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September 2021

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## Abstract

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Keywords: Boardroom diversity, corporate governance, mass protests, Environmental, Social and Governance (ESG)

JEL Classifications: G12, G14, G30

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# 1. Introduction

The killing of George Floyd, an African American male, by a US police officer on May 25, 2020 led to widespread protests against police brutality, re-igniting the Black Lives Matter (BLM) movement that brought worldwide attention to racial injustice. The protests reached a peak on June 6, gathering almost 500,000 people in 550 different locations across the USA (Buchanan, Bui, & Patel, 2020). As of July 2020, the total number of demonstrators reached 15–26 million people, which makes BLM protests the most heavily attended civil movement in US history (Buchanan, Bui, & Patel, 2020). The protests spread around the world, raising awareness of issues of racial inequality, discrimination, and systemic racism.

With increased attention on systemic racism, Reeve (2017) suggests that a growing number of investors recognize racial diversity on corporate boards. It is important to highlight increasing money inflows in Environmental, Social and Governance (ESG) funds shortly before the protests (Riding, 2020) and ESG fund managers' plans to devote more attention to racial diversity in companies (Kishan & Marsh, 2020). This suggests that firms with racially non-diversified leadership could be prone to unfavorable perception by investors. Additionally, as Brown Brothers Harriman (2020) report, three-quarters of investors plan to invest more in ESG funds, which possibly increases the importance of racial diversity for a company and its shareholders. Companies with racially diverse boards are perceived as more sustainable in the long term due to lower chances of being criticized for racial inequality. Likewise, Nauman (2020) notes that many corporations and asset management firms recognize issues of insufficient racial diversity and are focusing on inclusion and equal opportunities policies, especially after the BLM movement. Many institutional investors are starting to demand disclosure of boardroom racial composition (Butler, 2020) and are urging companies to act accordingly (Edgecliffe-Johnson & Nauman, 2020).

In this paper, we study a cross-section of stock price reactions to the BLM protests. Our main hypothesis is that the stock returns of companies with racially diversified corporate boards have outperformed those of companies with racially non-diversified boards. This exogenous shock (BLM protests) provides an opportunity to evaluate the relationship between racial diversity in the boardroom and firm value. According to Richard, Murthi, and Ismail (2007) there are two contradicting theories—the knowledge view and the conflict view—explaining the

relationship between racial diversity and company performance. The positive "knowledge-based view" (Andrevski et al., 2014, p.822) supports the idea of racial diversity as increasing the variety of viewpoints and opinions (and thus aggregated group knowledge), in turn leading to superior decision-making and better performance (Conner & Prahalad, 1996). In contrast, the negative "theory of heterogeneity" (Richard, Murthi, & Ismail, 2007), initially developed by Blau (1977), states that group racial diversity leads to additional obstacles in communication (due to discrimination, biases, differences in beliefs and values) and facilitates conflict (Sessa, 1993, as cited in Baugh & Graen, 1997) thus hindering performance and decision-making efficiency (Richard, Murthi, & Ismail, 2007). Although corporate boards might embrace different levels of diversity – such as gender, experience, field of expertise – with ethnicity being one of them, we hypothesize that in the context of the BLM protests the positive effect of racial balance on the board should dominate.

There are several channels through which protests might affect company stock prices (King & Soule, 2007). For example, customers may boycott companies with non-diverse leadership, thus posing a threat to company cashflow. Additionally, investors may perceive dissatisfied stakeholders as reputational damage for the company, impacting shareholder wealth (Roberts & Dowling, 2002). Since the BLM protests have raised awareness of racial inequality and systemic racism, the movement may potentially lead to increased importance of racial diversity on the board for a firm's reputation and positively affect the stock prices of companies with racially diversified boards.

Our primary analysis of stock price reactions focuses on a 25-day period from May 25, the day George Floyd was killed, through the peak of the BLM protests on June 6, and until June 19, when attention towards the protests normalized. We measure interest towards certain search patterns and keywords related to the protests (such as "BLM", "protests", "racial inequality", and "racial injustice") using Google Trends. We start by collecting the board composition of companies included in the S&P 500 index as of May 25. Since in most cases companies do not disclose their board's racial diversity data or the race of their board members, we use external resources to hand-collect the necessary information. As a result, we have a comprehensive data set of all the S&P 500 index companies' board members. This approach allows us not only to accurately determine the board's racial composition on a specific date, but also to assess which companies disclose such data. Overall, 64% of S&P 500 companies disclose information about

directors' race (either in the text or with photos) on their websites; for the remaining 36% this information could be obtained only from external sources.

Our sample covers 5,524 board seats and 4,665 unique individuals, with an average of 1.17 board seats per male director and 1.23 board seats per female director. We find that all ethnic minorities (including African Americans) on average hold 16% of board seats and black directors hold 8% of board seats; meanwhile 17% of sample companies have no ethnic minorities on the board of directors and 37% have no black directors. Interestingly, the average number of board seats per black director is 1.34, compared to 1.17 board seats per director of other ethnic origin, the difference being statistically significant at the 1% level. As expected, a positive correlation exists between the size of the company, both in terms of market capitalization and board size, and the percentage and number of board seats occupied by ethnic minorities.

The main result that emerges from studying the cross-section of stock price reactions is that firms with more racially diverse boards, in particular with African American representation on the board of directors, are positively associated with stock returns during the BLM protests, especially among the largest and most popular companies. In the sample of top 250 companies by market capitalization, the relationship is both economically and statistically significant. For example, firms with at least one black director are associated with 3.1% higher Fama-French and Carhart (4-factor) adjusted cumulative abnormal returns at the peak of the BLM mass protests than firms without black directors. This relationship is not driven by general board diversity, such as the proportion of all ethnic minorities or the proportion of female directors on the board.

While analyzing the long-term effects of the BLM protests, board diversity and firm performance in depth is beyond the scope of this paper, we present some preliminary evidence and implications for researchers and policy-makers going forward. Our findings show that within thirteen months after the BLM mass protests, firms have increased the number of board seats held by black directors. During the time period between May 25, 2020 and July 15, 2021, 61 percent of companies had changes in the board and almost one third (31%) of all the new directors were black. As a result, the proportion of board seats held by black directors has increased from 8.2% to 9.6%. This increase is mostly driven by firms creating new board seats, rather than replacing existing directors.

Additionally, we find that boards pay considerably more attention to racial diversity issues in reported statements in the aftermath of the BLM protests. Our findings show that post-BLM proxy statements have a significantly higher prevalence of words related to 'race', 'ethnic' and 'diversity' than the proxy statements of the same companies before the BLM protests. The average number of words referring to 'race', 'racial', 'person of color', or 'ethnic' per 100,000 words in the latest proxy statement before May 25 is 1.2 compared to an average of 28.8 in the first proxy statement after May 25, the difference being statistically significant at the 1% level. Similar results are obtained using the word 'diversity'. It is also interesting to note that the correlation between talking about racial diversity in a proxy statement and the actual racial diversity of the board is relatively low (0.03).

Regarding the relationship between boardroom racial diversity and some longer-term firm performance measures, such as Tobin's Q and portfolio returns, we do not find any significant differences between more and less racially diverse firms one year after the BLM mass protests. This no result is not surprising given that we observe only a short time period after the respective board changes and, moreover, the endogenous nature of board diversity makes the identification of causality between board composition and firm performance very difficult (Adams et al., 2010). More research is needed to investigate the racial diversity and firm outcome relationships in the long-term.

The study makes contributions to two strands of literature. First, this study contributes to the literature on boardroom diversity and firm performance (reviewed, for example, in Adams et al. (2015)) by analyzing the effect of an exogenous shock (BLM protests) on the relationship between boardroom racial diversity and firm value. Because diversity is associated with more efficient response to market volatilities and unprecedented events (Hunt, Layton, and Prince, 2015) and higher firm reputation (Miller and Triana, 2009), we propose that companies with higher representation of black directors weathered the BLM protest "storm" better than companies with a less racially diverse board. Second, this study extends the literature on protests and stock prices. In particular, we suggest that BLM protests raised awareness of issues of racial inequality and systemic racism and triggered potential reputational damage risk that could impact shareholder wealth (Roberts and Dowling, 2002; King, 2008; Bear, Rahman, and Post, 2010).

Although we predominantly study a short-term effect on stock prices, the boardroom governance consequences of these protests are expected to be long-lived, as evidenced by the Nasdaq's Board Diversity Rule proposed on December 1, 2020[1] and accepted by the SEC on August 6, 2021, as well as by some institutional investors starting to vote against directors of companies that fail to up their game with respect to leadership diversity and disclosure.[2] If a large enough group of investors assigns higher value to companies with more diverse corporate boards, there are clear opportunities for ETF strategies targeting those investors. As a result, if more funds are allocated to companies with racially diversified corporate boards, this could motivate racially non-diversified companies to embrace this aspect of board diversity.

The rest of this paper is organized as follows. Section 2 reviews previous literature on board diversity and firm performance, as well as on channels through which mass protests impact stock prices. Section 3 describes our data and methodology. Sections 4 and 5 present our empirical findings of short-term and long-term effects, respectively, and Section 6 concludes.

## 2. Related Literature

### *2.1. Race and racial diversity*

Historically, the concept of race has been repeatedly changing; in particular, it has often been discussed whether race is a biological or self-attributed social concept (Clair & Denis, 2015; Andreasen, 2000). Nowadays, race is usually referred to as the presence of certain observable physical characteristics, such as the color of the skin (Andreasen, 2000). In academia, race and ethnicity are regularly used as substitute terms; however, ethnicity is directly related to ancestral and cultural similarities rather than individual physical appearance (Clair & Denis, 2015).

