# The Value of Corporate Social Responsibility: Evidence from an Inflation-Driven Crisis of Trust *

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**Abstract**

Stakeholder trust is a major driver of corporate performance, but its benefits are difficult to identify empirically. This paper provides new evidence on the role of social capital on firm value employing a sudden increase in inflation as exogenous variation in stakeholder trust. Analyzing the cross-section of U.S. stock returns from 2018 through 2022, we find that in months following higher inflation rates, equity investors reward firms with stronger social capital, as proxied by their corporate social responsibility (CSR) levels. The result holds using different measures of inflation and CSR. The effect is stronger for firms headquartered in Democratic U.S. states (those most exposed to the "corporate greed" narrative of inflation) and ex-ante higher trust regions, as well as for firms with higher levels of customer awareness, customer sensitivity, and intangible capital. Analyst forecast revisions provide additional evidence that cash flow considerations drive the observed inflation-hedging property of CSR. Overall, the findings spotlight inflation as a crisis in stakeholder trust and provide new insights into the importance of social capital for firm value.

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# 1 Introduction

Trust is a vital element for the well-functioning of any human organization, including corporations (e.g., La Porta et al., 1997; Servaes and Tamayo, 2017). When trust becomes suddenly scarce, social capital – i.e., the intangible capital accumulated over time through investments in a good relationship with stakeholders such as employees, customers, suppliers, and local communities – is likely to be a major driver of firm value. However, despite its crucial importance, the effect of social capital on firm value is hard to identify empirically. Existing studies use the 2008 global financial crisis or the COVID-19 outbreak as proxies for crises of trust (Lins et al., 2017; Albuquerque et al., 2020), but, of course, not every financial or economic downturn is a crisis of trust. Appropriate settings to establish the causal effect of social capital on firm value are rare.

This paper provides novel evidence of the importance of social capital for firm value by studying a different form of crisis of trust, the historic surge in inflation in late 2021 and 2022. Several factors support our interpretation of high inflation as a significant threat to stakeholders' trust in corporations. The percentage of U.S. adults having "a great deal" or "quite a lot" of confidence in "Big business" dropped from 23% in 2019 and 19% in 2020 to only 14% in 2022 (Gallup, 2022). After all, people dislike inflation (Shiller, 1997) and survey evidence indicates that most U.S. citizens blamed price hikes by corporations to increase their profits – that is, "corporate greed" – as a major cause of inflation in the post-2020

period (see Deloitte, 2022; Data For Progress, 2022; Ipsos, 2022; Navigator Research, 2022).[1] Andre et al. (2023) study the narratives about inflation in the U.S. in the period 2021-22, and "concerns about price gouging or profiteering" is one of the factors cited by many U.S. households as a major cause of inflation. As Shiller (2022) put it, "*the public tends to think of inflation as an indicator of a cycle of greed and inhumanity, as a conspiracy to rob them of their buying power.*" This type of narrative can significantly erode the perception of a company by its stakeholders, undermining its performance.

Our first test investigates whether investors rewarded firms with higher social capital following various inflation measures from January 2018 through December 2022. Following the existing literature, we proxy for a firm's social capital using its level of corporate social responsibility (CSR) in the environmental and social dimensions (ES) (Sacconi and Antoni, 2010; Lins et al., 2017; Albuquerque et al., 2020; Amiraslani et al., 2023), employing different data providers for robustness.

We find that in months following higher inflation, stocks of higher-CSR firms perform significantly better than stocks of lower-CSR firms. Specifically, for any additional one percentage point of month-to-month inflation in month $t$, companies with a 1-standard-deviation higher ES score experience a stock price outperformance of 1.56 percentage points

[1] According to Data For Progress (2022), as of May 2022, around 60% of US citizens agreed that corporations took advantage of the pandemic to raise prices and grow profits and rejected the premise that corporations have "no choice but to raise prices". According to Deloitte (2022), the share of people blaming corporate price gouging for inflation is around 54%, and those people express weaker spending intentions. Ipsos (2022) find that clients react to price increases by expecting immediate improvements in customer experience, and customers feel nearly two times more empathy for small businesses (81%) raising their prices compared to large companies (47%).

in *t+1*, net of the effect of other firm characteristics. The inflation-hedging properties of CSR persist even when contemporaneously accounting for the stock-price effects of inflation through other channels, including the repricing of nominal values (cash holdings), differential exposure to changes in discount rates (book-to-market), pricing power (profitability), and exposure to market downturns (market beta).

Our finding on the resilience effect of CSR is robust to using alternative measures of inflation (including expected yearly inflation, region-specific inflation, and Google search attention to inflation) and alternative returns sets (CAPM-adjusted and Fama-French-adjusted). We also obtain similar inferences when using an alternative measure of CSR obtained from MSCI-KLD (instead of Refinitiv, as in our main regressions).

Why do stocks of high-CSR firms perform relatively better during periods of high inflation? Our interpretation is that equity investors recognize that inflation can significantly undermine a firm's relationship with its stakeholders, affecting its performance. The most prominent channel is through cash-flows: customers may lose trust in a company if they perceive price increases as opportunistic, which affects sales; employees may also leave the firm or decrease productivity if they believe the firm is taking advantage of its position. Investors then expect firms with stronger social capital to be able to better preserve a relationship of trust with customers and employees, with positive effects on expected cash flows and, hence, firm value. Three different sets of tests support this interpretation.

First, we explore the geographical heterogeneity of our results. Based on our interpreta-

tion, the benefit of social capital during periods of high inflation should be more prominent the stronger the effect of inflation is on stakeholder trust. This is likely the case for firms more exposed to the "corporate greed" inflation narrative. This is precisely what we observe: The stock price effect of CSR interacted with inflation is almost twice as large among firms headquartered in Democratic U.S. states – where the "corporate greed" narrative is more popular (Data For Progress, 2022; Navigator Research, 2022) – than among firms headquartered in Republican U.S. states, where generally stronger pro-business attitudes prevail (e.g., Gatchev et al., 2022). We also find the results to be significantly stronger for firms headquartered in U.S. divisions with higher ex-ante levels of perceived fairness and trust from the General Social Survey (GSS) (also employed in, e.g., Lins et al., 2017 and Kapons et al., 2023), for which the effect on trust of the high inflation "shock" is presumably more consequential.

Second, we investigate the cross-sectional heterogeneity of our results based on the importance of customers and employees for value creation. We find that the inflation-hedging property of social capital is more substantial amongst firms with higher advertisement expenses, in line with the role of customer awareness in mediating the effects of CSR on firm value (Servaes and Tamayo, 2013; Albuquerque et al., 2019). In addition, the effect is significantly more substantial in customer-sensitive industries, as defined in Flammer (2015a). Finally, we also find the effect stronger among high-intangible firms as proxied by their R&D intensity. This result is consistent with the interpretation of our main results as at least par-

tially driven by the ability of high-CSR firms to preserve employee cohesion during periods of high inflation when job satisfaction is generally reduced.

Finally, we analyze changes in financial analyst forecasts on firms' future operating performance. We find that, consistently with the behavior of marginal investors in the stock market, financial analysts expect higher-CSR firms to fare relatively better during a high-inflation period, revising forecasts for earnings and sales more favorably for these firms, especially at the 2- and 3-year horizons. These results support the interpretation that cash-flow considerations drive CSR's inflation-hedging effects on stock returns.

The paper makes three key contributions. First, it adds to the literature on the effect of social capital on firm value, particularly during crises of trust. Trust plays a crucial role in the well-functioning of financial markets (e.g., Guiso et al., 2008; Giannetti and Wang, 2016; Gurun et al., 2018) and corporations (e.g., La Porta et al., 1997; Sapienza and Zingales, 2012; Sapienza et al., 2013). When trust becomes suddenly scarce, firms with better stakeholder relationships will likely be more resilient. For instance, a good relationship with employees in "normal" times can help maintain their job satisfaction during difficult periods, positively affecting firm performance (Edmans, 2011). In line with this interpretation, Lins et al. (2017) find that during the 2008–2009 financial crisis, firms with high levels of corporate social responsibility experienced significantly better stock returns and operating performance. Similarly, Albuquerque et al. (2020) document that high-CSR firms experienced higher stock returns and operating profit margins during the early phases

of the COVID-19 crisis, at least partially due to customer and investor loyalty.[2] However, not all financial or economic downturns are crises of trust.[3] Appropriate empirical settings to study how social capital shapes firm value are rare. In this paper, we provide new evidence on the role of social capital on firm performance by looking at a new and different crisis of trust between stakeholders and corporations, a sudden and historical increase in inflation.

Second, the paper relates to the literature on the role of culture in influencing economic outcomes (Guiso et al., 2006). Different beliefs about the role of corporations in society can have significant economic consequences. For instance, Gatchev et al. (2022) show that pro-business attitudes vary significantly across political and religious dimensions, influencing local firms' corporate governance. Colonnelli et al. (2022) show that public discontent toward large businesses influences policy preferences. Motivated or not, narratives can have a first-order influence on individual behaviors and economic outcomes (Shiller, 2017). We contribute to this literature by showing how belief in narratives about the role of corporations during periods of high inflation can influence stakeholder behavior and, hence, firm performance.

Finally, we also add to the literature on the cross-sectional effects of inflation on firm value. Among the earlier works, Hong (1977) and Pearce and Roley (1988) highlight the importance of the re-pricing of nominal values, while Sharpe (2002) focuses on the effects

[2]Ding et al. (2021) also find that stocks of high-CSR firms proved more resilient during the Covid-19 market crash. Demers et al. (2021) find that they did not, after accounting for several firm characteristics but emphasize the positive role of intangible assets.

