x Flow correlation				-0.0225	-0.0152
				(-0.71)	(-0.50)
IO_oef	0.0548***				0.0750***
	(4.67)				(4.95)
IO_excessweight		-0.0216			-0.0344*
		(-1.55)			(-1.96)
IO_flowvola			-0.3532***		-0.3518***
			(-4.48)		(-4.52)
Flow correlation				0.0265	0.0107
				(0.99)	(0.39)
Treat	0.0043*	0.0001	-0.0009	0.0019	0.0025
	(1.69)	(0.05)	(-0.57)	(1.18)	(0.84)
POST x Treat	0.0022	0.0008	0.0014	-0.0037*	0.0041
	(0.65)	(0.33)	(0.63)	(-1.65)	(1.04)
POST	-0.0200***	-0.0138*	-0.0162**	-0.0117*	-0.0212***
	(-2.69)	(-1.95)	(-2.39)	(-1.70)	(-2.74)
Controls	Yes	Yes	Yes	Yes	Yes
Deal F.E.	Yes	Yes	Yes	Yes	Yes
Firm F.E.	Yes	Yes	Yes	Yes	Yes
Year F.E.	Yes	Yes	Yes	Yes	Yes
N	17,723	17,723	17,723	17,723	17,723
adj. R^2	0.75	0.74	0.74	0.74	0.75

Table 8. Effects on Other Financing Policies

This table examines if treated firms register changes in other corporate policies, specifically, financing policies. The specifications are as in Table 5 but use alternative outcome variables to measure changes in other financing policies including *Chgcash* is the change in cash or cash equivalent, *Chgstdebt* is the change in current debt scaled by total assets at the beginning of period, *Chgltdebt* is long-term debt issuance minus long-term debt reduction scaled by total assets at the beginning of period, *Chglev* is the change in leverage where leverage is computed as long-term debt plus current liabilities divided by total assets at the beginning of period, and *Equityiss* is sale of common and preferred stocks scaled by total assets at the beginning of period. All other specifications are unchanged. * / ** / *** indicate statistical significance at the 10% / 5% / 1% level, computed from standard errors clustered at the firm level.

	(1) Chgcash	(2) Chgstdebt	(3) Chgltdebt	(4) Chglev	(5) Equityiss
POST x Treat	-0.0016	-0.0003	-0.0011	0.0010	-0.0060***
	(-0.59)	(-0.34)	(-0.28)	(1.13)	(-2.67)
Treat	0.0012	0.0006	-0.0002	-0.0008	0.0030*
	(0.60)	(0.99)	(-0.06)	(-1.16)	(1.88)
POST	0.0173	0.0017	-0.0478**	-0.0097*	0.0077
	(0.78)	(0.31)	(-2.47)	(-1.75)	(0.41)
Firm size	-0.0042	-0.0053***	-0.0648***	0.0052**	-0.0334***
	(-0.59)	(-2.92)	(-5.70)	(2.26)	(-3.55)
Log(B/M)	0.0090**	-0.0004	0.0013	-0.0089***	0.0140***
	(2.58)	(-0.47)	(0.26)	(-4.56)	(3.15)
Cashflow	0.0140	0.0021	0.0827***	-0.0031	0.0096
	(0.48)	(0.38)	(2.61)	(-0.50)	(0.28)
IO	-0.0106	0.0058	-0.0106	0.0024	0.0074
	(-0.40)	(1.05)	(-0.36)	(0.41)	(0.35)
Age	0.0089	-0.0005	-0.0019	-0.0005	-0.0126
	(1.10)	(-0.17)	(-0.16)	(-0.14)	(-1.48)
Cash holdings	0.4801***	-0.0028	0.0698***	-0.0169***	0.3413***
	(10.13)	(-0.84)	(2.93)	(-3.28)	(4.67)
Leverage	0.0299**	-0.0071**	-0.2354***	-0.0294***	0.0679***
	(2.36)	(-2.04)	(-10.21)	(-6.12)	(4.02)
Dividend	-0.2475***	0.0383	0.2426**	0.0010	0.0183
	(-3.45)	(1.59)	(2.41)	(0.03)	(0.41)
Mom	0.0081**	-0.0010	-0.0004	-0.0004	-0.0000
	(2.02)	(-1.09)	(-0.08)	(-0.24)	(-0.01)
Controls	Yes	Yes	Yes	Yes	Yes
Deal F.E.	Yes	Yes	Yes	Yes	Yes
Firm F.E.	Yes	Yes	Yes	Yes	Yes
Year F.E.	Yes	Yes	Yes	Yes	Yes
N	17,723	17,723	17,723	17,723	17,723
adj. R^2	0.46	0.05	0.28	0.07	0.47

Table 9. Cross-sectional Heterogeneity by Financial Constraints

This table examines changes in repurchases and capital expenditures for financially constrained firms. Panel A (Panel B, Panel C) examines repurchases (capital expenditures, equity issuances) The specification is as in Table 5 but augmented with triple interaction terms for different firm characteristics that measure financial constraints. These include: *WW* is the measure of Whited and Wu (2006), *S&A* is the size and age index following Hadlock and Pierce (2010), *Log(B/M)* is the logarithm of book value equity divided by the market value of equity. All other specifications are unchanged. * / ** / *** indicate statistical significance at the 10% / 5% / 1% level, computed from standard errors clustered at the firm level.

Panel A: Repurchase

	(1) Repurchase	(2) Repurchase	(3) Repurchase	(4) Repurchase
POST x Treat x WW	0.0439***			0.0323
	(2.94)			(1.12)
POST x Treat x S&A		0.0031***		0.0007
		(2.66)		(0.32)
POST x Treat x Log(B/M)			-0.0072***	-0.0069***
			(-3.32)	(-3.24)
Treat x WW	-0.0093			-0.0186
	(-0.61)			(-0.75)
Treat x S&A		-0.0001		0.0011
		(-0.11)		(0.56)
Treat x Log(B/M)			-0.0003	-0.0003
			(-0.14)	(-0.15)
POST x WW	-0.0143			-0.0069
	(-0.53)			(-0.24)
POST x S&A		-0.0058***		-0.0047**
		(-2.84)		(-2.04)
POST x Log(B/M)			0.0039**	0.0036*
			(2.01)	(1.89)
Treat	-0.0051	-0.0015	-0.0020	-0.0076
	(-0.74)	(-0.62)	(-1.55)	(-0.91)
POST x Treat	0.0224***	0.0088***	0.0003	0.0137
	(3.43)	(4.15)	(0.19)	(1.42)
POST	-0.0262***	0.0028	-0.0157**	0.0006
	(-3.39)	(0.26)	(-2.37)	(0.05)
Controls	Yes	Yes	Yes	Yes
Deal F.E.	Yes	Yes	Yes	Yes
Firm F.E.	Yes	Yes	Yes	Yes
Year F.E.	Yes	Yes	Yes	Yes
N	17,723	17,723	17,723	17,723
adj. R^2	0.58	0.58	0.59	0.59