[1] According to Nasdaq Chairman Michael Splinter, "Diversity of experience, gender, race, knowledge, and perspective means that a company is more capable of seeing the full picture, assessing risk and overcoming challenges with forward-looking innovative solutions." (https://www.nasdaq.com/press-release/nasdaq-to-advance-diversity-through-new-proposed-listingrequirements-2020-12-01)

[2] "State Street's $3.1tn investment arm will start voting against directors of big companies that fail to disclose the racial and ethnic make-up of their boards, a move that will increase the mounting pressure on corporations to diversify their leadership." (Financial Times, January 10, 2021, "State Street to insist companies disclose diversity data".)

Despite race being perceived as a purely social construct, it has a significant influence on modern society (Clair & Denis, 2015). Some people falsely consider race to be correlated with other non-physical characteristics such as intelligence or behavior (Andreasen, 2000) and the existence of biases towards different races is categorized as racism. Although in recent years racist attitudes towards minorities have been decreasing, forms of racist expression have changed into stereotyping and implicit biases (Clair and Denis, 2015). There is evidence that white people who state that they support racial equality fail to actually act in terms of enforcing policies aimed at increasing racial equality. Such unconscious perceptions towards minority groups lead to unequal opportunities, unequal policies, and unequal distribution of resources, which is often classified as systemic or institutional racism (Clair & Denis, 2015). Altogether, it is crucial to properly define race, racial inequality, and systemic racism to further analyze the impact and importance of racial diversity in corporations.

According to Erhardt, Werbel, and Shrader (2003), diversity is divided into demographic and cognitive diversity. Since demographic diversity is easily quantifiable (such as gender, age, and race), researchers tend to prioritize analyzing firm performance based on these criteria. Later in this piece, we will refer to demographic diversity as "the representation of both ethnic and gender differences" (Erhardt, Werbel, & Shrader, 2003). Thus, the degree of diversity implies the proportion of women and/or minorities in a particular division of a company.

Since the aim of this research is to analyze the stock reaction to the BLM protests with respect to racial diversity in companies, it is crucial to determine the stakeholder group whose diversity should be measured. Vafeas (1999) states that a company board of directors' main duties include representing shareholders' interests by choosing appropriate short-term and long-term strategies. Additionally, the board is responsible for ensuring and controlling the quality, decision-making, and performance of managers (Fama & Jensen, 1983). Moreover, during unstable periods such as crises, the efficiency of the board of directors is crucial for shareholders due to the rising importance of communicating and protecting their interests (Vafeas, 1999). Another argument for looking at the racial diversity of corporate boards is data availability – 45 Fortune 100 companies disclosed data on board members' race (Edgecliffe-Johnson & Nauman, 2020), while just 28% of Russel 1000 companies provide at least limited insights about statistics on the racial diversity of their employees (Green, 2020). Thus, not only does the corporate board

have the biggest influence on representing shareholder interests, but it is also more feasible to determine racial diversity in terms of each board member.

### *2.2. Racial diversity of the board and firm performance*

For evaluating the relationship between the demographic diversity of corporate boards and firm performance, researchers typically focus on two aspects – gender and racial diversity. However, the number of studies related to gender diversity is much higher than that of racial diversity studies (Rhode & Packel, 2014). Previous studies that explicitly focus on racial diversity find that racial-minority board members are more prevalent in larger companies in terms of both market capitalization and board size (Carter et al., 2003; Lemayian et al., 2020) and that racial-minority board representatives are more likely to have a background not related to a traditional business career, as well as being more academically educated, and bringing more diverse skills compared to white male directors (Hillman, Cannella, and Harris, 2002). There is also some evidence that the pool of appropriate minority directors is scarce and those who make it to the top are paid significantly more than their non-minority peers (Lemayian et al., 2020).

As to the relationship between the racial diversity of a team and firm performance, previous literature provides contradictory evidence. According to the "theory of heterogeneity" (Richard et al., 2007), initially developed by Blau (1977), group racial diversity creates barriers to effective communication (due to discrimination, biases, differences in beliefs and values) and facilitates conflict (Sessa, 1993, as cited in Baugh & Graen, 1997) thus hindering the performance and efficiency of decision-making (Richard et al., 2007).

On the other hand, according to the "knowledge-based view" (Andrevski et al., 2014) racial diversity increases the variety of viewpoints and opinions (and thus aggregated group knowledge), which leads to superior decision-making and performance (Watson et al., 1993; Conner & Prahalad, 1996), better innovation and global outreach (Cox, 1991), more efficient response to market volatilities and unprecedented events (Hunt, Layton, and Prince, 2015), and higher firm productivity (Richard, Triana, and Li, 2020). Additionally, Carter et al. (2003) find that racial diversity on corporate boards positively affects ROA and firm value (measured by Tobin's Q) and that the effect of boardroom racial diversity is more significant compared to gender diversity. This is in line with arguments by Robinson and Dechant (1997) that outline the

importance of diversity in enhancing creativity, different approaches to business problems, and leadership efficiency. The importance of diversity for investors is illustrated by the findings of McMillan, Aaron, and Cline (2010) that document significant and positive cumulative abnormal returns after inclusion of a company in the DiversityInc index (representing diversity reputation) and of Miller and Triana (2009) that find a positive relationship between boardroom racial diversity and firm reputation.

A point of concern outlined by Rhode and Packel (2014) is representation quotas in the boardroom or "tokenism"—the inclusion of minorities to satisfy a certain quota that would facilitate perception of the board as "racially diverse". Tokenism may lead to decreased incentives in terms of continuous stimulation of racial diversity, reduced influence, decision power, and inclusion of racial minorities, as well as a perception of inferiority and biases towards the person appointed (Rhode & Packel, 2014; Konrad, Kramer, & Erkut, 2008). Empirically, Roberson and Park (2006) show a non-linear relationship between leaders' racial diversity and firms' financial performance and argue that inclusion of minorities is counterproductive if the only aim is to satisfy certain inclusion quotas.

In sum, the majority of previous studies find a positive relationship between racial diversity in a firm's leadership and firm performance, but the effect differs depending on the level of diversity (Blau, 1977), the team's organizational hierarchy (Richard, Triana, & Li, 2020), the time period and the industry (Richard, Murthi, & Ismail, 2007), as well as diversity management practices and level (for example, group vs organization) (Richard, 2000). In this paper, we hypothesize that the BLM mass protests illuminated racial diversity issues and strengthened the effect of boardroom racial diversity on firm value.

### *2.3. Mass protests and company stock performance*

In this section, we review literature describing the channels through which protests affect stock returns. Formally, protests are referred to as "social movements" which are caused by "collectively expressed grievance to a perceived social problem or reactively to a threatened change to a way of life" (Tilly, 1978, as cited in King & Soule, 2007). Typically, previous research examines the effect of firm-targeted protests (e.g. King & Soule, 2007), political protests (e.g. Acemoglu, Hassan, & Tahoun, 2018), or stock boycotts (e.g. Ding et al., 2014). As

protests differ by their nature (for example, political, social, consumer) and target audience (such as government, corporations), we will review channels through which mass protests against racial inequality might influence company stock performance.

Certain protests possess a threat to company cashflow (as noted, currently around 10% of American consumers are boycotting companies with non-diverse leadership) (Charlotte, 2020). Other, non-active forms of social movement such as peaceful protests do not threaten cashflow, but instead "draw attention to existing stakeholder concerns and may cause investors to question the firm's managerial soundness" (Oliver, 1992, as cited in King & Soule, 2007). Moreover, investors could perceive dissatisfied external stakeholders as reputational damage for the company, leading to a lower intangible value, in turn impacting firm revenues and shareholder wealth (Roberts & Dowling, 2002). Bear, Rahman, and Post (2010) find a positive and significant relationship between a board's gender diversity and company reputation (through higher CSR ratings) and King (2008) argues that decline in a firm's reputation is a stronger signal for investors than possible threats to future revenue. Since BLM protests are raising awareness of racial inequality and systemic racism, they could potentially lead to increased importance of boardroom racial diversity for a firm's reputation, thus positively affecting the stock price of companies with a racially diversified board. An alternative hypothesis is that protests do not provide new information and hence investors have no rationale in responding to a particular social movement (King and Soule, 2007).

In a related manner, Acemoglu, Hassan, and Tahoun (2018) have examined the link between street protests and stock market performance in Egypt, concluding that protests against a political group lowered the stock returns of companies connected to the political group against which the protests are held. Thus, a potential link could exist between protests and stock returns of companies that possess criteria which are not favored by protesters (that is, racial inequality). As for more intense forms of protest, such as boycotts, previous researches find a negative relationship between stock performance and firm-targeted stock boycotts (Ding et al., 2018) as well as consumer boycotts (Tomlin, 2019). Regarding long-term effects, Vasi and King (2012) find no evidence supporting the influence of protests on a firm's long-term financial performance. Although protests help to determine publicly perceived significant problems within companies, investors are more likely to react to issues pointed out by primary stakeholders and

activists rather than considering the opinion of the general public (i.e. protesters) (Vasi and King, 2012).

In the absence of literature examining the effect of mass protests on stock returns, we assess factors that affect market reaction to firm-targeted protests and apply them to the specifics of BLM protests. According to King and Soule (2007) a company is more likely to experience negative abnormal returns during protests if these (1) are aimed towards bringing up issues involving employees or customers, (2) happen for an extended period of time, and (3) are well-covered by the media. Similarly, we could expect a relationship between the BLM protests and abnormal company stock returns, because (1) the protests bring up issues involving all stakeholder groups (including customers and employees), (2) the demonstrations were active for more than 4 months, and (3) no other protests in the USA since 1970 have generated more media coverage than the BLM movement (Heaney, 2020).

Summarizing the previous literature on board diversity, protests and stock performance, we propose the following hypothesis, which we test in our empirical analysis:

**H1**: The stock returns of companies with racially diversified corporate boards outperformed those of companies with racially non-diversified boards during the BLM mass protests.