[3]For instance, D'Ercole and Wagner (2023) find that stocks of more environmentally responsible firms strongly under-performed after the collapse of Silicon Valley Bank (SVB) in March 2023, a banking crisis without a strong societal trust dimension.

of revisions in expected cash flows and risk premium. More recently, Boons et al. (2020) study how inflation risk is priced in stock returns and how it interacts with the expected effect on real growth. Gil de Rubio Cruz et al. (2022) find that firms with low leverage, large capitalization, high market beta, low book-to-market, and low market power are more susceptible to inflation surprises. Our paper is the first to investigate and document the cross-sectional effect of inflation on asset prices based on firms' social capital.

The rest of this paper is structured as follows. Section 2 presents and summarizes the data. Section 3 discusses our methodology and main results. Section 4 discusses and tests the potential channels driving the main finding. Section 5 concludes.

# 2 Data

Our main sample covers public firms in the United States from January 2018 through December 2022. We retrieve our data from several sources, as described below.

## 2.1 Stock returns and accounting variables

We retrieve monthly stock prices for common shares listed on U.S. major stock exchanges (NYSE, NYSE Arca, AMEX, and NASDAQ) from January 2015 through December 2022 from the Compustat Capital IQ database (accessed through the Wharton Research Data Services, WRDS).

We compute monthly returns by using dividend-adjusted stock prices. For every month, we winsorize returns at the 1st and 99th percentiles to reduce the effect of outliers on our estimates. For each stock, we estimate *Market beta* by regressing monthly returns above the 1-month Treasury-bill rate on the excess market return using a 36-month moving window when at least 24 months of non-missing returns are available. Similarly, we also estimate each stock's loadings on the value and size factors. We obtained the excess returns on the market, value, and size factors from Kenneth French's website. For each stock-month observation, we compute *Momentum* as the average individual stock return from month *t-12* to *t-1*.

From Compustat (through WRDS), we retrieve standard firm-level annual lagged accounting characteristics until year-end 2022: leverage (long-term debt plus debt in current liabilities divided by total assets, in percentage points), cash holdings (cash and short-term investments divided by total assets, in percentage points), firm size (the logarithm of market capitalization), book-to-market ratio (the book value of equity divided by market valuation), and return on assets (ROA, computed as the annual income before extraordinary items over total assets, in percentage points). We also retrieve and consider short-term and long-term debt separately, R&D intensity (R&D expenses divided by total assets, in percentage points) and advertising intensity (advertising expenses divided by total assets, in percentage points).

To determine the firms' location, we use their business address as reported in 10-X filings with the SEC.[4] Using this information, we restrict our sample to firms headquartered in the

[4]This data is obtained from the University of Notre Dame's webpage: https://sraf.nd.edu/data/augmented-10-x-header-data/.

United States. We classify firms based on GICS industry groups, and we restrict our sample to non-financial and non-utility firms.[5]

Finally, for our main sample period of January 2018 through December 2022, we obtain analyst forecast data on earnings per share and sales from IBES (also accessed through WRDS).

- Table 1 -

Table 1 provides the summary statistics of the main variables used in our analyses.

## 2.2 Corporate social responsibility

Following the existing literature, we proxy for a firm's social capital using its level of corporate social responsibility (e.g., Sacconi and Antoni, 2010; Lins et al., 2017; Albuquerque et al., 2020; Amiraslani et al., 2023). For this purpose, we obtain environmental and social scores from Refinitiv for 2017 through 2021. These scores are available at an annual frequency.[6]

Since we are mostly interested in the Environmental and Social pillars as a proxy for a firm's CSR and social capital, we compute an ES Score as the average of the two scores. To facilitate the economic interpretation of the results, we standardize our annual ES scores to

[5]Specifically, we exclude firms from the *Financials* and *Utilities* GICS sectors. All our results are robust to the additional exclusion of firms in the *Real Estate* GICS sector.

[6]Refinitiv adopts a percentile rank scoring methodology, where low scores indicate poor relative ESG performance and insufficient disclosure of data, whereas high scores indicate good relative performance and disclosure. The assessment is based on analyzing ten main themes aggregated in the three ESG pillars. The ten themes are *Resource use*, *Emissions*, *Innovation* (which make up the Environmental dimension), *Workforce*, *Human rights*, *Community*, *Product responsibility* (Social), *Management*, *Shareholders*, and *CSR strategy* (Governance).

have mean 0 and unit standard deviation. As an alternative proxy for CSR, we compute the environmental and social score using the MSCI–KLD database, *ES score (KLD)*[7].

## 2.3 Inflation measures

We obtain national and local inflation data (month-on-month changes in the Consumer Price Index for All Urban Consumers, All Items, seasonally adjusted, and year-on-year changes in the Consumer Price Index for All Urban Consumers, All Items, not seasonally adjusted) from the U.S. Bureau of Labor Statistics. In our main regressions, we focus on the level of inflation rate reported but also show results based on inflation changes. We also consider measures of local inflation based on U.S. Census regions, which are matched with the firms' locations.[8]

To gauge consumers' expectations of inflation, we use the one-year-ahead inflation expectations numbers from the Survey of Consumer Expectations, available from the Federal Reserve Bank of New York. To measure consumers' attention to inflation more specifically, we collect Google Trends data at the national and state level for searches with the keyword "inflation". The evolution of inflation and attention to inflation figures at the national level

[7]The MSCI–KLD dataset provides a series of dummy variables indicating, for each firm and year, the presence of strengths or concerns on several environmental, social, and governance factors. Following the usual practice in the literature (e.g., Lins et al., 2017; Albuquerque et al., 2020), we define *ES score (KLD)* as the fraction of environmental and social "strengths" indicators that are equal to one minus the fraction of the environmental and social "concerns" indicators that are equal to one. Since, at the time of writing, the MSCI–KLD dataset is available only through 2019, we assign the latest-available score for a firm also to the most recent period.

[8]The four regions are Northeast, Midwest, South, and West. This data is only available since December 2018.

during our sample period is illustrated in Figure 1. In Appendix Figure A1, we show the year-on-year inflation rates at the regional level.

- Figure 1 -

Importantly, since our main channel is that investors anticipate stakeholders' reactions to inflation and their expectations for how firms behave, we account for the timing of inflation as follows. Since official inflation numbers and survey results are typically publicly announced mid-month and refer to the previous month, we study the effect of inflation data on stock returns over the following months. In contrast, we do not lag Google search intensity data since it is available in real-time.[9]

## 2.4 Political preferences, regional trust, and customer sensitivity

We proxy a firm's exposure to political beliefs based on state-level political results (Democratic or Republican) at U.S. House of Representatives elections from 2016 to 2022. We define the indicator *Democratic state* equal to 1 for firms headquartered in States with at least 50% of representatives from the Democratic party based on the latest election.

We obtain measures of pre-determined regional variations in trust and fairness based on the 2016 wave of the General Social Survey (GSS), as done, e.g., in Lins et al. (2017) and Kapons et al. (2023). We aggregate GSS individual-level data at the division level based

[9] As an example, we are interested in studying the reaction of stock returns in the month of September to the inflation numbers of August, which are announced in early to mid-September. When using the inflation attention measure, we merge the September stock returns with the September Google search intensity data.

on the publicly available data on respondents' location.[10] Following the existing literature, we define the variable *Trusting fraction* as the percentage of participants in a given division that reply "Can trust" to the question "*Generally speaking, would you say that most people can be trusted or that you can't be too careful in dealing with people?*". We then define the indicator *High trusting fraction* as equal to 1 for firms headquartered in divisions with above-median *Trusting fraction*. Similarly, we construct the *Fairness fraction* and *High fairness fraction* variables based on the share of respondents who answer "Would try to be fair" to the question "*Do you think most people would try to take advantage of you if they got a chance, or would they try to be fair?*". *Trusting fraction* and *Fairness fraction* have a correlation of 0.76. Appendix Figure A2 shows the values of these variables.

Finally, we follow the industry characterization of customer sensitivity defined in Lev et al. (2010) and used in previous literature (e.g., Darendeli et al., 2022; Flammer, 2015a), and construct *Cust. sensitive industry* as an indicator that takes the value of 1 if the firm operates in a business-to-consumer (B2C) industry.[11].

[10]The nine U.S. divisions are New England, Middle Atlantic, East North Central, West North Central, South Atlantic, East South Central, West South Central, Mountain, and Pacific.

[11]This classification is based on SIC codes and considers *Consumer Goods* or *Finance* firms as B2C. In our sample, most firms operating in a customer-sensitive industry are in consumer goods, given that we exclude financials as described earlier.

# 3 The inflation-hedging properties of social capital

In this section, we test our hypothesis on the positive effect of a firm's social capital on firm value during periods of high inflation. With this purpose, we run OLS regressions of individual stock returns in month *t+1* of the following type:

$$Return_{i,t+1} = \alpha + \beta_1 Inflation_t \times ESscore_{i,t} + \beta_3 ESscore_{i,t} + \gamma' \mathbf{X}_{i,t} + \delta_t + I_i + \epsilon_{i,t}$$

Our main variable of interest is the interaction between the inflation rate in time $t$ ($Inflation_t$) and firm $i$'s environmental and social score ($ESscore_{i,t}$), our proxy for social capital. $\mathbf{X}_{i,t}$ is a vector of lagged firm and stock characteristics (leverage, cash holdings, firm size, book-to-market, ROA, market beta and momentum).[12] In a second specification, we will also interact these firm characteristics with the inflation rate to account for the "traditional" channels through which inflation can impact firms differently. $\delta_t$ and $I_t$ represents month and industry fixed effects, respectively, and $\epsilon_{i,t}$ the error term. We cluster standard errors at the firm level.[13]

[12] We do not include a stock's estimated loadings to the size, value, and quality factors, as we already control for firm characteristics correlated with those loadings (Bessembinder et al., 2019). However, controlling for factor loadings instead, or in addition to, firm characteristics does not affect our main findings. As discussed in Section 3.2, we also obtain similar results when using model-adjusted returns on the left-hand side of the regressions.