Panel B: CAPEX

	(1) CAPEX	(2) CAPEX	(3) CAPEX	(4) CAPEX
POST x Treat x WW	-0.0314**			-0.0143
	(-2.08)			(-0.37)
POST x Treat x S&A		-0.0025**		-0.0015
		(-2.02)		(-0.49)
POST x Treat x Log(B/M)			0.0033*	0.0031*
			(1.78)	(1.71)
Treat x WW	0.0172			0.0088
	(1.27)			(0.33)
Treat x S&A		0.0013		0.0007
		(0.97)		(0.30)
Treat x Log(B/M)			-0.0052***	-0.0052***
			(-3.08)	(-3.13)
POST x WW	0.0416			0.0288
	(1.34)			(0.71)
POST x S&A		0.0074**		0.0068*
		(2.49)		(1.90)
POST x Log(B/M)			-0.0050***	-0.0048***
			(-2.74)	(-2.67)
Treat	0.0090	0.0039	-0.0014	0.0029
	(1.51)	(1.62)	(-1.00)	(0.33)
POST x Treat	-0.0155**	-0.0061***	-0.0010	-0.0083
	(-2.36)	(-2.92)	(-0.51)	(-0.64)
POST	-0.0065	-0.0436***	-0.0134**	-0.0416**
	(-0.89)	(-2.93)	(-1.98)	(-2.42)
Controls	Yes	Yes	Yes	Yes
Deal F.E.	Yes	Yes	Yes	Yes
Firm F.E.	Yes	Yes	Yes	Yes
Year F.E.	Yes	Yes	Yes	Yes
N	17,723	17,723	17,723	17,723
adj. R^2	0.74	0.74	0.74	0.74

Panel C: Equity issuances

	(1) Equityiss	(2) Equityiss	(3) Equityiss	(4) Equityiss
POST x Treat x WW	-0.1557***			-0.0875
	(-3.41)			(-1.21)
POST x Treat x S&A		-0.0113***		-0.0057
		(-3.10)		(-0.99)
POST x Treat x Log(B/M)			0.0060	0.0047
			(1.37)	(1.14)
Treat x WW	0.0706**			-0.0301
	(2.37)			(-0.67)
Treat x S&A		0.0071***		0.0095**
		(2.66)		(2.27)
Treat x Log(B/M)			-0.0026	-0.0022
			(-0.80)	(-0.68)
POST x WW	0.0987			0.0666
	(1.34)			(0.76)
POST x S&A		0.0107		0.0077
		(1.26)		(0.95)
POST x Log(B/M)			-0.0084**	-0.0080**
			(-2.26)	(-2.28)
Treat	0.0300**	0.0108**	0.0011	0.0004
	(2.34)	(2.45)	(0.46)	(0.03)
POST x Treat	-0.0659***	-0.0177***	-0.0017	-0.0421*
	(-3.46)	(-3.22)	(-0.52)	(-1.74)
POST	0.0365*	-0.0113	0.0057	0.0013
	(1.65)	(-0.23)	(0.31)	(0.03)
Controls	Yes	Yes	Yes	Yes
Deal F.E.	Yes	Yes	Yes	Yes
Firm F.E.	Yes	Yes	Yes	Yes
Year F.E.	Yes	Yes	Yes	Yes
N	17,723	17,723	17,723	17,723
adj. R^2	0.47	0.48	0.47	0.48

Table 10. Changes in Payout Policy, Investment Policy, and Corporate Governance

This table examines if changes in payout and investment policies are driven by governance changes. Panel A presents specifications as in Table 5 that are augmented with triple interaction terms for firm-level governance characteristics prior to the mergers. These governance characteristics include: *Logn_blckholder* is the log number of institutions that hold more than 5 percent of the total shares outstanding, *Gindex* is the governance index from Gompers, Ishii, and Metrick (2003), and *Eindex* is the entrenchment index is from Bebchuk et al. (2009). Both *Gindex* and *Eindex* are obtained from ISS/RiskMetrics. Panel B examines if changes in ownership concentration induced by the mergers impacts shareholder proposals or shareholder voting outcomes. The specifications are as in Table 5, column 5 but use different dependent variables to measure various outcomes related to management or shareholder proposals and voting behavior. These dependent variables include: *%ShareholderProposal* is the total number of shareholder proposal scaled by the total number of proposals in the given firm-year, *Participation* is the total number of ballots divided by total share outstanding, averaged across all proposals in a given firm-year, *%AgainstMgmt* is the average percentage of votes against management proposal in any firm-year, and %*Pass* is the fraction of management proposals that "Pass" in each firm-year. All other specifications are unchanged. * / ** / *** indicate statistical significance at the 10% / 5% / 1% level, computed from standard errors clustered at the firm level.

Panel A: Cross-sectional Heterogeneity in Repurchases by Pre-Merger Firm Governance

	(1) Repurchase	(2) Repurchase	(3) Repurchase
POST x Treat x logn_blckholder	0.0053		
	(1.54)		
POST x Treat x Gindex		-0.0008	
		(-0.92)	
POST x Treat x Eindex			-0.0013
			(-0.69)
Treat x logn_blckholder	-0.0049		
	(-1.23)		
Treat x Gindex		0.0008	
		(1.29)	
Treat x Eindex			-0.0007
			(-0.45)
POST x logn_blckholder	-0.0029		
	(-1.44)		
POST x Gindex		-0.0003	
		(-0.33)	
POST x Eindex			-0.0005
			(-0.27)
Treat	0.0032	-0.0075**	-0.0011
	(0.88)	(-2.00)	(-0.24)
POST x Treat	-0.0002	0.0125**	0.0122**
	(-0.07)	(2.28)	(2.02)
POST	-0.0178***	-0.0276	-0.0287*
	(-2.59)	(-1.62)	(-1.74)
Controls	Yes	Yes	Yes
Deal F.E.	Yes	Yes	Yes
Firm F.E.	Yes	Yes	Yes
Year F.E.	Yes	Yes	Yes
N	16,245	9,091	9,091
adj. R^2	0.60	0.60	0.60

Panel B: Shareholder proposals and voting outcomes

	(1) %Shareholder Proposals	(2) Participation	(3) %AgainstMgmt	(4) %Pass
POST x Treat	0.0029	-0.0033	-0.0027	-0.0069
	(0.70)	(-0.37)	(-0.80)	(-0.72)
Treat	-0.0018	0.0043	0.0002	0.0044
	(-0.57)	(0.76)	(0.08)	(0.72)
POST	-0.0323	0.0299	0.0628***	0.0821
	(-1.35)	(0.57)	(3.45)	(1.50)
Controls	Yes	Yes	Yes	Yes
Deal F.E.	Yes	Yes	Yes	Yes
Firm F.E.	Yes	Yes	Yes	Yes
Year F.E.	Yes	Yes	Yes	Yes
N	10,518	10,482	10,300	10,516
adj. R^2	0.54	0.39	0.30	0.31

Appendix A: Variable Definitions

This appendix includes a full list of all variables and their definitions.