## 3. Data and methodology

### *3.1. Time horizon and sample*

We study the market reaction to the BLM mass protests using a sample of S&P 500 companies. The start and end dates of our event study time horizon are based on the chronology of the BLM protests and peak interest towards certain search patterns and keywords related to the protests (such as "BLM", "protests", "racial inequality", "racial injustice") using Google Trends. This allows us to determine the period during which the topic of racial inequality and diversity gained the most recognition and interest from the general public, and investors had the highest probability of being influenced by the news and altering their investment decisions. The event period starts on May 25, 2020 – the day George Floyd was killed. After that day, the

number of searches for BLM movement-related keywords skyrocketed, reaching a peak on Saturday, June 6, and remained high until June 19, when the search pattern normalized (see Appendix 1).

### *3.2. Boardroom racial diversity*

We retrieve the name and title of each member of the board of directors from the Refinitiv (previously, Thomson Reuters Datastream) database. As we analyze stock returns during the protests, we use the board composition effective as of May 25. To get the most precise data about the board's racial diversity, we hand-collect information on each board member's race and classify it into four ethnic groups – African American/ Black, Asian, Hispanic, and White.[3] This approach allows us not only to accurately determine the board's racial composition, but also to assess for which companies this information is publicly available. Since most of the companies (about 90%) do not explicitly disclose their board's racial diversity data or the race of their board members, we use external resources to gather the necessary information.

First, we check whether the information about boardroom racial diversity is available on the company's official website and annual reports (for instance, racial diversity statistics or pictures of the board members). Second, in case of the absence of data on the company's website and annual reports, we use the NNDB database to obtain data about each member's race. The database contains a brief biography of around 40,000 of the most popular and noteworthy individuals (including board members of the largest companies) (NNDB, n.d.). Finally, if the information about a particular board member is unavailable both on the official website and the NNDB database, we use other external resources to determine the race of the board member. Similar to Carter et al. (2010), the race of each board member is determined through external resources such as news articles, LinkedIn, Bloomberg, SEC filings and other sources which directly or indirectly (via pictures) indicate information on a person's race or ethnicity.[4]

In the rare cases when we cannot accurately identify someone's race (less than 20 cases), we ask three random acquaintances with different backgrounds to identify it. This is done to provide a collective view and mitigate the possibility of biased data items. Based on the opinion

[3] In further analyses, however, we focus on only three ethnic groups—African American/Black, White, and other ethnic minorities—because of the event that we study (the BLM mass protests).
[4] We could not find any "visual footprint" of 27 board members (out of 4,665).

of the majority, we make the final data entry in our database. This approach also simulates the real-life situation faced by retail investors when they are looking for similar data.

### *3.3. Stock returns*

We retrieve daily stock prices for each company from January 2, 2018 through June 19, 2020, from the Refinitiv database. For dual-class share companies with both share classes listed (five companies), we go for the firm's security with the highest market capitalization. We use the four-factor model (Fama and French, 1995; Carhart, 1997) to estimate cumulative abnormal returns for each company during the event period (May 25 – June 19, 2020). To determine each company's 'normal' beta coefficients (or factor exposures) before the protests, we regress daily excess returns for a two-year estimation period from January 2, 2018 to December 31, 2019 (since afterwards the stock market was heavily affected by the Covid-19 pandemic). Although the Covid-19 crisis persisted throughout 2020, the most dramatic market response to the pandemic ("surprise") was over by March 20 (see Ramelli and Wagner (2020) for a detailed analysis of market reaction to the Covid-19 crisis from January 2 to March 20). Therefore, our event period is more than two months after the peak of the Covid-19 crisis, more than a month after the US$2 trillion relief bill (CARES Act) and the Fed's announcement of significant expansion of primary and secondary market facilities, and is not associated with any new pandemic-related information.

Although we use two other asset pricing models – the Capital Asset Pricing Model (CAPM) (Sharpe, 1964) and the three-factor model (Fama & French, 1993) – for a robustness test, we find the four-factor model to be the most suitable for our study. First, previous research has raised concerns about the robustness of market beta as a single risk metric. Instead, we employ the Carhart's (1997) four-factor model because (1) it provides higher model accuracy compared to Fama and French (1993) three-factor model (e.g., Carhart, 1997; Boamah, 2015), and (2) is more appropriate than Fama and French (2015) five-factor model for the short run studies. Fama and French (2016) argue that the profitability and investment factors (of the five-factor model) are important over the long run, while the momentum factor (of the four-factor model) is more applicable for the short run (which corresponds to the scope of our study).

We compute abnormal returns only for companies with at least half of daily observations (258) in the estimation period, similar to Ramelli and Wagner (2020). The market excess return,

risk-free return (the US 1-month Treasury-bill rate), and four-factor returns (Fama and French, 1995; Carhart, 1997) are from the website of Kenneth French. The event study methodology and subsequent cross-sectional regressions are also used (but in the context of different protests) in King and Soule (2007) and Van den Broek, Langley and Hornig (2017). We calculate the daily abnormal return for each sample firm in the 25-day event period:[5]

$$AR_{it} = R_{it} - E(R_{it}) = R_{it} - [\hat{\beta}_{1i}(R_{mt} - R_{ft}) + \hat{\beta}_{2i}(SMB_t) + \hat{\beta}_{3i}(HML_t) + \hat{\beta}_{4i}(UMD_t)] \quad (1)$$

where the expression in square brackets represents the estimated normal excess stock return for firm *i,* calculated using the four-factor model with market, size, value and momentum factors, respectively. All variables are defined in Appendix 2.

Afterwards, we calculate cumulative abnormal stock returns (CAR) as the sum of daily abnormal stock returns in the given period:

$$CAR_{[t_1,t_2]} = \sum_{t=t_1}^{t_2} AR_t \quad (2)$$

In the final step, we perform ordinary least squares (OLS) regressions of individual stock cumulative abnormal returns on variables measuring boardroom racial diversity, controlling for firm characteristics and industry fixed effects:

$$CAR_i = \gamma_0 + \gamma_1 BoardDiv_i + \gamma_2 Industry_i + \gamma_3 Controls_i + n_i \quad (3)$$

where *BoardDiv* is a measure of boardroom diversity for which we use both the proportion of racial minority representatives on the board and a dummy variable that equals one if at least one racial minority representative is on the board (Carter at al., 2003). As suggested by Ramelli and Wagner (2020), we also control for such year 2019 (pre Covid-19 crisis) firm characteristics (*Controls*) as firm size, book-to-market, and profitability. Firm size is defined as the natural logarithm of market capitalization at the end of 2019. Book-to-market is the book value of equity divided by market value of equity at the end of 2019. Profitability is return on assets, defined as the trailing twelve months of earnings excluding extraordinary items divided by total assets at

[5] As a robustness check, we adjust for abnormal returns related to any earnings or dividend announcements in the event window.

the end of 2019. All financial variables are from Compustat Quarterly. We use GICS sectors industry classification.

## 4. Empirical Analysis of Stock Returns during the BLM Protests

### *4.1. Descriptive statistics*

Summary statistics of the racial composition of the board members used in our analyses are reported in Table 1. In Panel A we tabulate the number of board seats by three ethnic groups (African American/ Black, White, and Other) and in Panel B the number of individual directors by ethnic groups, compared to the US resident population. The proportion of all ethnic minority representation on corporate boards is 15%, while the proportion of African American/ Black—the focus group in the context of the BLM movement—is 8.2% of all board seats and 7.2% of all individual directors, which is much lower than the proportion of black people among US resident population (13.4%).

(Insert Table 1 about here)

Table 2 shows that the proportion of female directors in our sample is 27.5% (1,274 out of 4,638) and the average number of board seats per individual director is 1.19, with 1.17 board seats per male director and 1.23 seats per female director (the difference being statistically significant at the one percent level). Interestingly, we note that the number of board seats per black director is 1.34, which is significantly higher than the number of board seats per any other ethnic group (1.17). This observation is in line with the arguments that minority directors are a scarce resource and somewhat similar to the concept of "golden skirts" in the context of gender quotas in Norway. After the introduction of a mandatory (at least) 40% female representation in corporate boards in Norway from 2005, Huse (2012) discusses the trend of increasing multi-board membership of highly qualified female directors.

(Insert Table 2 about here)

In line with previous literature (e.g., Carter et al., 2003; Lemayian et al., 2020), we observe that larger firms—both by market capitalization and board size—have a higher number of ethnic minorities on the board. Table 3 shows that 17% of firms (85 out of 500) have no ethnic

minorities on the board and 37% of firms (183 out of 500) have no black directors. These are the firms with the lowest average market capitalization and board size.

