

MASTER'S THESIS

Socially Responsible Local Firms and Stock Market Participation: Evidence from the U.S. Household Survey

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HONG KONG BAPTIST UNIVERSITY

Master of Philosophy

THESIS ACCEPTANCE

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**Socially Responsible Local Firms and Stock Market
Participation: Evidence from the U.S. Household Survey**

YU Li

A thesis submitted in partial fulfillment of the requirements
for the degree of
Master of Philosophy

Principal Supervisor: Dr. SONG Byron Y

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DECLARATION

I hereby declare that this thesis represents my own work which has been done after registration for the degree of MPhil at Hong Kong Baptist University, and has not been previously included in a thesis or dissertation submitted to this or any other institution for a degree, diploma or other qualifications.

I have read the University's current research ethics guidelines, and accept responsibility for the conduct of procedures in accordance with the University's Research Ethics Committee (REC). I have attempted to identify all the risks related to this research that may arise in conducting this research, obtained the relevant ethical and/or safety approval (where applicable), and acknowledged my obligations and the rights of the participants.

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ABSTRACT

In this study, I examine the relation between local firms' corporate social responsibility (CSR) performance and households' stock market participation. I hypothesize that the CSR performance of local firms is positively associated with households' stock market participation and that this result can be attributed to individual investors' increased confidence in the stock market. Using data from U.S. household surveys, I find that households are more likely to participate in the stock market and hold a larger proportion of their portfolios in stocks when local firms engage in more CSR activities. Cross-sectional analyses show that: i) the positive relation between local CSR and households' stock market participation is stronger for states in which firms receive greater media exposure; ii) relative to households in the Republican-leaning states, the positive relation is weaker for households in Democratic-leaning states; and iii) the relation tends to be stronger for households with a more highly educated and/or younger head, and wealthier households. Additional tests further show that the CSR performance of local firms has a significant and positive effect on individuals' stock market expectations. This finding is consistent with the argument that better CSR performance by local firms increases households' confidence in the stock market. In addition, I find that the positive relation between CSR and household stock market participation is mainly driven by firms' CSR efforts in relation to diversity engagement and environmental performance. Overall, my findings suggest that local firms' CSR performance plays an important role in enhancing individual investors' confidence in the stock market, thereby influencing household stock market participation.

Keywords: CSR, Household Stock Market Participation, Confidence

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1. Introduction

Corporate social responsibility (CSR), or the idea that businesses should seek to contribute to society by achieving goals beyond profit maximization and legal compliance (e.g., McWilliams and Siegel, 2001; Crane et al., 2013), continues to draw substantial interest from scholars, practitioners, and regulators. A large body of research has examined the economic consequences of firms' CSR activities, and shows that firms' CSR initiatives receive favorable responses from various stakeholders including financial analysts (Dhaliwal et al., 2012; Ioannou and Serafeim, 2015), debt holders (Goss and Robert, 2011; Cheng et al., 2014; Tan et al. 2020), institutional investors (Dhaliwal et al., 2011, 2014), auditors (López-Puertas Lamy et al., 2017), consumers (Luo and Bhattacharya, 2006; Schuler and Cording, 2006; Servaes and Tamayo, 2013), employees (Turban et al., 1997), the media (Cahan et al., 2015), and regulators (Wang and Qian, 2011; Flammer, 2018).

Despite the substantial efforts devoted to explore the effects of CSR on sophisticated Wall Street investors, corporate managers, and other professionals, few studies have examined how CSR affects the investment decisions of Main Street investors. This study aims to fill this gap in the literature by investigating the effect of firms' CSR performance on the stock market participation of U.S. households. Studies show that the CSR activities of local firms can signal the firms' commitment to ethical practices, responsible management, reduced agency concerns, and corporate transparency (Kim et al., 2012; Chen et al., 2016; Christensen, 2016; Ferrell et al., 2016; Harjoto, 2017; Wans, 2020). Based on this line of research, I posit that local firms' better CSR engagement helps increase local stakeholders' confidence in the firms' endeavors, thereby increasing the willingness of non-

sophisticated household investors to invest in the stock market (Zerbini, 2017). In turn, households' greater trust in local firms reduces households' concerns about monitoring costs and enhances their confidence in investing in the stock market, thereby increasing household investors' incentives to participate in the stock market.

Alternatively, other studies suggest that CSR may signal agency problems (Barnett, 2007; Friedman, 2007). According to this line of research, corporate insiders, such as executives, tend to enhance their reputation with important stakeholders at the expense of shareholders by increasing their firm's investment in CSR activities (Ioannou and Serafeim, 2015; Krüger, 2015; Liao et al., 2021). In line with this, Bartov et al. (2021) show that CSR activities may exacerbate, rather than moderate, negative stock market reactions to negative firm events if investors perceive that the negative events are a result of intentional fraud. To the extent that a greater commitment to CSR is associated with higher agency costs and concerns about managerial self-interest, the agency view of CSR suggests that better CSR performance may reduce potential investors' trust in the stock market, thereby hindering household stock market participation. Therefore, whether firms' CSR performance affects household stock market participation is an empirical question.¹

To answer this research question, I combine data on firms' CSR performance from the KLD database² with household data from the Panel Study of Income Dynamics (PSID). In examining the effect of firms' CSR performance on households, I assume that the CSR

¹ Several studies also document significant correlations between various CEO demographics and traits and firms' CSR performance (e.g., Huang, 2013; Borghesi et al., 2014; Cronqvist and Yu, 2017; Davidson et al., 2019). The findings of these studies suggest that firms' CSR performance may simply be an outcome of the personal style and characteristics of the CEOs. Thus, CSR performance may have a trivial effect on potential investors' confidence in the stock market and subsequently, the level of household stock market participation.

² Founded in the U.S. in 1988, the KLD database was acquired by RiskMetrics in 2009. RiskMetrics was subsequently sold to MSCI in 2010. Thus, KLD is known as MSCI ESG STATS.

performance of firms headquartered in a household's state of residence tends to more significantly affect that household's decision to participate in the stock market. This assumption is justified by evidence showing that as local firms tend to receive more media coverage and socially engage in their local area, local households are more likely to hold the stocks of these firms (Ivković and Weisbenner, 2005; Shive, 2012).

I then aggregate the CSR performance of all of the firms in each state and create a state-year measure of CSR. That is, I assume that the households in a particular state are exposed to and subsequently affected by the collective CSR efforts of all of the firms in that state. Using this aggregated measure of firms' CSR engagement, I find a positive correlation at the state level between the average CSR performance of firms and households' stock market participation. Similarly, I find a positive correlation between the average CSR performance of local firms and the level of household stock market participation, i.e., the ratio of equity value to total financial wealth of households. These results are robust to alternative CSR measures and household fixed effects. Overall, these findings suggest that local households are more likely to invest in stocks and tend to hold a larger proportion of stocks in their portfolios when the average CSR performance of local firms is high.

Next, I conduct several cross-sectional analyses to further investigate the effect of firms' CSR on household stock market participation. It is well documented that investors are affected by media coverage of corporate activities (Miller, 2006; Bushee et al., 2010; Solomon and Soltes, 2012; Solomon et al., 2014; Cao et al., 2017), presumably because greater media coverage makes corporate activities, such as CSR initiatives, more salient to

capital market participants.³ Thus, in the first cross-sectional test, using media data from RavenPack, I find that the positive relationship between local firms' CSR performance and households' stock market participation is more profound when local firms receive greater media coverage. This finding supports the view that greater media coverage of corporate activities, such as local firms' CSR performance, increases the confidence of potential investors in investing in local stocks.

In the second cross-sectional test, I examine whether the CSR demands of stakeholders moderate the association between CSR performance and household stock portfolios. Lins et al. (2017) show that firms are likely to meet the CSR demands of stakeholders as such investments can enhance trust and reciprocity, and thereby increase the stakeholders' willingness to support the firms. Stakeholders' greater CSR demands likely suggest that stakeholders generally have stronger CSR expectations of firms, thereby weakening the effect of CSR on the decision to invest. In the US, Democratic-leaning states are generally wealthier than Republican states, and thus firms in Democratic-leaning states tend to spend more on CSR than those in Republican-leaning states. Accordingly, I propose that individuals from Democratic-leaning states are more likely to demand that firms perform better on CSR. Thus, using hand collected data on whether a state is Democratic-leaning to proxy for stakeholders' CSR demands, I find that the positive correlation between local CSR performance and household stock investment is weaker in regions with greater demand for CSR, which is consistent with the argument that the effect of CSR on household

³ Alternatively, studies suggest that media coverage plays an important role in reducing information asymmetry between firms and capital market participants because it is challenging for investors to independently collect a firm's information before making an investment decision, as shown by studies such as Bushee et al. (2010), Huang et al. (2014), and Drake et al. (2017).

equity participation is weaker in states where stakeholders have higher expectations on CSR.

