Local Crime and ESG

Abstract

Using a large FBI dataset of reported crime incidents across the U.S., we examine how local crime near firm headquarters impacts firm ESG outcomes. Based on three identification approaches, our results suggest that higher (lower) crime causes worse (better) ESG performance. This relation is stronger when firms are in the retail industry and have more financial constraints, and weaker when firms face more stakeholder pressure to pursue ESG initiatives and when they are led by CEOs with characteristics such as being more pro-social.

Keywords: Crime, ESG, CEO characteristics, Financial constraints, Stakeholder preferences

1. Introduction

Research in social sciences has long emphasized the significant impact of local crime on individuals' behavior. Heightened crime levels increase residents' perceptions of danger, which prompts them to avoid certain areas and disrupts their daily routines (e.g., Sampson, Raudenbush, & Earls, 1997). The effects of crime on individuals have been found to significantly influence economic behavior (e.g., Skogan, 1986), shape political attitudes (e.g., Blanco and Ruiz, 2013), and affect social trust (e.g., Linden & Rockoff, 2008).[1] In this study, we examine whether public U.S. firms adjust their Environmental, Social, and Governance (ESG) activity in response to variations in local crime levels.

There are reasons to expect that higher local crime results in an increase in firm ESG. Stakeholder theory suggests that firms should consider their interactions with various stakeholders rather than solely focus on shareholders (e.g., Donaldson and Preston, 1995). Lins, Servaes, and Tamayo (2017) suggest that building social capital via ESG expenditure should be more valuable when the operating environment is challenged by issues impacting stakeholders so it seems plausible that companies may increase their ESG focus when crime impacts stakeholders. Firms may build their ESG profile to offset the impact of crime on their sales. Godfrey, Merrill, and Hansen (2009) suggest that ESG can lead to stakeholder goodwill that tempers negative perceptions due to other factors. Albuquerque, Koskinen, and Zhang (2019) propose that strong ESG is a product differentiation strategy that results in less elastic demand. Given that crime increases firm risk and cost of capital (e.g., Brushwood, Dhaliwal, Fairhurst, and Serfling, 2016) firms may also view ESG expenditure as a means by which they can offset this impact. Ilhan, Sautner, and Vilkov (2021) find high ESG firms are less risky and Hong and Kacperczyk (2009) find that firms with better ESG have a lower cost of capital.

[1] Evidence of the effects of crime has also been observed in the decision-making processes of local authorities, policymakers, and judges (e.g., Huber & Gordon, 2004; Stevenson, 2018; Rosenfeld, 2009).

On the other hand, consistent with risk management theory, firms may respond to local crime by decreasing their focus on ESG. Froot, Scharfstein, and Stein (1993) highlight that managing risk is an important consideration for executives, while Graham, Harvey, and Puri (2013) find that concerns about risk impact CEO decision-making. Novy-Mark (2007) develops a theoretical model where an uncertain environment causes firms to delay investment, even if this relates to positive NPV projects. Numerous related empirical studies have also been conducted. For example, firms safeguard against rising risks and uncertainties by reducing discretionary activities (e.g., Minton and Schrand, 1999), lowering or delaying investments (e.g., Gulen and Ion, 2016), and saving more cash (e.g., Almeida, Campello, and Weisbach, 2004).[2] We suggest that crime is another risk impacting firms. Therefore, given that the payback to ESG initiatives is sometimes viewed as occurring in the long run (e.g., Kruger, 2015), firms may view ESG expenditure as discretionary expenditure that can be deferred or reduced in the face of increased crime.

We investigate the impact of local crime on ESG, using a novel dataset comprising 256 million data points on crime incidents across the U.S. during the 2002–2022 period. Crime is endogenous because it is impacted by local economic conditions (e.g. Glaeser, Sacerdote, and Scheinkman, 1996), so we carefully select several identification strategies to establish causality. To measure crime rates at the county level, we use data from the FBI's Uniform Crime Reporting (UCR) Program, which aggregates crime statistics from law enforcement agencies across the U.S. The data include both violent crimes (e.g., homicide, robbery, aggravated assault) and property crimes (e.g., burglary, larceny-theft, motor vehicle theft). Since the data are initially reported at the agency level, we aggregate them to the county level

[2] There is also empirical evidence on how risks associated with the locations of firms induce more conservative corporate strategies. For example, Dessaint and Matray (2017) show that firms headquartered in areas affected by hurricanes tend increase cash holdings, even when their assets are not directly damaged. Goetz, Laeven, and Levine (2016) find that adverse local conditions influence firms' diversification strategies. Bulan, Mayer, and Somerville (2009) show that area-specific risk, such as increased potential competiton can impact decision-making regarding firm expenditure in that area

by summing crime incidents from all agencies within each region. To allow for meaningful comparisons of crime rates across counties with different population sizes, we divide a county's total reported crimes by its population from the U.S. Census Bureau and then multiply it by 100,000. This measure represents the county-level crime rate per 100,000 inhabitants. Next, we source ESG measures from two datasets, LSEG Asset4 database and the MSCI KLD database, to construct firm-level ESG scores. These two databases provide extensive information about firms' ESG performance ratings, offering some of the most comprehensive resources available for evaluating a firm's ESG activities.

Using a sample of 15,639 firm-year observations over the 2002 – 2022 period, we test if the level of crime within a county in a given year impacts the ESG of a firm headquartered in the county the following year. Our focus on a firm's headquarters is driven by evidence from extant literature on how headquarters locations shape corporate strategies when top executives base their judgments on the conditions and risks present in their immediate surroundings (e.g., Pirinsky and Wang, 2006). When crime levels are high in the area where a firm's headquarters is located, executives may perceive this as local community risk and adjust the firm's ESG strategies accordingly.

Our baseline regressions based on the LSEG Asset 4 ESG measure indicate a strong inverse relationship between local crime and ESG outcomes. This relationship holds when we construct local crime rates at both the county and state levels, include firm, industry, and year fixed effects, or differentiate between violent crime and property crime rates. Given that Avramov, Cheng, Lioui, and Tarelli (2022) and Berg, Koelbel, and Rigobon (2022) find considerable variation in ESG ratings across different providers, we also use MSCI KLD data as a robustness check and find consistent results. These findings indicate that firms situated in areas with higher crime levels may struggle to maintain or enhance their ESG performance, possibly due to the negative impact of a crime-ridden environment on their operations. These

results are inconsistent with the stakeholder value view but support a risk management explanation.[3]

It is important to rule out the possibility that the relationship runs in the opposite direction, with firm ESG efforts impacting crime levels. This scenario seems unlikely, as it is difficult to believe that firms' actions would consistently alter the behavior of those committing crimes. Nonetheless, we address this point in three ways. First, Mello (2019) finds that increased funding from the American Recovery and Reinvestment Act for Community Oriented Policing Services (COPS) reduced crime. Additionally, we use alcohol consumption rates as an alternative instrument, drawing on established criminological research, such as Greenfeld (1998), that links alcohol use to crime. Using two-stage least squares (2SLS) regressions with these instrumental variables, we continue to find strong evidence that higher crime rates lead to lower ESG performance.

Second, Volger (2020) establishes a causal link between access to healthcare and crime, demonstrating that states expanding Medicaid coverage following the Affordable Care Act saw a reduction in crime rates. We leverage the staggered implementation of these expansions as a quasi-natural experiment for crime reduction, applying both staggered difference-in-differences (DiD) and synthetic DiD methods. Our analysis shows that Medicaid expansion has a robust and positive effect, consistent with the hypothesis that improved public health and reduced crime rates associated with Medicaid expansion lead to better ESG performance by firms.

[3] Our primary focus is on aggregate ESG. However, our results also suggest that crime affects individual ESG components. The impact of crime on social and environmental factors is more intuitive than its impact on governance. Nevertheless, there is evidence that the three ESG factors are interrelated. For example, Kruger (2015) finds that investors react negatively to positive ESG news that may arise from agency problems. The governance components that ESG providers consider when compiling the 'G' pillar are closely related to environmental and social factors. Asset4 includes metrics such as 'CSR strategy' and 'ESG reporting and transparency'. Similarly, KLD includes a 'Transparency Strength' defined as 'the company is particularly effective in reporting on a wide range of social and environmental performance measures, or is exceptional in reporting on one particular measure', as well as a 'Transparency Weakness' for companies that fall short in this area.

Third, we observe that firms relocating their headquarters from a low-crime county to a high-crime county experience a subsequent decline in ESG performance. In contrast, those moving from a high-crime county to a low-crime county experience an improvement in ESG performance. Collectively, these results corroborate the notion that firms perceive ESG initiatives as discretionary expenditures that can be deferred or reduced in the face of heightened local risks, consistent with Novy-Marx (2007)

We show that three factors influence the crime-ESG relation. First, our analysis explores how local crime rates affect ESG performance, focusing on the role of CEO characteristics such as gender, education, age, and social engagement. We find that the negative impact of crime rates on ESG performance is more pronounced in firms led by female CEOs, who may exhibit heightened risk aversion in crime-prone environments (e.g., Croson and Gneezy, 2009; Faccio, Marchica, and Mura, 2016). Conversely, CEOs with higher education tend to mitigate the negative impact of crime, likely due to their ability to implement effective risk management strategies (e.g., Bertrand and Schoar, 2003; Custódio and Metzger, 2014). Older CEOs appear to struggle to adapt ESG strategies in high-crime settings, potentially due to conservatism in decision-making (e.g., Yim, 2013). Socially engaged CEOs demonstrate resilience, offsetting some of the negative effects of crime on ESG, possibly due to their stronger stakeholder relationships (e.g., Feng, Ge, Ling, and Loh, 2024). These findings suggest leadership attributes are crucial in shaping a firm's ESG response to external risks like crime.

Next, our analysis examines how resource constraints influence the impact of crime on firm ESG performance, focusing on financial limitations, industry-specific characteristics, and international operations. Prior research suggests that firms with greater financial constraints, such as high debt or limited access to equity, are more vulnerable to external shocks (e.g., Chava and Hsu, 2020). Consistent with these findings, our results show that firms with higher

debt or equity constraints experience a stronger negative relationship between crime and ESG performance, as they lack the financial flexibility to absorb crime-related costs. In addition, industry characteristics play an important role, with retail firms being particularly exposed to crime due to their physical locations (e.g., Brushwood, Dhaliwal, Fairhust, and Serfling, 2016). Conversely, firms with global operations demonstrate greater resilience to local crime, as international diversification allows them to mitigate localized risks (e.g., Doukas and Lang, 2003). The results indicate that the negative effect of crime on ESG performance is more severe for financially constrained firms and retail firms, while firms with international operations are better able to withstand the adverse effects of crime.

In our final avenue of inquiry, we investigate how external governance factors and stakeholder pressures influence the relationship between local crime rates and firms' ESG performance. Political leadership at the state level can shape corporate behavior, with Democratic administrations often implementing progressive policies and social safety nets that support ESG initiatives (e.g., Hong and Kostovetsky, 2012; Di Giuli and Kostovetsky, 2014; Gupta, Raman, and Shang, 2018). Our findings show that firms located in states with a Democratic voting majority experience a less negative effect of crime on ESG performance. States with climate action plans (SCAPs) require firms to adhere to stricter environmental standards (He, Nguyen, Qiu, and Zhang, 2023), which can mitigate the negative effects of crime on ESG . We find that firms in states with SCAPs perform better in terms of ESG when facing crime-related challenges. Considerting institutional ownership as stakeholder pressure as institutional investors often advocate for better ESG performance (Dyck, Lins, Roth, and Wagner, 2019), our results show that firms with higher institutional ownership face a reduced impact of crime on ESG outcomes.

Our study contributes to two active research areas. First, our study contributes to the emerging research that explores the link between crime, firms, and financial markets. Recent

studies have highlighted the influence of financial markets on crime activities through perceptions of wealth changes. For example, Huck (2024a) finds a contemporaneous relationship between crime and stock market returns, with a negative impact on investors and a positive impact on non-investors, consistent with changes in relative wealth affecting psychological well-being. Similarly, Lin and Pursiainen (2023) show that stock returns during the week are negatively related to reported domestic violence during the following weekend, suggesting that stock market losses can increase stress levels and strain relationships. Economic conditions such as gross domestic product (GDP) growth (e.g., Arvanites and Defina, 2006), income inequality (e.g., Krammer, Lashitew, Doh, and Bapiji, 2023), and consumer sentiment (e.g., Rosenfeld and Fornango, 2007) have been shown to impact crime. Our work suggests that the reverse is also important: local crime can shape firms' ESG initiatives. We show that firms located in areas with higher crime rates tend to reduce their ESG activities, indicating that local crime challenges can lead firms to scale back on discretionary ESG efforts. This is consistent with studies that show that crime impacts the firm via stock returns (e.g., Huck, 2024b) and shareholder wealth (e.g., Kamiya, Kang, Kim, Milidonis, and Stulz, 2021).

Second, we add to the literature on corporate ESG responses to local conditions. Extant research suggests that firms often amplify their ESG initiatives to support local stakeholders and demonstrate their commitment during acute crises.[4] For example, firms engage in corporate donations after natural disasters to mitigate reputational damage, regain stakeholder trust, enhance legitimacy, and strengthen community relations (e.g., Muller and Kräussl, 2011; Tilcsik and Marquis, 2013). However, we show that when local challenges are ongoing and

[4] Although the motivations behind firms' investments in ESG activities, particularly those that maximize stakeholder wealth at shareholder expense, are subject to much debate, studies have documented that such investments pay off in various contexts including increased value creation in mergers and acquisitions (Deng, Kang, and Low, 2013), higher resilience when markets suffer negative shocks (Lins, Servaes, and Tamayo, 2017), lower firm risk and enhanced firm value (Albuquerque, Koskinen, and Zhang, 2019), and greater immunity to the adverse effects of the COVID-19 pandemic (Ding, Levine, Lin, and Xie, 2021). This behaviour and the associated economic benefits align with stakeholder theory, which posits that firms should increase their ESG efforts to meet stakeholder needs and affirm their commitment to societal well-being. In turn, this approach enhances stakeholders' support for the firm's operations, contributing to increased shareholder wealth.

require long-term approaches, such as high levels of crime, firms reduce their ESG initiatives. This finding contrasts with documented pro-social responses to crisis events, suggesting that the enduring nature of local challenges influences corporate ESG strategies differently.

The rest of the paper is organized as follows: Section 2 explains our data sources and summary statistics. Section 3 presents the core results and robustness checks. Section 4 presents and discusses our identification strategies and results. Section 5 contains results on factors impacting the relationship between crime and ESG. We present our conclusions in Section 6.

2. Data and summary statistics

2.1 Data and sample

We source ESG measures from two datasets: LSEG Asset4 and MSCI KLD e. We obtain firm-specific accounting and financial information from Compustat, and stock prices and returns from the Center for Research in Security Prices (CRSP). Following prior research (e.g., Servaes and Tamayo, 2013; Kruger, 2015; Lins, Servaes, and Tamayo, 2017), we winsorize all continuous variables at the 1^{st} and 99^{th} percentiles to address potential outlier concerns.

To construct our sample, we begin with the universe of firms at the intersection of the CRSP/Compustat Merged database, county-level crime data, and LSEG Asset4 databases. The final sample comprises 15,639 firm-year observations representing 2,226 unique firms over the period 2002-2022. Appendix Table A1 provides a detailed description of the variables used in this study.

2.2 Measures of crime levels

To measure crime rates at the county and state levels, we begin by collecting data from the Federal Bureau of Investigation's (FBI) Uniform Crime Reporting (UCR) Program. The UCR Program compiles comprehensive crime statistics from law enforcement agencies across the United States, providing detailed information on various types of offenses. These offenses include violent crimes such as homicide, robbery, and aggravated assault and property crimes such as burglary, larceny-theft, and motor vehicle theft.[5] Because the crime data are reported at the agency level, corresponding to specific jurisdictions, we aggregate these data to county and state levels by summing the crime incidents reported by all law enforcement agencies within each county and state for a given year.