(Insert Table 3 about here)

### *4.2. Stock returns during the BLM protests*

Table 4 and Figure 1 report our main results on the relationship between boardroom racial diversity and stock returns during the BLM protests in the period from May 25, 2020 to June 19, 2020. The start date is May 25, the day when George Floyd was killed. We calculate abnormal returns and cumulative abnormal returns (CARs) for 19 trading days using the Fama-French/ Carhart four-factor model (see Equation (1) above). Using the four-factor adjusted cumulative returns on individual stocks, we use cross-sectional ordinary least squares (OLS) regressions to estimate the effect of racial diversity on the board (see Equation (3) above), controlling for year 2019 individual firm characteristics (firm size, book-to-market, and profitability) along with industry (11 GICS sectors) fixed effects.[6] In line with previous literature, our main measure of racial diversity is a dummy variable that equals one if at least one minority representative—in this case African American—is on the board. The variable of interest is *At least one black director* that we hypothesize to be positively related to stock returns during the peak of the BLM mass protests. Figure 1 shows the evolution of the coefficients on our main racial diversity variable from 19 regressions of four-factor adjusted returns in two sub-samples: top-250 firms and bottom-250 firms. [7]

(Insert Figure 1 about here)

Table 4 shows the results of 9 (out of 19) regressions of cumulated four-factor adjusted returns from May 26 to June 19, with a peak in the middle (Monday, June 8). Although we run regressions for all 19 trading days and report the respective coefficients in Figure 1, for brevity, in Table 4 we show only the results of every second trading day. Throughout the event window, the coefficients on *At least one black director* are positive in the full sample (Panel A) and in the sub-sample of top 250 largest companies (Panel B). Although all coefficients are positive and

[6] The (not reported) results are qualitatively similar if we do not include firm controls in our four-factor adjusted cumulative return regressions, as well as if we use only market risk-adjusted cumulative returns (i.e. a one-factor model) and include firm controls, or if we use a three-factor model.
[7] The methodology used to construct Figure 1 is similar to that used for Figure 3 in Ramelli and Wagner (2020).

economically significant, they are statistically significant only in the sub-sample of largest and most popular firms. At the peak of attention to the BLM movement on June 6 (measured by Google Trends of such search words as "BLM", "protests", "racial inequality", "racial injustice"), firms with at least one black director are associated with 1.8%, 3.1% and 1.3% higher adjusted cumulative abnormal returns, than firms without a single black director, in the full, top-250 and bottom-250 samples, respectively (see the shaded column in Table 4).[8]

(Insert Table 4 about here)

When splitting the sample in half, we observe that the positive relationship between boardroom racial diversity and stock returns is significant only for the largest companies. The top-250 companies have the market capitalization (as of May 25, 2020) in the range from 21.6 billion USD to 1.38 trillion USD. This result is intuitive and consistent with increased attention to racial diversity from, for example, ESG fund managers that focus on larger companies and from general public that may boycott the largest and most visible companies with non-diverse leadership. Additionally, an increasingly vocal and organized group is retail investors that trade through, for example, Robinhood trading platform and follow investment ideas and sentiment on *reddit/wallstreetbets*, the social news and discussion platform. As a simple measure of popularity among retail investors, we use the Robintrack popularity index for each sample company as of May 25, 2020 (at 23:59). Popularity index is measured by the total number of individual retail investors on Robinhood platform that hold at least one share of a company's stock at a given time. We take the natural logarithm of one plus the popularity index as our stock popularity measure. Not surprisingly, the sub-sample of top-250 companies are significantly more popular among retail investors—the average ln(1+popularity index) is 8.6 for the top-250 companies and 7.6 for the bottom-250 (the difference being statistically significant at the one percent level).

To assess the robustness of our result in the sample of largest and most popular companies, we first look at an alternative measure of racial diversity, namely the proportion of black directors. Panel A of Table 5 shows the results of Equation (3) regressions using the alternative racial diversity measure. The coefficients on the proportion of black directors are again positive and economically significant. A one standard deviation increase in the proportion

[8] Note that Monday, June 8 is the first trading day after the peak attention.

of black directors is associated with 1% higher adjusted cumulative abnormal return at the peak of the BLM attention (June 8), than firms without a single black director. The effect is also statistically significant for most of the days in the event window, in particular from the 3rd to 12th day after the killing of George Floyd.

(Insert Table 5 about here)

Can this result be driven by a broader board diversity concept that would be hard to explain in the context of the BLM protests? In other words, if this stock market reaction is indeed associated with the BLM protests, we should not observe any effect of higher representation of other ethnic groups such as Asian or Hispanic or higher representation of female directors. The results in Panel B and C of Table 5 confirm that more broadly defined board diversity variables have no effect on stock returns during the BLM protests. Neither the *Proportion of all ethnic minorities* (including black directors) nor the *Proportion of female directors* are economically or statistically significantly related to the adjusted cumulative abnormal returns during the BLM protests.

Additionally, we check if our results are robust to earnings and dividends announcement effects. In particular, we extract all the dividend and earnings announcement dates during our event period and recalculate the cumulative four-factor adjusted returns from May 26 to June 19 by removing the abnormal returns on dividend and earnings announcement days. Altogether 82 sample firms had dividend or earning announcements during the sample period, and the results remain qualitatively identical when we repeat all the regressions on these adjusted cumulative abnormal returns.

Overall, the main result that emerges from our analyses is that firms with more racially diverse boards, in particular with African American representation on the board, are positively associated with stock returns during the period of the Black Lives Matter protests. As attention to the BLM movement and mass protests leveled off, the difference in cumulative returns between racially diverse and non-diverse boards disappeared. These results provide evidence of the effects of mass protests on stock returns of companies faced with dissatisfied stakeholders. In the next section, we examine the impact of this episode on boardroom racial diversity one year after the BLM protests.

## 5. Empirical Analysis of Board Diversity after the BLM Protests

### *5.1. Boardroom changes*

Although the intensity of BLM mass protests diminished, it became clear that the consequences of this event will be long lasting. One plausible explanation for the disappearing difference in cumulative returns of firms with racially diverse and non-diverse boards (reported in Figure 1 and Table 4) is that the market was expecting changes in the corporate boards with respect to racial diversity. For example, on June 10, 2020 the Canadian Council of Business Leaders Against Anti-Black Systemic Racism announced the formation of the Council and launched the BlackNorth Initiative "to increase the representation of Blacks in boardrooms and executive suites across Canada", stating that the "market is moving to help close the diversity deficit".[9]

To measure the extent of boardroom changes in the aftermath of the BLM protests, we use Refinitiv database to extract information on all the directors that joined and left the board in the time period from May 26, 2020 until July 15, 2021 (i.e. thirteen months after the killing of George Floyd). For this analysis we use a sample of 496 firms that were listed as of July 15, 2021 (i.e., we exclude 4 firms that merged within this time period) and find that 305 (or 61.5%) of the sample firms experienced changes in the board composition. Panel A of Table 6 shows that the total increase in the number of board seats was 1.1%, while the number of board seats held by black directors increased by 18%. As a result, the proportion of total board seats held by black directors increased from 8.2% to 9.6%. Panel B of Table 6 shows that 31% of all the new directors are black, and from Panel C we see that one year after the BLM protests the proportion of firms with no African American representation decreased from 36.3% to 27.8%. As to the number of board seats per individual director represented in our sample, results are similar to the ones reported in Table 2. The average number of board seats per black director as of July 15, 2021 is 1.28 compared to 1.17 for other ethnic groups (untabulated).

[9] See https://blacknorth.ca/canadian-council-of-business-leaders-against-anti-black-systemic-racism-announces-formation-launch-of-blacknorth-initiative/.

(Insert Table 6 about here)

That companies would satisfy boardroom diversity requirements by increasing their board's size is in line with predictions made in the Toomey et al. letter (2021) in the context of NASDAQ's diversity rule. It could be justified from business perspective as firms are facing more complex global challenges such as Covid-19 pandemic, climate change and sustainability issues, but the tendency of growing board size is potentially worrisome as larger boards have been associated with less effective corporate governance and lower valuations (Yermack, 1996). At the time of this writing we have only one-year data to examine the effect of recent boardroom changes which is not sufficient to disentangle all the costs and benefits of these changes. Seeing the scale of boardroom expansion, perhaps some of the changes have been rushed, as noted in a roundtable discussion held by the Conference Board: "*Because of the sense of urgency to take a stand against racial inequality following the killing of George Floyd, many companies focused on speed rather than on process when making financial commitments a year ago*." (Schwarz, 2021)

### *5.2. The effects of boardroom changes*

We turn next to the question of the effects of boardroom changes one year after the killing of George Floyd. What firm characteristics are related to black director representation in the boards before and after the BLM protests? Are companies that increased representation of black directors associated with higher or lower valuations?

First, we identify what company characteristics are associated with the representation of black directors on company boards before the BLM protests. The dependent variable is a dummy variable taking the value of 1 if there was at least one black director as of May 25, 2020 and the value zero otherwise. In Panel A of Table 7, we report the results of a probit model and find that, not surprisingly, companies with at least one black director are significantly bigger (by market capitalization) and have larger boards. Although firm and board size are slightly positively correlated, we do not observe any multicollinearity issues as these variables capture different firm characteristics. We control for growth opportunities (book-to-market variable), ethnic composition in the county in which a firm is headquartered (proportion of black population in the county), firm complexity (measured by the natural logarithm of different SIC 4-digit industry

codes[10]), and industry fixed effects (GICS sectors). Using this probit model, we then calculate the propensity score or, in other words, the probability of having at least one black director for each firm in our sample.

(Insert Table 7 about here)

In Panel B of Table 7 we show the transition matrix of firms with at least one (no) black directors before and after the BLM protests and report their respective propensity scores. We observe that 53 firms that had no black directors before the killing of George Floyd and at least one black director after this event had significantly lower propensity scores (0.546) compared to firms before the event (0.716). In other words, previous determinants of board diversity such as firm and board size became less important, and black directors were added across a wide range of firms with lower propensity scores. Nevertheless, the propensity score of firms that transitioned from no black directors to at least one (0.546) is significantly higher than that of firms remaining without a single black director (0.475).

To address the question of valuation effects of increased boardroom diversity, we use the difference in differences regression model, in which the treated firms are the ones that increased the representation of black directors (from the end of Quarter 2 (Q2) of 2020 to the end of Q2 of 2021) and the control firms – those that did not. The dependent variable is Tobin's Q that is measured at two points in time – at the end of Q2 2020 and Q2 2021. There are altogether 97 (treated) firms that increased the number of black directors in their boards. We control for firm size (Ln of market capitalization), profitability (return on assets, defined as the trailing twelve months of earnings excluding extraordinary items divided by total assets), and industry effects. The results in Table 8 show that firm valuations are significantly higher in Q2 2021 compared to Q2 2020, and profitability has a significant positive relation to Tobin's Q, as expected. We do not find any treatment effect. In other words, the change in Tobin's Q in firms that increased the number of black directors is not significantly different from the change in those firms that did not.

(Insert Table 8 about here)

[10] The results are similar if we use the natural logarithm of different SIC 2-digit industry codes.