In the third cross-sectional test, I investigate whether the relation between CSR performance and household stock portfolios varies with the demographic characteristics of the households, such as the education level of the household head. I find that the positive relationship between CSR performance and stock portfolios is stronger when the household heads are better educated and when the individual household members are wealthier and/or younger. These results suggest that well educated people may value CSR engagement more and thus their investment decisions are more likely to be affected by firms' CSR performance. Moreover, wealthier people have a higher capacity to invest, and thus invest more based on CSR information, which suggests their investment decisions are more likely to be influenced by firms' CSR activities. However, older people may have less incentive to invest in the capital market because they tend to be more conservative (Truett, 1993; Cornelis et al., 2009). Moreover, older people tend to be more risk averse and thus have less incentive to invest in the stock market. Therefore, I conjecture that the relationship between CSR and equity participation is less pronounced among older people. Therefore, these findings support the view that households' different reactions to CSR performance reflect the level of confidence of individual investors in the stock market.

To shed light on the underlying channel, I also study the association between CSR performance and households' stock market expectations using data from the Rand American Life Panel (ALP). I find that households are more likely to expect a stock price increase, in both the short and long run, when local firms have better CSR performance.

This finding supports the view that local firms' CSR engagement increases households' confidence in the stock market.

Furthermore, in additional tests, I examine whether CSR plays a similar role in affecting households' decisions to invest in financial assets other than equities. I find that while there is a positive association between local firms' CSR performance and household stock market entry, I find no significant relation between local firms' CSR performance and other types of financial investment. These findings lend further support to the crucial role that firms' CSR performance plays in influencing individual investors' confidence in investing in the stock markets.

Finally, I examine whether the findings vary with different dimensions of CSR. Among the major CSR dimensions, the results indicate that the diversity and environment categories of CSR appear to be the most influential dimensions in explaining the greater household stock market participation documented in this study. I attribute this finding to the potentially greater salience of these two dimensions to local communities.

This study makes several contributions to the literature. First, CSR studies generally focus on sophisticated players in the capital markets, such as commercial banks, mutual funds, corporate managers, and financial analysts, while overlooking the investment behavior of ordinary households. Research suggests that households are pivotal decision-making agents in financial markets (Gomes et al., 2020). Although individually small, households in aggregate are an important source of funds for the capital market (Guiso and Sodini, 2013). Thus, by examining households' investment decisions, this study broadens our understanding of the capital market consequences of CSR.

Second, some CSR studies assert that strong CSR performance can enhance firms' reputation and social capital, and thus engender trust in the firms (Godfrey et al., 2009; Pevzner et al., 2015). However, studies tend to focus on the trust built by the CSR performance of individual firms, whereas my findings indicate that firms' CSR performance can increase households' overall confidence in the stock market, thereby reducing the cost of capital in the market. Therefore, I extend this line of research by examining the effect of the aggregate CSR performance at the regional level on potential household investors in the same region. The substitution between regional social capital and local firms' collective CSR activities further supports the argument that the average CSR performance of local firms can help generate social capital for all firms in the region. Thus, these findings provide evidence of the positive externality of firms' CSR investments and shed light on the channels through which firms' CSR investments affect shareholder value.

Third, I contribute to the literature on household investment choices by identifying an important determinant of household stock market participation. Not participating in the stock market can lead to sizable welfare losses for households (Campbell, 2006). Studies suggest that lack of trust in the stock market is a crucial factor that prevents households from investing in stocks (Guiso et al., 2008; Choi and Robertson, 2020). Supporting this view, studies suggest that corporate fraud undermines households' trust in the stock market and decreases the likelihood of household stock market participation (Giannetti and Wang, 2016; Niu et al., 2019). Christensen et al. (2019) suggest that strengthening and harmonizing securities regulations increases the equity ownership of households by increasing their confidence in the stock market. However, the literature is silent on how

firms can build households' trust in the stock market. The findings of this study indicate that the average CSR performance of local firms can influence potential investors' trust in the stock market, especially in regions with low levels of social capital. This finding is reassuring because limited stock market participation is a pressing issue worldwide and trust is typically hard to build (Guiso and Sodini, 2013).

2. Literature Review

In this section, I first review the literature on the framework of CSR. I then review the literature on the framework of household stock market participation.

2.1 Theoretical framework of CSR

With the increasing social demands for greater regulation and transparency of corporations, CSR is becoming a growing field of interest. The increased interest in CSR among capital market participants has also been accompanied by a growing body of CSR related accounting research. For instance, a significant proportion of the papers submitted to the most influential accounting conferences are related to CSR reporting (e.g., the midyear meeting of the Financial Accounting and Reporting Section). Perhaps more importantly, some of the most influential accounting papers published in the last decade are related to CSR. For instance, three of the top 10 most-cited papers in accounting since 2010 examine the capital market implications of CSR reporting and/or performance⁴

⁴ As reported in the Brigham Young University Citation Rankings http://www.byuaccounting.net/rankings/articles/areaarticle_ct.php.

(Dhaliwal et al., 2011; Kim et al., 2012). Thus, it seems fitting that this short review focuses on the most important and debated questions relating to CSR in the accounting literature.⁵

CSR signifies the “commitment of businesses to contribute to sustainable economic development by working with employees, their families, the local community and society at large to improve their lives in ways that are good for business and for development” (World Business Council for Sustainable Development, 2002). Increasingly, stakeholder expectations are motivating firms to be more proactive in engaging in CSR. Moreover, there is growing public awareness of social and environmental issues, with consumers and employees being some of the top stakeholders (United Nations, 2019). Shareholders are also making more frequent calls for firms to incorporate CSR in their business practices. This focus is strongly reflected in the content of shareholders’ proposals,⁶ which indicates that shareholders are mostly concerned about CSR issues such as the environment, political spending, and human rights.⁷

Although shareholder demands for CSR initiatives are increasing in strength and frequency, there is an ongoing debate regarding the role of CSR in the firm. Traditionally, firms are considered to be vehicles for maximizing shareholder wealth. However, CSR broadens the role of a firm to include providing wider social benefits. Some studies

⁵ To keep this review to a manageable length, I do not consider the CSR literature in other disciplines, such as finance and corporate governance. For a thorough review of CSR in the finance literature see Gillan et al. (2021). Christensen et al. (2018) provide an extensive review of CSR reporting standards, and Margolis et al. (2007) review the literature on the link between CSR and performance.

⁶ A review of shareholder proposals over the last decade consistently shows that social policy proposals outnumber the corporate governance proposals made by shareholders. Information and data on shareholder proposals on corporations can be found at <https://www.proxymonitor.org>

⁷ An examination of the categories of social and environmental policy-related shareholder proposals from proxymonitor.com reveals that approximately 40 percent of such shareholder proposals pertain to environmental issues while 35 percent pertain to political spending and lobbying, and 18 percent pertain to human and employment rights.

question this departure from the value maximization view of the firm (see, e.g., Jensen, 2001). Moreover, the channels through which CSR creates competitive advantage are unclear. Suggested channels for CSR-enabled competitive advantage include employees (Greening and Turban, 2000), marketing (Fombrun, 2005), customer loyalty (Luo and Bhattacharya, 2006), reputation (Godfrey et al., 2009), and reduced information asymmetry (Cho et al., 2013). However, there is little agreement on which channels are the most successful in creating value through CSR. Under the value maximization view of the firm, these uncertainties surrounding the channel, amount, and timing of CSR payoffs suggest that pursuing CSR initiatives may hinder firm performance.

Stakeholder theory offers an alternative view of firm value creation. Stakeholder theory explains how firms can integrate their value maximization goals with the interests of diverse groups of stakeholders to create competitive advantage. According to stakeholder theory, to be successful, firms have to create value for various stakeholders, such as customers, suppliers, employees, communities, trade unions, political groups, competitors, shareholders, and banks. While the traditional value maximization view advocates creating value for shareholders, stakeholder theory advocates creating value for the whole corporation (Jo et al., 2016). Understandably, stakeholder theory is now the primary theory for explaining the link between firm performance and CSR.

The literature broadly supports stakeholder theory as it relates to CSR. Studies linking CSR and firm performance identify several ways in which CSR activities can create value for firms. Specifically, evidence indicates that better CSR performance can improve access to finance (Cheng et al., 2014), reduce the cost of capital (El Ghouli et al., 2011; Goss and Roberts, 2011; Ng and Rezaee, 2015; Tan et al., 2020), increase customer and employee

satisfaction (Servaes and Tamayo, 2013), increase levels of institutional ownership (Dimson et al., 2015), and generate a better reputation and more social capital (Godfrey et al., 2008). Nevertheless, despite this large body of literature on the effects of CSR performance on different kinds of stakeholders, considerable academic attention continues to focus on the relationship between CSR performance and firm value.

Taking a closer look at the CSR-firm value debate, Tsang et al. (2021) investigate whether researchers' decisions relating to different CSR measures, CSR categories, and sample periods play a role in the observed association between CSR performance and firm value. They construct several measures of CSR performance based on the KLD database and find that the different CSR performance measures indicate that there is a significant and positive relationship between CSR performance and firm value. However, they also find that the choice of CSR categories and the sample period affect the CSR-firm value relationship. For example, the product category of CSR has the least robust relationship between CSR performance and firm value, reflecting the higher proprietary costs of disclosing product-related CSR information. Conversely, the environmental, employee relations, community, and diversity subcategories have robust associations with firm value.