To accurately calculate crime rates that are comparable across geographic locations, we obtain population data for each county and state. These data are sourced from the U.S. Census Bureau for a given year. We carefully check that the population data aligns with the crime data regarding time period and geographic boundaries for consistency in our calculations. At the county level, we construct the crime rate by dividing the total number of reported crimes in each county by the county's population and then multiplying the result by 100,000. This calculation standardizes the crime rate per 100,000 inhabitants, allowing for meaningful comparisons across counties with varying population sizes. Similarly, we construct the state-level crime rate by summing the total number of reported crimes across all counties in the state, dividing by the state's total population, and multiplying by 100,000.

We also calculate both violent and property crime rates using the same standardized method to ensure comparability across different geographic areas. Violent crimes, as defined by the U.S. Department of Justice's UCR Program, include offenses such as murder, rape, robbery, and aggravated assault, which involve physical harm or the threat of harm to individuals (UCR, 2023). Property crimes, on the other hand, include burglary, larceny-theft,

[5] The data are available from: https://www.fbi.gov/how-we-can-help-you/more-fbi-services-and-information/ucr

motor vehicle theft, and arson, which involve the theft or destruction of property without direct harm to individuals (UCR, 2023).

Huck (2024a) studies how financial markets affect crime and uses daily crime data from the National Incident-Based Reporting System (NIBRS). The NIBRS data spans from 1991 to 2015 and contains over 80 million crime incidents. However, due to its voluntary nature, NIBRS data consistency may vary across agencies and over time, covering only about 30% of the U.S. population by 2015. In contrast, the UCR data used in our study comprises 256 million data points for the period from 2002 to 2022 (721 million data points for the entire UCR coverage). This dataset aligns well with the period of our ESG measurements and provides a comprehensive sample size for robust analysis. The UCR's standardized reporting protocols and aggregation to county and state levels allow for consistent crime rate calculations across geographical areas.

Figure 1A provides a visual representation of crime rates across the U.S. at the county level. The darker shades represent higher crime rates, while the lighter shades indicate lower crime rates, allowing for a clear comparison of crime levels across different regions. Notably, the western part of the U.S., particularly in California, exhibits several counties with high crime rates, as reflected by the darker red tones on the map. This pattern is also observed in certain counties in the southern states, such as Texas and Louisiana, where higher crime rates are prevalent. These areas stand out on the map, suggesting regions with potentially greater challenges in terms of crime management and law enforcement. In contrast, the central and northern regions of the U.S., including states like North Dakota, South Dakota, Montana, and Nebraska, display lighter shades on the map, indicating relatively lower crime rates. The East Coast presents a mixed picture, with some counties in the Northeast and Mid-Atlantic states showing higher crime rates, while others exhibit lower rates.

{INSERT FIGURE 1A}

Figure 1B illustrates crime rates across the U.S. at the state level. The map shows that Florida has the highest crime rate, as indicated by the darkest red shade. Other states with relatively high crime rates include South Carolina and Georgia, as well as several southwestern states such as New Mexico and Arizona. In contrast, states in the northern and central parts of the country, such as North Dakota, South Dakota, and Wyoming, display lighter shades of red, indicating lower crime rates. This trend extends to parts of the Midwest and the Northeast, where states like Vermont, New Hampshire, and Maine also exhibit lower crime rates.

{INSERT FIGURE 1B}

2.3. Measures of ESG performance

First, we obtain firm-level ESG scores from LSEG (formerly Refinitiv) Asset4 database. This database is widely respected for its comprehensive and detailed ESG metrics and is a common resource for assessing corporate sustainability and responsibility. The data provided by LSEG Asset4 covers a broad spectrum of environmental, social, and governance factors, offering a robust framework for evaluating a firm's ESG performance.[6] The Asset4 ESG score is the weighted average score from the three pillars: environment (E), social (S), and governance (G), with a total of ten categories across those pillars. Emissions, innovation, and resource use categories are under the environmental pillar; community, human rights, product responsibility, and workforce categories belong to the social pillar; and shareholders, CSR strategy, and management are the categories under the governance pillar. The weight of each category is based on the relative importance of various themes within the category to individual industry groups. The ESG score is normalized to values ranging from 0 to 1.

[6] This database has been employed in a number of recent studies examining firm-level ESG performance (e.g., Christensen, Serafeim, and Sikochi, 2021; Ding, Levine, Lin, and Xie, 2021).

Second, we obtain ESG data from the MSCI KLD database (formerly known as KLD Research and Analytics). The MSCI KLD database has been a cornerstone in ESG research for decades (Hong and Kostovetsky, 2012; Cheng, Ioannou, and Serafeim, 2014; Flammer, 2015), providing extensive historical data on corporate social performance and covers various ESG dimensions, including community relations, diversity, employee relations, environment, human rights, product quality, and corporate governance. We follow the methodologies outlined by Lins, Servaes, and Tamayo. (2017) to construct our ESG measures.[7] Specifically, ESG from KLD is computed as the number of strengths minus the number of concerns across the seven ESG dimensions.

LSEG Asset4 provides a comprehensive and quantitative ESG score based on weighted averages across environmental, social, and governance pillars, tailored to industry-specific relevance. In contrast, MSCI KLD adopts a strengths-and-concerns approach, offering a more qualitative perspective by counting positive and negative factors in each ESG dimension. In our study, we use both of these ESG measures to enhance the robustness and reliability of ESG assessments by capturing different dimensions of corporate sustainability.[8]

2.4 Summary statistics

Table 1 presents the descriptive statistics for the main variables and control variables used in the analysis. In Panel A, the ESG score from the LSEG Asset4 database shows a mean of 0.399 and a median of 0.363. Thus, on average, firms in the sample have a moderate level of

[7] MSCI/KLD evaluates firms across seven different ESG categories: environment, employee relations, community, diversity, human rights, product, and governance. For each category, we consider both strengths and concerns, and create a net ESG measure by adding the strengths and subtracting the concerns (Lins, Servaes, and Tamayo, 2017). Since the number of strengths and concerns in each category fluctuates over time, we follow the approach of Servaes and Tamayo (2013) by scaling the strengths (concerns) for each category. This is done by dividing the number of strengths (concerns) for each firm-year by the maximum possible number of strengths (concerns) in that category for that year.

[8] Studies such as Ioannou and Serafeim (2012) use both MSCI KLD data and Asset4 data to investigate corporate social responsibility (CSR) practices and firm performance and note that the use of both measures offers complementary research insights.

environmental, social, and governance performance. The ESG score from the MSCI KLD database shows a negative mean (-0.110) and median (-0.107). Thus, firms in our sample tend to have more concerns than strengths in their ESG ratings. The crime variables show the average crime rates per 100,000 residents at the county and state levels. The county-level crime rate, *CRIME* (*county*), has a mean of 3,478 crimes per 100,000 residents, which is higher than the state-level crime rate, *CRIME* (*state*), with a mean of 2,675 crimes per 100,000 residents. The standard deviations indicate significant variability in crime rates at both county and state levels.

In Panel B, we include control variables representing various financial and operational metrics. Firm size, *SIZE*, which is measured by the log of total assets, has a mean of 7.739. *RND*, representing research and development expenses as a percentage of sales, has a low mean of 0.062, suggesting that RandD spending is, on average, a small proportion of firm sales. Leverage, *LEV*, and capital expenditures, *CAPX*, also exhibit low means, 0.252 and 0.034, respectively, reflecting modest levels of debt and investment in capital assets across the sample. The return on assets, *ROA*, has a negative mean, -0.011, indicating that, on average, firms in the sample have slight losses. The market-to-book ratio, BTM, has a mean of 0.395, indicating that the book value of equity is on average about 40% of the market value of equity for our sample firms. Property, plant, and equipment, *PPE*, account for about 19.8% of total assets on average, highlighting the tangible asset base of these firms. The average firm age, *FRMAGE*, is approximately 20.7 years, indicating that the sample comprises relatively mature companies. Cash holdings, *CASH*, represent about 15.3% of total assets on average, reflecting a conservative liquidity position among firms. Sales growth, *SALEG*, shows a mean of 0.211 but with high variability, indicating diverse growth experiences within the sample. The average asset tangibility, *TANG*, average is 35.2%, and the average stock return volatility, *VOL*, is 0.460. The Amihud illiquidity measure, *AMIHUD*, varies widely, with a mean of 4.963,

suggesting differing levels of stock liquidity across firms. Lastly, the average stock return, *RET*, is 0.128. These statistics are comparable with those reported in prior studies (e.g., Goyenko, Holden, and Trzcinka, 2009; Lins, Servaes, and Tamayo, 2017; Harford, He., and Qiu , 2024).

{INSERT TABLE 1}

Panel C provides additional insights into CEO characteristics, firm operations, and external factors influencing the firms in our sample. Gender diversity among CEOs is minimal, as reflected by the *FEMALE* variable with a mean of 0.043. The education of CEOs, *EDUC*, has a mean of 0.059, indicating that approximately 5.9% of the CEOs hold an advanced degree such as an MBA or Ph.D. The average CEO age, *AGE*, is approximately 57.5 years old, derived from the mean logarithmic value of 4.053. *SOCIAL* measures whether a CEO is pro-social. It is an indicator that is equal to one if a CEO has been involved in at least one charitable organization, and zero otherwise. This variable has a mean of 0.392, with a median of 0.000, indicating that 39.2% of CEOs in the sample have been involved with some charity work.

For variables of firm operations, we first obtain the variables of borrowing constraints, *FCDEBT*, and equity constraints, *FCEQU*, from Linn and Weagley (2023).[9] A higher value of *FCDEBT* indicates a greater level of borrowing constraints, while a higher value of *FCEQU* indicates greater equity issuance constraints. The mean *FCDEBT* is 0.106, and the mean equity *FCEQU* is -0.149. Next, *RETAIL* is an indicator that is one if a firm belongs to the Retail industry (i.e., its SIC code being between 5000 and 5999), and zero otherwise. *RETAIL* has a mean of 0.132, showing that 13.2% of the firms operate within the retail sector. A significant proportion of firms have international operations, as reflected by the *FOREIGN* variable, which has a mean of 0.702. The *FOREIGN* variable takes a value of one if a firm has non-zero foreign income or foreign taxes, and zero otherwise.

[9] We thanks these authors for making their data available.

Our set of variables for external factors includes political factors, local climate action plans, and institutional ownership. Political factors are captured by the *DEMGOV* and *DEMPRES* variables, with means of 0.553 and 0.636, respectively. *DEMGOV* (*DEMPRES*) is an indicator variable equal to one for firms headquartered in states where more than 50% of residents voted for a Democratic governor (presidential) candidate. Both variables are sourced from the Federal Election Commission (FEC), and the mean values suggest that over half of firms operate in areas that support Democratic leadership at the state or national level. We gather information on state-level climate action plan (SCAP) finalizations from the Georgetown Climate Center (GCC), a prominent resource for practical strategies addressing climate change impacts.[10] The indicator variable for *SCAP* is coded as one if the firm is headquartered in a state that has finalized its climate action plan, and zero if it has not. *SCAP* has a mean of 0.483, indicating that nearly half of the firms are from states that have adopted climate adaptation strategies and action plans to prepare for and combat climate change. Institutional ownership, *IO*, is the percentage of shares institutional investors hold. The *IO* mean of 0.761 shows that institutional investors own an average of about 76.1% of the firms' outstanding shares.

3. Core results

We employ a regression framework where we can control for firm-specific characteristics and time-invariant factors at the same time. We use the following regression model:

$$\begin{aligned} ESG\_SCORE_{i,t} = {} & a + b_1 CRIME_{i,t-1} + b_2 SIZE_{i,t-1} + b_3 RND_{,t-1} + b_4 LEV_{i,t-1} + b_5 CAPX_{i,t-1} \\ & + b_6 BTM_{i,t-1} + b_7 PPE_{i,t-1} + b_8 FRMAGE_{i,t-1} + b_9 ROA_{i,t-1} + b_{10} CASH_{i,t-1} \\ & + b_{11} SALEG_{i,t-1} + b_{12} TANG_{i,t-1} + b_{13} VOL_{i,t-1} + b_{14} AMIHUD_{i,t-1} + b_{15} RET_{i,t-1} \\ & + \gamma_i + \delta_k + \theta_t + \varepsilon_{i,t} \end{aligned} \quad (1)$$

[10] Data are available from: https://www.georgetownclimate.org/adaptation/plans.html.

where *ESG_SCORE* is the ESG performance sourced from the LSEG Asset4 database or the MSCI KLD database. *CRIME* is county-level (or state-level) crime rate. γ_i, δ_k, and θ_t denote the firm, industry, and year fixed effects to account for firm-level, time, and industry invariant factors that could be associated with ESG performance. Following prior studies (e.g., Servaes and Tamayo, 2013 Di Giuli and Kostovetsky, 2014; Krüger, 2015; Crongvist and Yu, 2017; Lins, Servaes, and Tamayo, 2017; Azar, Duro, Kadach, and Ormazabal, 2021), we also control for various observed firm characteristics that can be associated with firm ESG performance, including firm size (*SIZE*), research and development, (*RND*), leverage (*LEV*), capital expenditure (*CAPX*), book-to-market ratio (*BTM*), property, plant and equipment (*PPE*), firm age (*FRMAGE*), return-on-assets (*ROA*), cash holdings (*CASH*), sales growth (*SALEG*), tangible assets (*TANG*), stock return volatility (*VOL*), Amihud stock liquidity (*AMIHUD*), and stock return (*RET*). We lag all independent variables by one year relative to ESG performance to avoid potential reverse causality issues. To correct for cross-sectional and time-series dependence, we use robust standard errors clustered simultaneously by firm and year dimensions (e.g., Petersen, 2009; Gow, Ormazabal, and Taylor, 2010).

Table 2 presents the empirical results of the effect of county-level crime rates on ESG performance, using two different measures of ESG: Asset4 ESG scores and KLD ESG scores. We report the results across multiple models, controlling for various firm characteristics and fixed effects.

In columns (1) to (3), where we employ Asset4 ESG scores as the dependent variable, the coefficients on *CRIME* (*county*) are negative and statistically significant across all three models. This indicates that higher crime rates at the county level are associated with lower firm-level ESG performance. Specifically, in model (1), a one-unit increase in crime rate is associated with a 0.0078 decrease in the ESG score. This negative relationship persists even when firm fixed effects, industry fixed effects, and year fixed effects are included in models

(2) and (3), though the magnitude of the effect slightly decreases. This suggests that crime in the immediate surrounding area negatively impacts firms' ESG efforts.

In columns (4) to (6), we replicate the analysis using the KLD ESG score as the dependent variable. The results again show a negative and significant relationship between county-level crime and this alternative ESG performance. Notably, the effect size in this case is larger, particularly in model (6), where the coefficient is -0.1666, suggesting a stronger impact of crime on KLD scores. Given that the scales and constructions of the two ESG variables differ, the differences in coefficient estimates are expected.

Across all models, control variables such as *SIZE* and *RND* consistently show a positive and significant relationship with ESG and KLD scores, indicating that larger firms and those investing more in research and development tend to have better ESG performance. On the other hand, variables such as *LEV* and *CAPX* exhibit mixed effects. The inclusion of firm, industry, and year fixed effects, particularly in models (3) and (6), significantly increases the adjusted R-squared values, suggesting that accounting for these factors explains a substantial portion of the variation in ESG performance.

{INSERT TABLE 2}

Table 3 presents the results where we separate our county-level CRIME variables into violent crime, $CRIME_{Violent}$, and property crime, $CRIME_{Property}$. We adopt the most robust model, including firm fixed effects and year fixed effects. In column (1), the coefficient on $CRIME_{Violent}$ is negative and statistically significant at the 1% level. A one-unit increase in the violent crime rate is associated with a 0.0115 decrease in the ESG score. In column (2), the coefficient on $CRIME_{Property}$ is also negative and statistically significant at the 1% level. A one-unit increase in the property crime rate is associated with a 0.0072 decrease in the ESG score.