[13] We do not cluster both at the firm and month levels (Thompson, 2011; Petersen, 2009) due to our short sample period, which includes only 60 months/clusters. However, our main findings remain statistically significant even when double-clustering standard errors.

### 3.1 Main results

Table 2 shows the results of our analysis. In column 1, we run a regression without month fixed effects showing a strongly negative effect of inflation on monthly returns. In column 2, this effect is absorbed by the month fixed effects. In both specifications, we find that in months following higher inflation rates, high-CSR firms experience superior stock price performance than otherwise similar companies. The effect is economically meaningful: for a one percentage point higher inflation rate in month $t$, companies with a 1-standard-deviation higher ES score experience a stock price outperformance of 1.56 percentage points in $t+1$, net of the effect of many other firm characteristics. Figure 2 illustrates this finding in a binned scatter plot and confirms the linearity of the relationship.

- Table 2 -

- Figure 2 -

Of course, inflation can impact firm value through several potential channels. For this reason, in column 3, we interact the inflation rate with *all* firm characteristics in our regressions. Some interesting patterns emerge. In particular, following months of high inflation, firms with higher profitability (ROA) — a measure of market power and markup — perform better, presumably thanks to their ability to pass through inflation to their clients and remain profitable. Cash holdings interact negatively with inflation, reflecting a repricing of the nominal values of liquidity (no such effect is found for leverage). High-market-beta firms

perform worse, given the overall negative reaction of the stock market to inflation (in this regression, the direct negative coefficient on inflation is absorbed by the month fixed effects). Large firms perform better than small ones. Finally, high book-to-market firms perform better, reflecting the positive link between inflation and discount rates, i.e., investors' expected real returns. Despite simultaneously controlling for these "traditional" effects of inflation on stock prices, the estimated effect of our CSR channel remains statistically significant, although reduced in magnitude (0.45).

## 3.2 Robustness checks

In this subsection, we describe the results of a set of robustness checks. Using alternative measures of inflation and attention to inflation does not change our main finding that high CSR firms outperform[14].

### 3.2.1 Alternative inflation measures

In Table 3, we confirm the value of firms' CSR during periods of high inflation using various alternative measures of inflation (the specifications presented in this table are otherwise analogous to that of column 2 in Table 2). In column 1, we use the inflation year-on-year (*Inflation (yoy)*), and obtain a coefficient of 0.17. The result is similar (coefficient of 0.16 in column 2) if instead of using the national year-on-year inflation rate, we take it at the

[14]We also test in if our findings hold using an alternative measure of firms' CSR performance, the ES score from MSCI–KLD. The findings, summarized in Appendix Table A3, are in line with those of our main specification.

U.S. Census Region level (*Inflation (yoy, region)*). Columns 3 and 4 consider measures of consumer inflation expectations at the national and regional level (*Expected inflation (yoy)* and *Expected inflation (yoy, region)*), and we find coefficients of 0.32 and 0.28. Finally, in the last two columns, we include measures of attention to inflation proxied by Google search intensity for "Inflation", at the national and state level (*Google SVI inflation (US)*, *Google SVI inflation (state)*). Throughout all the specifications, our main effect of interest – the outperformance of high social responsibility firms in reaction to inflation – is significant at the 1% level.

- Table 3 -

### 3.2.2 Inflation changes

In Table A1 in the Appendix, we re-run the main regressions by considering monthly *changes* in inflation, instead of its level. The estimated coefficients confirm the positive effect of social capital: starting with column 1, following an increase in the monthly inflation rate of 1 percentage points, companies with a 1-standard-deviation higher ES score experience a stock price outperformance of 0.56 percentage points in *t+1* controlling for firm characteristics and industry. In column 2, we additionally include monthly fixed effects (thus absorbing the direct effect of changes in inflation on returns), and the coefficient of interest, 0.57, remains highly significant.

### 3.2.3 Model-adjusted returns

In Table A2 in the Appendix, we replicate our main analyses using CAPM-adjusted and Fama-French-adjusted returns as the dependent variable instead of raw returns. The estimated coefficient on the interaction between inflation and CSR remains positive and statistically significant, except when using Fama-French-adjusted returns and simultaneously accounting for the interaction of inflation with firm characteristics. The reason is that firm size is positively correlated with CSR and, in this specification, we account for firm size three times: 1) When adjusting returns for the stock's loading to the size factor times the size factor, 2) when including firm size as a control in the regression, and 3) when interacting size with the inflation rate. The remaining variability in CSR is small for reliable inferences.

## 3.3 Results by industry

The impact of inflation on firm value is likely to vary significantly across industries due, for instance, to different levels of price rigidity (e.g., Nakamura et al., 2018). The value of social capital during high inflation is also likely to vary across industries.

Panel A of Figure 3 plots the coefficient on the interaction terms *Inflation (mom)* $\times$ *ES score* obtained from regressions of individual stock returns by GICS industry groups. Our coefficient of interest has a positive sign in most industries, confirming the broad importance of our findings, which are not driven by a few isolated sectors. The effect appears particularly strong among firms in the media, technology and IT, healthcare, and pharmaceutical sectors.

- Figure 3 -

Panel B plots the average effect of inflation on stock returns by GICS industry groups against the estimated effects of *Inflation (mom)* × *ES score* on stock returns within the same industry. We observe that the hedging effect of *ES score* is more important within industries more negatively exposed to inflation.

# 4 Drivers

In the previous section, we documented the positive effect of CSR on stock returns following months of higher inflation. We now investigate some factors that amplify this effect, as well as the channels behind it.

## 4.1 The role of inflation narratives and trust

Survey evidence indicates that the "corporate greed" narrative of inflation is significantly stronger amongst Democratic vs. Republican voters (Data For Progress, 2022; Navigator Research, 2022). Republican areas are also more likely than Democratic ones to have stronger pro-business attitudes (e.g., Gatchev et al., 2022). Hence, to the extent that the "corporate greed" narrative at least partially explains our result, we can expect the average political preferences in a firm's home state to significantly influence the inflation-hedging properties of CSR on stock prices.

To test for the above conjecture, we regress individual stock returns in *t+1* on the triple interaction term $Inflation \times ESscore \times Democratic\ state$, where *Democratic state* is an indicator equal to 1 if the firm is headquartered in a U.S. state with a Democratic majority in the House of Representatives. The regressions control for the same set of firm characteristics used in our baseline specifications.

We also investigate how differences in trust and fairness feelings across the U.S. influence this resiliency effect. Lins et al. (2017) hypothesize that trust is more valuable in more trusting areas. They find that in times of crisis, the effect of CSR is higher in high-trust regions than in low-trust regions. In our setting, we characterize firms as those operating in *High trusting fraction* divisions and in *High fairness fraction* divisions and examine the triple interaction terms with inflation and ES score. We conjecture that these triple interactions should be positive, reflecting higher payoffs from CSR when there is a crisis of trust (inflation shock) in higher trust areas, as in higher fairness areas.

The results of these analyses are reported in Table 4. In line with our expectations, we find that the value of CSR after months of higher inflation is primarily driven by firms headquartered in Democratic states. In column 1, we report a coefficient for the effect of high CSR interacted with inflation for Democratic states of 0.98 percentage points ($Inflation\ (mom) \times ES\ Score \times Democratic\ state$), while the effect of CSR interacted with inflation ($Inflation\ (mom) \times ES\ Score$) is 0.91 percentage points. That is, the effect among firms in "blue" states is almost double that observed among firms in "red" states, which is

also positive and statistically significant.

- Table 4 -

The results also confirm the expectation about the inflation-hedging property of CSR in areas with stronger ex-ante levels of trust and fairness: in columns 2 and 3 of Table 4, we observe positive coefficients of 0.61 ($Inflation\ (mom) \times ES\ Score \times High\ trusting\ fraction$) and 0.64 ($Inflation\ (mom) \times ES\ Score \times High\ fairness\ fraction$), both significant at the 5% level. Figure 4 illustrates the positive relationship between the pre-determined levels of trust and fairness and the inflation-resiliency effect of CSR on firm value.

- Figure 4 -

Overall, the findings in this section align with the expectation that regional variations of beliefs – representing differential exposures to our "shock" in stakeholder trust – significantly influence the observed investor reward to social capital in periods of high inflation.

## 4.2 The role of customers and employees

Here, we investigate the effect of cash flow expectations in driving our main results. We focus on two main mechanisms.

The first possible channel is the role of customer loyalty. CSR can represent a form of product market differentiation, allowing firms to apply higher product price markups (e.g., Luo and Bhattacharya, 2006; Siegel and Vitaliano, 2007). Consistent with this view, Servaes

and Tamayo (2013) and Albuquerque et al. (2019) show that CSR positively influences firm value only if coupled with high customer awareness. Derrien et al. (2021) investigate analyst revisions of earnings forecasts following negative ESG news, and find evidence of analysts anticipating lower sales – consistent with the idea that consumers penalize firms with poor CSR image. Meier et al. (2022) use barcode-level data to show that an increase in CSR ratings by a brand owner is associated with higher sales for the average product sold in the same county in the following year, especially in more Democratic counties. There is also evidence that firms invest in CSR when faced with higher competition, which suggests that it can serve as a differentiation strategy (Flammer, 2015b).