Corporate governance is another factor that may affect the association between CSR performance and firm value.⁸ Although they are distinct concepts, corporate governance and CSR serve similar functions within the firm and are inter-related (Liao et al., 2021;

⁸ It is worth noting that while CSR is mostly conceptualized as socially responsible actions undertaken by corporations, it may also include the concept of corporate governance. Indeed, Environmental, Social, and Governance (ESG) reporting integrates firms' corporate governance concerns (G) with their environmental and social orientation (ES). The concept of CSR also includes governance concerns, but indirectly as they relate to environmental and social considerations (Gillan et al., 2021). Worldwide, CSR performance is now a primary corporate governance concern.

Tsang et al., 2021).⁹ In general, the literature treats corporate governance and CSR as separate topics of research (Di Giuli and Kostovetsky, 2014). However, recent studies have examined whether corporate governance moderates the CSR-firm value relationship. According to stakeholder theory, well-designed corporate governance systems should reduce firms' agency problems and motivate managers to focus on the benefits of nonfinancial stakeholders. In line with this, studies document strong relationships between CSR and corporate governance (Jamali et al., 2008; Harjoto and Jo, 2011; Jo and Harjoto, 2012; Ferrell et al., 2016; Liao et al., 2021).

In summary, there is a clear trend that stakeholders increasingly demand greater CSR performance and transparency from corporations.

2.2 Theoretical framework of household stock market participation

Household finance is an emerging and rapidly growing topic that has attracted considerable academic and media attention. Because households usually operate in complex and dynamic environments, investigating the factors that influence households' financial decisions can help improve their financial wealth and welfare. In addition, household stock market participation plays a vital role in the development of corporate finance and the capital markets, and thus understanding the factors that influence households' portfolio choices may contribute to the sustainable development of the capital market. As individuals represent a significant portion of capital market participants

⁹ Corporate governance primarily focuses on reducing the agency problem, whereas CSR activities mainly focus on serving the interests of all stakeholders (Tsang et al., 2021). However, the primary focus of both corporate governance and CSR is to increase long-term shareholder value, and like CSR, data from proxymonitor.com indicate that in recent decades, shareholders have been showing increasing interest in corporate governance.

worldwide, there is growing interest in exploring the potential determinants of households' investment choices (Guiso and Sodini, 2013).

Studies on household stock market participation show that demographic, socio-economic, and cultural factors can influence the likelihood of a household participating in the stock market. For example, studies show that wealth (Vissing-Jorgensen, 2003), education (Bernheim and Garrett, 2003), social interaction (Hong et al., 2004; Brown et al., 2008), financial literacy (Van Rooij et al., 2011), and trust (Guiso et al., 2008) can have significant effects on households' investment choices.

Vissing-Jorgensen (2003) find that investors' past investment experience is an important determinant of their investment decisions. In line with this, Malmendier and Nagel (2011) find a significant association between individuals' lifetime experiences and the economic decisions of their households. In addition, Bernheim and Garrett (2003) find a positive association between education and personal savings. Van Rooij et al. (2011) find that individuals with low literacy levels are less likely to participate in the stock market, which provides empirical evidence that financial literacy can affect individuals' financial portfolio decisions. Brown et al. (2008) find that individuals' social connections can influence their decisions on whether to participate in the stock market.

Studies on household finance tend to focus on the relation between trust/confidence and the decision-making processes of ordinary households. Research suggests that trust can also significantly affect individuals' decisions to engage in risky contracts (Guiso et al., 2008). Consistent with this argument, various studies document a positive association between trust and household stock market participation (Guiso et al., 2008; Christensen et al., 2019). Lending further support to this view, in their survey of the financial beliefs and

decisions of a representative sample of U.S. individuals, Choi and Robertson (2020) find that a lack of trust in other market participants is one of the most important factors preventing individuals from owning stocks. Similarly, some studies suggest that corporate fraud undermines households' confidence in the stock market and reduces their likelihood of participating in the stock market (Giannetti and Wang, 2016; Niu et al., 2019).

Overall, household finance is a significant topic of research in the literature. Studies generally tend to attribute household portfolio decisions to the individual householder's views of the financial market. Supporting this view, studies on the U.S. stock market (Giannetti and Wang, 2016) and stock markets outside the U.S. (Niu et al., 2019) suggest that corporate fraud is negatively associated with household stock market participation because corporate misconduct undermines households' trust in the market.

In summary, it is important to understand and identify the factors that may affect households' access to stock market.

3. Hypothesis Development

The portfolio choice problem, i.e., how should an investor allocate his or her wealth among risk-free assets (e.g., government bonds) and risky assets (e.g., stocks), is one of the central questions of modern financial economics. The classic finance theories predict that every rational investor should hold some stocks as long as the equity premium is positive (Mankiw and Zeldes, 1991; Haliassos and Bertaut, 1995). In other words, not participating in the stock market is considered to be a welfare loss for households (Cocco et al., 2005). However, contrary to this position, data from countries around the world show that only a small portion of the population owns stocks (Guiso and Sodini, 2013). Moreover,

even among those who own stocks, the amount invested is often far below the optimal level implied by the classic portfolio choice theories (Guiso and Sodini, 2013). Against this backdrop, understanding the drivers of households' stock market participation has become a focal topic in the household finance literature (Campbell, 2006).

The classic portfolio choice theories typically assume that investors can acquire and understand all publicly available information at no cost and can objectively assess stock market returns (Haliassos and Bertaut, 1995). In reality, households are typically financially naïve and lack the ability to obtain and process the relevant information (Haliassos and Michaelides, 2003; Van Rooij et al., 2011). Guiso et al. (2008) argue that many households may perceive the stock market to be like a three-card game played on the street, and thus they must trust that the game is played fairly and believe in the integrity of the other players. In theoretical terms, low levels of trust increase the likelihood of individuals feeling that they are being cheated in the stock market (Guiso et al., 2008). Consistent with this argument, various studies show that trust is positively associated with household stock market participation (Guiso et al., 2008; Christensen et al., 2019). In a survey of the financial beliefs and decisions of a representative sample of U.S. individuals, Choi and Robertson (2020) find that a lack of trust in other market participants is one of the most important factors preventing individuals from owning stocks.

Given this trust issue, when making investment decisions, households need signals to increase their confidence in firms' future performance. CSR performance might serve this role by building social capital and trust (Lins et al., 2017). It is well documented that CSR performance can signal firms' commitment to ethical practices, responsible management, lower agency concerns, and corporate transparency (EI Ghoul et al., 2011; Kim et al., 2012;

Chen et al., 2016; Christensen, 2016; Ferrell et al., 2016; Harjoto, 2017; Wans, 2020). This signaling effect may increase current and potential investors' perceptions of firms' trustworthiness, thereby reducing their expropriation concerns.

Although CSR studies generally focus on sophisticated investors, the signaling role of CSR may have a particularly important influence on the decision-making processes of ordinary households. Because of their outsider status and lack of knowledge, households face more information asymmetry and have limited ability to conduct financial analyses. Compared with accounting and financial information, CSR information is easier for nonprofessionals to understand. In addition, small investors, such as households, tend to be inattentive to financial market information (Sicherman et al., 2016). However, CSR information is highly visible and is available from various sources, such as corporate websites, stand-alone CSR reports, news media, social media, and financial statements such as the 10K. Moreover, individuals tend to make emotionally driven decisions (Statman et al., 2008). Communications about CSR often evoke emotionally affecting images, causing investors to respond affectively to the communicating firms (Elliott et al., 2014).

In addition, Bodnaruk (2009) shows that in addition to mainly investing in domestic stocks, investors show a significant preference for firms that are located in their local area. This strong preference of investors for nearby domestic companies is widely recognized as a form of local bias. Studies show that local bias can have an important effect on the behavior of capital market participants (Coval and Moskowitz, 1999, 2001; Hau, 2001). Lending further support to the conjecture that household investors are more likely to be affected by local firms' CSR performance, Massa and Simonov (2006) suggest that

investors' local bias (in this study, household investors' preference for local firms) can play an important role in determining investors' equity investment decisions.

To generate testable hypotheses, I assume that households are more exposed to the CSR performance of firms headquartered in their state of residence. Supporting this view, studies show that households tend to hold stocks of local firms (Coval and Moskowitz, 1999; Ivković and Weisbenner, 2005; Shive, 2012). Based on this rationale, I develop the following hypothesis:

H1a: There is a positive association between local firms' CSR performance and nearby households' stock market participation.

For a balanced view, I note that CSR investment may represent a costly diversion of firm resources from profitable projects and thus signal agency problems (Barnett, 2007; Friedman, 2007). According to this view, given the existence of agency conflicts, the managers of a firm might opportunistically invest in CSR initiatives to advance their personal agendas, such as increasing executive power, enhancing their personal image, or covering up misconduct, at the expense of shareholder interests (Ioannou and Serafeim, 2015; Krüger, 2015; Liao et al., 2021). Moreover, Bartov et al. (2021) argue that CSR performance may destroy firm value by exacerbating negative stock market responses to negative events if those events are perceived to be the result of intentional misconduct. Therefore, CSR performance could be interpreted as a manifestation of the high agency costs arising from managerial self-interest and reduce the confidence of potential investors in the stock market. Therefore, I posit the following hypothesis:

H1b: There is a negative association between local firms' CSR performance and nearby households' stock market participation.