### *5.3. Boardroom racial diversity and portfolio returns*

In this section, we examine longer-term stock price reactions in companies with different levels of racial diversity. After observing the peak of the BLM mass protests and short-term stock abnormal stock returns (Table 4), one could design a simple investment strategy that buys firms with at least one black director and shorts firms with no black directors. Table 9 documents the results of weekly rebalanced equally-weighted portfolio regressions (from May 29, 2020 until June 25, 2021), using the Fama-French-Carhart four-factor model. There are 64 rebalancing events – 53 positives and 11 negatives. The variable of interest is Alpha – the abnormal return after controlling for market, size (SMB), value (HML) and momentum (UMD) factors. Column (1) reports the results for the equally-weighted portfolio of firms with no black directors at the beginning of the respective month, Column (2) – for the portfolio of firms with at least one director, and Column (3) – for the market-neutral portfolio that is long in racially diverse firms and short in racially not diverse firms. The results in Column 3 show that the alpha of this market-neutral portfolio is not significantly different from zero, suggesting that boardroom racial composition alone has not been a significant factor one year after the peak of the BLM protests.

(Insert Table 9 about here)

### *5.4. Discussing diversity in the proxy statements*

Finally, we examine the effect of the BLM protests on company disclosures with respect to racial diversity. As the BLM protests illuminated issues of racial inequality and systemic racism, investors and the wider public increasingly scrutinize companies for their actions on racial inclusion. This has been a hot topic during the 2021 proxy season: "*"Something we are going to spend a lot of the next proxy season engaging on is getting better workplace demographic disclosure so we can actually hold companies accountable," Katie Koch, a managing director at Goldman Sachs Asset Management, told a conference in September."* (Financial Times, "Black Lives Matter provokes change on Wall Street", October 12, 2020)

To address this question, we read a number of proxy statements (DEF 14a filings) in search of the most common words that describe a company's racial diversity policy. It is quite evident that often companies use standard phrases and almost identical paragraphs. And it is not unusual for companies without a single racial minority representative on the board to state that

they embrace board diversity with respect to gender, ethnicity, field of expertise, and business skills. To determine the extent to which companies discuss race, ethnicity, and diversity in their disclosures, we perform a simple textual analysis of the proxy statements filed by companies. We retrieve the proxy statements (DEF 14a) from the SEC EDGAR database using CIK identifiers and parse them using a Python code in a search for two regular expressions: (1) including phrases 'race', 'racial', 'person of color', or 'ethnic' (we first manually read some sample reports and determine that these are the words that are most commonly used to talk about the racial diversity of the board), and (2) including the word 'diversity'. As a simple measure of companies' focus on racial diversity in words, we calculate two measures – the number of race-related words and the number of diversity-related words per 100,000 total words in the proxy statement.

Panel A of Table 10 shows that the correlation between actual board diversity and talking about it in the proxy statement is rather low, at around 0.07. The only significant correlation (0.14) is between the number of diversity-related words per 100,000 total words and the actual proportion of black directors.

(Insert Table 10 about here)

More interestingly, Panel B of Table 10 and Figure 2 show that 'talking about diversity' has significantly increased after the emergence of the BLM protests. Using a sample of 457 companies that have filed their proxy statements after May 25, 2020, we find that the average number of words referring to 'race', 'racial', 'person of color', or 'ethnic' per 100,000 words in the latest proxy statement before May 25 is 1.2 compared to an average of 28.8 in the first proxy statement after May 25, which is significantly higher at the 1% level. Similar results are obtained using the word 'diversity'.

(Insert Figure 2 about here)

As a case study, we analyze the company with the highest number of words (130) referring to race and ethnicity in the post BLM protest period – Amazon Inc. From the proxy statement filed with SEC on April 14, 2021[11], we see that the company had two shareholder proposals (ITEMS 6 and 9) related to diversity, with the board of directors recommending a vote

[11] See https://sec.report/Document/0001104659-21-050333/.

"Against" on both proposals. The first proposal (Item 6) requested additional reporting on gender/racial pay and the second proposal (Item 9) requested a diversity and equity audit report. Ironically, while discussing racial and other diversity issues at length in the proxy statement, Amazon was one of the few companies that had one black board member before the peak of the BLM protests and no black directors one year later. In February 2021, Rosalind (Roz) Brewer stepped down from Amazon's board of directors to become the only black female CEO of a Fortune 500 company (Walgreens).

Overall, the results indicate that companies have been paying more attention to racial diversity issues on the board following the Black Lives Matter protests. We have observed increased disclosures of racial equity topics in the proxy statements, as well as significant increase of black director representation in the boards. In the meantime, we do not find any valuation or stock performance effects related to boardroom racial diversity one year after the killing of George Floyd. While these results are suggestive and in line with previous arguments that many companies made rushed decisions to take a stand against racial inequality, our analyses do not consider other potential long-term effects of increased boardroom racial diversity and general progress toward racial equity. We leave it for further research.

## 6. Conclusions

This paper presents the first evidence on firm value implications in response to the Black Lives Matter movement that not only raises awareness of racial injustice issues but also "provokes change on Wall Street" (Financial Times, October 12, 2020). We find strong evidence that during the spike of the BLM movement investors perceived companies with higher representation of black directors more favorably than companies with a less racially diverse board. This result is particularly pronounced among the largest and most popular companies.

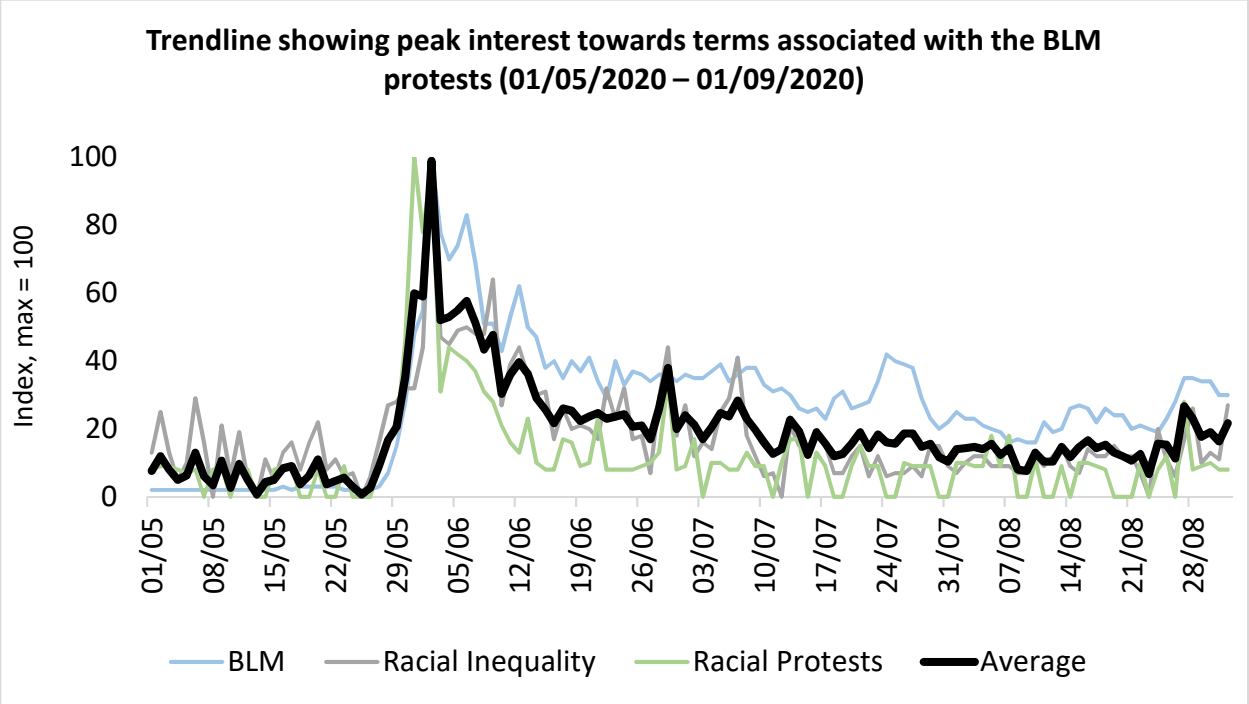
Looking beyond the short-term effect on stock prices, we find that companies have significantly increased the discussion of general diversity and in particular ethnic diversity related issues in their proxy statements and that the BLM protests served as a catalyst for significant changes in the boardroom racial composition. One year after the killing of George

Floyd, the proportion of board seats held by black directors has increased from 8.2% to 9.6%, with 31% of newly appointed directors being black. This radical change has been largely achieved by increasing the overall number of board seats, which is one plausible explanation for why we do not observe any long-term (one year) valuation or stock performance effects in companies that increased their boardroom racial diversity. According to Yermack (1996) larger boards are associated with less effective corporate governance and lower valuations.

Recently, it has become evident that large groups of investors can organize themselves around a popular narrative and implement huge amount of trades based on this narrative (for example, GameStop vs. Hedge funds saga in the first quarter of 2021). As it is very likely that different groups of investors, including fund managers and retail investors, will continue to keep an eye on boardroom and other racial diversity issues, companies should be prepared to address these questions in a transparent manner. Our findings show that the information on boardroom racial composition was not easily available to the public in 36% of the S&P 500 companies (as of May 2020) and clearly support the recent call for improved workplace demographic disclosure. It is yet to be seen whether the optimal solution is a market (institutional investor) driven push for disclosure and actual diversity or a regulatory mandate, such as NASDAQ's Board Diversity Rule.[12] Our results show that companies tend to add diverse directors by increasing board size which might not be the most effective corporate governance response.

[12] Nasdaq's Board Diversity Rule (approved by the SEC on August 6, 2021) requires listed companies disclose board-level diversity statistics using a standardized template and have or explain why they do not have at least two diverse directors. This 'comply or explain' rule expects that companies have at least one female director (regardless of their designated sex at birth) and at least one director who self-identifies as an underrepresented ethnic minority or as LGBTQ+.