Variables	Definition
Dependent variables	
Total Volatility	Annualized standard deviation of daily stock returns over the period.
Amihud	Average of daily price impact measure of Amihud (2002) over the period defined as the absolute daily stock return divided by the dollar trading volume on the day in million US$.
Dividend	Cash dividends scaled by the beginning-of-period total assets.
Repurchase	Purchase of common and preferred stocks scaled by the beginning-of-period total assets.
D_ Repurchase$_{-2 \text{ to } 0}$	The simple difference in *Repurchase* between years 0 and -2.
CAPEX	Capital expenditure scaled by the beginning-of-period total assets.
D_ CAPEX$_{-2 \text{ to } 0}$	The simple difference in *CAPEX* between years 0 and -2.
Total Investments	Sum of capital, R&D and acquisition expenditure scaled by the beginning-of-period total assets.
Total Asset Growth	Log changes in total assets.
chgcash	Cash or cash equivalent increase or decrease scaled by the beginning-of-period total assets.
chgstdebt	Current debt changes scaled by the beginning-of-period total assets.
chgltdebt	Long-term debt issuance minus long-term debt reduction scaled by the beginning-of-period total assets.
Chglev	Leverage in period t minus the leverage in period $t-1$. The leverage is computed as the long-term debt plus current liability divided by the beginning-of-period total assets.
Equity Issuance	Sales of common and preferred stocks scaled by the beginning-of-period total assets.
Control variables	
$\sqrt{Fragility}$	Square root of the fragility measure of Greenwood and Thesmar (2011) but computed including holdings, return, and flow information for all fund types in FactSet as in Massa, Schumacher, and Wang (2020).
Firm Size	Logarithm of the beginning-of-period total assets.
Log(B/M)	Logarithm of book value of equity divided by the market value of equity.
Cash flow	Income before extraordinary items plus depreciation scaled by the beginning-of-period total assets.
IO	Total institutional ownership calculated as the sum of all holdings of all funds in FactSet divided by shares outstanding.
Age	Logarithm of the number of years since a firm appears in DataStream.
Cash holdings	Total cash holdings divided by the beginning-of-period total assets.
Leverage	Long-term debt plus current liabilities divided by the beginning-of-period total assets.
Mom	The trailing twelve-month total stock return.
Pre-merger ownership characteristics	
IO_oef	Total ownership of open-ended funds (OEFs).
IO_flowvola	The stock ownership of funds that are in the top quartile of the fund flow volatility. Fund flow volatility is the standard deviation of the flows over the past three years.
Flow correlation	The average flow correlation of each pair of funds, weighted by the maximum market value of the position of one of two pair members.
IO_excessweight	The stock ownership of funds that are on the top quartile of the excess weight, which is computed as the difference between the portfolio weight and its corresponding benchmark weight.

Financial constraint measures	
AS index	Following Hadlock and Pierce (2010), the SA index is calculated as follows, SA = (-0.737*Size) + (0.043*Size^2) – (0.040*Age), where Size equals the log of inflation-adjusted book assets, and Age is the number of years since the firm is listed. Note that Size is winsorized (i.e., capped) at (the log of) $4.5 billion, and Age is winsorized at 37 year as in the paper.
WW index	Following Whited and Wu (2006), the WW index is computed according to the following formula: WW = -0.091*CF – 0.062*DIVPOS + 0.021*TLTD – 0.044*LNTA + 0.102*ISG – 0.035*SG, where CF is the ratio of cash flow to total assets, DIV POS is an indicator that takes the value of one if the firm pays cash dividends and zero otherwise, TLT D is the ratio of the long-term debt to total assets, LNT A is the natural logarithmn of total assets, ISG is the firm's three-digit industry sales growth, and SG is firm's sales growth.
Corporate governance measures	
G index	*Gindex* is the governance index as in Gompers, Ishii, and Metrick (2003) from ISS/RiskMetrics.
E index	*Eindex* is the entrenchment index as in Bebchuk et al. (2009) from ISS/RiskMetrics.
Logn_blckholder	The log number of institutions that held more than 5 percent of the total shares.
%ShareholderProposal	The percentage of shareholder proposal, defined as the total number of shareholder proposal scaled by the total number of proposals in any firm-year.
Participation	The average participation in any firm-year, defined as total number of ballots divided by total share outstanding.
%AgainstMgmt	The average percentage of votes against management proposal in any firm-year.
%Pass	The fraction of management proposals that "Pass" for each firm-year. The average is taken over all proposal outcome in a given year where a proposal outcome is equal to 1 if it "Passes" and 0 otherwise.

Internet Appendix for

"The Bright Side of Financial Fragility"

This internet appendix presents additional results to complement those presented in the main body.

- Table IA.1 presents the robustness tests for Tables 2 and 3 but transforms $\sqrt{Fragility}$ into quintiles.
- Table IA.2 presents validation tests on the changes in fragility and Amihud around the merger events.
- Table IA.3 presents test of changes in ownership composition around the merger events.
- Tables IA.4 presents robustness test for Table 5 using the alternative treatment variable $IO\ Total_{fd} = IO\ Acq_{fd} + IO\ Targ_{fd}$.
- Tables IA.5 presents robustness test for Table 6 using the alternative treatment variable $IO\ Total_{fd} = IO\ Acq_{fd} + IO\ Targ_{fd}$.
- Tables IA.6 presents robustness test for Table 7 using the alternative treatment variable $IO\ Total_{fd} = IO\ Acq_{fd} + IO\ Targ_{fd}$.
- Tables IA.7 presents robustness test for Table 8 using the alternative treatment variable $IO\ Total_{fd} = IO\ Acq_{fd} + IO\ Targ_{fd}$.
- Tables IA.8 presents robustness test for Table 9 using the alternative treatment variable $IO\ Total_{fd} = IO\ Acq_{fd} + IO\ Targ_{fd}$.

Table IA.1. Fragility Tests – Robustness

This table present robustness tests for Table 2 and Table 3. Panel A presents the results of the relation between total volatility, illiquidity, and fragility quintiles. Panel B presents the results of the relation between repurchase, capital expenditures, and fragility quintiles. *Fragility Q5* are the fragility quintiles transformed from the continuous form of fragility computed based on the holdings of all funds in FactSet (i.e., including open-end and non-open-end funds) as in Massa, Schumacher, and Wang (2020). All regressions follow specifications in Table 2 and 3. ***/**/* indicate statistical significance at the 10% / 5% / 1% level respectively, computed from standard errors that allow for clustering at the stock level.

Panel A: Fragility quintiles, volatility and Amihud

	(1) Total Volatility	(2) Total Volatility	(3) Total Volatility	(4) Amihud	(5) Amihud	(6) Amihud
Fragility Q5	0.0053***	0.0054***	0.0017**	-0.0362***	-0.0367***	-0.0112***
	(6.14)	(6.95)	(2.18)	(-12.76)	(-12.95)	(-4.93)
Firm size	-0.0255***	-0.0259***	-0.0289***	-0.1130***	-0.1148***	-0.1253***
	(-34.92)	(-37.97)	(-12.04)	(-50.01)	(-50.08)	(-19.58)
Log(B/M)	0.0242***	0.0029**	0.0212***	0.1183***	0.1054***	0.1115***
	(17.10)	(2.20)	(11.65)	(28.77)	(25.02)	(22.82)
Cash flow	-0.1372***	-0.1663***	-0.0815***	-0.0840***	-0.0750***	-0.2459***
	(-20.72)	(-27.88)	(-11.47)	(-4.34)	(-3.86)	(-12.14)
IO	-0.0782***	-0.0915***	-0.0748***	-0.2691***	-0.2712***	-0.1769***
	(-12.63)	(-15.85)	(-7.91)	(-14.04)	(-14.06)	(-7.43)
Age	-0.0201***	-0.0190***	-0.0133***	0.0294***	0.0289***	0.0388***
	(-18.56)	(-19.11)	(-4.80)	(9.92)	(9.64)	(5.72)
Cash holdings	0.0410***	0.0230***	-0.0201***	-0.1166***	-0.1248***	-0.0976***
	(10.48)	(6.76)	(-4.80)	(-12.05)	(-12.78)	(-9.86)
Leverage	0.0867***	0.0756***	0.0726***	0.1192***	0.1165***	0.0827***
	(18.25)	(17.52)	(12.36)	(9.40)	(9.18)	(6.08)
Dividend	-0.4248***	-0.5696***	-0.1739***	-0.1220	-0.2161***	-0.4572***
	(-14.06)	(-21.07)	(-6.67)	(-1.63)	(-2.87)	(-5.28)
Mom	-0.0337***	0.0208***	0.0225***	-0.0472***	-0.0443***	-0.0367***
	(-25.67)	(17.64)	(19.02)	(-17.24)	(-14.39)	(-13.15)
Country F.E.	Yes	Yes	No	Yes	Yes	No
Industry F.E.	Yes	Yes	No	Yes	Yes	No
Year F.E.	No	Yes	Yes	No	Yes	Yes
Stock F.E.	No	No	Yes	No	No	Yes
N	61,123	61,123	61,123	61,123	61,123	61,123
adj. R^2	0.27	0.54	0.72	0.37	0.38	0.72