In our setting, during periods of high inflation, CSR may give firms extra pricing power, allowing them to pass through inflation to clients more easily. To test this conjecture, we follow Servaes and Tamayo (2013) and proxy the role of customer awareness with advertising expenditures. We also consider whether the effect is stronger in firms operating in business-to-consumer industries, where the ultimate consumer would be more sensitive to CSR (following, e.g., Flammer, 2015a).

A second possible channel is the role of employees. Employee satisfaction positively influences firm operations by, for instance, facilitating recruitment, reducing staff turnover, and improving productivity. Edmans (2011) finds a positive relationship between employee satisfaction and long-run stock returns, confirming the importance of this intangible for firm value (beyond what investors generally appreciate). Nyborg and Zhang (2013) show

that workers in socially responsible firms are paid less. Similarly, using administrative data, Krueger et al. (2021) provide evidence that employees, especially those high-skilled and younger, are willing to accept a lower wage to work in a more environmentally sustainable firm.[15] High-CSR firms may be in a position of advantage to preserve employee cohesion during periods of high inflation when job satisfaction is generally reduced due to a perceived worsening of real salaries.[16] Testing for this channel is not straightforward since simple headcounts do not reflect the firms' investment in employees, and salary expense measures are scattered across different accounting items.[17] We thus use R&D intensity as a tentative proxy for the importance of employees and human capital in a firm's value creation process.

- Table 5 -

In Table 5, we test the two channels by adding an interaction term to our main specification: firms with *High advertising* intensity (column 1), firms operating in industries with high customer sensitivity (column 2), and firms with *High R&D* (column 3). (The sparsity of the advertising expenses variable on Compustat, and to a lesser extent the R&D expenses variable, reduces the number of observations in the regressions in columns 1 and 3.) We define a high advertising or R&D firm as one with above-median expenditures in that item.

[15] Yao (2022) studies the effect of introducing ESG education in MBA curricula and finds evidence that ESG awareness influences job choices, to steer graduates towards higher-ESG firms. Following the introduction of mandatory ESG courses, graduates' wage growth decreases, which is also consistent with employees sacrificing salaries to work in more responsible firms.

[16] For instance, Hajdini et al. (2022) document survey evidence indicating that inflation expectations increase the likelihood that employees will consider applying for a new job to improve their wages.

[17] Moreover, given the sparsity of variables such as staff expenses at Compustat, alternative measures of labor intensity would have to rely on industry-level approximations.

Recall that in our main analysis, we found that firms with one standard deviation higher CSR scores have an outperformance of 1.56 percentage points following a 1 percentage point higher monthly inflation rate.

In support of the customer channel, the coefficient of 0.81 in column 1 confirms the conjecture that the CSR effect is stronger for firms with high advertising expenses. Moreover, the effect is also stronger in firms operating in high customer sensitivity industries (coefficient of 0.69 in column 2).

In support of the employee channel, the results in column 3 are consistent with the intuition that firms with higher reliance on labor experience a higher inflation-hedging effect of CSR on stock prices. While R&D intensity is an imperfect measure of labor intensity, this analysis offers suggestive evidence that in firms where these activities, and thus human capital, are more important, there is a stronger effect.

Overall, the results in this section are consistent with cash-flow considerations – in particular, related to the role of customers and employees in firm operations – driving the inflation-hedging property of CSR on firm values.

## 4.3 Revisions of analyst earnings forecasts

So far, we have focused on the effect of firms' social capital (CSR) during periods of high inflation through the lens of stock returns, reflecting the behavior of marginal investors. We now focus on the behavior of another influential group of market agents, financial analysts.

Revisions in analysts' earnings forecasts are a powerful tool to understand the market's expectations about a firm's future cash flows and the drivers of stock price movements (Fried and Givoly, 1982; Brown and Rozeff, 1978). If the stock price effect that we documented is driven by cash-flow considerations, we can expect financial analysts to revise their earning forecasts accordingly.

To test this hypothesis, we retrieve data on earnings per share (EPS) and sales forecasts from the IBES Summary Statistics database, which provides snapshots as of the day before the third Friday of each month of individual firms' expected operating performance at different horizons. For each firm-month observation, we compute the monthly percentage change in average earnings ($\Delta fEPS$) and sales forecasts ($\Delta fSales$) at 1-, 2-, and 3-year horizons as the change between months *t-1* and $t$ in average analyst forecasts, relative to the absolute value of the average forecast in $t$.[18] We look at both EPS and sales forecasts, as also done by Derrien et al. (2021), given the potential differential effect of CSR on profitability overall and sales only. Appendix Table A4 provides summary statistics for these additional variables.

In Table 6, we regress monthly analyst forecast revisions at 1-, 2-, and 3-year horizons on the interaction between a firm's CSR score and the inflation rate, in addition to their direct effects and control variables (leverage, cash holdings, size, book-to-market, ROA, and industry and month fixed effects).

[18]Formally, for each horizon $h$ and firm $i$, we compute EPS (or sales) revisions as $\Delta EPSforecast_{i,h} = \frac{\mathbb{E}_{t+1}[EPS_{i,h}]-\mathbb{E}_t[EPS_{i,h}]}{|\mathbb{E}_t[EPS_{i,h}]|} \times 100$. We trim the resulting values at the 1st and 99th percentiles. By using the absolute value in the denominator of our delta variables, we avoid losing observations with negative average forecasts, which is particularly important given the macroeconomic environment during our sample period.

- Table 6 -

In Panel A, we focus on EPS expectations. At all three horizons, our coefficient of interest is positive and statistically significant. Just as marginal investors do on stock returns, financial analysts react to higher inflation by expecting higher-CSR firms to fare relatively better, revising their EPS forecasts for these firms more favorably than for lower-CSR firms. For instance, for a one percentage point higher inflation rate in month $t$, financial analysts update their EPS expectations at 2- and 3-year horizons up by 52 basis points for firms with a one-standard-deviation higher ES score. This effect corresponds to around one-third of the absolute value of mean forecast changes.

In Panel B, we look at updates of forecasts in terms of sales. In this case, the inflation-hedging property of CSR is significant only at two- and three-year horizons. We interpret this finding as indicative that CSR may influence not just firms' top line, but also their costs – for which relationships with customers (e.g., through lower additional advertising expenses), with employees (e.g., through lower added retention costs), and with suppliers (e.g., through better terms of trade and bargaining power) all matter.

Overall, the analyses of analyst forecast revisions provide further evidence of the positive role of social capital during high inflation and support the interpretation that cash-flow considerations drive CSR's inflation-hedging effects on stock returns.

# 5 Conclusion

How inflation affects firm value is a topic attracting renewed interest from investors, corporate managers, and regulators alike after the historical surge in inflation in 2021 and 2022. We approach this topic from a new angle, looking at high inflation as a threat to companies' relationships with their key stakeholders. We use this crisis of trust as a unique empirical setting to provide new insights into the effects of corporate social capital on firm value.

Analyzing the cross-sectional reactions of U.S. stocks to inflation over the period 2018-2022, we find that after months of higher inflation, equity investors reward firms with stronger social capital, as captured by their corporate social responsibility. The effect holds using different measures of inflation, stock return models, and CSR scores. The effect is significantly stronger among firms headquartered in areas more exposed, and more inclined to believe, in the "corporate greed" narrative of inflation, as well as in areas with a pre-determined higher level of social trust. In addition, cross-sectional analyses show that the effect is mediated by the importance of customers and employees in the firm value creation. Analyst forecast revisions confirm that cash flow considerations drive our main result on the inflation-hedging property of CSR on firm value.

Overall, our findings spotlight inflation as a crisis in stakeholder trust. They provide new insights into the importance of social capital for firm value that are relevant for both investors and firms.

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# Figures

**Figure 1: Inflation and attention to inflation measures**
Measured in the left-hand axis, *Inflation (mom)* and *Inflation (yoy)* are the monthly and yearly change in the Consumer Price Index for All Urban Consumers, All Items, from the U.S. Bureau of Labor Statistics; *Expected inflation (yoy)* is the one-year-ahead inflation expectation series from the Survey of Consumer Expectations, available from the Federal Reserve Bank of New York. Measured in the right-hand axis, *Google Trends Inflation* is the search index for the keyword "inflation" in the United States.

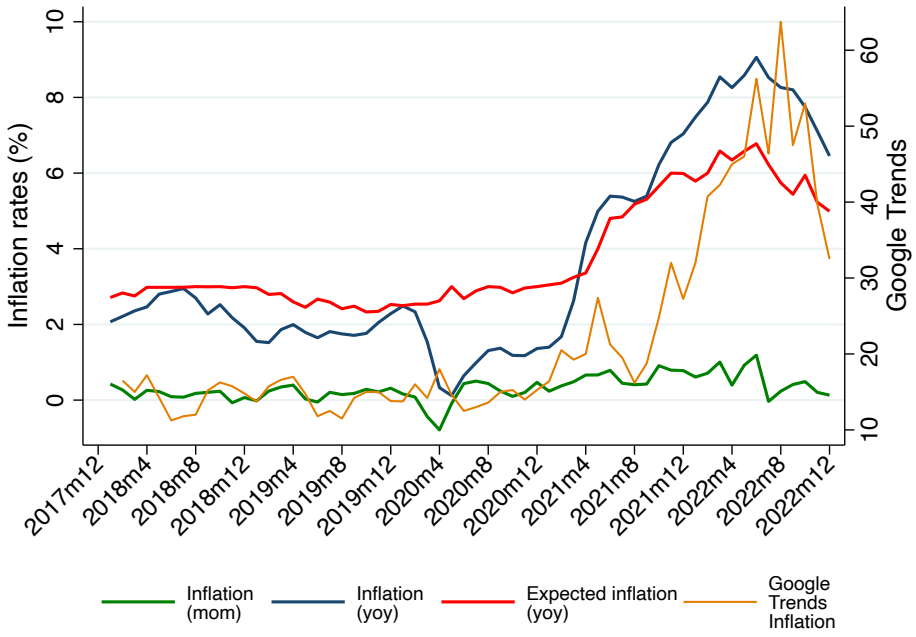


**Figure 2: Inflation, corporate social responsibility and stock returns**
This graph shows the effect on stock returns in month *t+1* of the interaction of inflation in month *t* and firms' ES score. The relation depicted in the graph controls for firm characteristics (leverage, cash, size, book-to-market, ROA, market beta, and momentum), industry and month fixed effects and the direct effect of the ES score.