{INSERT TABLE 3}

Overall, the results in Table 2 and Table 3 show a robust negative relationship between county-level crime rates and ESG performance. The results hold when we consider violent crime and property crime separately. These findings suggest that firms located in higher crime areas may face challenges in maintaining or improving their ESG performance, potentially due to the adverse effects of a crime-ridden environment on their operations and stakeholder relationships.

We also perform a number of robustness checks and present these results in the Appendix. Table A2 contains the results of robustness checks for the relationship between crime rates and ESG performance, where we measure crime rates at the state level. The analysis echoes the findings from the county-level results on a negative association between crime and ESG outcomes. In columns (1) and (2), the coefficients for *CRIME* (*state*) are negative and statistically significant, indicating that higher state-level crime rates are associated with lower ESG performance. Similarly, the analysis using KLD scores as the dependent variable in colums (3) and (4) also shows a significant negative relationship between state-level crime and ESG. In Table A3, we consider an alternative measure of ESG performance where we source the total number of incidents reported in RepRisk database with higher values indicating poorer environmental performance. This alternative measure allows us to capture more direct instances of ESG-related risks and controversies, providing a complementary perspective on a firm's environmental reputation.[11] Although the requirement of data availability in RepRisk reduces the sample size significantly to 6,049 observations, we still observe that an increase in the county-level crime rate is associated with an increase in the count of negative ESG incidents. This reinforces the robustness of the crime–ESG relationship across different measures of ESG performance. As a further robustness check, we repeat our analysis using

[11] RepRisk specializes in environmental, social, and governance (ESG) risk analytics and metrics. The firm operates a comprehensive database that systematically tracks and analyzes public information from media, stakeholders, and other sources to identify ESG risks associated with firms and infrastructure projects worldwide.

change variables for ESG, crime and each of the control variables. The results presented in Table A4, Show that the general finding of increased crime resulting in lower ESG is robust to this specification.

4. Identification strategies

We employ a number of identification strategies to ensure that our documented results are not driven by omitted correlated variable biases and other endogeneity concerns. First, we adopt a two-stage least square analysis that employs an instrumental variable, following standard econometric techniques (Wooldridge, 2010). Second, we employ staggered and synthetic difference-in-differences approaches and investigate the impact of an exogenous shock on crime rate and the effect on firm-level ESG performance, drawing on methodologies from Bertrand and Mullainathan (2003) and Arkhangelsky, Athley, Hirshberg, Imbens, and Wager (2021). Third, we adopt headquarter changes to investigate the effect of crime rate from a new location on ESG performance, similar to the approach used by Pirinsky and Wang (2006). We discuss the details of each identification strategy and further analyses in the following section.

4.1 Instrumental variable

To address concerns that our OLS estimates may be biased due to omitted variables correlating with both crime rates and firms' ESG performance, we employ an instrumental variable (IV) approach (e.g., Angrist and Pischke, 2009; Roberts and Whited, 2013). The IV method allows us to isolate the causal effect of crime rates on ESG performance by accounting for potential endogeneity issues arising from unobserved factors.

We identify instruments that are correlated with crime rates but are plausibly exogenous to firms' ESG activities. Our first instrument is derived from federal grants to local police departments, similar to the approach used by Mello (2019). This instrument, denoted as *COPS*,

represents the county-level dollar amounts of grants provided by the Office of Community Oriented Policing Services (COPS) for new hires in local law enforcement agencies during the 2009–2014 period.[12]

Mello (2019) demonstrates that areas receiving increased federal funding for police forces experience significant reductions in crime rates. The underlying rationale is that augmented funding enhances law enforcement capacity, thereby exerting a deterrent effect on criminal activities. Importantly, these police grants are unlikely to directly influence firms' ESG performance or other unrelated operational aspects, satisfying both the relevance and exclusion restrictions necessary for a valid IV estimation (e.g., Wooldridge, 2010). Since the allocation of COPS grants is exogenous to individual firms and primarily aimed at improving public safety, we argue that *COPS* serves as a credible instrument in our analysis.

Our second instrument is based on alcohol consumption rates, drawing on established criminological research linking alcohol use to property crime. Greenfeld (1998) reports that over one-third of convicted criminals were under the influence of alcohol at the time of their offense, indicating a strong correlation between alcohol consumption and criminal activity. In addition, Carpenter (2007) provides causal evidence that the implementation of strict zero-tolerance drunk-driving laws, which effectively reduced alcohol consumption among young males, led to decreases in property crime arrests. Therefore, alcohol consumption should serve as a robust instrument for crime rates, as it is strongly related to property crime but does not directly affect firms' ESG performance. In our analysis, we measure alcohol consumption using annual per capita ethanol consumption data for each state, sourced from the National Institute on Alcohol Abuse and Alcoholismg.[13] We name this instrument *Alcohol*.

[12] https://github.com/mello/cops
[13] https://nda.nih.gov/niaaa

Employing these two instruments (*IV*): *COPS* and *Alcohol*, we proceed to perform a two-stage least squares (2SLS) regression. In the first stage, we use equation (2) and regress crime rates on our *IV*s, controlling for firm characteristics and fixed effects, to obtain the predicted crime rates, $\widehat{CRIME}$. In the second stage, we use equation (3) to estimate the impact of these predicted crime rates on firms' ESG performance. $C_{i,t}$ and $C_{i,t-1}$ refer to the control variables specified in equation 1.

$$CRIME_{i,t} = \beta_0 + \beta_1 IV_{i,t} + \sum_{m=1}^{M} \lambda_m C_{i,t} + \gamma_i + \theta_t + \varepsilon_{i,t} \quad (2)$$

$$ESG\_SCORE_{i,t} = \beta_0 + \beta_1 \widehat{CRIME}_{i,t-1} + \sum_{m=1}^{M} \lambda_m C_{i,t-1} + \gamma_i + \theta_t + \varepsilon_{i,t} \quad (3)$$

Table 4 presents the instrumental variable analysis results. Panel A shows the results of the first stage regression. The coefficient for *COPS* is -0.2149, which is highly significant, suggesting that increased investment in police grants is associated with a significant reduction in crime rates. The coefficient for *Alcohol* is 0.1284, also highly significant, indicating that higher alcohol consumption correlates with increased crime rates. The adjusted R-squared values of 0.402 and 0.158 for these models, respectively, indicate that the instruments explain a substantial portion of the variation in crime rates. The inclusion of control variables, firm fixed effects, and year fixed effects suggests that the relationship between the instruments and crime is robust to potential confounding factors.

The second stage regression results are presented in Panel B of Table 4 to show the impact of predicted crime rates on ESG performance. The results show that both instrumented crimes, $CRIME_{COPS}$ and $CRIME_{Alcohol}$, have a significant negative effect on ESG scores. Specifically, the coefficient for $CRIME_{COPS}$ is -0.1863, indicating that higher crime rates (as instrumented by COPS) are associated with a significant decline in ESG performance. The effect is even more pronounced for $CRIME_{Alcohol}$, with a coefficient of -1.8002, suggesting that crime rates driven by alcohol consumption have a strongly negative impact on ESG outcomes.

The significant coefficients in both stages of the regression provide strong evidence that the relationship between crime and ESG is robust and likely causal, with higher crime rates leading to lower ESG performance.

{INSERT TABLE 4}

4.2 Medicaid changes as exogenous shocks

Next, we employ the Medicaid expansion as an exogenous shock to local crime rates in our analysis with the aim to use this policy change to isolate causal impact of crime changes on the outcomes of firm-level ESG performance.

Medicaid is a critical public health insurance program in the U.S. that provides coverage to low-income individuals and families. Established in 1965 under the Social Security Act, Medicaid is jointly funded by federal and state governments and administered by states within broad federal guidelines. The Affordable Care Act (ACA) of 2010 significantly expanded Medicaid eligibility to include all individuals with income up to 138% of the federal poverty level, thereby extending coverage to millions of previously uninsured adults, particularly low-income, non-elderly adults without dependent children). This expansion aimed to reduce the number of uninsured Americans and improve access to healthcare, aligning with the ACA's broader goals of enhancing public health and economic security.

A 2012 Supreme Court ruling in National Federation of Independent Business v. Sebelius, however, made Medicaid expansion optional for states, leading to significant variation in its implementation across the country (e.g., Rosenbaum and Westmoreland, 2012). Some states expanded coverage immediately, others delayed implementation, and some opted not to expand at all. This patchwork adoption created a natural experiment setting that researchers have employed to study the impacts of Medicaid expansion on various outcomes, including public health, economic stability, labor markets, and social factors. Importantly for our study, recent research has linked Medicaid expansion to reductions in crime rates. For

example, Vogler (2020) provides empirical evidence that states expanding Medicaid under the ACA saw subsequent decreases in violent crime. Other studies, such as Wen, Hockenberry, and Cummings (2017) and He and Barkowski (2020), also find that states which expanded Medicaid under the ACA experienced significant decreases in both property and violent crime rates compared to non-expansion states. They attribute these reductions to improved access to healthcare services, including mental health and substance abuse treatments, which address underlying issues that can lead to criminal behavior. This evidence suggests that Medicaid expansion serves not only as a public health initiative but also as a social policy tool that can indirectly reduce crime. Furthermore, economic theory also suggests that access to healthcare reduces financial stress and improves overall well-being, which can decrease the propensity for criminal activity (e.g., Grossman, 1972).

Given this context, studying the impact of Medicaid expansion on firms' ESG performance using a staggered difference-in-differences (DiD) approach is particularly relevant for addressing endogeneity concerns. The variation in the timing of Medicaid expansion across states allows for a more precise analysis of how reductions in crime, driven by improved access to healthcare, translate into changes in ESG outcomes. Specifically, we hypothesize that as states implement Medicaid expansion and subsequently experience lower crime rates, firms operating in those states benefit from a more stable and secure environment. This stability can lead to improvements in ESG performance, as firms are better positioned to invest in sustainable practices, community engagement, and governance initiatives without the detriments associated with high local crime rates.

Table 5 reports the results of this empirical analysis. In column (1) of Table 5, the average treatment effect on the treated (ATT) for the Medicaid expansion is positive and statistically significant, with a coefficient of 0.1191. This suggests that states that expanded Medicaid under the Affordable Care Act experienced improved ESG performance by firms

operating in those states. In Panel B of Table 5, the dynamic DiD effects provide further insights into the timing and persistence of the impact of Medicaid expansion. The results show that the positive effects of Medicaid expansion begin at the time of the policy implementation (*t*) and continue to grow over time. At *t*, the effect is 0.0518, significant at the 1% level, indicating an immediate positive impact following the expansion. The effect remains strong and statistically significant in the subsequent periods, with coefficients of 0.0489, 0.0584, and 0.0845 at $t + 1$, $t + 2$, and $t + 3$, respectively. These findings suggest that the benefits of Medicaid expansion are not only immediate but also increase over time, likely due to the cumulative effects of improved health outcomes and reduced crime, which contribute to a more stable and supportive environment for corporate ESG initiatives.

{INSERT TABLE 5}

In addition to the traditional staggered difference-in-differences (DiD) analyses, we also implement a synthetic staggered DiD approach in column (2) of Table 5 to further validate our findings. The synthetic DiD method combines elements of the synthetic control method and DiD estimators to enhance causal inference, especially when the parallel trends assumption may be violated (e.g., Arkhangelsky, Athley, Hirshberg, Imbens, and Wager, 2021). Specifically, this approach constructs a synthetic control group by optimally weighting control units to closely match the pre-treatment characteristics and trends of the treated units to address potential biases arising from unobserved heterogeneity and time-varying confounders. In column (2) of Table 5, the ATT for Medicaid expansion is positive and statistically significant at the 1% level, with a coefficient of 0.0450. This finding corroborates the results obtained from the traditional staggered DiD models, indicating that Medicaid expansion leads to improved ESG performance among firms in the affected states. The magnitude of the ATT is slightly smaller than in the traditional DiD estimates, reflecting the conservative nature of the

synthetic DiD method, which accounts for potential biases due to time-varying unobserved factors.

Figure 2 displays the results of the synthetic DiD analysis, illustrating the ATT estimates for Medicaid expansion. In the pre-treatment period ($t < 0$), the ATT estimates hover around zero, indicating no significant differences between treated and control groups before the Medicaid expansion. This flat trend confirms that the parallel trends assumption holds before the policy implementation. After the Medicaid expansion ($t \geq 0$), the ATT estimates increase gradually, becoming statistically significant and positive over time. This upward trend suggests that the Medicaid expansion led to progressively larger positive effects on the outcomes of interest, likely reflecting improvements in ESG performance due to the expanded access to healthcare.

Overall, the results in Table 5 and Figure 2 demonstrate that Medicaid expansion has a robust and positive effect, which is consistent with the hypothesis that improved public health and reduced crime rates associated with Medicaid expansion lead to better ESG performance by firms.

{INSERT FIGURE 2}

4.3 Headquarters changes

Next, we propose analyzing changes in firms' headquarters locations to understand how the external environment, specifically crime rates, influences ESG performance. Relocating corporate headquarters is a significant strategic decision with profound implications for a firm's operations, employee well-being, and overall success (e.g., Porter, 1990). Prior research indicates that geographical factors causally impact corporate behavior and performance (e.g., Dougal, Parsons, and Titman, 2015; Grieser, LeSage, and Zekhnini, 2022;).

Moving headquarters into high-crime areas may introduce challenges such as increased security costs, decreased employee morale, and potential reputational risks, all of which can

negatively impact ESG performance. Brushwood, Dhaliwal, Fairhurst, and Serfling (2016) find that firms located in areas with higher property crime rates face higher financing costs due to perceived risks, which can constrain resources available for ESG initiatives. High crime rates can also adversely affect employee safety and satisfaction, leading to reduced productivity and challenges in talent retention (e.g., Ganau and Rodriguez-Pose, 2017). Conversely, relocating to lower-crime areas may provide a safer and more stable environment that supports operational efficiency and positive stakeholder relations. Such environments can enhance a firm's ability to invest in ESG activities, improve community engagement, and attract socially conscious investors and employees (e.g., Porter and Kramer, 2006). Therefore, analyzing firms that change their headquarters location allows us to observe how variations in local crime rates directly impact ESG outcomes.

Using staggered and synthetic DiD approaches, we examine the effects of changes in headquarter locations and ESG outcomes, specifically focusing on a subsample of firms that change their headquarters from a low (high) crime county to a high (low) crime county, based on the median county-level crime in a year. Table 6 presents the empirical results. In Panel A, the ATT results highlight the overall impact of changing headquarter locations on ESG performance. Based on the synthetic DiD approach, for firms moving from low-to-high crime areas, the ATT is -0.0717 and statistically significant, indicating that such relocations are associated with a significant decline in ESG performance. Conversely, for firms moving from high-to-low crime areas, the ATT is 0.0761 and statistically significant, indicating that relocating to lower crime areas is beneficial for firms.

In Panel B, the dynamic DiD results provide further insights into the timing and persistence of the effects of relocating headquarter locations on ESG performance. The synthetic DiD results show that for firms relocating from low-to-high crime areas, the negative effects of crime begin to materialize immediately at the time of the move (t = 0), with a

statistically significant ATT of -0.0686, and remain significant over time. Conversely, for firms relocating from high-to-low crime areas, the positive impact begins immediately, with a statistically significant ATT of 0.0432 at $t = 0$. The positive effects remain strong in the years $t + 1$ through $t + 3$. These results indicate that the benefits of relocating to lower crime areas are both immediate and sustained.

{INSERT TABLE 6}

Overall, the DiD effects in Table 6 reinforce the notion that crime rates at headquarters locations have a lasting impact on corporate ESG performance, with positive effects emerging from moves to safer areas and negative effects persisting in riskier environments. These patterns highlight the importance of location-specific factors, particularly crime rates, in shaping ESG outcomes for firms.

5. Factors influencing the crime-ESG relation

We explore the possibility that crime matters more for certain types of firms within certain economic environments than others. Specifically, we examine the impact of crime on ESG performance with variation among CEO characteristics, firm resources, and stakeholder pressure.

5.1 CEO characteristics

We explore how CEO characteristics may moderate the impact of crime on firms' ESG performance, focusing on gender, education, age, and social engagement.