Panel B: Fragility quintiles, repurchase, and CAPEX

	(1) Repurchase	(2) Repurchase	(3) Repurchase	(4) CAPEX	(5) CAPEX	(6) CAPEX
Fragility Q5	-0.0016***	-0.0016***	-0.0012***	0.0036***	0.0037***	0.0015***
	(-9.51)	(-9.40)	(-6.06)	(7.85)	(8.18)	(3.29)
Firm size	0.0003	0.0003*	0.0030***	-0.0059***	-0.0055***	-0.0311***
	(1.54)	(1.82)	(5.05)	(-14.91)	(-13.92)	(-18.00)
Log(B/M)	-0.0078***	-0.0078***	-0.0052***	-0.0086***	-0.0070***	-0.0086***
	(-18.92)	(-18.13)	(-10.83)	(-12.02)	(-9.28)	(-9.27)
Cash flow	0.0345***	0.0341***	0.0164***	0.1008***	0.0972***	0.0556***
	(18.78)	(18.25)	(7.45)	(20.46)	(19.81)	(12.37)
IO	0.0267***	0.0264***	0.0126***	-0.0009	-0.0020	0.0315***
	(16.69)	(16.46)	(4.30)	(-0.27)	(-0.65)	(6.10)
Age	0.0010***	0.0010***	0.0024***	-0.0058***	-0.0058***	-0.0063***
	(4.13)	(4.09)	(3.54)	(-9.05)	(-8.88)	(-3.69)
Cash holdings	0.0002	0.0002	-0.0038***	0.0033	0.0037	0.0138***
	(0.25)	(0.20)	(-3.21)	(0.99)	(1.10)	(3.11)
Leverage	-0.0174***	-0.0174***	-0.0295***	0.0222***	0.0224***	-0.0278***
	(-16.01)	(-16.00)	(-16.77)	(8.04)	(8.12)	(-8.23)
Dividend	-0.0318***	-0.0321***	-0.0202**	-0.1572***	-0.1479***	0.0578***
	(-3.66)	(-3.66)	(-2.00)	(-10.38)	(-9.78)	(3.62)
Mom	-0.0035***	-0.0029***	-0.0012***	0.0027***	0.0063***	0.0001
	(-15.31)	(-10.99)	(-4.48)	(4.16)	(8.12)	(0.09)
Country F.E.	Yes	Yes	No	Yes	Yes	No
Industry F.E.	Yes	Yes	No	Yes	Yes	No
Year F.E.	No	Yes	Yes	No	Yes	Yes
Stock F.E.	No	No	Yes	No	No	Yes
N	61,123	61,123	61,123	61,123	61,123	61,123
adj. R^2	0.17	0.17	0.42	0.25	0.26	0.63

Table IA.2. Changes in Fragility and Illiquidity Around the Mergers

This table presents the test results of changes in fragility and illiquidity around the merger events. $\sqrt{Fragility}$ is computed based on the holdings of all funds in FactSet (i.e., including open-end and non-open-end funds) as in Massa, Schumacher, and Wang (2020). *Amihud* is defined as the monthly average of the daily Amihud, which is computed as absolute daily stock return divided by the dollar trading volume on that day. All regressions follow the specifications in Table 5 but use $\sqrt{Fragility}$ and Amihud as dependent variables. indicate statistical significance at the 10% / 5% / 1% level respectively, computed from standard errors that allow for clustering at the stock level.

Panel A: Changes in $\sqrt{Fragility}$

	(1) $\sqrt{Fragility}$	(2) $\sqrt{Fragility}$	(3) $\sqrt{Fragility}$	(4) $\sqrt{Fragility}$	(5) $\sqrt{Fragility}$	(6) $\sqrt{Fragility}$
POST x Treat	-0.0238**	-0.0255**	-0.0244**	-0.0248**	-0.0231**	
	(-2.16)	(-2.26)	(-2.26)	(-2.06)	(-2.02)	
Before1 x Treat						-0.0027
						(-0.25)
After1 x Treat						-0.0225*
						(-1.67)
After2 x Treat						-0.0254*
						(-1.68)
Before1						-0.0269
						(-0.56)
After1						-0.1114
						(-1.49)
After2						-0.2221**
						(-2.43)
POST	-0.0366***	-0.2055***	-0.1513***	-0.2445***	-0.1317**	
	(-4.12)	(-4.36)	(-3.01)	(-4.44)	(-2.13)	
Treat	0.0597***	0.0515***	0.0498***	0.0156*	0.0134*	0.0150
	(4.94)	(5.13)	(5.21)	(1.80)	(1.68)	(1.47)
Firm size		-0.0537***	-0.0459***	0.0189	0.0117	0.0103
		(-12.47)	(-10.87)	(1.10)	(0.68)	(0.59)
Log(B/M)		0.0656***	0.0527***	-0.0051	-0.0130	-0.0109
		(8.62)	(6.25)	(-0.58)	(-1.27)	(-0.87)
Cashflow		0.1837***	0.1683***	0.0909	0.0524	0.0644
		(3.48)	(3.31)	(1.60)	(0.97)	(0.95)
IO		0.4074***	0.3982***	0.4061***	0.2858***	0.2354***
		(21.92)	(21.89)	(5.15)	(3.73)	(3.03)
Age		0.0147*	0.0150**	0.0351	0.0398	0.0527*
		(1.96)	(2.05)	(1.56)	(1.51)	(1.88)
Cash holdings		-0.0435*	-0.0066	0.0477	0.0843***	0.0951***
		(-1.70)	(-0.27)	(1.37)	(2.63)	(2.86)
Leverage		-0.0780**	-0.0894***	-0.0893**	-0.0681*	-0.0569
		(-2.58)	(-3.01)	(-2.11)	(-1.72)	(-1.27)
Dividend		0.2452	0.0581	-0.1794	-0.3093	-0.4056*
		(0.98)	(0.24)	(-0.85)	(-1.48)	(-1.74)
Mom		-0.0440***	-0.0020	-0.0388***	0.0018	0.0022
		(-4.58)	(-0.21)	(-5.25)	(0.17)	(0.15)
Deal F.E.	No	No	No	No	Yes	Yes
Firm F.E.	No	No	No	Yes	Yes	Yes
Year F.E.	No	No	Yes	No	Yes	Yes
N	18,328	17,723	17,723	17,723	17,723	17,723
adj. R^2	0.01	0.21	0.25	0.58	0.62	0.62