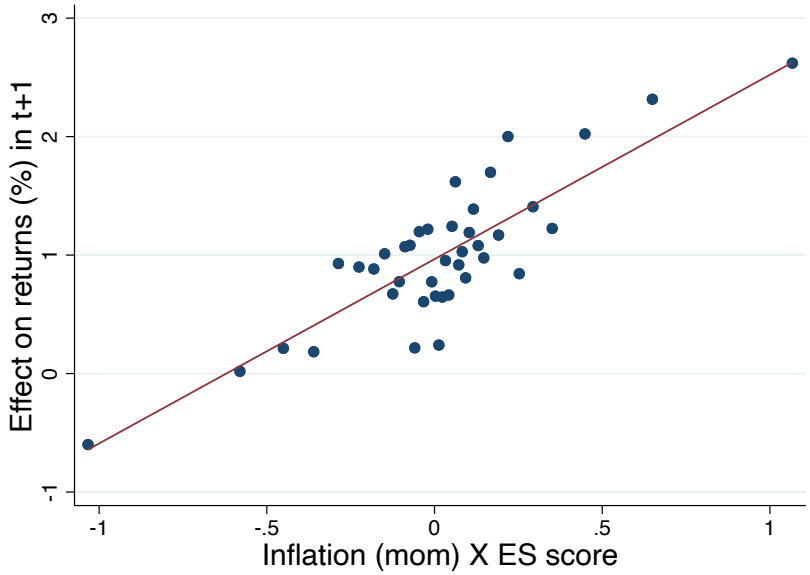
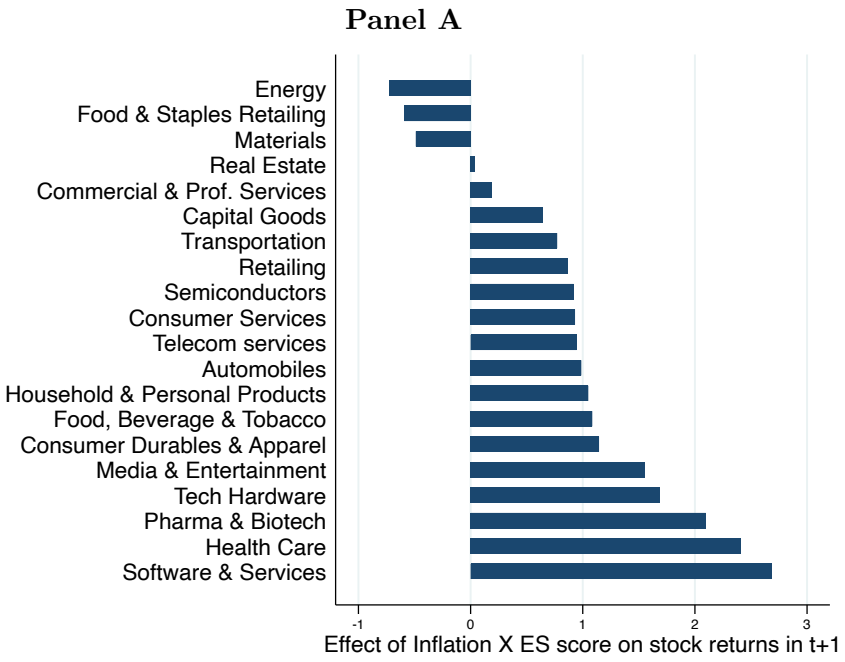


**Figure 3: The value of corporate social responsibility by industry**
Panel A shows the estimated coefficient on monthly stock returns in *t+1* of the interaction between inflation in $t$ and firms' ES score, by GICS industry groups. The coefficients are estimated through industry-specific regressions controlling for firm characteristics (leverage, cash holdings, size, book-to-market, ROA, market beta, and momentum), month fixed effects, and the direct effect of the ES score. Panel B plots the same coefficients against the average stock-price reaction to inflation in the respective industries.



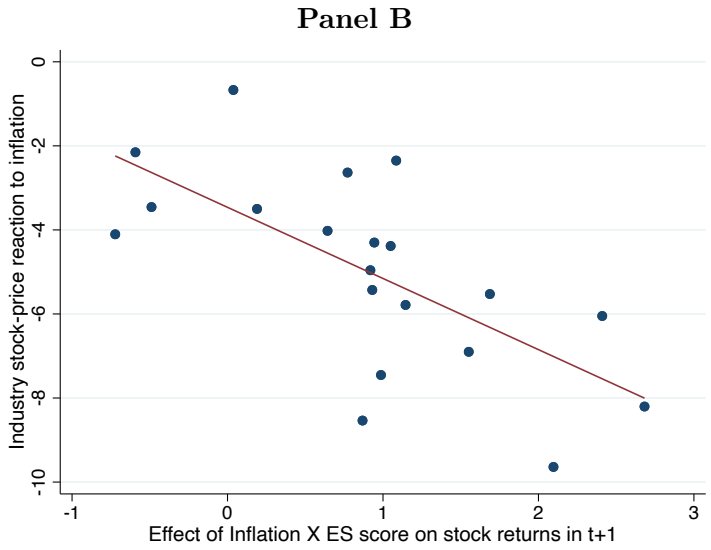
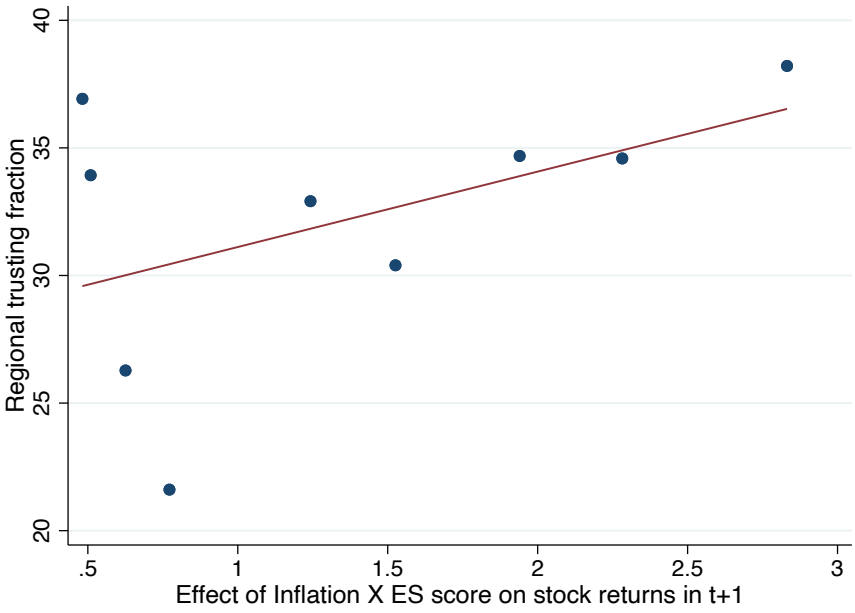
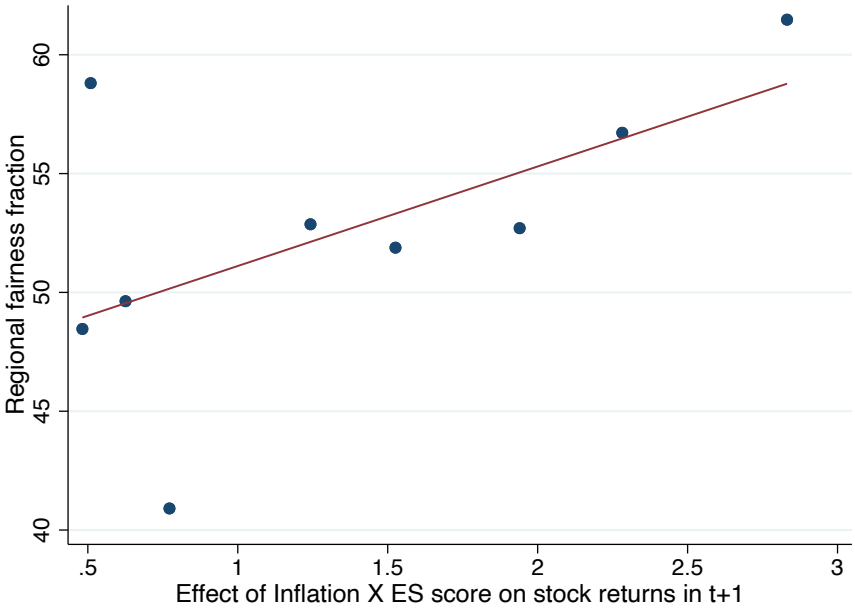



**Figure 4: U.S. differences in trust and fairness feelings**
Panel A depicts the estimated coefficient on monthly stock returns in *t+1* of the interaction between inflation in $t$ and firms' ES score for different divisions and levels of trusting fraction. Panel B shows the same for divisions and levels of fairness fraction.