First, prior research consistently shows that female CEOs tend to exhibit higher levels of risk aversion compared to their male counterparts. Croson and Gneezy (2009) document that women are generally more risk-averse, particularly in uncertain or threatening environments, which aligns with broader findings on gender differences in risk preferences. Moreover, Faccio,

Marchica, and Mura (2016) find that firms led by female CEOs undertake less risky investments and have lower leverage, indicating a more conservative approach to risk management. Adams and Funk (2012) suggest that female directors prioritize values like benevolence and universalism, which may influence corporate decisions toward caution in the face of external threats such as crime. This heightened sensitivity to risk implies that female CEOs may respond more conservatively to external threats, potentially leading to a stronger reduction in ESG initiatives when crime rates increase. Therefore, we hypothesize that the negative effect of crime on ESG performance is more pronounced in firms led by female CEOs. In our empirical analysis, *FEMALE* is set to one for female CEOs and zero otherwise.

Second, CEO education is crucial in strategic decision-making and risk navigation. Bertrand and Schoar (2003) highlight that CEOs with higher levels of education are better equipped to make complex decisions and adapt to changing environments. Custódio and Metzger (2014) find that educated CEOs are likelier to engage in innovative activities and adopt sophisticated risk management strategies. Therefore, we posit that the adverse effect of crime on ESG performance is less severe among firms led by CEOs with higher levels of education. In our analysis, CEO education, *EDUC,* is an indicator equal one if a CEO has a PhD or MBA qualification, and zero otherwise.

Third, older CEOs often exhibit conservatism and risk aversion, which can hinder adaptability in high-crime environments. Serfling (2014) finds that firms with older CEOs tend to invest less in R&D and other innovative activities. Yim (2013) shows that CEO age is negatively correlated with corporate risk-taking. This conservatism may impede the implementation of innovative ESG strategies or effective mitigation of risks associated with crime. Thus, we expect the negative impact of crime on ESG performance to be more pronounced among firms led by older CEOs. We thus create variable *AGE* for a CEO age in any given year.

Fourth, CEOs with strong social engagement are often more effective in mitigating the negative effects of external challenges, such as crime, on ESG performance. Feng, Ge, Ling, and Loh (2024) show that CEOs who actively engage in civic and social responsibilities can foster better relationships with stakeholders and improve corporate social and environmental outcomes. Flammer and Luo (2017) find that such proactive engagement not only enhances ESG performance but also strengthens financial outcomes by increasing transparency and trust among stakeholders. Therefore, we expect that firms led by socially engaged CEOs will be less adversely affected by crime in terms of their ESG performance.

To identify CEOs' prosocial tendencies, we adopt the approach of Feng, Ge, Ling, and Loh (2024) and employ the BoardEx database to gather information on individual CEOs' memberships and involvement in various off-the-job organizations, including leisure clubs, professional groups, and charitable organizations. We match these organizations' names with those classified as charitable by the IRS. If a CEO has participated in at least one charitable organization during their career, we designate them as prosocial, assigning a value of one to the variable *SOCIAL*, and zero otherwise.[14]

Table 7 presents the empirical results where we explore the impact of local crime rates on ESG performance, with a focus on how this relationship varies across different CEO characteristics such as gender, education, age, and social engagement. In column (1), the coefficient for county-level *CRIME* is negative and highly significant (-0.0159), indicating that higher crime rates are generally associated with lower ESG performance. The interaction term *CRIME * FEMALE* is also negative and significant (-0.015), suggesting that the adverse impact of crime on ESG is even more pronounced when the CEO is female. However, the positive coefficient for *FEMALE* (0.0821) suggests that female CEOs, in general, are associated with

[14] Feng, Ge, Ling, and Loh (2024) show document that prosocial CEOs are less inclined to credit themselves for good performance and less likely to blame others for poor performance. This finding supports the notion that this measure effectively captures the individual tendencies of prosocial CEOs.

better ESG performance.[15] These results suggest that while female CEOs may drive stronger ESG initiatives, they might face greater challenges in crime-prone environments, possibly due to heightened risk aversion towards crime risk.

In column (2), the interaction term *CRIME * EDUC* is positive and significant (0.0126), indicating that the negative impact of crime on ESG is mitigated when the CEO has a higher level of education. This suggests that more educated CEOs may possess the skills and knowledge to better navigate the challenges posed by high-crime environments, possibly by implementing more effective risk management strategies or fostering stronger community relations. Interestingly, the positive coefficient for *EDUC* (0.0462) further reinforces the idea that higher education levels are generally associated with better ESG outcomes.

In column (3), there is a negative and significant interaction between *CRIME* and *AGE* (-0.1663), indicating that there is a more pronounced impact of crime on ESG performance among firms led by older CEOs. While the main effect of *AGE* is positive, it is not statistically significant. These results suggest that older CEOs, who might be more conservative or less adaptive to change, could find it more difficult to counteract the challenges posed by a high-crime environment.

In column (4), we introduce *SOCIAL*, a measure of the CEO's engagement in pro-social engagements. The interaction term *CRIME * SOCIAL* is positive and significant (0.012), indicating that CEOs who are more socially engaged can offset some of the negative effects of crime on ESG performance. The positive coefficient for *SOCIAL* (0.0592) suggests that socially engaged CEOs are generally associated with better ESG outcomes, likely due to their proactive stance in addressing social issues and fostering stronger relationships with stakeholders (Feng, Ge, Ling, and Loh, 2024).

[15] This finding is in line with prior studies documenting higher ESG performance among firms with larger proportions of female directors (e.g., Bear, Rahman, and Post 2010).

Overall, the results in Table 6 demonstrate that the impact of crime on ESG performance is not uniform but varies significantly based on CEO characteristics. Female CEOs, older CEOs seem to experience more significant challenges in high-crime environments, which negatively affects ESG outcomes. In contrast, higher education and social engagement appear to provide some resilience against the adverse effects of crime, potentially enabling better ESG performance even in challenging environments. These findings highlights the importance of considering the role of leadership attributes in shaping a firm's response to external risks like crime.[16]

{INSERT TABLE 7}

5.2 Firm resources

We next examine how resource constraints influence the impact of crime on firm performance, building on the premise that firms with varying levels of financial limitations, industry-specific characteristics, and international operations may exhibit different degrees of vulnerability or resilience in the face of crime.

First, prior research suggests that firms facing greater financial constraints, whether due to debt or limited access to equity capital, are more sensitive to external shocks. For example, Myers (1977) argues that highly leveraged firms have less financial flexibility to adapt to unforeseen challenges because of their debt obligations. Similarly, Kaplan and Zingales (1997) find that firms with constrained equity resources have limited capacity to raise capital, making it difficult to buffer against adverse events. Consistent with these findings, Almeida, Campello, and Weisbach (2004) show that financially constrained firms cannot easily adjust investment policies in response to negative shocks. Therefore, we hypothesize that firms with higher debt

[16] Table A5 in the Appendix presents the results of the varying effects of *CRIME* on KLD ESG based on CEO characteristics. We document similar findings to those reported in Table 6 where CEOs who are women and oldertend to face greater difficulties in high-crime environments, which negatively impact ESG outcomes. In contrast, those CEOs with higher levels of education and greater social engagement are more resilient against the adverse effects of crime.

or equity constraints will exhibit a stronger negative relationship between crime and firm performance, as they lack the necessary financial cushion to absorb costs associated with crime-related disruptions. We source borrowing and equity issuance constraint variables, *FCDEBT* and *FCDEQU*, from Linn and Weagley (2023), with higher values indicating higher levels of constraints.

Second, industry characteristics play a crucial role in how firms cope with crime. Retail firms, in particular, are more exposed to crime due to their reliance on physical locations that are vulnerable to theft, vandalism, and other criminal activities. Rosenthal and Ross (2010) highlight how retail firms are particularly sensitive to crime due to their reliance on pedestrian shoppers. Therefore, we expect the impact of crime on firm ESG performance to be more pronounced for retail firms compared to those in other industries. In our analysis, *RETAIL* is a dummy variable that is set to one if a firm belongs to the Retail industry (SIC code being between 5000 and 5999), and zero otherwise.

Lastly, firms with global operations may possess more resources and diversified risk management strategies, enabling them to mitigate the adverse effects of crime more effectively. International diversification allows firms to allocate resources flexibly, adjust supply chains, and leverage best practices from global markets to handle external threats (e.g., Kim, Hwang, and Burgers, 1993). Doukas and Lang (2003) find that multinational firms benefit from diversification by reducing their overall risk exposure. Consequently, we hypothesize that firms with international operations will experience a lesser impact of local crime on performance compared to domestic firms, as their global presence provides a buffer against localized crime pressures. We establish an indicator variable *FOREIGN* that takes a value of one if a firm has non-zero foreign income or foreign taxes as reported in Compustat, and zero otherwise.

Table 8 presents the results of this analysis. In columns (1) and (2), the interaction coefficients *CRIME * FCDEBT* and *CRIME * FCEQU* are -0.0088 and -0.0138, respectively,

and these coefficients are statistically significant at the 1% level. This result suggests that firms with higher debt constraints or equity constraints experience a more negative impact on ESG performance from crime. At the same time, the direct effects of *FCDEBT* and *FCEQU* are also negative and significant (-0.073 and -0.1074), reinforcing the idea that firms with high financial constraints from debt and equity exhibit worsened firm ESG outcomes.

In column (3), the interaction coefficient *CRIME * RETAIL* is -0.0062 and stattistically significant at the 1% level. This result suggests that firms in the Retail industry suffer a more negative effect of crime on their ESG activities. Interestingly, in column (4), the interaction coefficient *CRIME * FOREIGN* is positive (0.0101) and statistically significant at the 1% level. This suggests that firms with foreign operations are subject to a lesser effect of crime on their ESG performance. The direct effect of *FOREIGN* is also positive (0.084) and significant at the 1% level, indicating that firms with foreign operations exhibit a higher level of ESG performance.

Overall, the results in Table 8 demonstrate that the impact of crime on ESG performance also varies in firm-level proxies for resources. Specifically, the impact of crime on ESG is more pronounced among firms with high debt and equity constraints, and retail firms, while such impact is lesser among firms with foreign operations.[17]

{INSERT TABLE 8}

5.3 Stakeholder pressure

We further explore how external governance factors and stakeholder pressures may influence the relationship between local crime rates and firms' ESG performance. Specifically, we investigate the moderating effects of political leaning, environmental regulations, and institutional ownership on this relationship.

[17] Using MSCI KLD as the alternative proxy for ESG performance, we find similar patterns that financial constraints, retail industry, and international diversification play a role in moderating the negative impact of crime on ESG outcomes. These results are reported in Table A6.

First, political leadership at the state level can significantly shape corporate behavior. Democratic leaders often implement more progressive policies, stronger social safety nets, and proactive law enforcement strategies that can mitigate the adverse effects of crime and promote ESG initiatives. Prior research indicates that Democratic administrations tend to prioritize environmental protection and social welfare, which positively influences corporate ESG performance and financing costs (e.g., Di Giuli and Kostovetsky, 2014). In addition, areas where the Democratic Party holds a majority may have constituents who place a higher value on corporate social responsibility and environmental stewardship. This societal expectation can pressure firms to maintain or enhance their ESG performance, even amid external challenges like crime. Studies have shown that local political leanings influence corporate policies and stakeholder expectations (e.g., Hong and Kostovetsky, 2012;). Thus, we posit that the negative effect of crime on ESG performance is less pronounced in regions with a Democratic voting majority. Following Di Giuli and Kostovetsky (2014), our political indicator *DEMGOV* (*DEMPRES*) takes a value of one for firms headquartered in states with more than 50% of their residents' votes for a Democratic governor (president) candidate, and zero otherwise.

Second, regulatory frameworks such as State Climate Adaptation Plans (SCAPs) compel firms to adhere to stricter environmental standards and sustainability practices. SCAPs are policies implemented at the state level to address climate change and promote sustainable development (e.g., He, Nguyen, Qiu, and Zhang, 2023). These regulations incentivize firms to invest in ESG initiatives to comply with legal requirements and meet societal expectations. Consequently, we expect that the adverse impact of crime on ESG performance is mitigated for firms operating in states with SCAPs. In our analysis, *SCAP* is a dummy that equals one if a firm is headquartered in a state with a state-level climate action plan in year *t*, and zero otherwise.

Lastly, institutional ownership can influence corporate governance and strategic decisions. Institutional investors often advocate for improved ESG performance and can exert significant pressure on management to uphold sustainability commitments (e.g., Dyck, Lins, Roth, and Wagner, 2019; Cheng, Hong, and Shue, 2016). Firms with higher levels of institutional ownership may be better equipped to maintain their ESG initiatives despite challenges posed by local crime. We hypothesize that the negative relationship between crime and ESG performance is weaker for firms with substantial institutional ownership. We use institutional ownership, *IO,* as the percentage of shares of a firm held by institutional investors.

Table 9 presents this set of analysis. In column (1), the interaction coefficient *CRIME * DEMGOV* is positive (0.0207) and statistically significant at the 1% level, suggesting that firms operating in states with Democratic governors experience a less negative effect of crime on the ESG outcome compared to firms operation in states with non-Democratic governors. The positive and statistically significant coefficient of *DEMGOV* (0.1613) suggests that firms in states with Democratic governors also generally exhibit higher ESG performance. This is in line with our hypothesis that Democratic governments are often associated with more progressive policies, social safety nets, or law enforcement strategies that may mitigate the effects of crime and promote ESG outcomces.

In column (2), the interaction term *CRIME * DEMPRES* (0.0109) is positive and statistically significant. This implies that the negative impact of crime is less severe in areas where the Democratic presidential candidate won the majority. Thus, areas voting Democratic are better equipped to mitigate the effects of crime, perhaps due to more socially progressive policies or investments in crime prevention and social services. The positive and statistically significant coefficient of *DEMPRES* (0.0948) suggests that firms operating in states or districts where the Democratic Party won a majority of votes have better ESG outcomes, potentially due to the policies or governance style typically associated with Democratic-leaning areas.

In column (3), the interaction coefficient *CRIME * SCAP* is positive (0.026) and statistically significant at the 1% level, suggesting that the effect of crime on ESG is lesser among firms operating in states with SCAP. Interestingly, the coefficient on SCAP is also positive (0.1723) and statistically significant at the 1% level. Thus, we document that firms operating in states with SCAP also exhibit higher levels of ESG performance.

We also find some evidence that the effect of crime on ESG is lesser among firms with a higher level of institutional holdings. The interaction *CRIME * IO* in column (4) is positive (0.0345) and statistically significant. Consistent with prior studies, we find that institutional holdings exhibit a positive relationship with ESG performance.

Overall, the results in Table 9 demonstrate that the impact of crime on ESG performance also varies in various proxies for stakeholder pressure. Specifically, the impact of crime on ESG is lesser among firms operating in democratic government, in areas with the implementation of SCAP, and when the level of institutional holding is high.[18]

{INSERT TABLE 9}

6. Conclusions

This study provides robust evidence that higher local crime rates significantly undermine corporate ESG performance. Employing a comprehensive dataset and rigorous identification strategies, we demonstrate that firms headquartered in high-crime areas experience notable declines in ESG outcomes across multiple measures, such as those from LSEG Asset4 and MSCI KLD databases. Our findings show that crime not only poses immediate operational challenges but also erodes a firm's commitment to sustainability, governance, and social responsibility.

[18] Table A7 in the Appendix presents the results of the effect of stakeholder where we use KLD ESG measures. We document consistent findings where the impact of crime on KLD ESG is lesser among firms operating in democratic leaning states and in states with the implementation of SCAP.

The negative impact of crime on ESG is particularly pronounced in firms with financial constraints, such as those with high levels of debt or limited equity. These firms likely lack the financial flexibility to maintain or improve ESG initiatives in the face of external stressors like crime. Retail firms also exhibit a more negative relationship between crime and ESG, which is likely due to their heightened exposure to crime-related disruptions, such as theft and vandalism, at physical store locations. In contrast, firms with international operations are better able to mitigate the adverse effects of crime, potentially due to diversified operations and access to global resources, which provide a buffer against local crime conditions.