Panel B: Changes in illiquidity

	(1) Amihud	(2) Amihud	(3) Amihud	(4) Amihud	(5) Amihud	(6) Amihud
POST x Treat	0.0120***	0.0136***	0.0135***	0.0131***	0.0133***	
	(2.68)	(3.05)	(3.03)	(2.75)	(2.79)	
Before1 x Treat						-0.0013
						(-0.17)
After1 x Treat						0.0137***
						(2.62)
After2 x Treat						0.0117*
						(1.87)
Before1						0.3316***
						(5.07)
After1						0.2201***
						(5.18)
After2						0.2391***
						(5.28)
POST	0.0008	0.0808**	0.0866**	0.0358	0.0694	
	(0.24)	(2.14)	(2.23)	(0.97)	(1.47)	
Treat	-0.0201***	-0.0165***	-0.0163***	-0.0073***	-0.0075***	-0.0068*
	(-4.16)	(-3.84)	(-3.80)	(-2.71)	(-2.79)	(-1.67)
Firm size		-0.0263***	-0.0263***	-0.0104*	-0.0105*	0.0054
		(-8.50)	(-8.39)	(-1.88)	(-1.86)	(0.82)
Log(B/M)		0.0210***	0.0123***	0.0268***	0.0160***	-0.0004
		(5.65)	(3.53)	(4.96)	(3.15)	(-0.08)
Cashflow		-0.0266	-0.0282	-0.0607**	-0.0642**	-0.0220
		(-1.24)	(-1.28)	(-1.97)	(-2.03)	(-0.68)
IO		-0.0969***	-0.1013***	-0.0271	-0.0156	0.0456**
		(-8.35)	(-8.44)	(-1.55)	(-0.94)	(2.45)
Age		-0.0000	0.0002	0.0169	0.0033	-0.0085
		(-0.01)	(0.06)	(1.39)	(0.19)	(-0.50)
Cash holdings		-0.0296***	-0.0330***	-0.0082	-0.0117	0.0101
		(-2.85)	(-3.04)	(-0.78)	(-1.10)	(0.70)
Leverage		0.0214**	0.0179*	0.0090	0.0023	-0.0053
		(2.13)	(1.78)	(0.55)	(0.15)	(-0.30)
Dividend		-0.0950	-0.1132	-0.3227**	-0.3012**	-0.2635*
		(-1.29)	(-1.55)	(-2.35)	(-2.21)	(-1.85)
Mom		-0.0004	-0.0115*	-0.0042	-0.0075*	0.0090
		(-0.08)	(-1.93)	(-1.43)	(-1.93)	(1.43)
Deal F.E.	No	No	No	No	Yes	Yes
Firm F.E.	No	No	No	Yes	Yes	Yes
Year F.E.	No	No	Yes	No	Yes	Yes
N	18,328	17,723	17,723	17,723	17,723	17,723
adj. R^2	0.00	0.10	0.11	0.55	0.55	0.57

Table IA.3. Ownership Composition Changes Around the Mergers

This table presents test results of changes in ownership composition around the merger events. All regressions follow the same specification in Column 6 of Table 5 but use ownership variables as dependent variables. *IO* is the total institutional ownership. *IO Short-term* is the ownership of funds with portfolio turnover in the top quartile. *IO Long-term* is the total institutional ownership deducting *IO Short-term*. *Average Portfolio Turnover* is the average portfolio turnover aggregated at firm-level. ***/**/* indicate statistical significance at the 10% / 5% / 1% level respectively, computed from standard errors that allow for clustering at the stock level.

	(1) IO	(2) IO Short-term	(3) IO Long-term	(4) Average Portfolio Turnover
POST x treat	0.0064	-0.0036***	0.0083**	-0.0032**
	(1.27)	(-3.70)	(2.33)	(-2.15)
Treat	-0.0030	0.0036***	-0.0050*	0.0451***
	(-0.93)	(3.15)	(-1.76)	(13.87)
POST	0.0315	-0.0038	-0.0523***	0.0140
	(1.15)	(-0.64)	(-2.69)	(1.35)
Firm size	0.0157*	-0.0001	0.0378***	-0.0024
	(1.82)	(-0.04)	(4.84)	(-0.72)
Log(B/M)	-0.0183***	-0.0020*	-0.0144***	-0.0031*
	(-3.45)	(-1.77)	(-3.27)	(-1.81)
Cashflow	0.0510**	0.0138**	0.0476**	0.0158
	(2.02)	(2.34)	(2.22)	(1.60)
Age	0.0225*	0.0038	0.0242**	-0.0068
	(1.89)	(1.11)	(2.47)	(-1.06)
Cash holdings	0.0101	0.0028	0.0452***	-0.0023
	(0.59)	(0.86)	(3.78)	(-0.42)
Leverage	-0.0293*	0.0008	-0.0211	0.0007
	(-1.73)	(0.21)	(-1.56)	(0.12)
Dividend	-0.0071	-0.0268	-0.0413	-0.0099
	(-0.07)	(-1.57)	(-0.54)	(-0.33)
Mom	0.0028	0.0025**	0.0020	0.0063***
	(0.64)	(2.31)	(0.57)	(3.17)
Deal F.E.	Yes	Yes	Yes	Yes
Firm F.E.	Yes	Yes	Yes	Yes
Year F.E.	Yes	Yes	Yes	Yes
N	17,629	17,629	17,629	16,513
adj. R^2	0.71	0.54	0.96	0.66

Table IA.4. Difference-in-Difference Analysis of Changes in Payout Policy - Alternative Treatment

This table presents robustness tests for Table 5. Stocks are now assigned to the treatment group based on the alternative treatment variable $IO\ Total_{df} = IO\ Acq_{df} + IO\ Targ_{df}$ and the control group is then re-constructed accordingly following the same procedure as in the main test. All other specifications are unchanged.

Panel A: Repurchase

	(1) Repurchase	(2) Repurchase	(3) Repurchase	(4) Repurchase	(5) Repurchase	(6) Repurchase
POST x Treat	0.0050***	0.0043***	0.0042***	0.0046***	0.0046***	
	(3.64)	(2.85)	(2.86)	(2.93)	(3.00)	
Before1 x Treat						0.0026
						(1.31)
After1 x Treat						0.0060***
						(2.76)
After2 x Treat						0.0062***
						(2.75)
Before1						0.0182***
						(3.31)
After1						-0.0018
						(-0.19)
After2						-0.0019
						(-0.17)
POST	-0.0036***	-0.0078*	0.0046	-0.0112*	-0.0168**	
	(-3.20)	(-1.75)	(0.91)	(-1.87)	(-2.44)	
Treat	-0.0023	-0.0032**	-0.0032**	-0.0022*	-0.0028**	-0.0042**
	(-1.53)	(-2.28)	(-2.26)	(-1.88)	(-2.34)	(-2.41)
Firm size		-0.0006	-0.0004	0.0034	0.0038	0.0036
		(-1.22)	(-0.83)	(1.37)	(1.45)	(1.32)
Log(B/M)		-0.0150***	-0.0140***	-0.0109***	-0.0075***	-0.0070***
		(-12.54)	(-11.30)	(-7.11)	(-4.67)	(-3.65)
Cashflow		0.0536***	0.0526***	0.0258***	0.0213***	0.0257**
		(8.29)	(8.09)	(3.23)	(2.67)	(2.42)
IO		0.0328***	0.0335***	0.0144	0.0147	0.0216*
		(13.42)	(13.39)	(1.28)	(1.32)	(1.92)
Age		0.0017**	0.0016*	-0.0011	0.0069*	0.0045
		(2.04)	(1.96)	(-0.34)	(1.93)	(1.16)
Cash holdings		-0.0007	0.0005	-0.0213***	-0.0193***	-0.0195***
		(-0.17)	(0.13)	(-3.58)	(-3.30)	(-2.78)
Leverage		-0.0412***	-0.0405***	-0.0576***	-0.0537***	-0.0562***
		(-10.20)	(-9.92)	(-9.25)	(-8.70)	(-8.58)
Dividend		-0.0684**	-0.0688**	0.0512	0.0361	0.0701*
		(-2.46)	(-2.47)	(1.51)	(1.10)	(1.68)
Mom		-0.0088***	-0.0105***	-0.0052***	-0.0050***	-0.0061***
		(-8.84)	(-7.56)	(-4.24)	(-3.21)	(-2.85)
Deal F.E.	No	No	No	No	Yes	Yes
Firm F.E.	No	No	No	Yes	Yes	Yes
Year F.E.	No	No	Yes	No	Yes	Yes
N	20,968	19,313	19,313	19,313	19,313	19,313
adj. R^2	0.00	0.21	0.22	0.54	0.55	0.55