4. Data and Methodology

4.1. Data and Sample

To examine the effect of CSR on household stock investment decisions, I obtain data from the following sources: (1) information on household equity holdings and various demographic and economic characteristics is from the PSID database; (2) the KLD database is the source for firms' CSR ratings; (3) data from Audit Analytics, Institutional Brokers Estimate System (I/B/E/S), Capital IQ Compustat (CIQ), and the Bureau of Economic Analysis (BEA) are used to capture state-level business and economic conditions. The PSID houses the results of a longitudinal panel survey of US families organized by the Survey Research Center at the University of Michigan. Starting in 1968, the survey was conducted annually until 1997 and has been conducted biennially thereafter. The PSID contains rich information on families' demographic characteristics, health attributes, and financial decisions across multiple generations. In particular, the PSID data provide detailed information on the states in which individual households are located, which allows me to explore the variations in CSR performance between states. To maximize the observations, I merge the data from 1994–2019 into a large panel. The beginning of the sample period is determined by the availability of CSR scores.

The KLD database contains the CSR ratings of large publicly traded companies. Because of its extensive coverage and objectivity, the KLD database is widely used in the literature (e.g., Dhaliwal et al., 2011; Borisov et al., 2016; Lins et al., 2017). Specifically, it classifies firms' CSR performance into seven categories, with each category being associated with certain strength indicators and concern indicators. I do not include the

corporate governance category in my analysis because studies show that corporate governance is distinct from CSR (e.g., Di and Kostovetsky, 2014). In particular, corporate governance commonly focuses on reducing the agency problem. In contrast, CSR is not solely shareholder-oriented but also focuses on social and environmental objectives that concern general stakeholders. Consequently, I use the remaining six categories to construct the CSR scores for each firm-year. To match the PSID sample, I obtain CSR data from 1993 to 2018.

To investigate the effect of firms' CSR performance on households, I combine data on firms' CSR performance from the KLD database with household data from the PSID. As the survey data do not provide the names of the stocks a household owns, I cannot examine the effect of a particular firm's CSR performance on household decisions. Instead, I focus on how the overall CSR performance of firms headquartered in a region collectively affects the households domiciled in that region.

The main sample includes household-year observations of U.S. households from 1994 to 2019. I eliminate household-year observations with missing demographic characteristics and financial decisions that are necessary to conduct the multivariate tests. My final sample consists of 89,315 household-year observations from 1994 to 2019. Table 1 shows the sample distribution by year. The fewest observations (3306) occur in 1994, and the number increases over time to reach the most observations (8660) in 2019. According to the PSID database, data on the household level in my regression are available every five years from 1994 to 1999, and then every two years from 1999 to 2019. Thus, there is a gap between 1994 and 1999.¹⁰

¹⁰ This study is heavily reliant on the PSID database and the sample period is strictly consistent with the data availability.

<Insert Table 1 Here>

4.2. Measurements

My dependent variable is household stock market participation. Following the literature (Giannetti and Wang, 2016), I consider two alternative measures of stock market participation. The first measure is *Equity Participation*, an indicator variable that is coded 1 if the household holds any shares of publicly held corporations, mutual funds, or investment trusts. The second measure, *Equity-Wealth Ratio*, is the ratio of the value of equity to total financial wealth. These two measures represent the level of stock market participation on the extensive and intensive margins, respectively.

The explanatory variable in my analysis is local firms' CSR engagement. Following the literature (Gao et al., 2014; Hubbard et al., 2017), I measure a company's CSR performance using the difference between the number of CSR strengths and the number of CSR concerns across the major CSR dimensions. Using the firm-level CSR scores, I construct the variable *CSR*, which is the average CSR score of firms in a given state for a given year, which captures state-level CSR performance. The level of CSR performance differs remarkably across states, ranging from a low of -1.75 for North Dakota to a high of 2.55 for Maine. In my empirical analysis, I merge the state-level CSR index with household data from the PSID by assigning each household the one-year lagged CSR index of its state of residence.

4.3. Empirical Methodology

As the survey data do not provide the names of the stocks a household owns, I cannot examine the effect of a particular firm's CSR performance on household decisions. Instead,

I focus on how the overall CSR performance of firms headquartered in a region collectively affects the households domiciled in that region. The underlying assumption of this method is that households tend to be influenced by the local firms' CSR performance. This assumption is justified by the well-documented local bias phenomenon, which shows that investors prefer to invest in companies headquartered in their local area (Ivković and Weisbenner, 2005). Thus, investors tend to pay attention to the CSR performance of local firms and are more aware of the firms' CSR performance because local firms tend to interact with local residents and gain greater exposure in local news media. Given the issue of data availability, I follow the literature (i.e., Giannetti and Wang, 2016) and aggregate firms' CSR performance at the state level. Accordingly, I use the following OLS regression model to estimate the effect of CSR engagement on households' stock market participation:

$$Y_{ist} = \beta_0 + \beta_1 CSR_{st-1} + \beta_2 X_{ist} + \gamma_s + \delta_t + \varepsilon_{ist}, \quad (1)$$

where Y_{ist} is either *Equity Participation* or *Equity-Wealth Ratio* for individual i from state s in year t . CSR_{st-1} is the lagged state-level CSR index, which varies by state and over time. X_{ist} is a vector of household- and state-level control variables. γ_s and δ_t are state and year fixed effects, respectively. Including these fixed effects absorbs any shocks that are state- and time-specific. ε_{ist} is the error term. I cluster standard errors by state and year to allow for the correlation of error terms over time within the same state. It is important to note that research suggests that when a large number of fixed effects are included in the model, OLS models can be used to effectively estimate the relationship between dependent and independent variables even when the dependent variable is an indicator variable (Giannetti and Wang, 2016; Gan et al., 2021).¹¹ For example, Giannetti and Wang (2016)

¹¹ As households might also be exposed to the CSR performance of firms in other states, our estimates should be interpreted as the lower bound of the effect of CSR on household stock market participation.

examine the relationship between corporate fraud and household stock market participation in a U.S. setting using the OLS regression. Second, the economic significance of the results is easier to determine using OLS models than the Logit and Tobit models. Nevertheless, in robustness tests, I continue to find consistent results using the Logit and Tobit models.

To isolate the effect of CSR, I follow the literature and include a wide range of household- and state-level determinants of household investment decisions (Giannetti and Wang, 2016). At the household level, I control for a set of demographic and economic characteristics, including age, gender, marital status, education, family size, number of children, income, and wealth.

To control for temporal variations in local business and economic conditions that may affect household stock market participation or firms' CSR engagement, I also add a set of state-level characteristics. The variables *Firm Age* and *Firm Size* are the average age and size of local companies. The variables *CAPX*, *LEV*, and *ROA* represent the average adjusted capital expenditure, total long-term debt, and net income before extraordinary items of local companies. These variables are scaled according to the book value of total assets. Giannetti and Wang (2016) find that revelations of corporate scandals negatively affect stock market participation among local households. Thus, I control for the variable *Corporate Fraud*, which is the ratio of the number of fraudulent listed firms in a state divided by the total number of listed firms in that state for a given year. As litigation risk poses a threat to shareholder wealth and may also affect firms' CSR investment (Gande and Lewis, 2009; Koh et al., 2014), I include the variable *High Litigation Industry*, which is ratio of the number of listed firms in high litigation industries in a state to the total number of listed firms in that state for a given year. To capture the stock market

performance of local companies, I control for the variable *State Stock Return*, which is the average annual state-level stock market return in a state, and *State Market Capitalization*, which is the natural logarithm of the total market value of all public firms in a state for a given year. Finally, I include the annual state GDP growth rates to capture the local economic conditions. The variable definitions are summarized in Appendix A.

4.4. Descriptive Statistics

Table 2 presents the summary statistics of the main variables in the empirical analysis. Table 3 presents the Pearson correlations between the variables used in my regressions. As shown in Table 2, the mean values of *Equity Participation* and *Equity-Wealth Ratio* are 0.16 and 0.09, respectively, which indicates that the equity market participation rate of the sample is 16%, and on average, equity accounts for 9% of the total financial wealth. The mean and median values of *CSR* are both around 0.36, indicating that the average CSR score of firms in a state in a given year is 0.36. Around 50% of the household heads are married and more than 50% of the household heads are male. As shown in Table 3, *CSR* has positive correlations with *Equity Participation*, which provides preliminary evidence that household stock market participation is associated with the better CSR performance of local firms. In addition, *Equity Participation* has statistically significant positive correlations with the household level variables *Log (Head Age)*, *Male*, *Marriage*, *College Education*, *Log (Wealth)*, and *Log (Family Income)*. However, none of these correlations are greater than 0.3, suggesting that household stock market participation decisions are not mainly determined by household-level characteristics.

<Insert Tables 2&3 Here>

5. Empirical Results

5.1. Main Empirical Results

The results of the benchmark regressions are reported in Table 4. Columns (1)–(2) show the results for the participation regressions, and Columns (3)–(4) show the results for the asset allocation regressions. I focus on the former regressions first. When I include household-level control variables in Column (1), the estimated coefficient on CSR is positive and statistically significant at the 1% level. As expected, the coefficient on CSR becomes smaller when all of the control variables are added to the regression in Column (2), but it remains highly significant. These results reveal that when firms headquartered in a state exhibit better average CSR performance, households in that state are more willing to participate in the stock market. In Column (2), all of the control variables are included, and the coefficient on *CSR* is 0.013.