Moreover, we find that certain leadership-level characteristics moderate the relationship between crime and ESG performance. Firms led by higher educated or pro-social CEOs exhibit a less negative impact of crime on ESG outcomes. This suggests that leadership plays an important role in navigating external risks and maintaining ESG initiatives. On the other hand, the negative impact of crime is more pronounced in firms led by female and older CEOs, likely due to heightened risk aversion towards crime and its potential disruption to ESG efforts.

We also explore the role of external governance and stakeholder pressure in moderating the crime-ESG relationship. Firms located in states with stronger Democratic support in elections of governors or presidents are less affected by local crime when it comes to ESG outcomes. This finding suggests that progressive voter preferences, which tend to prioritize sustainability and social welfare, may provide a more supportive environment for maintaining ESG efforts, even in the presence of external threats like crime. In addition, we document that firms operating in states that have finalized State Climate Adaptation Plans (SCAPs) exhibit a lesser negative impact of crime on ESG. SCAPs, which enforce climate-related regulations, appear to incentivize firms to comply with stricter environmental governance, thereby mitigating the adverse effects of crime on their overall ESG performance. Our findings also

highlight that institutional ownership plays a role in buffering the negative effects of crime in that firms with higher levels of institutional ownership are less affected by crime. This is likely due to institutional investors' strong advocacy for ESG issues and their ability to hold firms accountable for maintaining sustainability efforts.

The interpretation of our findings, however, comes with some important considerations. For example, while our evidence suggests a relationship between local crime and firm ESG outcomes, it does not establish a definitive causal link. Further research is needed to explore the underlying mechanisms driving this relationship. Moreover, our analysis does not consider whether the firm's responses to crime (such as reallocating resources away from ESG) are socially optimal or aligned with broader societal goals. Future research could provide further insights into these critical issues.

References

Adams, R. B., and Funk, P. (2012). Beyond the glass ceiling: Does gender matter? Management Science, 58(2), 219-235.

Albuquerque, R., Koskinen, Y., and Zhang, C. (2019). Corporate social responsibility and firm risk: theory and empirical evidence. Management Science, 65(10), 4451-4949.

Almeida, H., Campello, M., and Weisbach, M. S. (2004). The cash flow sensitivity of cash. Journal of Finance, 59(4), 1777-1804.

Angrist, J. D., and Pischke, J.-S. (2009). Mostly Harmless Econometrics: An Empiricist's Companion. Princeton University Press.

Arkhangelsky, D., Athey, S., Hirshberg, D. A., Imbens, G. W., and Wager, S. (2021). Synthetic difference-in-differences. American Economic Review, 111(12), 4088–4118.

Arvanites, T. M., and Defina, R. H. (2006). Business cycles and street crime. *Criminology*, 44, 139–164.

Avramov, D., Cheng, S., Lioui, A., and Tarelli. A. (2021). Sustainable investing with ESG rating uncertainty. Journal of Financial Economics, 145(2), 642-664.

Azar, J., Duro, M., Kadach, I., and Ormazabal, G. (2021). The Big Three and corporate carbon emissions around the world. Journal of Financial Economics, 142(2), 674-696.

Bear, S., Rahman, N., and Post, C. (2010). The impact of board diversity and gender composition on corporate social responsibility and firm reputation. Journal of Business Ethics, 97(2), 207-221.

Berg, F., Koelbel, J. F., and Rigobon, R. (2022). Aggregate confusion: The divergence of ESG ratings. Review of Finance, 26(6), 1315-1344.

Bertrand, M., and Mullainathan, S. (2003). Enjoying the quiet life? Corporate governance and managerial preferences. Journal of Political Economy, 111(5), 1043-1075.

Bertrand, M., and Schoar, A. (2003). Managing with style: The effect of managers on firm policies. The Quarterly Journal of Economics, 118(4), 1169-1208.

Blanco, L., and Ruiz, I. (2013). The impact of crime and insercurity on trust and democracy and institutions. American Economic Review, 103(3), 284-288.

Bosse, D. A., Philips, R. A., and Harrison, J. S. (2009). Stakeholders, reciprocity, and firm performance. Strategic Management Journal, 30(4), 447-456.

Brushwood, J. D., Dhaliwal, D. S., Fairhurst, G. K., and Serfling, M. A. (2016). Local crime and corporate costs of capital. Journal of Corporate Finance, 41, 383-399.

Carpenter, C. (2007). Heavy alcohol use and crime: Evidence from underage drunk-driving laws. Journal of Law and Economics, 50(3), 539-557.

Chava, S., and Hsu, A. (2020). Financial constraints, monetary policy shocks and cross-section of equity. Review of Finanacial Studies, 33(9), 4367-4402.

Cheng, B., Ioannou, I., and Serafeim, G. (2014). Corporate social responsibility and access to finance. Strategic Management Journal, 35(1), 1-23.

Cheng, I. H., Hong, H., and Shue, K. (2016). Do managers do good with other people's money? Journal of Financial Economics, 121(2), 293-310.

Christensen, D. M., Serafeim, G., and Sikochi, A. (2021). Why is corporate virtue in the eye of the beholder? The case of ESG ratings. The Accounting Review, 96(1), 147-178.

Croson, R., and Gneezy, U. (2009). Gender differences in preferences. Journal of Economic Literature, 47(2), 448-474.

Cronqvist, H. and Yu, F. (2017). Shaped by their daughters executives, female socialisation, and corporate social responsibility. Journal of Financial Economics, 126, 543-562.

Custódio, C., and Metzger, D. (2014). Financial expert CEOs: CEO's work experience and firm's financial policies. Journal of Financial Economics, 114(1), 125-154.

Deng, X., Kang, J., and Low, B. S. (2013). Coperate osical responsibility and stakeholder value maximization: evidence from mergers. Journal of Finanical Economics, 110(1), 87-109.

Dessaint, O., and Matray, A. (2017). Do Managers Overreact to Salient Risks? Evidence from Hurricane Strikes. Journal of Financial Economics, 126(1), 97-121.

Di Giuli, A., and Kostovetsky, L. (2014). Are red or blue companies more likely to go green? Politics and corporate social responsibility. Journal of Financial Economics, 111(1), 158-180.

Ding, W., Levine, R., Lin, C., and Xie, W. (2021). Corporate immunity to the COVID-19 pandemic. Journal of Financial Economics, 141(2), 802-830.

Donaldson, T., and Preston, L. E. (1995). The stakeholder theory of the coperation: concepts, evidence and implications. The Academy of Management Review, 20(1), 65-91.

Dougal, C., Parsons, C. A., and Titman, S. (2015). Urban vibrancy and corporate growth. Journal of Finance, 70(1), 163-210.

Doukas, J. A., and Lang, L. H. P. (2003). Foreign direct investment, diversification, and firm performance. Journal of International Business Studies, 34(2), 153-172.

Dyck, A., Lins, K. V., Roth, L., and Wagner, H. F. (2019). Do institutional investors drive corporate social responsibility? International evidence. Journal of Financial Economics, 131(3), 693-714.

Faccio, M., Marchica, M.-T., and Mura, R. (2016). CEO gender, corporate risk-taking, and the efficiency of capital allocation. Journal of Corporate Finance, 39, 193-209.

Feng, M., Ge, W., Ling, Z., and Loh, W. T. (2024). Prosocial CEOs, corporate policies, and firm value. Review of Accounting Studie - Forthcoming

Flammer, C. (2015). Does corporate social responsibility lead to superior financial performance? A regression discontinuity approach. Management Science, 61(11), 2549-2568.

Glaeser, E. L., Sacerdote, B., and Scheinkman, J. A. (1996). Crime and social interactions. The Quarterly Journal of Economics, 111(2), 507-548.

Gow, I., Ormazabal, G., and Taylor, D. (2010). Correcting for cross-sectional and time-series dependance in accounting research. The Accounting Review, 85(2), 483-512.

Grieser, W., LeSage, J., and Zekhnini, M. (2022). Industry networks and the geography of firm behavior. Management Science. 68(8), 5557-5854.

Gupta, A., Raman, K., and Shang, C. (2018). Social capital and the cost of equity. Journal of Banking and Finance, 87, 102, 117

Godfrey, P. C., Merrill, C. B., and Hansen, J. M. (2009). The relationship between cooperate social responsibility and shareholder value: an empirical test of the risk management hypothesis. Strategic Management Journal, 30, 425-445.

Goyenko, R. Y., Holden, C. W., and Trzcinka, C. A. (2009). Do liquidity measures measure liquidity? Journal of Financial Economics, 92(2), 153-181.

Graham, J. R., Harvey, C. R., and Puri, M. (2013). Managerial attitudes and corporate actions. Journal of Financial Economics, 109(1), 103-121.

Greenfeld, L. A. (1998). Alcohol and crime: An analysis of national data on the prevalence of alcohol involvement in crime. U.S. Department of Justice, Bureau of Justice Statistics.

Grossman, M. (1972). On the concept of health capital and the demand for health. Journal of Political Economy, 80(2), 223-255.

Gulen, H., and Ion, M. (2016). Policy Uncertainty and Corporate Investment. Review of Financial Studies, 29(3), 523-564.

He, Q., Nguyen, J., Qui, B., and Zhang, B. (2023). Climate regulatory risks and executive compensation: Evidence from U.S. state-level SCAP finalization. Working Paper.

Harford, J., He., Q., and Qiu, B. (2024). Firm-level labor-shortage exposure. You say sorry and working paper. https://ssrn.com/abstract=4410126

He, Q., and Barkowski, S. (2020). The effect of health insurance on crime: evidence from the Affordable Care Act Medicaid expansion. Health Economics, 29(3), 261-277.

Hong, H., and Kacperczyk, M. (2009). The price of sin: the effect of social norms on markets. Journal of Financial Economics, 93(1), 15-36.

Hong, H., and Kostovetsky, L. (2012). Red and blue investing: Values and finance. Journal of Financial Economics, 103(1), 1-19.

Huber, G. A., and Gordon, S. C. (2004). Accountability and Coercion: Is Justice Blind When It Runs for Office? American Journal of Political Science, 48(2), 247-263.

Huck, J. (2024a). The psychological externalities of investing: Evidence from stock returns and crime. Review of Financial Studies, 37(7), 2273-2314.

Huck, J. (2024b). Asset pricing with revealed utility of heterogeneous consumers: Evidence from crime. SSRN Working Paper: https://ssrn.com/abstract=2664823

Ilhan, E., Sautner, Z., and Vilkov, G. (2021). Carbon tail risk. Review of Financial Studies, 34(3), 1540-1571.

Ioannou, I., and Serafeim, G. (2012). What drives corporate social performance? The role of nation-level institutions. Journal of International Business Studies, 43, 834-864.

Kamiya, S., Kang, J., Kim, J., Milidonis, A., and Stulz, R. M. (2021). Risk management, firm reputation, and the impact of successful cyberattacks on target firms. Journal of Financial Economics, 139(3), 719-749.

Kaplan, S. N., and Zingales, L. (1997). Do investment-cash flow sensitivities provide useful measures of financing constraints? Quarterly Journal of Economics, 112(1), 169-215.

Kim, W. C., Hwang, P., and Burgers, W. P. (1993). Multinationals' diversification and the risk-return trade-off. Strategic Management Journal, 14(4), 275-286.

Krammer, S. M S., Lashitew, A. A., Doh, J. P., and Bapiji, H. (2023). Income inequality, social cohesion, and crime against businesses: Evidence from a global sample of firms. Journal of International Business Studies, 54(2), 385-400,

Krüger, P. (2015). Corporate goodness and shareholder wealth. Journal of Financial Economics, 115(2), 304-329.

Lin, T-C. and Pursiainen, V. (2023). The Disutility of stock market losses: Evidence from domestic violence. Review of Financial Studies, 36, 1703-1736.

Linden, L., and Rockoff, J. E. (2008). Estimates of the impact of crime risk on property values from Megan's laws. American Economic Review, 98(3), 1103-1127.

Linn, M., and Weagley, D. (2023). Uncovering financial constraints. Journal of Financial and Quantitative Analysis, 59(6), 2582-2617.

Lins, K. V., Servaes, H., and Tamayo, A. (2017). Social capital, trust, and firm performance: The value of corporate social responsibility during the financial crisis. The Journal of Finance, 72(4), 1785-1824.

Minton, B. A., and Schrand, C. M. (1999). The Impact of Cash Flow Volatility on Discretionary Investment and the Costs of Debt and Equity Financing. Journal of Financial Economics, 54(3), 423-460.

Mello, S. (2019). More COPS, less crime. American Economic Journal: Economic Policy, 11(2), 248-282.

Muller, A., and Kräussl, R. (2011). Doing Good Deeds in Times of Need: A Strategic Perspective on Corporate Disaster Donations. Strategic Management Journal, 32(9), 911-929.

Myers, S. C. (1977). Determinants of corporate borrowing. Journal of Financial Economics, 5(2), 147-175.

Novy-Marx, R. (2007). An equilibrium model of investment under uncertainty. Review of Financial Studies, 20(5), 1461-1502.

Petersen, M. (2009). Estimating standard errors in finance panel data sets: Comparing approaches. Review of Financial Studies, 22(1), 435-480.

Pirinsky, C., and Wang, Q. (2006). Does corporate headquarters location matter for stock returns? The Journal of Finance, 61(4), 1991-2015.

Porter, M. E., and Kramer, M. R. (2006). Strategy and society: The link between competitive advantage and corporate social responsibility. Harvard Business Review, 84(12), 78-92.

Roberts, M. R., and Whited, T. M. (2013). Endogeneity in empirical corporate finance. In Handbook of the Economics of Finance (Vol. 2, pp. 493-572). Elsevier.

Rosenbaum, S., and Westmoreland, T. M. (2012). The Supreme Court's surprising decision on the Medicaid expansion: How will the federal government and states proceed? Health Affairs, 31(8), 1663-1672.

Rosenfeld, R. (2009). Crime Is the Problem: Homicide, Acquisitive Crime, and Economic Conditions. Journal of Quantitative Criminology, 25(3), 287-306.

Rosenfeld, R., and Fornango, R. (2007). The impact of economic conditions on robbery and property crime: The role of consumer sentiment. Criminology, 45, 735–769.

Rosenthal, S. S., and Ross, A. (2010). Violent crime, entrepreneurship, and cities. Journal of Urban Economics, 67(1), 135-149.

Sampson, R. J., Raudenbush, S. W., and Earls, F. (1997). Neighborhoods and violent crime: A multilevel study of collective efficacy. Science, 277(5328), 918-924.

Serfling, M. A. (2014). CEO age and the riskiness of corporate policies. Journal of Corporate Finance, 25, 251-273.

Servaes, H., and Tamayo, A. (2013). The impact of corporate social responsibility on firm value: The role of customer awareness. Management Science, 59(5), 1045-1061.

Skogan, W. G. (1986). Fear of crime and neighborhood change. Crime and Justice, 8, 203-229.

Stevenson, M. T. (2018). Distortion of Justice: How the Inability to Pay Bail Affects Case Outcomes. Journal of Law, Economics, and Organization, 34(4), 511-542.

Tilcsik, A., and Marquis, C. (2013). Punctuated Generosity: How Mega-events and Natural Disasters Affect Corporate Philanthropy in U.S. Communities. Administrative Science Quarterly, 58(1), 111-148.

Vogler, J. (2020). Access to health care and criminal behavior: Evidence from the ACA Medicaid expansions. Available at SSRN 3066815.

Wen, H., Hockenberry, J. M., and Cummings, J. R. (2017). The effect of Medicaid expansion of crime reduction: Evidence from HIFA-waiver expansions. Journal of Public Economics, 154, 67-94.

Wooldridge, J. M. (2010). Econometric Analysis of Cross Section and Panel Data (2nd ed.). MIT Press.

Yim, S. (2013). The acquisitiveness of youth: CEO age and acquisition behavior. Journal of Financial Economics, 108(1), 250-273.

U.S. Department of Justice, Federal Bureau of Investigation. (2023). Uniform Crime Reporting Program. Available at https://www.fbi.gov/how-we-can-help-you/more-fbi-services-and-information/ucr.