Panel B: Dividend

	(1) Dividend	(2) Dividend	(3) Dividend	(4) Dividend	(5) Dividend	(6) Dividend
POST x Treat	0.0010	0.0007	0.0007	0.0009	0.0009	
	(1.20)	(0.82)	(0.85)	(1.06)	(1.13)	
Before1 x Treat						-0.0010
						(-1.37)
After1 x Treat						-0.0001
						(-0.14)
After2 x Treat						0.0009
						(0.82)
Before1						0.0004
						(0.17)
After1						-0.0021
						(-0.36)
After2						-0.0043
						(-0.59)
POST	-0.0009	-0.0006	-0.0020	-0.0104**	-0.0042	
	(-1.18)	(-0.17)	(-0.49)	(-2.20)	(-0.76)	
Treat	-0.0011	-0.0004	-0.0004	-0.0012**	-0.0010*	-0.0005
	(-1.06)	(-0.43)	(-0.46)	(-2.05)	(-1.71)	(-0.68)
Firm size		-0.0005	-0.0002	0.0007	0.0002	0.0005
		(-1.47)	(-0.64)	(0.29)	(0.09)	(0.17)
Log(B/M)		-0.0102***	-0.0105***	-0.0049***	-0.0043***	-0.0058***
		(-10.84)	(-10.96)	(-4.08)	(-3.63)	(-3.62)
Cashflow		0.0630***	0.0627***	0.0203***	0.0194***	0.0252***
		(7.12)	(7.10)	(2.88)	(2.72)	(3.21)
IO		-0.0238***	-0.0238***	0.0016	-0.0012	-0.0029
		(-15.34)	(-15.37)	(0.33)	(-0.24)	(-0.56)
Age		0.0032***	0.0032***	0.0043***	0.0013	0.0013
		(6.51)	(6.54)	(2.91)	(0.83)	(0.73)
Cash holdings		-0.0036	-0.0029	0.0011	0.0014	0.0002
		(-1.28)	(-1.04)	(0.48)	(0.63)	(0.09)
Leverage		-0.0102***	-0.0108***	-0.0113***	-0.0112***	-0.0106**
		(-3.45)	(-3.63)	(-3.10)	(-3.02)	(-2.49)
Repurchase		-0.0315**	-0.0311**	-0.0037	-0.0058	-0.0133
		(-2.41)	(-2.38)	(-0.38)	(-0.59)	(-1.02)
Mom		-0.0044***	-0.0034***	-0.0013**	-0.0007	-0.0018
		(-6.13)	(-3.66)	(-2.20)	(-0.80)	(-1.22)
Deal F.E.	No	No	No	No	Yes	Yes
Firm F.E.	No	No	No	Yes	Yes	Yes
Year F.E.	No	No	Yes	No	Yes	Yes
Observations	20,968	19,313	19,313	19,313	19,313	19,313
Adjusted R^2	0.00	0.23	0.23	0.72	0.72	0.72

Table IA.5: Difference-in-Difference Analysis of Changes in Investment Policy – Alternative Treatment

This table presents robustness tests for Table 6. Stocks are now assigned to the treatment group based on the alternative treatment variable $IO\ Total_{df} = IO\ Acq_{df} + IO\ Targ_{df}$ and the control group is then re-constructed accordingly following the same procedure as in the main test. All other specifications are unchanged.

Dependent variable	(1) CAPEX	(2) CAPEX	(3) CAPEX	(4) CAPEX	(5) CAPEX	(6) Total Investment	(7) Total Asset Growth	(8) CAPEX
POST x Treat	-0.0034**	-0.0050**	-0.0049**	-0.0044***	-0.0043***	-0.0057***	-0.0002	
	(-2.48)	(-2.42)	(-2.38)	(-3.00)	(-2.95)	(-2.70)	(-0.03)	
Before1 x Treat								0.0030*
								(1.72)
After1 x Treat								-0.0035*
								(-1.90)
After2 x Treat								-0.0020
								(-1.00)
Before1								-0.0050
								(-0.87)
After1								-0.0066
								(-0.65)
After2								-0.0024
								(-0.20)
POST	-0.0052***	0.0023	0.0055	-0.0040	-0.0040	-0.0004	-0.0666	
	(-4.14)	(0.31)	(0.74)	(-0.64)	(-0.57)	(-0.03)	(-1.49)	
Treat	-0.0002	0.0006	0.0006	0.0023**	0.0023**	0.0019	-0.0068	0.0007
	(-0.10)	(0.30)	(0.26)	(2.30)	(2.32)	(1.28)	(-1.00)	(0.51)
Firm size		-0.0027***	-0.0023***	-0.0311***	-0.0308***	-0.1130***	-0.0693***	-0.0305***
		(-3.73)	(-3.20)	(-8.77)	(-8.46)	(-14.78)	(-17.53)	(-8.30)
Log(B/M)		0.0011	0.0028	-0.0058***	-0.0026*	-0.0004	-0.0666	-0.0017
		(0.60)	(1.46)	(-3.93)	(-1.69)	(-0.03)	(-1.49)	(-0.90)
Cashflow		0.1458***	0.1425***	0.0527***	0.0484***	-0.0693***	-0.3975***	0.0728***
		(12.81)	(12.59)	(6.87)	(6.37)	(-17.53)	(-15.51)	(7.23)
IO		0.0016	0.0032	0.0125	0.0134	-0.0021	0.0562***	0.0114
		(0.40)	(0.78)	(1.13)	(1.15)	(-0.98)	(5.28)	(0.96)
Age		-0.0044**	-0.0044***	0.0015	0.0052	0.0857***	0.2451***	0.0050
		(-2.57)	(-2.61)	(0.59)	(1.59)	(6.89)	(4.59)	(1.44)
Cash holdings		-0.0132**	-0.0117*	-0.0073	-0.0058	0.0178	-0.0199	-0.0079
		(-2.13)	(-1.93)	(-1.47)	(-1.19)	(1.20)	(-0.23)	(-1.34)
Leverage		0.0289***	0.0291***	-0.0266***	-0.0240***	0.0094*	0.0057	-0.0207***
		(4.26)	(4.32)	(-3.84)	(-3.55)	(1.73)	(0.24)	(-2.88)
Dividend		-0.0522	-0.0545	0.0524	0.0393	-0.0262***	0.6300***	0.0119
		(-1.47)	(-1.53)	(1.44)	(1.10)	(-3.36)	(16.07)	(0.27)
Mom		0.0074***	0.0112***	-0.0042***	-0.0036**	-0.0558***	-0.1654***	-0.0049**