Appendix 1. BLM protests-related keyword search popularity in Google trends



Appendix 2. Variable descriptions

| *Variable* | *Description* | *Source* |
|---|---|---|
| $\boldsymbol{AR_{it}}$ | Daily abnormal stock return (alpha) for company *i*, calculated as $R_{it}$ - $E(R_{it})$ | Calculated |
| $\boldsymbol{R_{it}}$ | Actual daily excess stock returns for company *i* | Datastream |
| $\boldsymbol{E(R_{it})}$ | Expected excess stock returns for company *i*, predicted by the Fama, French, Carhart Four-factor model; factor exposures are estimated during the period Jan 2, 2018 – Dec 31, 2019 | Calculated |
| $\boldsymbol{R_f}$ | Market risk-free rate (the U.S. 1-month Treasury-bill rate) | Kenneth French's website |
| $\boldsymbol{R_m}$ | Daily market return (using S&P 500 index as a proxy) | Kenneth French's website |
| ***SMB*** | Historical excess returns between small-cap and large-cap companies (Fama & French, 1995) | Kenneth French's website |
| ***HML*** | Historic excess returns of value stocks (high P/B ratio) over growth stocks (low P/B ratio) (Fama & French, 1995) | Kenneth French's website |
| ***UMD*** | Historical excess returns of highest performing stocks over lowest performing stocks (Carhart, 1997) | Kenneth French's website |
| $\boldsymbol{CAR_{[t1;\ t2]}}$ | Company cumulative abnormal stock returns from the date $t_1$ to $t_2$ | Calculated |
| $\boldsymbol{Industry_i}$ | Set of dummies identifying GICS industry group | Datastream |

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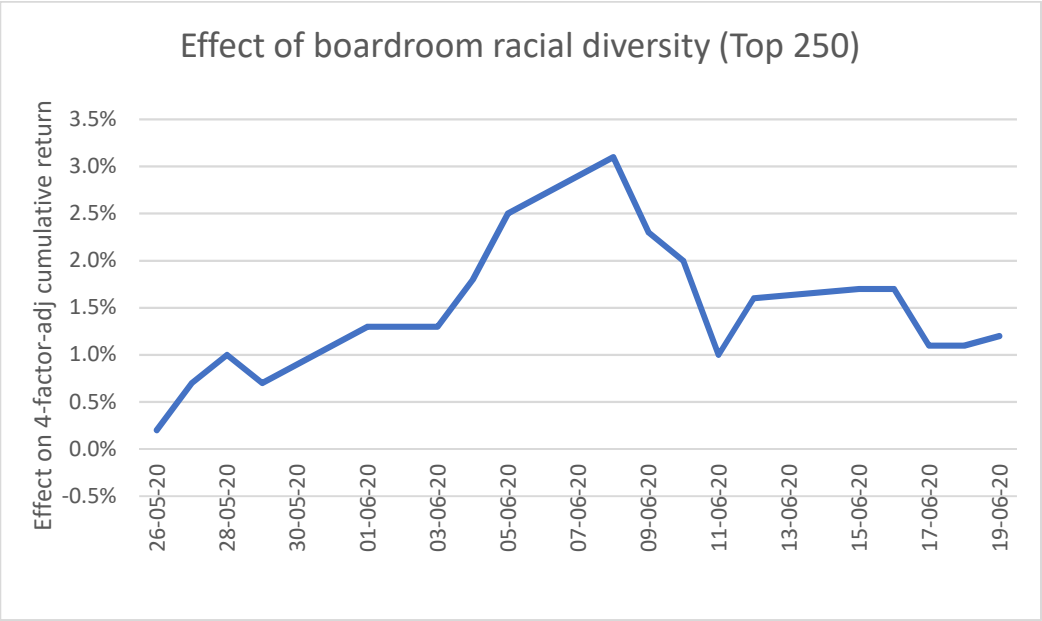
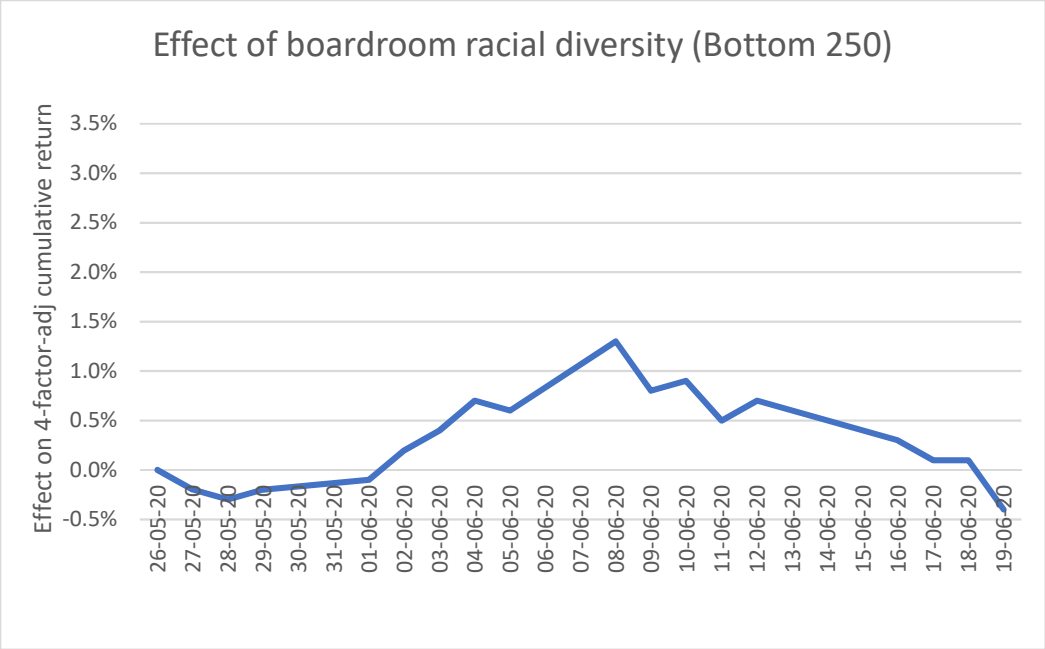
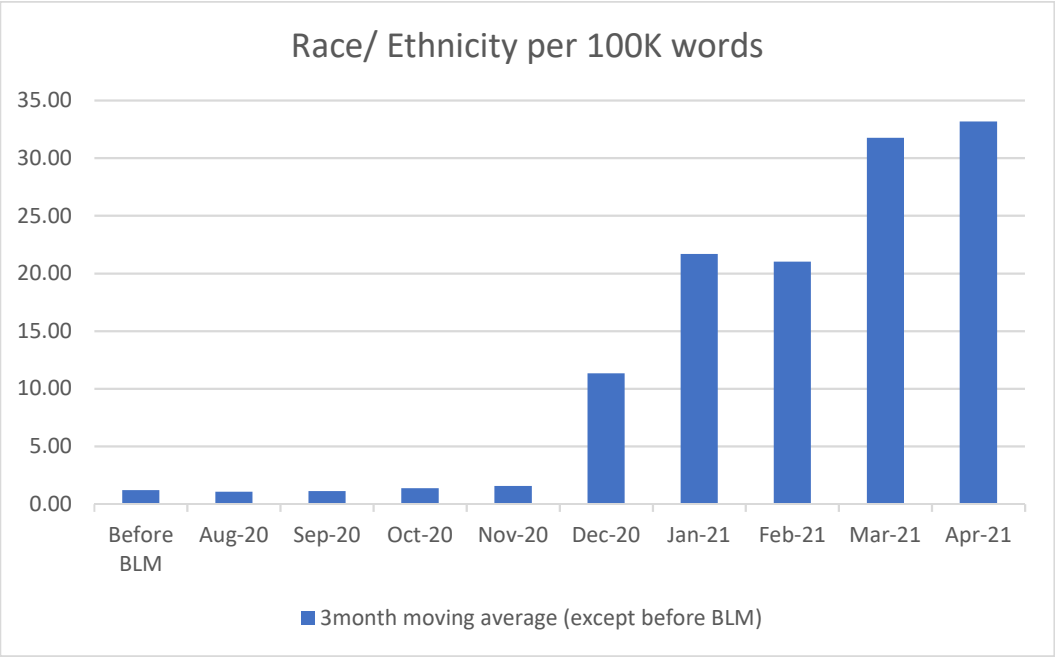
**Figure 1**
**Stock returns and racial diversity on the board**




The graphs show the impact of boardroom racial diversity on cumulative four-factor adjusted abnormal returns for each day during the BLM protest period between May 26, 2020 and June 19, 2020 (as specified in Equation (3)). The graphs show the coefficients for *At least one black director* dummy. The coefficients are from the regressions that control for GICS industry group fixed effects and firm characteristics (size, book-to-market and profitability). The sample includes top 250 (the first graph) and bottom 250 (the second graph) companies by market capitalization (as of May 25, 2020) in the S&P 500 index.

**Figure 2**
**Race/ Ethnicity related words in the proxy statements before and after the BLM protests**




The graph reports the 3-month moving average number of race and ethnicity related words in the proxy statements before and one year after the BLM protests. Race-/Ethnicity-related words per 100,000 words is the number of words such as 'race', 'racial', 'person of color', 'ethnic' or 'ethnicity' mentioned in a proxy statement (Def 14a) divided by the total number of words in the respective statement. The sample includes 457 companies in the S&P 500 index that (as of June 1, 2021) have filed proxy statements both before and after May 25, 2020.