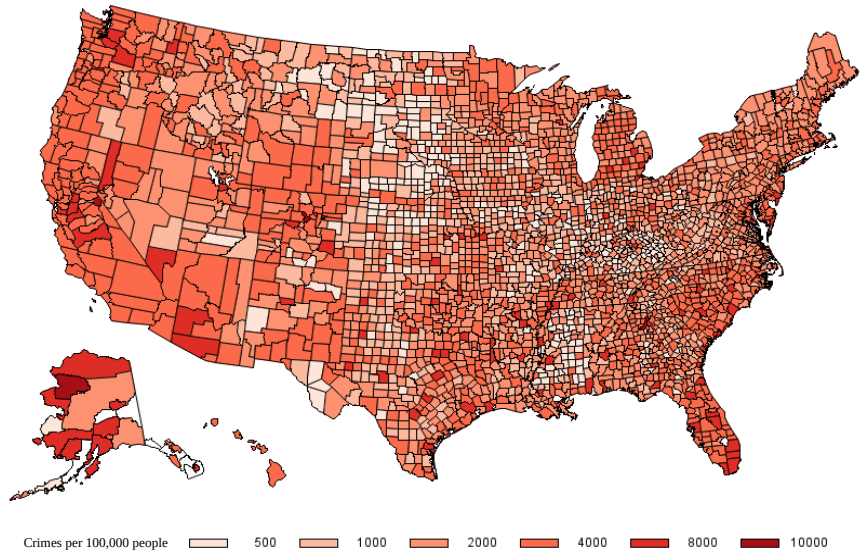

Figure 1A: This figure shows a visual representation of crime rates across the U.S. at the county level. The darker (lighter) shades represent higher (lower) crime rates.

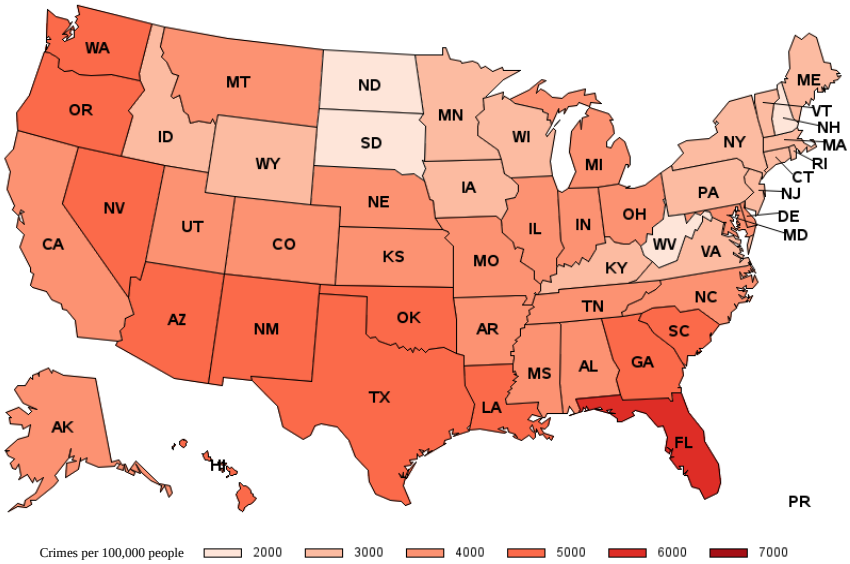

Figure 1B: This figure shows a visual representation of crime rates across the U.S. at the state level. The darker (lighter) shades represent higher (lower) crime rates.

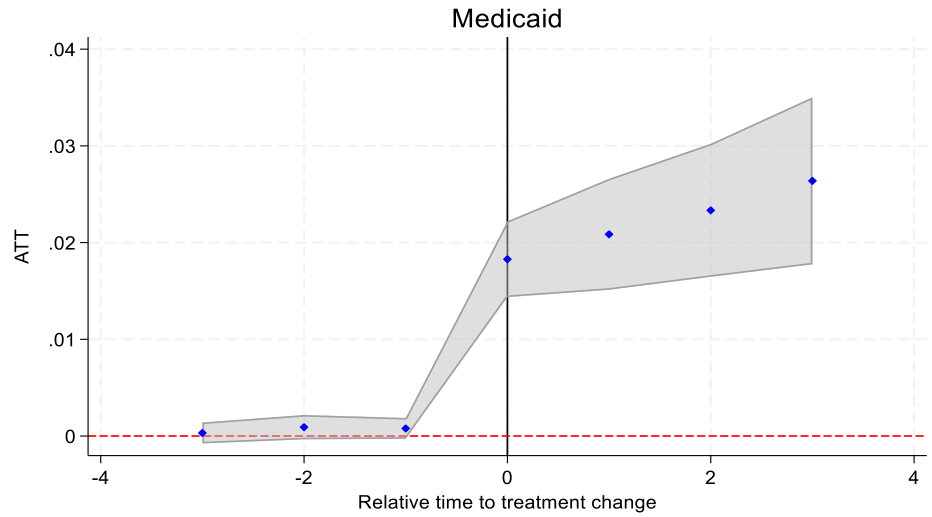

Figure 2: This figure shows the dynamic average treatment effect on the treated (ATT) based on the synthetic DiD approach using staggered state-level Medicaid expansions. The dots represent the ATTs from years $t - 3$ to $t + 3$ while the upper and lower solid lines represent the 95% confidence interval. Year $t = 0$ represents the event year when a state expands its Medicaid coverage following the 2012 Supreme Court ruling.

Table 1: Descriptive Statistics

	N	Mean	Median	StdDev	P05	P25	P75	P95
Panel A: Main Variables								
ESG (Asset4)	15,639	0.399	0.363	0.194	0.133	0.247	0.535	0.763
ESG (KLD)	21,045	-0.110	-0.107	0.542	-0.917	-0.333	0.333	0.778
CRIME (county)	15,639	3,478	3,129	1,859	1,124	2,050	4,693	6,975
CRIME (state)	16,254	2,675	2,692	781	1,509	2,055	3,067	4,013
Panel B: Control Variables								
SIZE	15,639	7.739	7.809	1.740	4.743	6.623	8.880	10.700
RND	15,639	0.062	0.018	0.127	0.000	0.001	0.071	0.253
LEV	15,639	0.252	0.218	0.220	0.000	0.071	0.372	0.659
CAPX	15,639	0.034	0.024	0.036	0.000	0.011	0.044	0.100
BTM	15,639	0.395	0.300	0.388	0.000	0.158	0.513	1.066
PPE	15,639	0.198	0.135	0.192	0.001	0.060	0.281	0.615
FRMAGE	15,639	3.030	3.178	0.802	1.609	2.398	3.714	4.043
ROA	15,639	-0.011	0.042	0.257	-0.413	-0.013	0.086	0.175
CASH	15,639	0.153	0.097	0.173	0.007	0.039	0.196	0.526
SALEG	15,639	0.211	0.072	1.229	-0.402	-0.013	0.184	0.681
TANG	15,639	0.352	0.300	0.274	0.027	0.140	0.515	0.837
VOL	15,639	0.460	0.381	0.298	0.176	0.265	0.574	0.960
AMIHUD	15,639	4.963	0.156	37.159	0.009	0.040	0.774	15.441
RET	15,639	0.128	0.059	0.562	-0.571	-0.187	0.315	1.017
Panel C: Channel Testing Variables								
FEMALE	9,126	0.043	0.000	0.203	0.000	0.000	0.000	0.000
EDUC	9,126	0.059	0.000	0.235	0.000	0.000	0.000	1.000
AGE	9,073	4.053	4.060	0.118	3.850	3.989	4.127	4.248
SOCIAL	12,662	0.392	0.000	0.564	0.000	0.000	0.693	1.609
FCDEBT	8,844	0.106	0.114	0.538	-0.701	-0.277	0.446	0.958
FCEQU	8,844	-0.149	-0.276	0.617	-0.966	-0.518	0.079	1.249
RETAIL	15,639	0.132	0.000	0.339	0.000	0.000	0.000	1.000
FOREIGN	15,639	0.702	1.000	0.457	0.000	0.000	1.000	1.000
DEMGOV	15,639	0.553	1.000	0.497	0.000	0.000	1.000	1.000
DEMPRES	15,639	0.636	1.000	0.481	0.000	0.000	1.000	1.000
SCAP	15,639	0.483	0.000	0.500	0.000	0.000	1.000	1.000
IO	15,639	0.761	0.803	0.198	0.354	0.664	0.905	1.000

This table present descriptive statistics of the variables used in our study. *ESG* (*Asset4*) is the LSEG Asset4 ESG score aggregated from the 10 categories of the environmental, social, and governance pillars. *ESG* (*KLD*) is the MSCI ESG KLD statistics computed as the number of strengths minus the number of concerns across the six ESG categories. *CRIME* (*county*) and *CRIME* (*state*) are the number of violent and property crimes per 100,000 people in a county and state, respectively. *SIZE* is the natural logarithm of a firm's total assets. *RND* is a firm's research and development expenses scaled by total assets. *LEV* is the ratio of long-term liability to total assets. *CAPX* is calculated as capital expenditure to total assets. *BTM* is book value of equity divided by market value of equity. *PPE* is property, plant, and equipment divided by total assets. *FRMAGE* is a firm's age since its first appearance in Compustat. *ROA* is return on

assets. *CASH* is the ratio of cash holdings to total assets. *SALEG* is annual sales growth. *TANG* is computed as tangible assets to total assets. *VOL* is annual return volatility. *AMIHUD* is the average illiquidity ratio of absolute daily return to dollar volume multiplied by 10^6. *RET* is annual stock return. *FEMALE* is set to one for female CEOs and zero otherwise. *EDUC* is an indicator equal one if a CEO has a PhD or MBA qualification, and zero otherwise. *AGE* is CEO age as at year *t*. *SOCIAL* is an indicator that is equal 1 if a CEO has been involved in at least one charitable organization, and zero otherwise. *FCDEBT* (*FCDEQU*) is a borrowing (equity issuance) constraint variable, as estimated in Linn and Weagley (2023) with higher values indicating higher levels of constraints. *RETAIL* is a dummy variable that is set to one if a firm belongs to the Retail industry, and zero otherwise. *FOREIGN* is an indicator with a value of one if a firm has non-zero foreign income or foreign taxes, and zero otherwise. *DEMGOV* (*DEMPRES*) equals to one for firms headquartered in states with more than 50% of their residents' votes for a Democratic governor (president) candidate, and zero otherwise. *SCAP* is a dummy that equals one if a firm is headquartered in a state with a state-level climate action plan in year *t*, and zero otherwise. *IO* is the proportion of institutional ownership.

Table 2: The Effect of Crime on ESG Performance

	ESG (Asset4)			ESG (KLD)		
	(1)	(2)	(3)	(4)	(5)	(6)
CRIME (county)	-0.0078***	-0.008***	-0.0057***	-0.0413***	-0.0361***	-0.1666***
	(0.0011)	(0.0011)	(0.0009)	(0.007)	(0.007)	(0.0128)
SIZE	0.0627***	0.0631***	0.0702***	0.0799***	0.0816***	0.0594***
	(0.0009)	(0.0009)	(0.0025)	(0.0028)	(0.0028)	(0.0078)
RND	0.1212***	0.1229***	0.0637***	0.376***	0.3523***	0.0143
	(0.0134)	(0.0136)	(0.0157)	(0.0452)	(0.0461)	(0.061)
LEV	-0.0085	-0.0057	0.0468***	-0.1173***	-0.0983***	0.2316***
	(0.0062)	(0.0063)	(0.0077)	(0.0204)	(0.0208)	(0.0275)
CAPX	-0.3032***	-0.2806***	-0.0583	0.8008***	0.8879***	0.4207***
	(0.0444)	(0.045)	(0.0426)	(0.1127)	(0.1142)	(0.125)
BTM	-0.0479***	-0.0461***	-0.0211***	-0.1111***	-0.1043***	0.011
	(0.0035)	(0.0035)	(0.0037)	(0.0109)	(0.0108)	(0.0125)
PPE	0.0627***	0.0615***	-0.0586***	-0.2235***	-0.1677***	-0.2647***
	(0.0086)	(0.0091)	(0.0172)	(0.0259)	(0.0269)	(0.0555)
FRMAGE	0.0418***	0.0403***	0.2451***	0.0423***	0.0421***	0.0047
	(0.0018)	(0.0018)	(0.0052)	(0.0057)	(0.0059)	(0.0144)
ROA	0.0069	0.0035	-0.0153**	0.052**	0.0336	-0.0596***
	(0.0067)	(0.0068)	(0.007)	(0.0218)	(0.0218)	(0.0218)
CASH	0.0567***	0.0594***	0.0637***	0.0703**	0.0594**	0.1149***
	(0.0091)	(0.0091)	(0.0102)	(0.0297)	(0.0296)	(0.0354)
SALEG	-0.0019*	-0.0016*	-0.001	-0.0097**	-0.0063	-0.0033
	(0.001)	(0.001)	(0.0008)	(0.0042)	(0.0042)	(0.0038)
TANG	0.0039	0.006	0.0079	0.0924***	0.0986***	0.0724***
	(0.0051)	(0.0052)	(0.0056)	(0.0163)	(0.0164)	(0.0195)
VOL	0.011**	0.0139***	-0.0036	-0.1402***	-0.137***	-0.1768***
	(0.0051)	(0.0051)	(0.0042)	(0.0174)	(0.0174)	(0.0159)
AMIHUD	0.0001**	0.0001*	0.0001***	0.0002***	0.0002***	0.0001***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
RET	-0.0122***	-0.0118***	0.0016	0.0072	0.0104	0.0395***
	(0.0023)	(0.0023)	(0.0017)	(0.0072)	(0.0072)	(0.0061)
Intercept	-0.1522***	-0.1251***	-0.5193***	-0.4258***	-0.5193***	0.5034**
	(0.0132)	(0.031)	(0.1001)	(0.0653)	(0.1048)	(0.2418)
Firm FEs	No	No	Yes	No	No	Yes
Industry FEs	No	Yes	No	No	Yes	No
Year FEs	No	Yes	Yes	No	Yes	Yes
Adj. R2	0.376	0.383	0.787	0.08	0.093	0.503
N	15,639	15,639	15,639	21,045	21,045	21,045

This table presents the effect of county-level crime on firm ESG performance. *ESG* (*Asset4*) is the LSEG Asset4 ESG score aggregated from the 10 categories of the environmental, social, and governance pillars. *ESG* (*KLD*) is the MSCI ESG KLD statistics computed as the number of strengths minus the number of concerns across the six ESG categories. *CRIME* (*county*) is

the natural log of the number of violent and property crimes per 100,000 people in a county. Control variables are described in Appendix Table A1. Different fixed effects (FEs) are included in the regressions. Standard errors in brackets are adjusted for clustering by firm and year. ***, **, and * represent statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 3: The Types of Crime on ESG Performance

	(1)	(2)
$CRIME_{Violent}$	-0.0115***	
	(0.0021)	
$CRIME_{Property}$		-0.0072***
		(0.0009)
SIZE	0.0705***	0.0699***
	(0.0026)	(0.0025)
RND	0.0626***	0.0637***
	(0.0158)	(0.0156)
LEV	0.0485***	0.0463***
	(0.0077)	(0.0077)
CAPX	-0.0617	-0.0563
	(0.0429)	(0.0426)
BTM	-0.021***	-0.021***
	(0.0037)	(0.0037)
PPE	-0.0632***	-0.0589***
	(0.0173)	(0.0171)
FRMAGE	0.2478***	0.2437***
	(0.0053)	(0.0052)
ROA	-0.0153**	-0.0154**
	(0.0071)	(0.007)
CASH	0.0652***	0.0629***
	(0.0102)	(0.0101)
SALEG	-0.0007	-0.001
	(0.0008)	(0.0008)
TANG	0.0093	0.0079
	(0.0059)	(0.0055)
VOL	-0.0039	-0.0036
	(0.0042)	(0.0042)
AMIHUD	0.0001**	0.0001***
	(0.001)	(0.001)
RET	0.0016	0.0016
	(0.0017)	(0.0017)
Intercept	-0.4896***	-0.5063***
	(0.1012)	(0.1)
Firm FEs	Yes	Yes
Year FEs	Yes	Yes
Adj. R2	0.786	0.787
N	15,556	15,639

This table presents the effect of county-level crime on firm ESG performance. The dependent variable is *ESG* (*Asset4*), which is the LSEG Asset4 ESG score aggregated from the 10 categories of the environmental, social, and governance pillars. $CRIME_{Violent}$ ($CRIME_{Property}$) is the natural log of the number of violent (property) crimes per 100,000 people in a county.