		(4.70)	(5.07)	(-3.62)	(-2.29)	(-6.58)	(-3.44)	(-2.12)
Deal F.E.	No	No	No	No	Yes	Yes	Yes	Yes
Firm F.E.	No	No	No	Yes	Yes	Yes	Yes	Yes
Year F.E.	No	No	Yes	No	Yes	Yes	Yes	Yes
N	20,968	19,313	19,313	19,313	19,313	19,313	19,313	19,313
adj. R^2	0.00	0.09	0.10	0.77	0.77	0.71	0.51	0.78

Table IA.6. Cross-sectional Heterogeneity by Pre-Merger Ownership Characteristics – Alternative Treatment

This table presents robustness tests for Table 7. Stocks are now assigned to the treatment group based on the alternative treatment variable $IO\ Total_{df} = IO\ Acq_{df} + IO\ Targ_{df}$ and the control group is then re-constructed accordingly following the same procedure as in the main test. All other specifications are unchanged.

Panel A: Repurchase

	(1) Repurchase	(2) Repurchase	(3) Repurchase	(4) Repurchase	(5) Repurchase
POST x Treat x IO_oef	0.0391***				0.0538***
	(2.73)				(2.66)
POST x Treat x IO_excessweight		0.0493*			0.0131
		(1.83)			(0.38)
POST x Treat x IO_flowvola			0.2970**		0.0741
			(2.51)		(0.57)
POST x Treat x Flow correlation				-0.0395	-0.0217
				(-1.47)	(-0.83)
Treat x IO_oef	-0.0346***				-0.0402**
	(-2.86)				(-2.45)
Treat x IO_excessweight		-0.0322			-0.0019
		(-1.58)			(-0.07)
Treat x IO_flowvola			-0.1816*		-0.0385
			(-1.88)		(-0.38)
Treat x Flow correlation				0.0168	0.0055
				(0.52)	(0.17)
POST x IO_oef	-0.0249*				-0.0120
	(-1.72)				(-0.69)
POST x IO_excessweight		-0.0775***			-0.0769**
		(-2.92)			(-2.48)
POST x IO_flowvola			-0.1994*		-0.0067
			(-1.86)		(-0.06)
POST x Flow correlation				0.0622**	0.0407
				(2.42)	(1.64)
IO_oef	0.0188				0.0099
	(1.49)				(0.67)
IO_excessweight		0.0323			0.0207
		(1.54)			(0.87)
IO_flowvola			0.1126		0.0236
			(1.20)		(0.24)
Flow correlation				-0.0601**	-0.0492*
				(-2.01)	(-1.74)
Treat	0.0048*	-0.0004	-0.0008	-0.0036**	0.0058*
	(1.81)	(-0.24)	(-0.48)	(-2.19)	(1.88)
POST x Treat	-0.0029	0.0019	0.0013	0.0063***	-0.0058*
	(-1.02)	(0.90)	(0.67)	(3.47)	(-1.85)
POST	-0.0092	-0.0077	-0.0122**	-0.0177***	-0.0050
	(-1.52)	(-1.22)	(-2.11)	(-2.94)	(-0.76)
Controls	Yes	Yes	Yes	Yes	Yes
Deal F.E.	Yes	Yes	Yes	Yes	Yes
Firm F.E.	Yes	Yes	Yes	Yes	Yes
Year F.E.	Yes	Yes	Yes	Yes	Yes
Observations	18,821	18,660	18,835	19,160	18,056
Adjusted R^2	0.55	0.54	0.55	0.55	0.55

Panel B: CAPEX

	(1) CAPEX	(2) CAPEX	(3) CAPEX	(4) CAPEX	(5) CAPEX
POST x Treat x IO_oef	-0.0330***				-0.0295*
	(-2.60)				(-1.86)
POST x Treat x IO_excessweight		-0.0505*			-0.0157
		(-1.70)			(-0.43)
POST x Treat x IO_flowvola			-0.4047**		-0.1435
			(-2.36)		(-1.02)
POST x Treat x Flow correlation				0.0251	0.0146
				(0.82)	(0.41)
Treat x IO_oef	0.0256**				0.0209
	(2.47)				(1.58)
Treat x IO_excessweight		0.0397**			0.0146
		(2.30)			(0.71)
Treat x IO_flowvola			0.2914***		0.1329
			(2.75)		(1.42)
Treat x Flow correlation				-0.0263	-0.0036
				(-0.79)	(-0.10)
POST x IO_oef	0.0351***				0.0223
	(2.94)				(1.56)
POST x IO_excessweight		0.0553*			0.0299
		(1.89)			(0.86)
POST x IO_flowvola			0.4654***		0.2123*
			(2.89)		(1.69)
POST x Flow correlation				-0.0076	0.0020
				(-0.30)	(0.07)
IO_oef	-0.0238**				-0.0121
	(-2.12)				(-0.92)
IO_excessweight		-0.0420**			-0.0235
		(-2.49)			(-1.20)
IO_flowvola			-0.3459***		-0.2186**
			(-3.43)		(-2.48)
Flow correlation				0.0349	0.0163
				(1.27)	(0.55)
Treat	-0.0030	-0.0008	-0.0009	0.0035**	-0.0042
	(-1.11)	(-0.46)	(-0.55)	(2.30)	(-1.29)
POST x Treat	0.0022	-0.0005	-0.0003	-0.0055***	0.0033
	(0.71)	(-0.19)	(-0.12)	(-3.01)	(0.87)
POST	-0.0104	-0.0104	-0.0084	-0.0053	-0.0144*
	(-1.64)	(-1.55)	(-1.34)	(-0.86)	(-1.94)
Controls	Yes	Yes	Yes	Yes	Yes
Deal F.E.	Yes	Yes	Yes	Yes	Yes
Firm F.E.	Yes	Yes	Yes	Yes	Yes
Year F.E.	Yes	Yes	Yes	Yes	Yes
Observations	18,821	18,660	18,835	19,160	18,056
Adjusted R^2	0.77	0.78	0.77	0.77	0.78

Table IA.7: Effects on Other Corporate Policies – Alternative Treatment

This table presents robustness tests for Table 8. Stocks are now assigned to the treatment group based on the alternative treatment variable $IO\ Total_{df} = IO\ Acq_{df} + IO\ Targ_{df}$ and the control group is then re-constructed accordingly following the same procedure as in the main test. All other specifications are unchanged.