In economic terms, this result implies that there is a 1.31% (0.013×1.01) increase in the probability of household investment for each one standard deviation increase in the CSR index. As approximately 16% of households invest in stocks, this result suggests that the CSR index is correlated with an 8.19% increase in the probability of household stock market participation.¹² Using gender as a comparison, the men in the sample are 1.9% more

¹² As shown in Table 5 Panel C, the coefficient on the CSR variable is significantly positive, indicating that an increase in the local firms' CSR performance is associated with a significant increase in the probability that a household is involved in the stock market. Column (1) of Table 5 Panel C presents the estimates from the Logit model, in which the dependent variable is an indicator variable for households' stock market participation. In Column (1) of Table 5 Panel C, I report the marginal effects of each prediction variable. In economic terms, the marginal effect of CSR is 0.006, meaning that a one standard deviation increase in CSR (S.D. = 1.01) from the sample mean would increase the households' probability of holding stocks by 0.61% (0.006×1.01). Given that the unconditional probability of households' stock market participation is around 16%, this magnitude of increase is moderate but economically meaningful ($0.61/16 = 3.8\%$).

likely to invest in stocks than their female counterparts. This indicates that the differential effect of CSR on male and female household investors is economically significant (Halko et al., 2012; Ke, 2021).

To better understand how individual involvement in the capital market varies with local firms' CSR engagement, I examine the households' asset allocation decisions. I use the fraction of financial wealth allocated to equities as the dependent variable. The results are displayed in Columns (3) to (4). The coefficient estimate of CSR is positive and highly significant at the 1% level, which indicates that better CSR performance among local firms leads households to invest a greater proportion of their financial wealth in stocks.

CSR also has a large economic effect on households' asset allocation decisions. The coefficient estimate of 0.008 in Column (4) indicates that a one standard deviation increase in a state's CSR index (1.01) is associated with a 0.81% (0.008×1.01) increase in the proportion of wealth allocated to equities. Compared to the unconditional sample mean of 0.09, this represents a 9% ($0.81\% / 0.09$) increase in the portfolio allocation in stocks. Therefore, this result is consistent with the argument that the superior CSR performance of local firms increases households' confidence in the stock market and leads to higher levels of stock market participation among households, which supports *Hypothesis 1a* and disproves *Hypothesis 1b*.

In addition to CSR, in line with the literature (Cole et al., 2014), I find that richer and more educated people are more willing to take greater risks. Moreover, being male, being married, and having more children can have a positive effect on households' equity investment, whereas family size is negatively correlated with stock market participation.

<Insert Tables 4 Here>

5.2. Robustness Checks

5.2.1. Alternative CSR Measures

In the benchmark analysis, I use the difference between the number of CSR strengths and the number of CSR concerns as a proxy for firm-level CSR performance. To explore whether the results are consistent using this alternative construction of the CSR scores, I consider three alternative CSR measures. First, CSR performance may vary systematically between industries. To consider this variation, I follow the literature (e.g., Tsang et al., 2021) in adjusting the raw firm-level CSR score by the industry mean score. This adjustment makes the resulting CSR performance more comparable across industries. Second, Lins et al. (2017) stress that the maximum numbers of strengths and concerns will differ over time. To address this concern, I scale the strengths (concerns) for each category by dividing the number of strengths (concerns) by the maximum number of strengths (concerns) for that category each year. Third, the distribution of firm-level CSR scores may be skewed within some states during my sample period. This possibility renders median, rather than mean, CSR scores more suitable for characterizing the CSR engagement of all firms in a state. Hence, I use the median score as another state-level CSR index.

I rerun the regressions using the alternative CSR measures and report the results in Table 5, Panel A. I still find consistent results, suggesting that my results are not dependent on the use of alternative CSR measures.

<Insert Tables 5 Here>

5.2.2. Household Fixed Effects

To further check the robustness of my results, I use the PSID dataset and expand my benchmark models with household fixed effects. Adding these fixed effects allows me to consider any unobserved household-specific, time-invariant characteristics, such as preferences, that may correlate with stock market participation. Table 5 Panel B displays the results of the regressions with household fixed effects. I find that the coefficient on CSR is still significantly positive, indicating that my results are robust to the inclusion of household fixed effects.

5.2.3. Alternative Model Specifications

Consistent with the research on household stock market participation (Giannetti and Wang, 2016; Gan et al., 2021), I use the OLS regression specification as the main research model. However, given that the dependent variable of this study (i.e., a household's equity participation) is a dichotomous variable, in a robustness test, I also estimate the key model with both the Logistic and Tobit regressions. As shown in Table 5 Panel C, the coefficient on CSR is still significantly positive, indicating that my results are robust to the Logit and Tobit models.

5.3. Cross-sectional Tests

In this section, to better understand the positive effect of CSR on households' equity investment, I use several cross-sectional tests documented in the benchmark analysis.

5.3.1. Moderating Effect of Media Coverage

It is well documented that the media can play a critical role in shaping investor

behavior by increasing the salience of corporate activities, such as firms' CSR initiatives (Miller, 2006; Barber and Odean, 2008; Bushee et al., 2010; Engelberg and Parsons, 2011; Solomon and Soltes, 2012; Solomon et al., 2014; Hu et al., 2021). Media coverage of corporate activities may play a particularly important role in increasing households' awareness of firms' CSR performance because cognitive limitations, such as inattention and inertia, are common among individual investors (Keys et al., 2016; Andersen et al., 2020). This implies that some households may not actively acquire information about firms' CSR involvement, even though such information is readily available on firms' websites and in their financial reports. Therefore, a greater level of media coverage may enhance the public awareness of firms' CSR initiatives and amplify the positive effect of CSR on household investment decisions. I examine this argument in the following analysis.

To measure the media coverage of corporate activities, I extract data from the RavenPack database and construct the variable *High Media Coverage*, which is an indicator variable that is coded 1 if the total number of news articles in a state is higher than or equal to the average number for a given year, and 0 otherwise. I then interact this variable with CSR performance and include the interaction term in the benchmark model to investigate the moderating effect of media coverage on the relationship between CSR and household stock market participation. As shown in Table 6, the coefficient on the interaction term between *CSR* and *High Media Coverage* is positive and significant across all specifications, indicating that the positive effect of CSR on stock market participation is stronger in states where corporate activities receive more media coverage. This is consistent with the argument that greater media coverage of corporate activities enhances

the effect of firms' CSR performance in increasing households' confidence in the stock market.

<Insert Tables 6 Here>

5.3.2. Moderating Effect of Stakeholders' CSR demands

Prior study reveals that Democratic-leaning firms invest \$20 million more on CSR than Republican-leaning firms (Di Giuli and Kostovetsky, 2014). Stakeholder theory suggests that CSR can reduce the negative externalities of many economic activities and ultimately benefit firms because society values and rewards such activities (Heal, 2005; Godfrey et al., 2009). Studies show that firms are likely to be willing to meet stakeholders' CSR demands, as such investments can enhance trust and reciprocity and thereby increase the stakeholders' willingness to support the firms (Lins et al., 2017). Greater CSR demands from stakeholders likely suggests that the stakeholders generally have stronger CSR expectations for firms domiciled in those states, thereby weakening the effect of CSR on investors' decisions. Therefore, I conjecture that in states where stakeholders tend to have higher expectations of CSR, the effect of CSR on household equity participation becomes weaker.

To test the moderating effect of stakeholders' CSR demands, I construct an indicator variable *Democratic States* that is coded 1 if the state is Democratic-leaning, and 0 otherwise. As Democratic-leaning states are generally wealthier than Republican states, firms in Democratic-leaning states tend to spend much more on CSR than those in Republican-leaning states. Therefore, I hand collect the data from the Google, then rerun the regressions with an additional interaction term between *Democratic States* and *CSR*.

Table 7 shows the results. I find that the coefficient on the interaction term is negative and significant in the participation regressions in Column (1), whereas it is non-significant but negative in the asset allocation regressions in Column (2). This result suggests that the positive effect of CSR on stock market participation is weaker for households in the *Democratic-leaning* states. This finding is consistent with my conjecture that local stakeholders are likely to enjoy a diminishing marginal utility in terms of their well-being stemming from the CSR investment, thereby weakening the effect of CSR on local householders' investment decisions.

<Insert Tables 7 Here>

5.3.3. Moderating Effect of Demographic Characteristics

To explore the relevance of individual investors' confidence in the stock market in explaining households' reactions to CSR performance, I examine the moderating effect of the demographic characteristics of household investors on the association between CSR and household equity investment. Accordingly, I construct a series of dummy variables to capture the different demographic characteristics. The differences in the effect of CSR performance on the household equity investment can provide support for the notion that the effect of CSR on individual investors' confidence can vary with demographic characteristics, thereby supporting the interpretation that CSR increases individual investors' confidence in the stock market.