**Panel A**




**Panel B**



# Tables

**Table 1: Descriptive statistics**
This table shows descriptive statistics of the variables used in the analyses. The sample in Panel A consists of non-financial and non-utility firms with available financial and accounting data from Compustat. The sample in Panel B consists of non-financial and non-utility firms with available financial and accounting data from Compustat and ESG data from Refinitiv.

**Panel A: Full Compustat sample**

| | Obs. | Min. | Pct.25 | Mean | Pct.50 | Pct.75 | Max. | S.D. |
|---|---|---|---|---|---|---|---|---|
| Return (t+1) | 176,681 | -72.65 | -8.70 | 0.36 | -0.25 | 7.81 | 163.57 | 17.48 |
| CAPM-adj. Return (t+1) | 156,536 | -60.12 | -8.09 | -0.39 | -0.94 | 6.04 | 164.92 | 15.57 |
| Fama-French-adj. Return (t+1) | 155,298 | -64.57 | -7.85 | -0.16 | -0.75 | 6.26 | 145.86 | 15.55 |
| Leverage | 178,614 | 0.00 | 6.34 | 28.74 | 25.61 | 43.72 | 116.17 | 25.22 |
| Cash holdings | 178,892 | 0.07 | 4.31 | 27.11 | 13.98 | 43.30 | 97.29 | 29.28 |
| Market beta | 177,679 | -1.18 | 0.73 | 1.26 | 1.19 | 1.72 | 4.12 | 0.87 |
| Book-to-market | 170,458 | 0.01 | 0.18 | 0.50 | 0.36 | 0.66 | 3.26 | 0.49 |
| ROA | 178,740 | -226.29 | -14.50 | -12.52 | 0.91 | 5.85 | 30.65 | 39.38 |
| Size | 178,921 | -3.11 | 5.25 | 6.82 | 6.91 | 8.34 | 14.66 | 2.24 |
| Momentum | 176,819 | -14.43 | -1.90 | 1.05 | 0.80 | 3.56 | 23.81 | 5.99 |
| R&D intensity | 124,386 | 0.00 | 0.45 | 12.85 | 4.51 | 15.98 | 127.71 | 21.05 |
| Advertising | 73,125 | 0.00 | 0.27 | 2.82 | 0.95 | 2.96 | 27.11 | 4.89 |

**Panel B: Main sample with Refinitiv ESG scores**

| | Obs. | Min. | Pct.25 | Mean | Pct.50 | Pct.75 | Max. | S.D. |
|---|---|---|---|---|---|---|---|---|
| Return (t+1) | 112,097 | -72.65 | -7.03 | 1.03 | 0.45 | 7.88 | 163.57 | 15.31 |
| CAPM-adj. Return (t+1) | 106,402 | -60.12 | -6.98 | -0.19 | -0.62 | 5.73 | 164.92 | 13.51 |
| Fama-French-adj. Return (t+1) | 106,075 | -64.57 | -6.79 | -0.03 | -0.48 | 5.84 | 145.86 | 13.49 |
| Leverage | 113,505 | 0.00 | 10.98 | 30.62 | 29.28 | 44.89 | 116.17 | 23.47 |
| Cash holdings | 113,664 | 0.07 | 3.99 | 23.24 | 11.77 | 33.01 | 97.29 | 26.52 |
| Market beta | 113,244 | -1.18 | 0.79 | 1.27 | 1.19 | 1.67 | 4.12 | 0.77 |
| Book-to-market | 109,633 | 0.01 | 0.17 | 0.45 | 0.33 | 0.59 | 3.26 | 0.43 |
| ROA | 113,652 | -226.29 | -4.39 | -4.08 | 2.65 | 6.85 | 30.65 | 25.53 |
| Size | 113,664 | 1.82 | 6.38 | 7.65 | 7.56 | 8.77 | 14.66 | 1.79 |
| Momentum | 112,773 | -14.43 | -1.10 | 1.48 | 1.16 | 3.58 | 23.81 | 4.94 |
| R&D intensity | 81,080 | 0.00 | 0.18 | 9.66 | 2.88 | 11.80 | 127.71 | 16.15 |
| Advertising | 48,644 | 0.00 | 0.28 | 2.60 | 0.95 | 2.83 | 27.11 | 4.45 |

**Table 2: Inflation, corporate social responsibility and stock returns**
This table shows the results of OLS regressions of individual stock monthly returns on the interaction between the inflation rate month-on-month and firms' CSR level. The regressions control for firm leverage, cash holdings, size, book-to-market, ROA, market beta and momentum, and industry and month fixed effects. *t*-statistics, based on standard errors clustered at the firm level, are reported in parentheses. ***, **, and * indicate that the parameter estimate significantly differs from zero at the 1%, 5%, and 10% levels, respectively.

| | Return (t+1) | | |
|---|---|---|---|
| | (1) | (2) | (3) |
| Inflation (mom) × ES score | 1.55*** | 1.56*** | 0.45*** |
| | (12.32) | (12.45) | (2.87) |
| Inflation (mom) × Leverage | | | -0.00 |
| | | | (-0.23) |
| Inflation (mom) × Cash holdings | | | -0.05*** |
| | | | (-6.26) |
| Inflation (mom) × Market beta | | | -1.64*** |
| | | | (-7.35) |
| Inflation (mom) × Book-to-market | | | 0.77* |
| | | | (1.81) |
| Inflation (mom) × ROA | | | 0.06*** |
| | | | (6.18) |
| Inflation (mom) × Size | | | 0.23** |
| | | | (2.01) |
| Inflation (mom) × Momentum | | | 0.17*** |
| | | | (4.17) |
| Inflation (mom) | -5.51*** | | |
| | (-34.91) | | |
| ES score | -0.25*** | -0.25*** | 0.07 |
| | (-4.13) | (-4.27) | (0.96) |
| Firm controls | Yes | Yes | Yes |
| Month FE | No | Yes | Yes |
| Industry FE | Yes | Yes | Yes |
| Observations | 106559 | 106559 | 106559 |
| Adjusted $R^2$ | 0.017 | 0.237 | 0.241 |
| Firm-clustered SE | Yes | Yes | Yes |

**Table 3: Main results with alternative measures of inflation**

This table shows the results of OLS regressions of individual stock monthly returns on the interaction between various measures of inflation and firms' ESG performance. The regressions control for firm leverage, cash holdings, size, book-to-market, ROA, market beta and momentum, and industry and month fixed effects. $t$-statistics, based on standard errors clustered at the firm level, are reported in parentheses. ***, **, and * indicate that the parameter estimate significantly differs from zero at the 1%, 5%, and 10% levels, respectively.

| | Return (t+1) | | | | | |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Inflation (yoy) × ES score | 0.17*** | | | | | |
| | (10.59) | | | | | |
| Inflation (yoy, region) × ES score | | 0.16*** | | | | |
| | | (9.59) | | | | |
| Expected inflation (yoy) × ES score | | | 0.32*** | | | |
| | | | (11.04) | | | |
| Expected inflation (yoy, region) × ES score | | | | 0.28*** | | |
| | | | | (9.42) | | |
| Google SVI inflation (US) × ES score | | | | | 0.02*** | |
| | | | | | (6.47) | |
| Google SVI inflation (State) × ES score | | | | | | 0.02*** |
| | | | | | | (6.42) |
| ES score | -0.35*** | -0.33*** | -0.92*** | -0.81*** | -0.22*** | -0.20** |
| | (-5.23) | (-4.75) | (-8.63) | (-7.24) | (-2.74) | (-2.50) |
| Firm controls | Yes | Yes | Yes | Yes | Yes | Yes |
| Month FE | Yes | Yes | Yes | Yes | Yes | Yes |
| Industry FE | Yes | Yes | Yes | Yes | Yes | Yes |
| Observations | 106559 | 88019 | 106559 | 88019 | 106559 | 106393 |
| Adjusted $R^2$ | 0.237 | 0.237 | 0.237 | 0.236 | 0.236 | 0.236 |
| Firm-clustered SE | Yes | Yes | Yes | Yes | Yes | Yes |

**Table 4: The role of cultural traits**

This table shows the results of OLS regressions of individual stock monthly returns on the interaction between inflation, firms' ESG performance, and cultural traits that vary across regions in US. *Democratic State* is an indicator equal to 1 for firms headquartered in US states with a Democratic majority in the previous House of Representatives election. *High trusting fraction* is an indicator equal to 1 for firms headquartered in US divisions with an above-median trusting fraction. *High fairness fraction* is an indicator equal to 1 for firms headquartered in US divisions with an above-median fairness fraction. Trusting and Fairness fraction are measures of social feelings constructed based on the GSS survey. The regressions control for firm leverage, cash holdings, size, book-to-market, ROA, market beta and momentum, and industry and month fixed effects. $t$-statistics, based on standard errors clustered at the firm level, are reported in parentheses. ***, **, and * indicate that the parameter estimate significantly differs from zero at the 1%, 5%, and 10% levels, respectively.