Control variables are described in Appendix Table A1. Firm FEs and Year FEs are included in the regressions. Standard errors in brackets are adjusted for clustering by firm and year. ***, **, and * represent statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 4: Instrument Variables for Crime

Panel A: First Stage Regression		
	CRIME (county)	
COPS	-0.2149***	
	(0.0022)	
Alcohol		0.1284***
		(0.0116)
Controls	Yes	Yes
Firm FEs	Yes	Yes
Year FEs	Yes	Yes
Adj. R2	0.402	0.158
N	18,157	50,631
Panel B: Second Stage Regression		
	ESG (Asset4)	
$CRIME_{COPS}$	-0.1863***	
	(0.0667)	
$CRIME_{Alcohol}$		-1.8002***
		(0.1242)
Controls	Yes	Yes
Firm FEs	Yes	Yes
Year FEs	Yes	Yes
Adj. R2	0.769	0.789
N	4,371	16,260

This table presents the 2SLS regressions in which *COPS* and *Alcohol* are instruments for *CRIME* (*county*), respectively. $CRIME_{COPS}$ and $CRIME_{Alcohol}$ are the predicted values of *CRIME* (*county*) from the 1st stage regression. *COPS* denotes the county-level dollar grants awarded by the office of Community Oriented Policing Services (COPS) for new hires for local law enforcement agencies and available for the 2009–2014 period (Mello, 2019). *Alcohol* represents the annual per capita number of gallons of ethanol consumed by individuals in each state, sourced from the National Institute on Alcohol Abuse and Alcoholism (NIAAA) (LaVallee, Kim, and Yi, 2014). *CRIME* (*county*) is the natural log of the number of violent and property crimes per 100,000 people in a county. *ESG* (*Asset4*) is the LSEG Asset4 ESG score aggregated from the 10 categories of the environmental, social, and governance pillars. Controls include all firm characteristics in Panel B of Appendix Table A1. Firm FEs and Year FEs are included in the regressions. Standard errors in brackets are adjusted for clustering by firm and year. ***, **, and * represent statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 5: The Effects of Changes in Medicaid

	Staggered DiD	Synthetic DiD
Panel A: Average Treatment Effect on the Treated		
ATT	0.0624***	0.0450***
	(0.0150)	(0.0038)
Panel B: Dynamic DiD Effects		
t - 3	0.0058	0.0003
	(0.0092)	(0.0005)
t - 2	0.0059	0.0009
	(0.0072)	(0.0006)
t - 1	0.0124	0.0008
	(0.0094)	(0.0005)
t	0.0518***	0.0182***
	(0.0073)	(0.0019)
t + 1	0.0489***	0.0209***
	(0.0114)	(0.0029)
t + 2	0.0584***	0.0233***
	(0.0138)	(0.0035)
t + 3	0.0845***	0.0263***
	(0.0181)	(0.0044)
Controls	Yes	Yes
Firm FEs	Yes	Yes
Year FEs	Yes	Yes
N	9,021	9,021

This table presents staggered and synthetic difference-in-differences results using state-level Medicaid expansions as events. The dependent variable is *ESG* (*Asset4*), which is the LSEG Asset4 ESG score aggregated from the 10 categories of the environmental, social, and governance pillars. The independent variable is *CRIME* (*county*), i.e., the natural log of the number of violent and property crimes per 100,000 people in a county. Controls include all firm characteristics in Panel B of Appendix Table A1. Firm FEs and Year FEs are included in the regressions. Standard errors in brackets are adjusted for clustering by firm and year. ***, **, and * represent statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 6: The Effects of Changes in Headquarter

	Staggered DiD		Synthetic DiD	
	Low-to High Crime	High-to-Low Crime	Low-to High Crime	High-to-Low Crime
Panel A: Average Treatment Effect				
ATT	-0.0938***	0.0462**	-0.0717***	0.0761***
	(0.0236)	(0.0187)	(0.0179)	(0.0257)
Panel B: Dynamic DiD Effects				
t - 3	-0.1419	0.0201	-0.0357	0.0624
	(0.1059)	(0.0156)	(0.0279)	(0.0844)
t - 2	-0.0235	0.0036	0.0060	0.0783
	(0.0197)	(0.0148)	(0.0610)	(0.0821)
t - 1	-0.0596	0.0041	-0.1133	0.0699
	(0.0423)	(0.0160)	(0.0694)	(0.0730)
t	-0.0539***	0.0404***	-0.0686***	0.0432***
	(0.0152)	(0.0135)	(0.0077)	(0.0130)
t + 1	-0.1748***	0.0470**	-0.0671***	0.0644***
	(0.0645)	(0.0204)	(0.0111)	(0.0153)
t + 2	-0.0603*	0.0519*	-0.0621***	0.0591***
	(0.0318)	(0.0303)	(0.0136)	(0.0197)
t + 3	-0.2338**	0.0527	-0.0646***	0.0758***
	(0.0964)	(0.0492)	(0.0166)	(0.0258)
Controls	Yes	Yes	Yes	Yes
Firm FEs	Yes	Yes	Yes	Yes
Year FEs	Yes	Yes	Yes	Yes
N	692	210	692	210

This table presents staggered and synthetic difference-in-differences results using a subsample of firms that change their headquarters from a low (high) crime county to a high (low) crime county, based on the median county-level crime in a year. *t* denotes an event year. The dependent variable is *ESG* (*Asset4*), which is the LSEG Asset4 ESG score aggregated from the 10 categories of the environmental, social, and governance pillars. The independent variable is *CRIME* (*county*), i.e., the natural log of the number of violent and property crimes per 100,000 people in a county. Controls include all firm characteristics in Panel B of Appendix Table A1. Firm FEs and Year FEs are included in the regressions. Standard errors in brackets are adjusted for clustering by firm and year. ***, **, and * represent statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 7: The Effects of CEO Characteristics

	(1)	(2)	(3)	(4)
CRIME	-0.0159***	-0.0148***	-0.0876*	-0.0361***
	(0.0019)	(0.0018)	(0.0492)	(0.007)
CRIME * FEMALE	-0.015***			
	(0.007)			
FEMALE	0.0821*			
	(0.0471)			
CRIME * EDUC		0.0126**		
		(0.0062)		
EDUC		0.0462***		
		(0.0102)		
CRIME * AGE			-0.1663*	
			(0.0972)	
AGE			0.0172	
			(0.0120)	
CRIME * SOCIAL				0.012***
				(0.0042)
SOCIAL				0.0592**
				(0.0225)
Intercept	-0.164***	-0.1714***	0.5214	-0.5193***
	(0.0219)	(0.0219)	(0.3953)	(0.1048)
Controls	Yes	Yes	Yes	Yes
Firm FEs	Yes	Yes	Yes	Yes
Year FEs	Yes	Yes	Yes	Yes
Adj. R2	0.339	0.334	0.337	0.093
N	9,126	9,126	9,073	12,763

This table presents the effects of various CEO characteristics on the ESG – CRIME relationship. The dependent variable is *ESG* (*Asset4*), which is the LSEG Asset4 ESG score aggregated from the 10 categories of the environmental, social, and governance pillars. *CRIME* is short for *CRIME* (*county*) which is the natural log of the number of violent and property crimes per 100,000 people in a county. *FEMALE* is set to one for female CEOs and zero otherwise. *EDUC* is an indicator equal one if a CEO has a PhD or MBA qualification, and zero otherwise. *AGE* is CEO age as at year *t*. *SOCIAL* is an indicator that is equal 1 if a CEO has been involved in at least one charitable organization, and zero otherwise. Controls include all firm characteristics in Panel B of Appendix Table A1. Firm FEs and Year FEs are included in the regressions. Standard errors in brackets are adjusted for clustering by firm and year. ***, **, and * represent statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 8: The Effects of Resource Constraints

	(1)	(2)	(3)	(4)
CRIME	-0.0091***	-0.0098***	-0.0078***	-0.0238**
	(0.0016)	(0.0015)	(0.0012)	(0.0119)
CRIME * FCDEBT	-0.0088***			
	(0.0031)			
FCDEBT	-0.073***			
	(0.0252)			
CRIME * FCEQU		-0.0138***		
		(0.0053)		
FCEQU		-0.1074***		
		(0.0491)		
CRIME * RETAIL			-0.0062**	
			(0.0030)	
RETAIL			-0.0131	
			(0.0451)	
CRIME * FOREIGN				0.0101***
				(0.0023)
FOREIGN				0.0804***
				(0.0121)
Intercept	-0.175***	-0.1681***	-0.1526***	-0.041
	(0.0183)	(0.0182)	(0.0135)	(0.0969)
Controls	Yes	Yes	Yes	Yes
Firm FEs	Yes	Yes	Yes	Yes
Year FEs	Yes	Yes	Yes	Yes
Adj. R2	0.418	0.419	0.376	0.355
N	8,844	8,844	15,639	15,639

This table presents the effects of firm resource constraints on the ESG – CRIME relationship. The dependent variable is *ESG* (*Asset4*), which is the LSEG Asset4 ESG score aggregated from the 10 categories of the environmental, social, and governance pillars. *CRIME* is short for *CRIME* (*county*) which is the natural log of the number of violent and property crimes per 100,000 people in a county. *FCDEBT* (*FCDEQU*) is a borrowing (equity issuance) constraint variable, as estimated in Linn and Weagley (2023) with higher values indicating higher levels of constraints. *RETAIL* is a dummy variable that is set to one if a firm belongs to the Retail industry, and zero otherwise. *FOREIGN* is an indicator with a value of one if a firm has non-zero foreign income or foreign taxes, and zero otherwise. Controls include all firm characteristics in Panel B of Appendix Table A1. Firm FEs and Year FEs are included in the regressions. Standard errors in brackets are adjusted for clustering by firm and year. ***, **, and * represent statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 9: The Effects of Stakeholder Pressure

	(1)	(2)	(3)	(4)
CRIME	-0.0326***	-0.0299***	-0.0268***	-0.0052***
	(0.0041)	(0.0044)	(0.0027)	(0.0018)
CRIME * DEMGOV	0.0207***			
	(0.0056)			
DEMGOV	0.1613***			
	(0.0456)			
CRIME * DEMPRES		0.0109*		
		(0.0058)		
DEMPRES		0.0948**		
		(0.0474)		
CRIME * SCAP			0.026***	
			(0.003)	
SCAP			0.1723***	
			(0.0239)	
CRIME * IO				0.0345*
				(0.0184)
IO				0.2742**
				(0.1407)
Intercept	0.0495	0.0354	-0.0298	-0.1775***
	(0.0347)	(0.0377)	(0.0236)	(0.0174)
Controls	Yes	Yes	Yes	Yes
Firm FEs	Yes	Yes	Yes	Yes
Year FEs	Yes	Yes	Yes	Yes
Adj. R2	0.366	0.364	0.387	0.378
N	15,639	15,639	15,639	15,639

This table presents the effect of stakeholder pressure on the ESG – CRIME relationship. The dependent variable is *ESG* (*Asset4*), which is the LSEG Asset4 ESG score aggregated from the 10 categories of the environmental, social, and governance pillars. *CRIME* is short for *CRIME* (*county*) which is the natural log of the number of violent and property crimes per 100,000 people in a county. *DEMGOV* (*DEMPRES*) equals to one for firms headquartered in states with more than 50% of their residents' votes for a Democratic governor (president) candidate, and zero otherwise. *SCAP* is a dummy that equals one if a firm is headquartered in a state with a state-level climate action plan in year *t*, and zero otherwise. *IO* is the percentage of institutional ownership. Controls include all firm characteristics in Panel B of Appendix Table A1. Firm FEs and Year FEs are included in the regressions. Standard errors in brackets are adjusted for clustering by firm and year. ***, **, and * represent statistical significance at the 1%, 5%, and 10% levels, respectively.

Table A1: Variable Descriptions

Panel A: Main Variables	
ESG (Asset4)	ESG score from the LSEG (formerly Refinitiv) Asset4 database. This score is the weighted average score from the three pillars: environment (E), social (S), and governance (G), with a total of ten categories across those pillars. Emissions, innovation, and resource use categories are uder the environmental pillar; community, human rights, product responsibility, and workforce categories belong to the social pillar; and shareholders, CSR strategy, and management are the categories under the governance pillar. The weight of each category is based on the relative importance of various themes within the category to individual industry groups. The overall ESG score (and its three pillar scores) is normalized to values ranging from 0 to 100.
ESG (KLD)	The MSCI ESG KLD statistics computed as the number of strengths minus the number of concerns across various dimensions: community, corporate governance, workforce diversity, employee relations, environment, human rights, and product quality and safety.
CRIME (county)	Number of violent and property crimes per 100,000 people in a county. Source: National Incident-Based Reporting System (NIBRS).
CRIME (state)	Number of violent and property crimes per 100,000 people in a state. Source: NIBRS.
$CRIME_{Violent}$	Number of violent crimes per 100,000 people in a county.
$CRIME_{Property}$	Number of property crimes per 100,000 people in a county.
Panel B: Control Variables	
SIZE	Natural logarithm of a firm's total assets in a year. Source: Compustat.
RND	A firm's research and development expenses scaled by total assets in a year. Source: Compustat.
LEV	Ratio of long-term liability to total assets in a year. Source: Compustat.
CAPX	Ratio of capital expenditure to total assets in a year. Source: Compustat.
BTM	Ratio of book value of equity to the market value of equity in a year. Source: Compustat.
PPE	Ratio of property, plant, and equipment to total assets in a year. Source: Compustat.
FRMAGE	A firm's age as at year *t* since its first appearance in Compustat.
ROA	Return on assets in a year. Source: Compustat.
CASH	Ratio of cash holdings to total assets in a year. Source: Compustat.
SALEG	Annual sales growth. Source: Compustat.
TANG	Ratio of tangible assets to total assets. Source: Compustat.
VOL	Annual return volatility. Source: CRSP.
AMIHUD	Average illiquidity ratio of absolute daily return to dollar volume multiplied by 10^6. Source: CRSP.
RET	Annual stock return. Source: CRSP.
Panel C: Channel Testing Variables	
FEMALE	Indicator that is equal 1one if a CEO is a female, and zero otherwise. Source: BoardEx

EDUC	Indicator that is equal one if a CEO has a PhD or MBA qualification, and zero otherwise. Source: BoardEx
AGE	CEO age as at year *t*. Source: BoardEx
SOCIAL	Indicator that is equal one if a CEO has been involved in at least one charitable organization, and zero otherwise. Source: BoardEx and IRS.
FCDEBT	Borrowing constraint variable as estimated in Linn and Weagley (2023) using a random forest methodology on the text of firm 10-Ks. A higher value of FCDEBT indicates a higher level of borrowing constraints. Source: Linn and Weagley (2023).
FCEQU	Equity issuance constraint variable as estimated in Linn and Weagley (2023) using a random forest methodology on the text of firm 10-Ks. A higher value of FCEQU indicates a higher level of equity constraints. Source: Linn and Weagley (2023).
RETAIL	Indicator that is set to one if a firm belongs to the Retail industry, i.e., its SIC code being between 5000 and 5999, and zero otherwise.
FOREIGN	Indicator variable that is set to one if a firm has non-zero foreign income or foreign taxes, and zero otherwise. Source: Compustat.
DEMGOV	Indicator that is equal to one for firms headquartered in states with more than 50% of their residents' votes for a Democratic governor candidate, and zero otherwise. Source: Federal Election Commission (FEC).
DEMPRES	Indicator that is equal to one for firms headquartered in states with more than 50% of their residents' votes for a Democratic president candidate, and zero otherwise. Source: FEC.
SCAP	Indicator that equals one if a firm is headquartered in a state with a state-level climate action plan in year *t*, and zero otherwise. Source: https://www.georgetownclimate.org/adaptation/plans.html.
IO	Proportion of institutional ownership. Source: Thomson Reuters' Institutional (13f) Holdings.