Table 8 reports the differences in the effect of CSR on households' equity investment with respect to the demographic characteristics of the household investors. The dependent variables in Columns (1)–(5) and Columns (6)–(10) are *Equity Participation* and *Equity-Wealth Ratio*, respectively. *College Education* is an indicator variable that is coded 1 if the

household head experiences no less than 16 years of education, and 0 otherwise. *High Wealth* is an indicator variable coded 1 if the net worth of the household is in the top tertile of the sample distribution in a year, and 0 otherwise. *High Age* is an indicator variable that is coded 1 if the household head is older than or equal to the sample median age, and 0 otherwise.

I find that the coefficient on the interaction term $CSR \times College\ Education$ is positive and significant in the asset allocation regressions in Column (4), whereas it is non-significant but negative in the participation regressions in Column (1). The coefficient on the interaction term $CSR \times High\ Wealth$ is positive and significant in the asset allocation regressions in Column (5), whereas it is non-significant but negative in the participation regressions in Column (2). Nevertheless, the coefficient on the interaction term $CSR \times High\ Age$ is negative and significant in the participation regressions in Column (3), whereas it is non-significant but negative in the asset allocation regressions in Column (6).

Overall, these results show that the positive effect of CSR tends to be more pronounced for households with more highly educated, wealthier, and younger members. This finding indicates that well educated people may pay more attention to CSR performance and be better able to absorb such information, and thus be more likely to invest in the stock market. Wealthier people have a higher capacity to invest, and thus invest more based on CSR information. However, older people tend to be more conservative and are less likely to be influenced by news of events such as CSR activities, therefore the effect of CSR on equity participation is less pronounced.

<Insert Tables 8 Here>

5.4. Supplementary Analyses

5.4.1. CSR and Stock Market Expectations

Although the PSID dataset I use in the main analysis contains rich information on household asset allocations, it does not specify stock market beliefs. To directly test the channel through which local firms' CSR activities affect households' stock market participation and provide some evidence of whether firms' CSR activities affect households' confidence in the stock market, I turn to another household survey data, the ALP.

An Internet survey platform administered by the RAND Corporation, the ALP maintains a pool of survey participants. Researchers can use the ALP to field their surveys. For my analysis, I use participants' responses to questions concerning their expectations about the future of the stock market, obtained from a series of modules (Hurd and Rohwedder, 2010). Specifically, this series of modules started in November 2008 and asked respondents how they believed major stock indexes, such as the Dow Jones Industrial Average, would increase in 1 year and in 10 years. The final sample in this section consists of 61,409 (61,239) individual-level observations on 1-year (10-year) stock market expectations, corresponding to 52 survey waves in the period between November 2008 and January 2014.

To examine the effect of CSR on households' confidence in the stock market, I generate two dependent variables that measure individuals' expectations about future stock market performance and use the specification from the benchmark analysis. Specifically, the variable *Expectation_1y* (*Expectation_10y*) is an indicator variable that is coded 1 if the respondent believes that the probability of a stock price increase in 1 year (10 years) is more than 50%, and 0 otherwise. Table 9 presents the regression results. The results suggest

that individuals are more confident in the future stock market both in the short- and long-term horizons when firms in their state of residence have better CSR performance. Therefore, increased confidence in the stock market is a potential channel underlying the relationship between CSR and household stock market participation. In addition, the finding that the local firms' CSR initiatives increase individuals' confidence in the stock market as a whole demonstrates the externality of CSR activities in that firms' CSR investments might improve the overall image of the stock market.

<Insert Tables 9 Here>

5.4.2. Stock Market Entry

In the benchmark analysis, I focus on the stock market participation of all households. As a robustness check, I further examine whether CSR attracts new investors. I posit that the positive signals associated with better CSR performance should induce more households to enter the stock market. To test this conjecture, following Giannetti and Wang (2016), I construct an indicator variable *Stock Entry* that is coded 1 if a household did not invest in stocks in the previous year but does in the current year, which captures individuals' entry into investing in the stock market.

Table 10 Column (1) reports the results for stock market entry. I observe that, consistent with the benchmark analysis, CSR has a positive and significant coefficient in the specification, indicating that when local companies exhibit better CSR performance, more households enter the stock market. The effect is economically meaningful. The coefficient of 0.008 in the specification with full controls implies that there is a 0.81 percentage point (0.008×1.01) increase in the probability that households in that state enter the stock market for each one standard deviation increase in CSR performance in that state.

Relative to the entry rate in the sample (7.6%), this estimate represents a 10.65% (0.81%/7.6%) increase in the likelihood of entering the stock market.

<Insert Tables 10 Here>

5.4.3. Investment in Other Financial Assets

Next, I investigate whether CSR affects investment in other financial assets. As CSR performance mainly conveys information about companies, one might expect that the demand for non-equity assets, such as government securities, is less affected by CSR. Moreover, the positive effect of CSR on individuals' equity investment implies that CSR may lead households to reallocate their portfolios away from other financial assets. I test these conjectures in the following analysis.

To measure investment in other financial assets, I construct the dummy variable *Other Financial Assets*, which equals 1 if the household holds a checking or savings account, money market funds, certificates of deposit, government bonds, or treasury bills.¹³ I then estimate the regressions with *Other Financial Assets* as the dependent variable. Table 10 Column (2) presents the regression results. I observe that the coefficient on CSR is not statistically significant in the specification. Therefore, CSR has no effect on investment in non-equity securities and the substitution effect, that CSR engagement induces households to replace other financial assets with stocks, is weak at best. This finding is consistent with

¹³ A caveat of this study is that in examining the effect of local firms' CSR performance on individual households' equity participation, it is important to examine the effect of local firms' CSR performance on nearby households' non-equity participation. Moreover, different financial assets (such as insurance, property, and savings) may also have different effects on individual household's equity participation. However, because the key variable of interest in this study is from the PSID's survey data, and data on other financial assets is limited in this survey data, it is difficult to distinguish the potential effect from different types of financial assets on households' equity participation decision.

my main hypothesis. As investing in bank deposits and government securities does not require a high level of confidence in firms, the effect of CSR on investment in these assets is expected to be weak.

5.4.4. CSR Categories

Thus far, I have established the overall effect of CSR performance on household stock market participation. Given that my CSR measure is composed of six categories, namely, community, diversity, employee relations, environment, human rights, and product, a natural follow-up question is whether specific components of CSR play a more important role in attracting individual investors. At the beginning of this study, I conjecture that CSR involvement serves as a signal that can build trust and confidence. Hence, the more visible and perceivable the disseminated CSR information is, the more household stock market participation should be affected. For example, because the employee relations category mainly concerns internal stakeholders, it is more difficult for general households to gain awareness of them. As a consequence, this category should be less important for individual investment decisions. In contrast, the diversity and environment categories speak mainly to external stakeholders and therefore may exert a greater effect by drawing the attention of more individual investors.

To address this question, I consider the major CSR dimensions. Table 11 reports the results using the score for each of these six categories as the explanatory variable. In this study, the diversity and environment categories tend to play a more significant role in explaining stock market participation, whereas the other categories are not significant, which suggests that the positive effect of CSR on individuals' equity investment mainly results from the firms' CSR performance related to the diversity and environment

categories. I attribute this finding to the greater level of visibility of firm activities in these two dimensions to external stakeholders. In addition, this finding may be explained by the greater effects of firms' engagement in these two dimensions on local households.

<Insert Tables 11 Here>

6. Conclusion

I examine whether firms' CSR engagement is associated with households' stock investment behavior. After controlling for various potentially confounding factors at both the household and regional levels, I find that households tend to own stocks and allocate more of their wealth to equity when firms in their state of residence exhibit better CSR performance. Further tests reveal that this positive effect of CSR is stronger when local firms receive more media coverage and when the individuals are more educated, more wealthy, or younger, and for households in the Republican-leaning states. By disaggregating CSR into its various sub-dimensions, I find that the diversity and environment dimensions drive the results. I also find that the CSR performance of local firms increases households' expectations about future stock market returns. Overall, these results indicate that by improving the attitudes of households toward firms and their confidence in the stock market generally, firms' CSR activities can broaden and deepen the investor base of the capital market.

Despite the evidence that increasing numbers of firms are actively investing in CSR activities, there are competing views about whether engaging in CSR is beneficial or detrimental to firm values. My study sheds light on the economic consequences of CSR activities from a new perspective by looking at the investment decisions of households.

The level of household equity investment improves the financial well-being of individual households and decreases the cost of capital in the financial markets. In fact, by focusing on the effect of households' exposure to local firms' CSR activities, my estimate may be merely the lower bound of the positive effect of CSR on households' demand for equity. Therefore, these findings suggest that CSR activities can have broader socioeconomic consequences in addition to affecting firm values. It is hoped that this study serves as an important step toward gaining a more comprehensive understanding of the social effects of CSR.