**Table 1**
**Board composition by ethnic groups (as of May 25, 2020)**

Panel A. Number of board seats by ethnic groups

| Ethnicity | Number of board seats in the sample | Proportion of total board seats |
|---|---|---|
| White | 4,655 | 84.3% |
| African American/ Black | 450 | 8.1% |
| Other ethnic minorities | 392 | 7.1% |
| N/A | 27 | 0.5% |
| Total | 5,524 | 100.0% |

Panel B. Number of individual directors by ethnic groups

| Ethnicity | Number of unique directors in the sample | Proportion of total directors | US resident population by ethnicity (2019) |
|---|---|---|---|
| White | 3,966 | 85.0% | 76.3% |
| African American/ Black | 336 | 7.2% | 13.4% |
| Other ethnic minorities | 336 | 7.2% | 10.3% |
| N/A | 27 | 0.6% | |
| Total | 4,665 | 100.0% | 100% |

This table shows summary statistics of board composition by ethnic groups. Panel A shows the number of board seats for each ethnic group in the sample. Panel B shows the number of unique directors for each ethnic group. The last column in Panel B reports the US resident population as of 2019 (Statista, n.d.).

**Table 2**
**Number of board seats per director**

| | | | Total | Difference (p-value) |
|---|---|---|---|---|
| Panel A. | | | | |
| | African American/ Black | Other ethnic groups (incl. white) | | |
| Average number of board seats | 1.34 | 1.17 | 1.19 | *0.000*** |
| Number of individuals | 336 | 4,302 | 4,638 | |
| Panel B. | | | | |
| | African American/ Black (Male) | Other ethnic groups (Male) | | |
| Average number of board seats | 1.34 | 1.15 | 1.17 | *0.000*** |
| Number of individuals | 232 | 3,132 | 3,364 | |
| Panel C. | | | | |
| | African American/ Black (Female) | Other ethnic groups (Female) | | |
| Average number of board seats | 1.35 | 1.22 | 1.23 | *0.020*** |
| Number of individuals | 104 | 1,170 | 1,274 | |

This table reports the average number of board seats held by each African-American/ Black director and directors of other ethnic groups (including white). Panel A shows the comparison between the average number of board seats by ethnic group, irrespective of gender. Panels B and C split the Panel A sample into male and female subsamples. The last column reports the p-value of a two-sided mean difference test.

**Table 3**
**Boardroom racial diversity and firm size**

Panel A.

| Number of ethnic minorities on the board | Number of sample firms | Average firm size, Ln(Market Cap) | Average board size (seats) |
|---|---|---|---|
| 0 | 85 | 9.5 | 9.9 |
| 1 | 154 | 10.0 | 10.8 |
| 2 | 149 | 10.2 | 11.5 |
| 3 | 74 | 10.3 | 11.6 |
| 4-7 | 38 | 10.8 | 12.1 |
| Total | 500 | 10.1 | 11.0 |

Panel B.

| Number of African Americans on the board | Number of sample firms | Average firm size, Ln(Market Cap) | Average board size (seats) |
|---|---|---|---|
| 0 | 183 | 9.69 | 10.2 |
| 1 | 200 | 10.26 | 11.4 |
| 2 | 102 | 10.48 | 11.8 |
| 3 | 14 | 10.14 | 12.6 |
| 4 | 1 | 11.94 | 13.0 |
| Total | 500 | 10.10 | 11.0 |

Panel A shows the frequency of firms, average market capitalization (measured by the natural logarithm of market capitalization as of May 25, 2020) and board size, based on how many minority board members (from 0 to 7) a company has. Panel B reports the respective information classified by the number of black directors.

**Table 4**
**Boardroom racial diversity and stock returns during the BLM protests**

Panel A. Full sample

| | May 27 | May 29 | June 2 | June 4 | June 8 | June 10 | June 12 | June 16 | June 18 |
|---|---|---|---|---|---|---|---|---|---|
| VARIABLES | CAR(2) | CAR(4) | CAR(6) | CAR(8) | CAR(10) | CAR(12) | CAR(14) | CAR(16) | CAR(18) |
| At least one black director | 0.001 | 0.000 | 0.005 | 0.011 | 0.018* | 0.012 | 0.010 | 0.007 | 0.003 |
| | (0.299) | (0.065) | (1.009) | (1.445) | (1.688) | (1.485) | (1.247) | (0.850) | (0.390) |
| Size | -0.003 | 0.000 | -0.006*** | -0.009** | -0.010** | -0.004 | -0.005 | -0.005 | -0.005 |
| | (-1.363) | (0.054) | (-2.687) | (-2.566) | (-2.088) | (-1.061) | (-1.395) | (-1.228) | (-1.196) |
| Book-to-market | 0.001 | -0.007 | -0.006 | -0.012 | -0.014 | -0.006 | 0.009 | 0.007 | 0.009 |
| | (0.149) | (-0.849) | (-0.698) | (-0.842) | (-0.693) | (-0.429) | (0.533) | (0.403) | (0.576) |
| Profitability | -0.019 | 0.057 | -0.008 | -0.077 | -0.123 | -0.087 | -0.074 | -0.099 | -0.103 |
| | (-0.565) | (1.565) | (-0.209) | (-1.233) | (-1.363) | (-1.330) | (-1.062) | (-1.304) | (-1.388) |
| Industry FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Observations | 494 | 494 | 494 | 494 | 494 | 494 | 494 | 494 | 494 |
| R-squared | 0.250 | 0.278 | 0.260 | 0.226 | 0.187 | 0.196 | 0.176 | 0.194 | 0.166 |
| Panel B. Top 250 companies | | | | | | | | | |
| At least one black director | 0.007 | 0.007 | 0.013** | 0.018** | 0.031** | 0.020** | 0.016** | 0.017** | 0.011 |
| | (1.300) | (1.372) | (2.217) | (2.187) | (2.412) | (2.248) | (2.001) | (1.990) | (1.344) |
| Firm and industry controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Observations | 248 | 248 | 248 | 248 | 248 | 248 | 248 | 248 | 248 |
| R-squared | 0.200 | 0.322 | 0.352 | 0.258 | 0.217 | 0.261 | 0.236 | 0.249 | 0.227 |
| Panel C. Bottom 250 companies | | | | | | | | | |
| At least one black director | -0.002 | -0.002 | 0.002 | 0.007 | 0.013 | 0.009 | 0.007 | 0.003 | 0.001 |
| | (-0.266) | (-0.304) | (0.222) | (0.584) | (0.804) | (0.710) | (0.577) | (0.247) | (0.064) |
| Firm and industry controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Observations | 246 | 246 | 246 | 246 | 246 | 246 | 246 | 246 | 246 |
| R-squared | 0.325 | 0.329 | 0.258 | 0.251 | 0.214 | 0.219 | 0.195 | 0.230 | 0.211 |

This table shows results of cross-sectional ordinary least squares (OLS) regressions of individual stock returns for ten different time periods. Each period starts on May 25 (the day of George Floyd killing) and ends on the date identified in the column headers. The number of trading days included in the time period is specified in the parentheses next to "CAR". The dependent variables are Fama-French-Carhart four factor-adjusted cumulative returns. *At least one black director* is a dummy variable equal to one if the number of black directors is equal or higher than one and zero otherwise. Panel A reports full sample results, Panel B includes top 250 and Panel C bottom 250 companies by market capitalization (as of May 25, 2020) in the S&P 500 index (excluding six companies with insufficient data in the estimation period). All regressions control for standard firm characteristics (size, book-to-market, and profitability (return on assets)) and GICS sector industry fixed effects. T-statistics based on robust standard errors are presented in parentheses. *p <.1; **p <.05; ***p <.01.

**Table 5**
**Boardroom diversity and stock returns during the BLM protests (Top 250 companies)**

| | May 27 | May 29 | June 2 | June 4 | June 8 | June 10 | June 12 | June 16 | June 18 |
|---|---|---|---|---|---|---|---|---|---|
| VARIABLES | CAR(2) | CAR(4) | CAR(6) | CAR(8) | CAR(10) | CAR(12) | CAR(14) | CAR(16) | CAR(18) |
| Panel A. | | | | | | | | | |
| Proportion of black directors | 0.047 | 0.070** | 0.088*** | 0.095* | 0.140* | 0.098* | 0.071 | 0.075 | 0.051 |
| | (1.559) | (2.466) | (2.763) | (1.956) | (1.913) | (1.946) | (1.533) | (1.612) | (1.137) |
| Firm and industry controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Observations | 248 | 248 | 248 | 248 | 248 | 248 | 248 | 248 | 248 |
| R-squared | 0.201 | 0.330 | 0.355 | 0.254 | 0.208 | 0.256 | 0.230 | 0.244 | 0.224 |
| Panel B. | | | | | | | | | |
| Proportion of all ethnic minorities | -0.031 | -0.009 | -0.016 | -0.021 | -0.061 | -0.045 | -0.046 | -0.038 | -0.028 |
| | (-1.496) | (-0.456) | (-0.822) | (-0.728) | (-1.402) | (-1.429) | (-1.512) | (-1.223) | (-0.802) |
| Firm and industry controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Observations | 248 | 248 | 248 | 248 | 248 | 248 | 248 | 248 | 248 |
| R-squared | 0.203 | 0.317 | 0.340 | 0.245 | 0.203 | 0.252 | 0.231 | 0.242 | 0.224 |
| Panel C. | | | | | | | | | |
| Proportion of female directors | 0.027 | -0.037 | 0.011 | 0.007 | 0.027 | 0.026 | 0.022 | 0.035 | 0.011 |
| | (0.871) | (-1.164) | (0.317) | (0.142) | (0.412) | (0.519) | (0.456) | (0.674) | (0.227) |
| Firm and industry controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Observations | 248 | 248 | 248 | 248 | 248 | 248 | 248 | 248 | 248 |
| R-squared | 0.198 | 0.323 | 0.339 | 0.244 | 0.198 | 0.247 | 0.225 | 0.240 | 0.222 |

This table shows results of cross-sectional ordinary least squares (OLS) regressions of individual stock returns for ten different time periods. Each period starts on May 25 (the day of George Floyd killing) and ends on the date identified in the column headers. The number of trading days included in the time period is specified in the parentheses next to "CAR". The dependent variables are Fama-French-Carhart four factor-adjusted cumulative returns. *Proportion of black directors* (Panel A) is the number of black directors divided by the total number of board members. *Proportion of all ethnic minorities* (Panel B) is the number of board members representing ethnic minorities (including black directors) divided by the total number of board members. *Proportion of female directors* (Panel C) is the number of female directors divided by the total number of directors. The sample consists of 250 largest companies from the S&P 500 index (excluding two companies with insufficient data in the estimation period). All regressions control for standard firm characteristics (size, book-to-market, and profitability (return on assets)) and GICS sector industry fixed effects. T-statistics based on robust standard errors are presented in parentheses. *p <.1; **p <.05; ***p <.01.