| | Return (t+1) | | |
|---|---|---|---|
| | (1) | (2) | (3) |
| Inflation (mom) × ES score × Democratic state | 0.98*** | | |
| | (3.72) | | |
| Inflation (mom) × ES score × High trusting fraction | | 0.61** | |
| | | (2.21) | |
| Inflation (mom) × ES score × High fairness fraction | | | 0.64** |
| | | | (2.57) |
| Inflation (mom) × ES score | 0.91*** | 1.36*** | 1.28*** |
| | (4.23) | (9.15) | (7.82) |
| Firm controls | Yes | Yes | Yes |
| Double interactions and direct effects | Yes | Yes | Yes |
| Month FE | Yes | Yes | Yes |
| Industry FE | Yes | Yes | Yes |
| Observations | 106072 | 106052 | 106052 |
| Adjusted $R^2$ | 0.238 | 0.237 | 0.237 |
| Firm-clustered SE | Yes | Yes | Yes |

**Table 5: The role of customers and employees**

This table shows the results of OLS regressions of individual stock monthly returns on the interaction between inflation, firms' ES performance, and different firm characteristics. *High advertising* is an indicator that takes the value of 1 if the firm has above-median expenditures in advertising. *Cust. sensitive industry* is an indicator that takes the value of 1 if the firm operates in a business-to-consumer (B2C) industry. *High R&D* is an indicator that takes the value of 1 if the firm has above-median expenditures in research and development. The regressions control for firm leverage, cash holdings, size, book-to-market, ROA, market beta and momentum, and industry and month fixed effects. $t$-statistics, based on standard errors clustered at the firm level, are reported in parentheses. ***, **, and * indicate that the parameter estimate significantly differs from zero at the 1%, 5%, and 10% levels, respectively.

| | Return (t+1) | | |
|---|---|---|---|
| | (1) | (2) | (3) |
| Inflation (mom) × ES score × High advertising | 0.81** | | |
| | (2.41) | | |
| Inflation (mom) × ES score × Cust. sensitive industry | | 0.69*** | |
| | | (2.76) | |
| Inflation (mom) × ES score × High R&D | | | 1.45*** |
| | | | (4.81) |
| Inflation (mom) × ES score | 1.03*** | 1.18*** | 0.93*** |
| | (4.22) | (6.35) | (5.41) |
| Firm controls | Yes | Yes | Yes |
| Double interactions and direct effects | Yes | Yes | Yes |
| Month FE | Yes | Yes | Yes |
| Industry FE | Yes | Yes | Yes |
| Observations | 44784 | 106559 | 75998 |
| Adjusted $R^2$ | 0.250 | 0.237 | 0.223 |
| Firm-clustered SE | Yes | Yes | Yes |

**Table 6: Inflation, corporate social responsibility and analyst forecast revisions**
This table shows the results of OLS regressions of monthly changes in analyst forecasts on the interaction between inflation and firms' CSR level. The regressions control for firm leverage, cash holdings, size, book-to-market, ROA, and industry and month fixed effects. For each firm-month observation, we compute the monthly percentage change in average earnings (ΔfEPS, in Panel A) and sales forecasts (ΔfSales, in Panel B) at 1-, 2-, and 3-year horizons as the change between months *t-1* and *t* in average analyst forecasts relative to the absolute value of the average forecast in *t*. *t*-statistics, based on standard errors clustered at the firm level, are reported in parentheses. ***, **, and * indicate that the parameter estimate significantly differs from zero at the 1%, 5%, and 10% levels, respectively.

**Panel A: EPS forecast revisions**

| | (1) | (2) | (3) |
|---|---|---|---|
| | Δ fEPS 1y | Δ fEPS 2y | Δ fEPS 3y |
| Inflation (mom) × ES score | 0.70*** | 0.52*** | 0.53*** |
| | (2.83) | (2.96) | (2.91) |
| ES score | -0.15 | -0.14 | 0.01 |
| | (-1.13) | (-1.44) | (0.13) |
| Firm controls | Yes | Yes | Yes |
| Month FE | Yes | Yes | Yes |
| Industry FE | Yes | Yes | Yes |
| Observations | 89730 | 88747 | 72259 |
| Adjusted $R^2$ | 0.047 | 0.031 | 0.025 |
| Firm-clustered SE | Yes | Yes | Yes |

**Panel B: Sales forecast revisions**

| | (1) | (2) | (3) |
|---|---|---|---|
| | Δ fSales 1y | Δ fSales 2y | Δ fSales 3y |
| Inflation (mom) × ES score | 0.00 | 0.10** | 0.12** |
| | (0.05) | (1.98) | (2.35) |
| ES score | -0.07** | -0.07** | -0.04 |
| | (-2.44) | (-2.56) | (-1.25) |
| Firm controls | Yes | Yes | Yes |
| Month FE | Yes | Yes | Yes |
| Industry FE | Yes | Yes | Yes |
| Observations | 87899 | 87809 | 72735 |
| Adjusted $R^2$ | 0.081 | 0.065 | 0.046 |
| Firm-clustered SE | Yes | Yes | Yes |

# Appendix

# A Additional results

**Figure A1: Regional inflation rates**

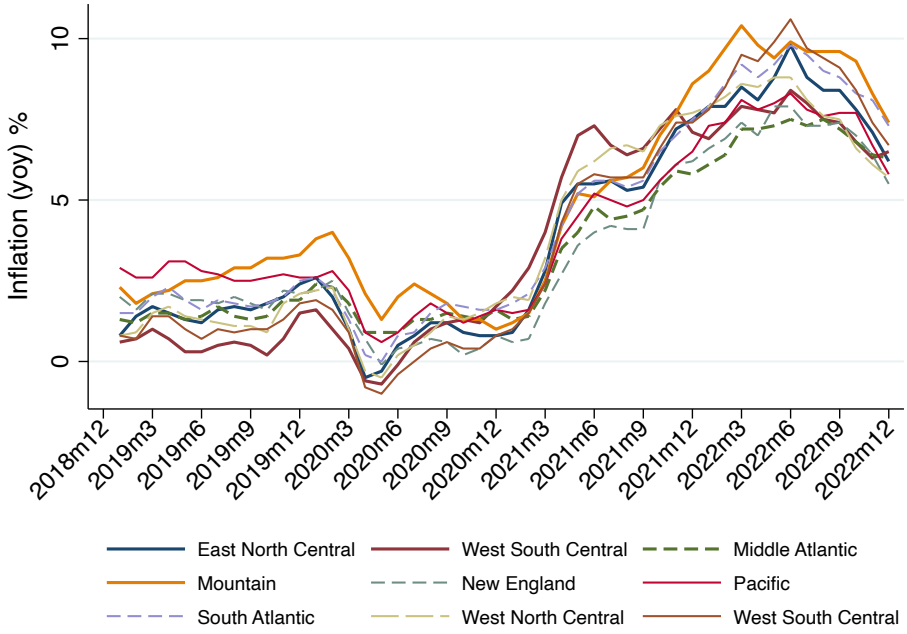


**Figure A2: Variation in social feelings within the United States**
Panel A shows the average percentage of respondents to the 2016 GSS survey that answer "Can trust" to the question, "Generally speaking, would you say that most people can be trusted or that you can't be too careful in dealing with people?", by location of the respondent. Panel B shows the average percentage of respondents to the 2016 GSS survey that answer "Would try to be fair" to the question "Do you think most people would try to take advantage of you if they got a chance, or would they try to be fair?", by location of the respondent. In both variables, participants with no answer, no applicable answer or "do not know" answers are excluded from the computations. Locations are defined as the nine U.S. Census Divisions.

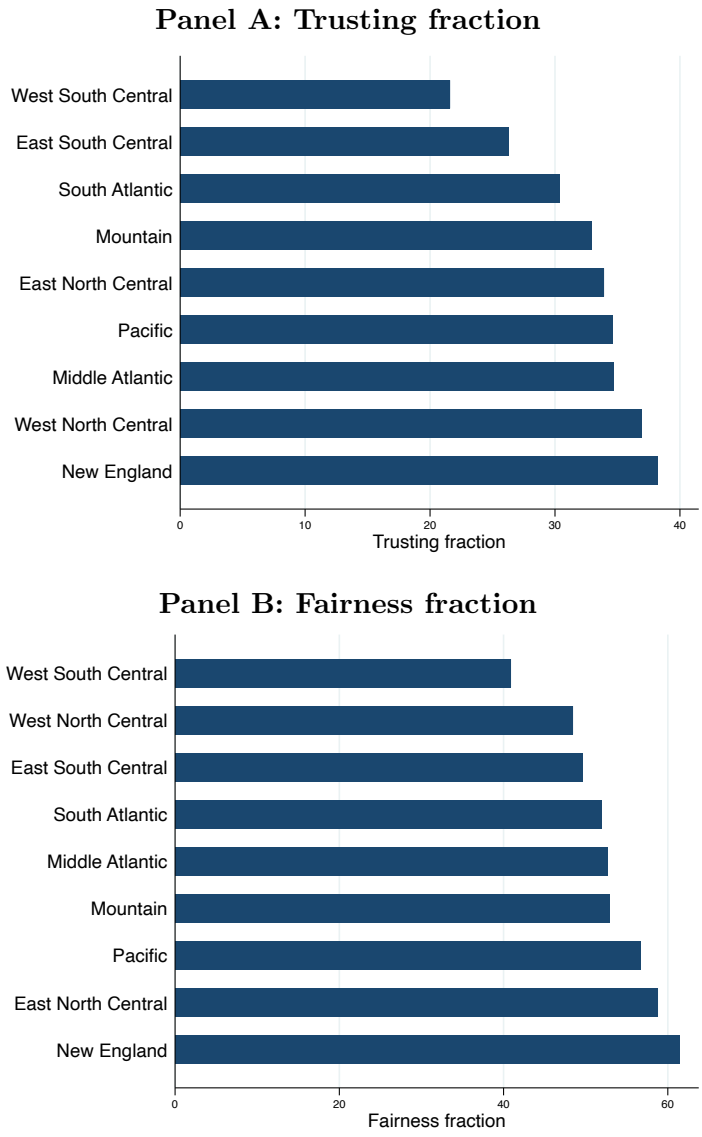


**Table A1: Robustness: Main results with changes in inflation**

This table shows the results of OLS regressions of individual stock monthly returns on the interaction between changes in inflation rate month-on-month and firms' CSR level. The regressions control for firm leverage, cash holdings, size, book-to-market, ROA, market beta and momentum, and industry and month fixed effects. $t$-statistics, based on standard errors clustered at the firm level, are reported in parentheses. ***, **, and * indicate that the parameter estimate significantly differs from zero at the 1%, 5%, and 10% levels, respectively.