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Appendix A. Variable definitions and data sources

Main Variables	Definition	Source
<i>Equity Participation</i>	A dummy variable coded 1 if the household holds any shares of stock in publicly held corporations, mutual funds, or investment trusts, and 0 otherwise.	PSID
<i>Equity-Wealth Ratio</i>	The ratio of the value of equity to total financial wealth.	PSID
<i>CSR</i>	The average CSR score of firms in a state for a given year. The firm-level CSR score is defined as the difference between the total number of CSR strengths and the total number of CSR concerns across major CSR dimensions.	KLD
<i>CSR_Adj1</i>	The average adjusted CSR score of firms in a state for a given year. The adjustment is made by subtracting the industry mean score from the raw firm-level CSR score.	KLD
<i>CSR_Adj2</i>	The average adjusted CSR score of firms in a state for a given year. The adjustment is made by dividing the total number of CSR strengths by the maximum possible number of CSR strengths and dividing the total number of CSR concerns by the maximum possible number of CSR concerns in each category for a given year.	KLD
<i>CSR_Adj3</i>	The median CSR score of firms in a state for a given year.	KLD
Household-level Control Variables		
<i>Log(Head Age)</i>	The natural logarithm of the household head's age.	PSID
<i>Male</i>	An indicator variable coded 1 if the household head is male, and 0 otherwise.	PSID
<i>Marriage</i>	An indicator variable coded 1 if the household head is married, and 0 otherwise.	PSID
<i>College Education</i>	An indicator variable coded 1 if the household head has at least 16 years of education, and 0 otherwise.	PSID
<i>Family Size</i>	The number of family members.	PSID
<i>Children</i>	The number of children.	PSID
<i>Log(Family Income)</i>	The natural logarithm of the family income.	PSID
<i>Log(Wealth)</i>	The natural logarithm of the family net wealth.	PSID
State-level Control Variables		
<i>Corporate Fraud</i>	The ratio of number of fraudulent firms in a state to the total number of firms in that state for a given year.	Audit Analytics
<i>Firm Age</i>	The average age of firms in a state for a given year.	I/B/E/S
<i>CAPX</i>	The average adjusted capital expenditure of firms in a state for a given year.	CIQ
<i>LEV</i>	The average adjusted long-term debt of firms in a state for a given year.	CIQ
<i>ROA</i>	The average adjusted net income before extraordinary items of firms in a state for a given year. The adjustment is made by scaling net income before extraordinary items by the book value of total assets.	CIQ
<i>Firm Size</i>	The average of the natural logarithm of firm size in a state for a given year. Firm size is defined as the common shares outstanding multiplied by the fiscal year-end price.	CIQ
<i>Corporate Governance</i>	The average corporate governance score of firms in a state for a given year.	KLD

<i>High Litigation Industry</i>	The number of listed firms in high litigation industries in a state divided by the total number of listed firms in that state for a given year.	CIQ
<i>State Market Capitalization</i>	The natural logarithm of the total market value of all public firms in a state for a given year.	CIQ
<i>State Stock Return</i>	The annual stock market return in a state.	CIQ
<i>State GDP Growth</i>	The annual GDP growth rate in a state.	BEA
<u>Variables for Other Tests</u>		
<i>High Media Coverage</i>	An indicator variable coded 1 if the total number of news articles in a state is higher than or equal to the average number for a given year, and 0 otherwise.	RavenPack
<i>Democratic States</i>	An indicator variable coded 1 if the state is Democratic-leaning states, and 0 otherwise.	
<i>High Wealth</i>	An indicator variable coded 1 if the net worth of household is in the top tertile of the sample distribution in a year, and 0 otherwise.	PSID
<i>High Age</i>	An indicator variable coded 1 if the age of household head is higher than or equal to the sample median, and 0 otherwise.	PSID
<i>Equity Entry</i>	An indicator variable coded 1 if the household did not hold any shares of stock in the prior survey year but does in the current survey year, and 0 otherwise.	PSID
<i>Other Financial Assets</i>	An indicator variable coded 1 if the household has a checking or savings account, money market funds, certificates of deposit, government bonds, or treasury bills, and 0 otherwise.	PSID
<i>Expectation_1y</i>	An indicator variable coded 1 if the respondent believes that the chance that the stock market will go up in the next year is more than 50%, and 0 otherwise.	RAND American Life Panel
<i>Expectation_10y</i>	An indicator variable coded 1 if the respondent believes that the chance that the stock market will go up in the next decade is more than 50%, and 0 otherwise.	RAND American Life Panel

Table 1 Sample distribution

Year	Obs	Percent (%)	<i>Equity Participation</i>	<i>Equity-Wealth Ratio</i>
1994	3,306	3.70	0.29	0.15
1999	5,647	6.32	0.23	0.13
2001	6,374	7.14	0.24	0.13
2003	6,738	7.54	0.20	0.11
2005	7,428	8.32	0.18	0.10
2007	7,758	8.69	0.18	0.10
2009	8,410	9.42	0.16	0.08
2011	8,647	9.68	0.13	0.07
2013	8,768	9.82	0.12	0.07
2015	8,410	9.42	0.12	0.07
2017	9,169	10.27	0.11	0.06
2019	8,660	9.70	0.11	0.09
<i>Sum/Avg</i>	<i>89,315</i>	<i>100.00</i>	<i>0.16</i>	<i>0.09</i>

Table 1 tabulates the sample distribution by year. The final sample consists of 89,315 household-year observations from 1994 to 2019. This table also reports the average percentage of household-year with stock market participation and asset allocation.

Table 2 Summary Statistics (N = 89,315)

	Mean	Std. Dev.	Q1	Q2	Q3
<i>Equity Participation</i>	0.16	0.37	0.00	0.00	0.00
<i>Equity-Wealth Ratio</i>	0.09	0.25	0.00	0.00	0.00
<i>CSR</i>	0.36	1.01	-0.43	0.37	1.00
<i>CSR_Adj1</i>	0.03	0.99	-0.76	0.06	0.63
<i>CSR_Adj2</i>	0.01	0.08	-0.05	0.01	0.06
<i>CSR_Adj3</i>	0.06	1.03	-1.00	0.00	1.00
<i>Log(Head Age)</i>	3.75	0.36	3.47	3.76	4.03
<i>Male</i>	0.69	0.46	0.00	1.00	1.00
<i>Marriage</i>	0.47	0.50	0.00	0.00	1.00
<i>College Education</i>	0.26	0.44	0.00	0.00	1.00
<i>Family Size</i>	2.64	1.49	1.00	2.00	4.00
<i>Children</i>	0.83	1.18	0.00	0.00	2.00
<i>Log(Family Income)</i>	11.23	1.56	10.77	11.45	12.02
<i>Log(Wealth)</i>	7.48	8.23	7.60	11.04	12.68
<i>Corporate Fraud</i>	0.03	0.03	0.01	0.03	0.04
<i>Firm Age</i>	42.74	12.72	33.80	39.58	50.07
<i>CAPX</i>	0.05	0.04	0.03	0.04	0.06
<i>LEV</i>	0.36	0.75	0.20	0.23	0.28
<i>ROA</i>	-5.23	40.31	-1.67	-0.44	-0.07
<i>Firm Size</i>	5.17	0.78	4.58	5.21	5.70
<i>Corporate Governance</i>	-0.10	0.21	-0.25	-0.08	0.06
<i>High Litigation Industry</i>	0.17	0.08	0.12	0.16	0.22
<i>State Market Capitalization</i>	12.67	1.46	11.85	12.69	13.58
<i>State Stock Return</i>	0.02	0.33	0.00	0.00	0.00
<i>State GDP Growth</i>	2.37	2.03	1.20	2.30	3.40

Table 2 reports the descriptive statistics for our variables of interest including the dependent and explanatory variables. See Appendix A for variable definitions. All of the continuous variables are winsorized at the 1st and 99th percentiles.

Table 3 Correlation Matrix (Pearson)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
<i>1 Equity Participation</i>																				
<i>2 CSR</i>	0.01																			
<i>3 Log(Head Age)</i>	0.15	0.03																		
<i>4 Male</i>	0.13	0.01	-0.01																	
<i>5 Marriage</i>	0.18	-0.01	0.16	0.62																
<i>6 College Education</i>	0.30	0.04	0.03	0.10	0.15															
<i>7 Family Size</i>	-0.04	-0.01	-0.14	0.21	0.40	-0.05														
<i>8 Children</i>	-0.09	-0.02	-0.28	0.02	0.15	-0.07	0.86													
<i>9 Log(Family Income)</i>	0.21	0.03	0.08	0.27	0.36	0.26	0.19	0.05												
<i>10 Log(Wealth)</i>	0.25	0.01	0.31	0.19	0.27	0.08	0.05	-0.06	0.24											
<i>11 Corporate Fraud</i>	-0.08	0.08	0.01	-0.02	-0.04	0.01	-0.02	-0.02	0.01	-0.03										
<i>12 Firm Age</i>	-0.08	-0.01	-0.01	-0.04	-0.04	-0.06	-0.02	0.01	-0.05	-0.04	0.31									
<i>13 CAPX</i>	0.02	-0.04	-0.02	0.02	0.03	-0.02	0.03	0.03	-0.01	0.02	-0.03	-0.16								
<i>14 LEV</i>	0.01	-0.01	-0.01	-0.01	0.01	0.01	0.01	0.01	0.01	0.01	-0.02	-0.11	0.06							
<i>15 ROA</i>	0.01	0.10	0.01	0.01	0.01	0.01	-0.01	-0.01	0.02	0.01	0.03	0.05	-0.06	-0.01						
<i>16 Firm Size</i>	-0.12	0.09	-0.01	-0.03	-0.04	-0.01	-0.02	-0.01	-0.02	-0.05	0.45	0.46	-0.17	-0.10	0.16					
<i>17 Corporate Governance</i>	-0.10	0.29	0.01	-0.03	-0.05	0.01	-0.03	-0.02	-0.01	-0.05	0.32	0.32	-0.16	0.02	-0.01	0.44				
<i>18 High Litigation Industry</i>	0.07	0.09	0.04	0.07	0.07	0.07	0.02	-0.01	0.07	0.06	-0.02	-0.52	0.08	0.03	-0.03	-0.10	-0.17			
<i>19 State Market Capitalization</i>	0.03	0.23	0.02	0.03	0.02	0.08	0.01	-0.01	0.07	0.01	-0.01	-0.44	0.01	-0.01	0.11	0.14	-0.15	0.44		
<i>20 State Stock Return</i>	-0.01	-0.02	-0.01	-0.01	-0.01	-0.01	0.01	0.01	-0.01	-0.01	-0.04	-0.01	0.02	-0.01	0.01	0.01	0.01	-0.07	-0.04	
<i>21 State GDP Growth</i>	0.03	0.13	-0.01	0.03	0.03	-0.01	0.02	0.01	0.01	0.04	-0.14	-0.23	0.11	-0.04	0.01	-0.02	-0.14	0.19	0.16	0.04