**Table 6**
**Board composition by ethnic groups (as of July 15, 2021)**

Panel A

| Ethnicity | Number of board seats (before BLM) (1) | Proportion of total board seats (2) | Number of board seats (after BLM) (3) | Proportion of total board seats (4) | Change (3) vs. (1) |
|---|---|---|---|---|---|
| White | 4,627 | 84.3% | 4,585 | 82.7% | -0.9% |
| Black | 450 | 8.2% | 531 | 9.6% | +18.0% |
| Other | 385 | 7.0% | 406 | 7.3% | +5.5% |
| N/A | 26 | 0.5% | 25 | 0.5% | -3.8% |
| Total | 5,488 | 100.0% | 5,547 | 100% | +1.1% |

Panel B

| Ethnicity | Number of new directors | Proportion of total board seats | Number of leaving directors | Proportion of total directors |
|---|---|---|---|---|
| White | 198 | 57.4% | 240 | 83.9% |
| Black | 107 | 31.0% | 26 | 9.1% |
| Other | 40 | 11.6% | 19 | 6.6% |
| N/A | . | . | 1 | 0.3% |
| Total | 345 | 100.0% | 298 | 100% |

Panel C

| Number of African Americans on the board | Number of firms (before BLM) | Proportion of all firms | Number of firms (after BLM) | Proportion of all firms |
|---|---|---|---|---|
| 0 | 180 | 36.3% | 138 | 27.8% |
| 1 | 199 | 40.1% | 218 | 44.0% |
| 2+ | 117 | 23.6% | 140 | 28.2% |
| Total | 496 | 100% | 496 | 100% |

This table shows summary statistics of board changes by ethnic groups. Panel A shows the number of board seats for each ethnic group before the BLM protests (as of May 25, 2020) and one year after (as of July 15, 2021). The sample includes 496 S&P500 firms (excluding 4 firms that merged or were taken over during the respective time period). Panel B shows the number of new and leaving directors by ethnicity. Panel C reports the number of firms classified by the number of African Americans on the board before and after the BLM protests.

**Table 7**
**Board diversity and firm characteristics**

Panel A. Probit regression

| VARIABLES | At least one black director (dummy) |
|---|---|
| Board size | 0.162*** |
| | (0.0379) |
| Size (Ln Mcap) | 0.426*** |
| | (0.0785) |
| Book-to-market | -0.187 |
| | (0.228) |
| Proportion of black population (HQ county) | 0.552 |
| | (0.539) |
| Complexity (Ln Different SIC4) | 0.140 |
| | (0.163) |
| Constant | -6.079*** |
| | (0.906) |
| Industry dummies | Yes |
| Observations | 500 |
| Pseudo R-squared | 0.180 |

Panel B. Transition matrix

| Propensity score (Number of firms) | | At least one black director AFTER the BLM protests | | Total |
|---|---|---|---|---|
| | | Yes | No | |
| At least one black director BEFORE the BLM protests | Yes | .716 (305) | .703 (11) | .716 (316) |
| | No | .546 (53) | .475 (127) | .496 (180) |
| | Total | .691 (358) | .493 (138) | .636 (496) |

This table shows the results of a probit regression (in Panel A) in which the dependent variable is a dummy variable taking the value of 1 if there was at least one black director as of May 25, 2020 and the value zero otherwise. *Board size* is the number of board seats; *Size (Ln Mcap)* is the natural logarithm of market capitalization; *Book-to-market* is the book value of equity divided by the market value of equity; all measured as of May 25, 2020. *Proportion of black population (HQ county)* is the percentage of black population in the county in which the company is headquartered (Source: William H. Frey analysis of US Census population estimates, 2018; available at https://www.brookings.edu/research/americas-racial-diversity-in-six-maps/). *Complexity (Ln Different SIC4)* is the natural logarithm of the number of different SIC 4-digit codes (plus one) for the company. *Industry dummies* are defined using GICS sector industry classification. Standard errors are presented in parentheses. *p <.1; **p <.05; ***p <.01. Panel B shows the propensity scores estimated using the probit regression in Panel A, for each of the groups in the transition matrix. The number of firms in each group is reported in parentheses.

**Table 8**
**Board diversity changes and Tobin's Q (difference-in-differences)**

| VARIABLES | Tobin's Q |
|---|---|
| Time | 1.322*** |
| | (6.372) |
| Treated | 0.017 |
| | (0.108) |
| Time*Treated (dif-in-dif) | -0.145 |
| | (-0.500) |
| Size (Ln Mcap) | 0.140** |
| | (2.163) |
| Profitability | 19.223*** |
| | (6.404) |
| Constant | -0.585 |
| | (-0.855) |
| Industry dummies | Yes |
| Observations | 921 |
| Adjusted R-squared | 0.340 |

This tables shows the results of the difference-in-differences regressions of Tobin's Q (panel data). Tobin's Q is the market value of equity plus book value of total assets minus book value of equity, all divided by the book value of total assets; measured at two time points: Quarter 2 of 2020 (Before the boardroom changes) and Quarter 2 of 2021 (After the boardroom changes). *Time* is a dummy variable equal to one in Q2 2021 (after) and zero in Q2 2020 (before). *Treated* is a dummy variable equal to one for firms that increased the number of black directors on the board, and zero otherwise. *Size (Ln Mcap)* is the natural logarithm of market capitalization. *Profitability* is return on assets, measured as trailing twelve-month earnings (before extraordinary items) divided by total assets. *Industry dummies* are defined using GICS sector industry classification. T-statistics based on robust standard errors are presented in parentheses. *p <.1; **p <.05; ***p <.01.

**Table 9**
**Boardroom racial diversity and portfolio returns**

| | Firms with no black directors (1) | Firms with at least one black director (2) | Long/Short portfolio (3) |
|---|---|---|---|
| Alpha (weekly) | -0.155 | -0.148* | 0.007 |
| | (-1.526) | (-1.989) | (0.085) |
| Market factor | 0.986*** | 0.938*** | -0.048 |
| | (23.380) | (30.304) | (-1.479) |
| SMB | 0.127** | 0.059 | -0.068 |
| | (2.171) | (1.379) | (-1.491) |
| HML | 0.274*** | 0.317*** | 0.043 |
| | (5.370) | (8.474) | (1.089) |
| UMD | -0.126*** | -0.078*** | 0.048 |
| | (-3.200) | (-2.716) | (1.554) |
| Observations | 56 | 56 | 56 |
| R-squared | 0.941 | 0.963 | 0.0849 |

This table documents results of Fama-French-Carhart four-factor weekly regressions (from May 29, 2020 until June 25, 2021). Three separate weekly rebalanced portfolios are generated: 1) a portfolio of firms with no black directors (Column 1) at the beginning of the respective week, 2) a portfolio of firms with at least one black director, and 3) a market-neutral portfolio that is long in firms with at least one black director and short in firms with no black directors. The dependent variable is the equally-weighted excess return of the portfolio stocks. Market factor is the excess return on the equally-weighted market index. HML factor is the return on a zero-investment portfolio constructed by shorting low book-to-market stocks and buying high book-to-market stocks. SMB factor is the return on a zero-investment portfolio constructed by shorting a portfolio of large firms and investing in a portfolio of small firms. UMD factor is the return on a zero-investment portfolio constructed by shorting a low prior return portfolio and investing in a high prior return portfolio. T-statistics are reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

**Table 10**
**Racial diversity disclosure in proxy statements before and after May 25, 2020**

Panel A

| | (Actual) Proportion of black directors | (Actual) Proportion of all ethnic minorities | (Talking) Race/ Ethnicity words |
|---|---|---|---|
| (Actual) Proportion of black directors | 1 | | |
| (Actual) Proportion of all ethnic minorities | **0.566** | 1 | |
| (Talking) Race/ Ethnicity words | 0.072 | 0.032 | 1 |
| (Talking) Diversity words | **0.143** | 0.067 | **0.501** |

Panel B

| | Pre-BLM | Post-BLM | Difference (p-value) |
|---|---|---|---|
| Race-/ Ethnicity-related words per 100,000 words | 1.195 | 28.773 | *0.000**** |
| Diversity-related words per 100,000 words | 4.100 | 57.764 | *0.000**** |
| Total number of words | 312.1K | 329.5K | *0.000**** |

This table presents analysis of diversity disclosures in proxy statements. The sample includes 457 companies in the S&P 500 index that (as of June 1, 2021) have filed proxy statements both before and after May 25, 2020. Panel A reports the correlation matrix of diversity disclosure and actual boardroom racial diversity variables. Significant correlations (at the 5% level) are indicated in bolded numbers. Proportion of black directors is the number of black directors divided by the total number of board members. Proportion of all ethnic minorities is the number of board members representing ethnic minorities (including black directors) divided by the total number of board members. Race-/Ethnicity-related words per 100,000 words is the number of words such as 'race', 'racial', 'person of color', 'ethnic', or 'ethnicity' mentioned in a proxy statement (Def 14a) divided by the total number of words in the respective statement. Diversity words per 100,000 words is the count of word 'diversity' in a proxy statement divided by the total number of words. Panel B shows the average number of race/ethnic related words per 100,000 words and diversity related words per 100,000 words in firms' proxy statements. Pre-BLM refers to the latest proxy statements filed before May 25, 2020, and Post-BLM refers to the first proxy statements filed after May 25, 2020. The last column reports the p-values of a two-sided mean difference test.

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