	(1) Chgcash	(2) Chgstdebt	(3) Chgltdebt	(4) Chglev	(5) Equityiss
POST x Treat	-0.0008	0.0005	0.0016	-0.0000	-0.0048**
	(-0.33)	(0.65)	(0.52)	(-0.02)	(-2.22)
Treat	0.0013	-0.0003	-0.0015	0.0002	0.0012
	(0.61)	(-0.46)	(-0.66)	(0.25)	(0.79)
POST	0.0204	-0.0071	-0.0246	-0.0072	0.0172
	(1.35)	(-1.57)	(-1.52)	(-1.38)	(1.32)
Firm size	-0.0040	-0.0037***	-0.0422***	0.0021	-0.0304***
	(-0.78)	(-2.66)	(-7.32)	(0.95)	(-4.91)
Log(B/M)	0.0076**	-0.0007	-0.0082**	-0.0091***	0.0094***
	(2.47)	(-0.90)	(-2.23)	(-4.61)	(3.22)
Cashflow	0.0033	0.0001	0.0531***	-0.0024	-0.0049
	(0.16)	(0.03)	(3.11)	(-0.36)	(-0.24)
IO	0.0006	-0.0058	0.0048	0.0047	0.0014
	(0.02)	(-1.06)	(0.19)	(0.77)	(0.11)
Age	0.0108	0.0006	0.0046	0.0025	-0.0159
	(1.30)	(0.25)	(0.49)	(0.84)	(-1.58)
Cash holdings	0.3817***	-0.0006	0.0479***	-0.0133***	0.2072***
	(14.07)	(-0.29)	(3.40)	(-2.99)	(7.50)
Leverage	0.0341***	-0.0058*	-0.1931***	-0.0282***	0.0493***
	(2.85)	(-1.78)	(-13.12)	(-6.03)	(4.74)
Dividend	-0.2412***	0.0475**	0.2557***	0.0152	-0.0077
	(-3.46)	(2.15)	(3.70)	(0.47)	(-0.21)
Mom	0.0124***	-0.0015*	-0.0126***	-0.0051***	0.0126***
	(3.36)	(-1.66)	(-3.96)	(-3.66)	(3.05)
Controls	Yes	Yes	Yes	Yes	Yes
Deal F.E.	Yes	Yes	Yes	Yes	Yes
Firm F.E.	Yes	Yes	Yes	Yes	Yes
Year F.E.	Yes	Yes	Yes	Yes	Yes
N	19,313	19,313	19,313	19,313	19,313
adj. R^2	0.35	0.07	0.27	0.07	0.44

Table IA.8. Cross-sectional Heterogeneity by Financial Constraints – Alternative treatment

This table presents robustness tests for Table 9. Stocks are now assigned to the treatment group based on the alternative treatment variable $IO\ Total_{df} = IO\ Acq_{df} + IO\ Targ_{df}$ and the control group is then re-constructed accordingly following the same procedure as in the main test. All other specifications are unchanged.

Panel A: Repurchase

	(1) Repurchase	(2) Repurchase	(3) Repurchase	(6) Repurchase
POST x Treat x WW	0.0315**			0.0346
	(2.00)			(1.03)
POST x Treat x S&A		0.0018*		-0.0003
		(1.72)		(-0.14)
POST x Treat x Log(B/M)			-0.0059***	-0.0058***
			(-2.91)	(-2.88)
Treat x WW	-0.0180			-0.0207
	(-1.41)			(-0.82)
Treat x S&A		-0.0010		0.0002
		(-1.12)		(0.11)
Treat x Log(B/M)			0.0007	0.0008
			(0.49)	(0.50)
POST x WW	-0.0057			0.0007
	(-0.19)			(0.02)
POST x S&A		-0.0056***		-0.0045*
		(-2.73)		(-1.83)
POST x Log(B/M)			0.0020	0.0018
			(1.05)	(0.94)
Treat	-0.0093*	-0.0036**	-0.0024**	-0.0098
	(-1.74)	(-2.30)	(-1.99)	(-1.17)
POST x Treat	0.0161**	0.0061***	0.0005	0.0129
	(2.46)	(3.38)	(0.35)	(1.17)
POST	-0.0224***	0.0097	-0.0147**	0.0064
	(-2.98)	(0.88)	(-2.32)	(0.48)
Controls	Yes	Yes	Yes	Yes
Deal F.E.	Yes	Yes	Yes	Yes
Firm F.E.	Yes	Yes	Yes	Yes
Year F.E.	Yes	Yes	Yes	Yes
Observations	19,307	19,307	19,307	19,307
Adjusted R^2	0.55	0.55	0.55	0.55

Panel B: CAPEX

	(1) CAPEX	(2) CAPEX	(3) CAPEX	(6) CAPEX
POST x Treat x WW	-0.0355**			-0.0336
	(-2.57)			(-1.13)
POST x Treat x S&A		-0.0022**		-0.0002
		(-2.13)		(-0.11)
POST x Treat x Log(B/M)			-0.0015	-0.0015
			(-0.88)	(-0.94)
Treat x WW	0.0146			0.0196
	(1.47)			(1.00)
Treat x S&A		0.0007		-0.0004
		(0.90)		(-0.28)
Treat x Log(B/M)			0.0009	0.0007
			(0.71)	(0.54)
POST x WW	0.0825***			0.0721**
	(2.80)			(2.07)
POST x S&A		0.0090***		0.0073***
		(3.60)		(2.90)
POST x Log(B/M)			-0.0013	-0.0009
			(-0.81)	(-0.53)
Treat	0.0076*	0.0028**	0.0029**	0.0095
	(1.89)	(2.12)	(2.45)	(1.53)
POST x Treat	-0.0172***	-0.0061***	-0.0053***	-0.0180*
	(-3.09)	(-3.46)	(-2.92)	(-1.88)
POST	0.0014	-0.0482***	-0.0036	-0.0396***
	(0.20)	(-3.28)	(-0.55)	(-2.77)
Controls	Yes	Yes	Yes	Yes
Deal F.E.	Yes	Yes	Yes	Yes
Firm F.E.	Yes	Yes	Yes	Yes
Year F.E.	Yes	Yes	Yes	Yes
Observations	19,307	19,307	19,307	19,307
Adjusted R^2	0.78	0.78	0.77	0.78

Panel C: Equity issuances

	(1) Equityiss	(2) Equityiss	(3) Equityiss	(4) Equityiss
POST x Treat x WW	-0.1418***			-0.0775*
	(-3.88)			(-1.65)
POST x Treat x S&A		-0.0100***		-0.0052
		(-3.91)		(-1.62)
POST x Treat x Log(B/M)			0.0043	0.0037
			(1.26)	(1.10)
Treat x WW	0.0725***			0.0309
	(3.47)			(0.96)
Treat x S&A		0.0053***		0.0035
		(3.31)		(1.38)
Treat x Log(B/M)			-0.0015	-0.0017
			(-0.57)	(-0.68)
POST x WW	0.1506***			0.1154**
	(3.25)			(2.22)
POST x S&A		0.0087**		0.0055
		(2.08)		(1.28)
POST x Log(B/M)			-0.0070*	-0.0065*
			(-1.94)	(-1.84)
Treat	0.0277***	0.0053**	0.0002	0.0141
	(3.27)	(2.18)	(0.12)	(1.36)
POST x Treat	-0.0563***	-0.0122***	-0.0019	-0.0345**
	(-3.83)	(-3.47)	(-0.77)	(-2.20)
POST	0.0409***	0.0002	0.0157	0.0145
	(2.94)	(0.01)	(1.30)	(0.55)
Controls	Yes	Yes	Yes	Yes
Deal F.E.	Yes	Yes	Yes	Yes
Firm F.E.	Yes	Yes	Yes	Yes
Year F.E.	Yes	Yes	Yes	Yes
N	19,307	19,307	19,307	19,307
adj. R^2	0.44	0.44	0.44	0.44