Table A2: ESG-Crime Relationship – State-Level Crime

	ESG (Asset4)		ESG (KLD)	
	(1)	(2)	(3)	(4)
CRIME (state)	-0.2936***	-0.3023***	-0.6988***	-0.7434***
	(0.0061)	(0.0062)	(0.0259)	(0.0264)
SIZE	0.0469***	0.0462***	0.0137*	0.0098
	(0.0024)	(0.0024)	(0.0079)	(0.008)
RND	0.054***	0.0556***	-0.0802	-0.0348
	(0.0144)	(0.0144)	(0.0607)	(0.0607)
LEV	0.0148**	0.0156**	0.1797***	0.1565***
	(0.007)	(0.007)	(0.0274)	(0.0275)
CAPX	0.025	0.032	0.4384***	0.2895**
	(0.039)	(0.0389)	(0.1241)	(0.1247)
BTM	-0.0098***	-0.0085**	0.0109	0.0297**
	(0.0034)	(0.0034)	(0.0124)	(0.0125)
PPE	-0.0616***	-0.0682***	-0.1259**	-0.1111**
	(0.0156)	(0.0156)	(0.0553)	(0.0552)
FRMAGE	0.1552***	0.1521***	-0.1658***	-0.182***
	(0.0051)	(0.0051)	(0.0158)	(0.0159)
ROA	-0.0082	-0.0078	-0.0501**	-0.052**
	(0.0064)	(0.0063)	(0.0217)	(0.0217)
CASH	0.0316***	0.0281***	0.0385	0.0749**
	(0.0092)	(0.0092)	(0.0353)	(0.0355)
SALEG	-0.0008	-0.0008	-0.0024	-0.0039
	(0.0007)	(0.0007)	(0.0038)	(0.0038)
TANG	-0.0006	-0.0008	0.0614***	0.0541***
	(0.005)	(0.005)	(0.0194)	(0.0194)
VOL	-0.0009	-0.005	-0.1622***	-0.1133***
	(0.0038)	(0.0041)	(0.0159)	(0.0165)
AMIHUD	0.0001***	0.0001***	0.0001	0.0001
	(0.000)	(0.000)	(0.001)	(0.001)
RET	-0.0012	-0.0022	0.0338***	0.0458***
	(0.0015)	(0.0015)	(0.006)	(0.0062)
STATECON		-0.0013***		0.0258***
		(0.0005)		(0.0027)
Intercept	2.0725***	2.1568***	5.4277***	5.8067***
	(0.1074)	(0.1074)	(0.3187)	(0.3218)
Firm FEs	Yes	Yes	Yes	Yes
Year FEs	Yes	Yes	Yes	Yes
Adj. R2	0.816	0.818	0.512	0.516
N	16,254	16,186	21,351	21,280

This table presents the effect of state-level crime on firm ESG performance. *ESG* (*Asset4*) is the LSEG Asset4 ESG score aggregated from the 10 categories of the environmental, social, and governance pillars. *ESG* (*KLD*) is the MSCI ESG KLD statistics computed as the number

of strengths minus the number of concerns across the six ESG categories. *CRIME* (*state*) is the natural log of the number of violent and property crimes per 100,000 people in a state. *STATECON* denotes state-level economic conditions as estimated by Baumeister, Leiva-Leon, and Sims (2024). Other control variables are described in Appendix Table A1. Different fixed effects (FEs) are included in the regressions. Standard errors in brackets are adjusted for clustering by firm and year. ***, **, and * represent statistical significance at the 1%, 5%, and 10% levels, respectively.

Table A3: The Effect of Crime on RepRisk

	(1)	(2)	(3)
CRIME (county)	0.0209**	0.0619***	0.0217*
	(0.0085)	(0.0093)	(0.0114)
SIZE	0.6686***	0.6958***	0.3617***
	(0.0064)	(0.0068)	(0.032)
RND	1.5929***	1.9573***	0.9694*
	(0.1201)	(0.1159)	(0.5187)
LEV	-0.8976***	-1.2104***	-0.1911**
	(0.0465)	(0.0497)	(0.0912)
CAPX	1.3816***	2.0027***	1.6873***
	(0.2385)	(0.2577)	(0.4235)
BTM	-0.79***	-0.5829***	-0.1237***
	(0.0287)	(0.0294)	(0.0452)
PPE	1.578***	1.2693***	0.8461***
	(0.0435)	(0.0522)	(0.1613)
FRMAGE	-0.0215*	-0.0235*	0.4378***
	(0.0127)	(0.0135)	(0.0772)
ROA	-0.4619***	-0.4123***	0.0036
	(0.0473)	(0.0542)	(0.1036)
CASH	0.443***	0.5138***	-0.4241**
	(0.1028)	(0.104)	(0.1846)
SALEG	-0.0275	-0.0103	-0.0317
	(0.0231)	(0.0223)	(0.0351)
TANG	0.244***	0.3411***	0.2282***
	(0.0425)	(0.0454)	(0.0776)
VOL	0.3022***	0.3402***	0.0937***
	(0.0274)	(0.0275)	(0.0296)
AMIHUD	0.0023***	0.0027***	0.0004
	(0.0003)	(0.0002)	(0.0009)
RET	-0.1306***	-0.1624***	-0.1313***
	(0.0187)	(0.0213)	(0.0235)
Intercept	-5.1***	-5.7339***	-2.9153***
	(0.1052)	(0.426)	(0.5004)
Firm FEs	No	No	Yes
Industry FEs	No	Yes	No
Year FEs	No	Yes	Yes
Adj. R2	0.193	0.193	0.193
N	4,241	4,241	4,241

This table presents the effect of county-level crime on RepRisk score. *RepRisk*, available from 2007, represents the total number of incidents reported in the database with higher values indicating worse environmental performance. *CRIME* (*county*) is the natural log of the number of violent and property crimes per 100,000 people in a county. Control variables are described

in Appendix Table A1. Firm FEs and Year FEs are included in the regressions. Standard errors in brackets are adjusted for clustering by firm and year. ***, **, and * represent statistical significance at the 1%, 5%, and 10% levels, respectively.

Table A4: Crime and ESG Performance - The Change Effect

	County-Level Crime		State-Level Crime	
	ΔESG (Asset4)	ΔESG (KLD)	ΔESG (Asset4)	ΔESG (KLD)
ΔCRIME	-0.0235*	-0.0231*	-0.0175**	-0.0847***
	(0.0135)	(0.0144)	(0.0088)	(0.0289)
ΔSIZE	0.0029	-0.0146	0.0026	-0.0115
	(0.0036)	(0.0132)	(0.0034)	(0.0135)
ΔRND	-0.0021	0.0701	0.0042	0.0846
	(0.0117)	(0.0527)	(0.0113)	(0.0541)
ΔLEV	0.003	-0.0509*	0.0046	-0.0593**
	(0.0073)	(0.0274)	(0.007)	(0.0281)
ΔCAPX	-0.0258	0.1182	-0.0157	0.0764
	(0.0339)	(0.0989)	(0.0329)	(0.1016)
ΔBTM	0.0008	0.0108	0.0009	0.0137
	(0.003)	(0.0102)	(0.0029)	(0.0104)
ΔPPE	-0.0071	-0.0223	-0.0056	-0.0031
	(0.0175)	(0.0649)	(0.017)	(0.0668)
ΔAGE	0.0038	0.0021	0.0158	-0.0066
	(0.0363)	(0.1024)	(0.0331)	(0.1033)
ΔROA	0.0017	0.0104	0.0002	0.0038
	(0.0049)	(0.0178)	(0.0048)	(0.0183)
ΔCASH	0.0027	0.0537*	0.005	0.054*
	(0.0074)	(0.0287)	(0.0069)	(0.0296)
ΔSALEG	0.0003	-0.0001	0.0005	-0.0003
	(0.0005)	(0.0024)	(0.0004)	(0.0024)
ΔTANG	-0.0037	-0.011	-0.004	-0.0159
	(0.0053)	(0.0179)	(0.0051)	(0.0184)
ΔVOL	-0.0037	-0.0083	-0.0034	0.0079
	(0.0033)	(0.012)	(0.0031)	(0.0123)
ΔAMIHUD	0.0001**	0.0000	0.0000**	0.0000
	(0.0000)	(0.0000)	(0.0000)	(0.0000)
ΔRET	0.0014	0.0068*	0.0012	0.0091**
	(0.001)	(0.0038)	(0.001)	(0.0039)
Intercept	(0.001)	(0.0038)	(0.001)	(0.0039)
	(0.0723)	(0.2178)	(0.0729)	(0.2252)
Firm FEs	Yes	Yes	Yes	Yes
Year FEs	Yes	Yes	Yes	Yes
Adj. R2	0.129	0.222	0.116	0.201
N	12,836	18,152	13,958	18,651

This table presents the effect of changes in county-level crime on firm ESG performance changes. The dependent variable is the annual difference in a firm's ESG score. *ESG* (*Asset4*) is the LSEG Asset4 ESG score aggregated from the 10 categories of the environmental, social, and governance pillars. *ESG* (*KLD*) is the MSCI ESG KLD statistics computed as the number of strengths minus the number of concerns across the six ESG categories. *CRIME* is the natural

log of the number of violent and property crimes per 100,000 people in a county or state. Control variables are described in Appendix Table A1. Δ denotes the annual difference in each of the independent variables. Firm FEs and Year FEs are included in the regressions. Standard errors in brackets are adjusted for clustering by firm and year. ***, **, and * represent statistical significance at the 1%, 5%, and 10% levels, respectively.

Table A5: The Effects of CEO Characteristics - ESG (KLD)

	(1)	(2)	(3)	(4)
CRIME	-0.1895***	-0.1901***	-0.1737**	-0.0048
	(0.018)	(0.0182)	(0.086)	(0.0043)
CRIME * FEMALE	-0.1920***			
	(0.0712)			
FEMALE	0.3002***			
	(0.0743)			
CRIME * EDUC		0.1471***		
		(0.0506)		
EDUC		0.3130***		
		(0.1125)		
CRIME * AGE			-0.2134**	
			(0.1084)	
AGE			0.0242*	
			(0.0135)	
CRIME * SOCIAL				0.0222***
				(0.0062)
SOCIAL				0.1897***
				(0.0505)
Intercept	0.6618***	0.6677***	0.9856	-0.0286
	(0.2451)	(0.2456)	(0.6905)	(0.2038)
Controls	Yes	Yes	Yes	Yes
Firm FEs	Yes	Yes	Yes	Yes
Year FEs	Yes	Yes	Yes	Yes
Adj. R2	0.536	0.536	0.129	0.097
N	11,486	11,486	11,312	19,249

This table presents the effects of various CEO characteristics on the KLD – CRIME relationship. The dependent variable is *ESG* (*KLD*), computed as the number of strengths minus the number of concerns across the six ESG categories in the MSCI ESG KLD database. *CRIME* is short for *CRIME* (*county*) which is the natural log of the number of violent and property crimes per 100,000 people in a county. *FEMALE* is set to one for female CEOs and zero otherwise. *EDUC* is an indicator equal one if a CEO has a PhD or MBA qualification, and zero otherwise. *AGE* is CEO age as at year *t*. *SOCIAL* is an indicator that is equal 1 if a CEO has been involved in at least one charitable organization, and zero otherwise. Controls include all firm characteristics in Panel B of Appendix Table A1. Firm FEs and Year FEs are included in the regressions. Standard errors in brackets are adjusted for clustering by firm and year. ***, **, and * represent statistical significance at the 1%, 5%, and 10% levels, respectively.

Table A6: The Effects of Resource Constraints - ESG (KLD)

	(1)	(2)	(3)	(4)
CRIME	-0.0487***	-0.0636***	-0.045***	-0.0336***
	(0.0094)	(0.0107)	(0.0077)	(0.0121)
CRIME * FCDEBT	0.0002			
	(0.0147)			
FCDEBT	-0.0505			
	(0.1214)			
CRIME * FCEQU		-0.0527***		
		(0.0168)		
FCEQU		-0.4153***		
		(0.1384)		
CRIME * RETAIL			-0.026***	
			(0.0058)	
RETAIL			0.0321	
			(0.0768)	
CRIME * FOREIGN				0.0113***
				(0.0024)
FOREIGN				0.1048***
				(0.0205)
Intercept	-0.2673***	-0.1723*	-0.3941***	-0.4933***
	(0.0926)	(0.1016)	(0.07)	(0.1047)
Controls	Yes	Yes	Yes	Yes
Firm FEs	Yes	Yes	Yes	Yes
Year FEs	Yes	Yes	Yes	Yes
Adj. R2	0.101	0.099	0.08	0.081
N	12,570	12,570	21,045	21,045

This table presents the effects of firm resource constraints on the KLD – CRIME relationship. The dependent variable is *ESG* (*KLD*), computed as the number of strengths minus the number of concerns across the six ESG categories in the MSCI ESG KLD database. *CRIME* is short for *CRIME* (*county*) which is the natural log of the number of violent and property crimes per 100,000 people in a county. *FCDEBT* (*FCDEQU*) is a borrowing (equity issuance) constraint variable, as estimated in Linn and Weagley (2023) with higher values indicating higher levels of constraints. *RETAIL* is a dummy variable that is set to one if a firm belongs to the Retail industry, and zero otherwise. *FOREIGN* is an indicator with a value of one if a firm has non-zero foreign income or foreign taxes, and zero otherwise. Controls include all firm characteristics in Panel B of Appendix Table A1. Firm FEs and Year FEs are included in the regressions. Standard errors in brackets are adjusted for clustering by firm and year. ***, **, and * represent statistical significance at the 1%, 5%, and 10% levels, respectively.

Table A7: The Effects of Stakeholder Pressure - ESG (KLD)

	(1)	(2)	(3)	(4)
CRIME	-0.0449***	-0.0482***	-0.0268***	-0.0311
	(0.0099)	(0.0116)	(0.0079)	(0.0245)
CRIME * DEMGOV	0.0135***			
	(0.0041)			
DEMGOV	0.1100***			
	(0.0332)			
CRIME * DEMPRES		0.0324**		
		(0.0151)		
DEMPRES		0.229*		
		(0.1254)		
CRIME * SCAP			0.0608***	
			(0.0201)	
SCAP			0.5012***	
			(0.1607)	
CRIME * IO				-0.0142
				(0.0324)
IO				0.0224
				(0.2673)
Intercept	-0.3972***	-0.3895***	-0.5624***	-0.434**
	(0.0874)	(0.1024)	(0.0719)	(0.2047)
Controls	Yes	Yes	Yes	Yes
Firm FEs	Yes	Yes	Yes	Yes
Year FEs	Yes	Yes	Yes	Yes
Adj. R2	0.08	0.081	0.083	0.086
N	20,919	20,989	21,045	18,296

This table presents the effect of stakeholder pressure on the ESG – CRIME relationship. The dependent variable is *ESG* (*KLD*), computed as the number of strengths minus the number of concerns across the six ESG categories in the MSCI ESG KLD database. *CRIME* is short for *CRIME* (*county*) which is the natural log of the number of violent and property crimes per 100,000 people in a county. *DEMGOV* (*DEMPRES*) equals to one for firms headquartered in states with more than 50% of their residents' votes for a Democratic governor (president) candidate, and zero otherwise. *SCAP* is a dummy that equals one if a firm is headquartered in a state with a state-level climate action plan in year *t*, and zero otherwise. *IO* is the percentage of institutional ownership. Controls include all firm characteristics in Panel B of Appendix Table A1. Firm FEs and Year FEs are included in the regressions. Standard errors in brackets are adjusted for clustering by firm and year. ***, **, and * represent statistical significance at the 1%, 5%, and 10% levels, respectively.