| | Return (t+1) | | |
|---|---|---|---|
| | (1) | (2) | (3) |
| Δ Inflation (mom) × ES score | 0.56*** | 0.57*** | 0.17 |
| | (3.79) | (3.89) | (0.86) |
| Δ Inflation (mom) × Leverage | | | 0.01 |
| | | | (0.55) |
| Δ Inflation (mom) × Cash holdings | | | -0.01 |
| | | | (-1.29) |
| Δ Inflation (mom) × Market beta | | | -1.50*** |
| | | | (-5.32) |
| Δ Inflation (mom) × Book-to-market | | | -1.59*** |
| | | | (-2.63) |
| Δ Inflation (mom) × ROA | | | 0.04*** |
| | | | (2.70) |
| Δ Inflation (mom) × Size | | | -0.12 |
| | | | (-0.88) |
| Δ Inflation (mom) × Momentum | | | 0.13*** |
| | | | (2.62) |
| Δ Inflation (mom) | -2.45*** | | |
| | (-14.86) | | |
| ES score | 0.28*** | 0.23*** | 0.23*** |
| | (5.28) | (4.68) | (4.67) |
| Firm controls | Yes | Yes | Yes |
| Month FE | No | Yes | Yes |
| Industry FE | Yes | Yes | Yes |
| Observations | 106559 | 106559 | 106559 |
| Adjusted $R^2$ | 0.005 | 0.236 | 0.237 |
| Firm-clustered SE | Yes | Yes | Yes |

**Table A2: Robustness: Main results using CAPM-adjusted and Fama-French-adjusted returns**

This table shows the results of OLS regressions of individual CAPM-adjusted (specifications 1-3) and Fama-French-adjusted (specifications 4-6) monthly returns on the interaction between inflation and firms' ES performance. The regressions control for firm leverage, cash holdings, size, book-to-market, ROA, and momentum, and industry and month fixed effects. $t$-statistics, based on standard errors clustered at the firm level are reported in parentheses. ***, **, and * indicate that the parameter estimate significantly differs from zero at the 1%, 5%, and 10% levels, respectively.

| | CAPM-adj. Return (t+1) | | | Fama-French-adj. Return (t+1) | | |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Inflation (mom) × ES score | 1.37*** | 1.36*** | 0.49*** | 0.66*** | 0.67*** | -0.07 |
| | (11.28) | (11.33) | (3.02) | (5.93) | (5.99) | (-0.48) |
| Inflation (mom) × Leverage | | | 0.01 | | | -0.00 |
| | | | (0.94) | | | (-0.41) |
| Inflation (mom) × Cash holdings | | | -0.05*** | | | -0.01 |
| | | | (-5.85) | | | (-0.91) |
| Inflation (mom) × Book-to-market | | | 1.25*** | | | 0.17 |
| | | | (2.72) | | | (0.39) |
| Inflation (mom) × ROA | | | 0.06*** | | | 0.04*** |
| | | | (6.05) | | | (3.56) |
| Inflation (mom) × Size | | | 0.13 | | | 0.37*** |
| | | | (1.03) | | | (3.30) |
| Inflation (mom) × Momentum | | | 0.11** | | | 0.34*** |
| | | | (2.37) | | | (7.56) |
| Inflation (mom) | -1.33*** | | | -0.73*** | | |
| | (-8.83) | | | (-5.49) | | |
| ES score | -0.22*** | -0.20*** | 0.03 | -0.12** | -0.10* | 0.12* |
| | (-3.66) | (-3.30) | (0.48) | (-2.01) | (-1.80) | (1.73) |
| Firm controls | Yes | Yes | Yes | Yes | Yes | Yes |
| Month FE | No | Yes | Yes | No | Yes | Yes |
| Industry FE | Yes | Yes | Yes | Yes | Yes | Yes |
| Observations | 102043 | 102043 | 102043 | 101729 | 101729 | 101729 |
| Adjusted $R^2$ | 0.003 | 0.042 | 0.046 | 0.002 | 0.010 | 0.012 |
| Firm-clustered SE | Yes | Yes | Yes | Yes | Yes | Yes |

**Table A3: Robustness: Main results using MSCI-KLD ES score**

This table shows the results of OLS regressions of individual stock monthly returns on the interaction between inflation and firms' ES performance based on the MSCI-KLD database. The regressions control for firm leverage, cash holdings, size, book-to-market, ROA, market beta and momentum, and industry and month fixed effects. $t$-statistics, based on standard errors clustered at the firm level are reported in parentheses. ***, **, and * indicate that the parameter estimate significantly differs from zero at the 1%, 5%, and 10% levels, respectively.

| | Return (t+1) | | |
|---|---|---|---|
| | (1) | (2) | (3) |
| Inflation (mom) × ES score (KLD) | 0.69*** | 0.66*** | 0.21* |
| | (6.58) | (6.40) | (1.76) |
| Inflation (mom) × Leverage | | | -0.00 |
| | | | (-0.56) |
| Inflation (mom) × Cash holdings | | | -0.05*** |
| | | | (-6.41) |
| Inflation (mom) × Market beta | | | -1.63*** |
| | | | (-6.81) |
| Inflation (mom) × Book-to-market | | | 0.45 |
| | | | (0.85) |
| Inflation (mom) × ROA | | | 0.07*** |
| | | | (4.70) |
| Inflation (mom) × Size | | | 0.20** |
| | | | (2.03) |
| Inflation (mom) × Momentum | | | 0.20*** |
| | | | (4.11) |
| Inflation (mom) | -4.18*** | | |
| | (-29.73) | | |
| ES score (KLD) | -0.11** | -0.07 | 0.07 |
| | (-2.10) | (-1.43) | (1.18) |
| Firm controls | Yes | Yes | Yes |
| Month FE | No | Yes | Yes |
| Industry FE | Yes | Yes | Yes |
| Observations | 85004 | 85004 | 85004 |
| Adjusted $R^2$ | 0.013 | 0.274 | 0.278 |
| Firm-clustered SE | Yes | Yes | Yes |

**Table A4: Descriptive statistics: Analyst forecast revisions**

This table shows descriptive statistics of the analyst forecast revisions variables. For each firm-month observation, we compute the monthly percentage change in average earnings (ΔfEPS, in Panel A) and sales forecasts (ΔfSales, in Panel B) at 1-, 2-, and 3-year horizons as the change between months *t-1* and *t* in average analyst forecasts relative to the absolute value of the average forecast in *t*. The sample in Panel A consists of non-financial and non-utility firms with available financial and accounting data from Compustat. The sample in Panel B consists of non-financial and non-utility firms with available financial and accounting data from Compustat and ESG data from Refinitiv.

**Panel A: Full Compustat sample**

| | Obs. | Min. | Pct.25 | Mean | Pct.50 | Pct.75 | Max. | S.D. |
|---|---|---|---|---|---|---|---|---|
| Δ fEPS 1y | 127,755 | -165.79 | -1.15 | -1.77 | 0.00 | 0.84 | 88.89 | 18.62 |
| Δ fEPS 2y | 124,861 | -121.84 | -1.65 | -1.68 | 0.00 | 0.88 | 70.00 | 15.24 |
| Δ fEPS 3y | 99,543 | -135.00 | -1.64 | -1.62 | 0.00 | 0.90 | 84.38 | 16.82 |
| Δ fSales 1y | 122,516 | -28.08 | -0.21 | -0.17 | 0.00 | 0.29 | 22.96 | 3.98 |
| Δ fSales 2y | 121,370 | -29.20 | -0.39 | -0.27 | 0.00 | 0.37 | 23.76 | 4.28 |
| Δ fSales 3y | 98,423 | -33.35 | -0.44 | -0.35 | 0.00 | 0.36 | 27.57 | 5.01 |

**Panel B: Main sample with Refinitiv ESG scores**

| | Obs. | Min. | Pct.25 | Mean | Pct.50 | Pct.75 | Max. | S.D. |
|---|---|---|---|---|---|---|---|---|
| Δ fEPS 1y | 93,285 | -165.79 | -1.05 | -1.45 | 0.00 | 0.94 | 88.89 | 17.55 |
| Δ fEPS 2y | 92,238 | -121.84 | -1.55 | -1.43 | 0.00 | 0.96 | 70.00 | 14.19 |
| Δ fEPS 3y | 75,204 | -135.00 | -1.57 | -1.37 | 0.00 | 0.99 | 84.38 | 15.69 |
| Δ fSales 1y | 91,430 | -28.08 | -0.21 | -0.11 | 0.00 | 0.32 | 22.95 | 3.72 |
| Δ fSales 2y | 91,302 | -29.20 | -0.38 | -0.18 | 0.00 | 0.42 | 23.76 | 3.98 |
| Δ fSales 3y | 75,720 | -33.34 | -0.45 | -0.24 | 0.00 | 0.44 | 27.57 | 4.68 |