Table 3 presents the Pearson correlations for the sample used in the regression analyses. Detailed variable definitions are provided in Appendix A. All of the continuous variables are winsorized at the 1st and 99th percentiles. Bold indicates correlations that are statistically significant at least at the 10% level.

Table 4 CSR and Stock Market Participation - Benchmark Result

Dep. Var. =	<i>Equity Participation</i>		<i>Equity-Wealth Ratio</i>	
	(1)	(2)	(3)	(4)
<i>CSR</i>	0.016*** (2.97)	0.013*** (2.61)	0.009*** (2.90)	0.008*** (2.68)
<i>Log(Head Age)</i>	0.074*** (20.62)	0.073*** (20.34)	0.059*** (22.51)	0.058*** (22.16)
<i>Male</i>	0.022*** (8.28)	0.019*** (7.19)	0.016*** (7.94)	0.015*** (7.60)
<i>Marriage</i>	0.055*** (17.36)	0.055*** (18.09)	0.026*** (12.28)	0.026*** (12.38)
<i>College Education</i>	0.207*** (51.96)	0.205*** (52.38)	0.121*** (41.79)	0.120*** (40.60)
<i>Family Size</i>	-0.031*** (-18.97)	-0.032*** (-19.53)	-0.020*** (-16.96)	-0.020*** (-16.75)
<i>Children</i>	0.015*** (7.96)	0.016*** (8.74)	0.011*** (8.50)	0.011*** (8.46)
<i>Log(Family Income)</i>	0.022*** (18.51)	0.023*** (18.97)	0.013*** (18.39)	0.012*** (17.86)
<i>Log(Wealth)</i>	0.007*** (37.15)	0.007*** (41.24)	0.004*** (36.64)	0.004*** (37.05)
<i>Corporate Fraud</i>		-0.053 (-0.88)		-0.084* (-1.93)
<i>Firm Age</i>		0.001 (1.21)		0.001 (0.28)
<i>CAPX</i>		-0.063* (-1.68)		-0.031 (-1.06)
<i>LEV</i>		-0.002 (-1.11)		-0.001 (-0.36)
<i>ROA</i>		0.001*** (3.05)		0.001 (1.21)
<i>Firm Size</i>		-0.015*** (-4.31)		-0.006*** (-2.79)
<i>Corporate Governance</i>		-0.026* (-1.81)		-0.013 (-1.52)
<i>High Litigation Industry</i>		0.126*** (4.70)		0.092*** (5.07)
<i>State Market Capitalization</i>		0.005*** (3.64)		0.001 (1.38)
<i>State Stock Return</i>		-0.005*** (-5.38)		-0.004*** (-5.79)
<i>State GDP Growth</i>		-0.001 (-0.95)		-0.001 (-0.03)
Year F.E.	Y	Y	Y	Y
State F.E.	Y	Y	Y	Y
N	89,315	89,315	89,315	89,315
Adjusted R-squared	0.181	0.191	0.132	0.133

This table reports the OLS regression results for the effect of CSR on stock market participation. Columns (1)–(2) show the results for the participation regressions. The dependent variable in this set of tests (Columns (1)–(2)) is *Equity Participation*. In Column (1), only individual control variables are included. In Column (2), all of the control variables are included. Columns (3)–(4) show the results for the asset allocation regressions. The dependent variable in this set of tests (Columns (3)–(4)) is *Equity-Wealth Ratio*. In Column (3), only individual control variables are included. In Column (4), all of the control variables are included. The independent variable in Columns (1)–(4) is CSR, which is the number of CSR strengths and the total number of CSR concerns across major CSR dimensions. See Appendix A for variable definitions. State and year fixed effects are included in all the regressions. Standard errors are clustered by state and year. ***, **, and * indicate that coefficients are statistically significant at the 1%, 5%, and 10% levels, respectively.

Table 5 Robustness checks**Panel A: CSR and Stock Market Participation - Alternative CSR Measures**

Dep. Var. =	<i>Equity Participation</i>			<i>Equity-Wealth Ratio</i>		
	(1)	(2)	(3)	(4)	(5)	(6)
<i>CSR_Adj1</i>	0.010*** (2.71)			0.007** (2.33)		
<i>CSR_Adj2</i>		0.132*** (2.97)			0.080** (2.43)	
<i>CSR_Adj3</i>			0.008*** (2.83)			0.006** (2.42)
Individual Controls	Y	Y	Y	Y	Y	Y
State Controls	Y	Y	Y	Y	Y	Y
Year F.E.	Y	Y	Y	Y	Y	Y
State F.E.	Y	Y	Y	Y	Y	Y
N	89,315	89,315	89,315	89,315	89,315	89,315
Adjusted R-squared	0.287	0.288	0.287	0.133	0.133	0.133

Panel B: CSR and Stock Market Participation – Household Fixed Effects

Dep. Var. =	<i>Equity Participation</i>		<i>Equity-Wealth Ratio</i>	
	(1)	(2)	(1)	(2)
<i>CSR</i>	0.012** (2.52)		0.008*** (2.59)	
Individual Controls	Y		Y	
State Controls	Y		Y	
Household F.E.	Y		Y	
Year F.E.	Y		Y	
State F.E.	Y		Y	
N	88,089		88,089	
Adjusted R-squared	0.181		0.132	

Panel C: CSR and Stock Market Participation – Alternative Model Specifications

Dep. Var. =	<i>Equity Participation</i>		<i>Equity-Wealth Ratio</i>	
	Model	<i>Logit</i> (1)	Model	<i>Tobit</i> (2)
<i>CSR</i>		0.006** (2.05)		0.035*** (2.59)
Individual Controls		Y		Y
State Controls		Y		Y
Year F.E.		Y		Y
State F.E.		Y		Y
N		89,315		89,315
Pseudo R-squared		0.246		0.206

This table reports the regression results of robust checks. Table 5A reports the OLS regression results for the effect of alternative CSR measures on stock market participation. The dependent variables in Panel A is *Equity Participation* (Columns (1)–(3)) and *Equity-Wealth Ratio* (Columns (4)–(6)), respectively. Table 5B reports the OLS regression results for the effect of CSR on stock market participation with household fixed effects included. The dependent variables in Panel B is *Equity Participation* (Columns (1)) and *Equity-Wealth Ratio* (Columns (2)), respectively. Table 5C reports the results for the effect of CSR on stock market participation using non-linear regression (Logit and Tobit model). The dependent variables in Panel C are *Equity Participation* (Columns (1)) and *Equity-Wealth Ratio* (Columns (2)), respectively. Results in Table 5C Column (1) is from Logit regressions, in which the dependent variable is an indicator variable for households' stock market participation. Column (2) of Table 5C presents the estimates from the

Tobit model as the dependent variable (the ratio of the value of equity to total financial wealth) is being censored (Niu et al. 2019). The reported coefficients are marginal effects. Detailed variable definitions are provided in Appendix A. Individual controls and state controls are the same as those in Column (1) and Column (2) of Table 4, respectively. State and year fixed effects are included in all the regressions. Standard errors are clustered by state and year. ***, **, and * indicate that coefficients are statistically significant at the 1%, 5%, and 10% levels, respectively.

Table 6 Cross-sectional Tests Based on Media Coverage

Dep. Var. =	<i>Equity Participation</i> (1)	<i>Equity-Wealth Ratio</i> (2)
<i>CSR × High Media Coverage</i>	0.015** (2.10)	0.006*** (3.54)
<i>CSR</i>	0.018** (2.38)	0.006*** (5.25)
<i>High Media Coverage</i>	-0.008 (-0.96)	-0.001 (-0.04)
<i>Log(Head Age)</i>	0.079*** (17.92)	0.014*** (12.21)
<i>Male</i>	0.019*** (5.06)	0.005*** (4.81)
<i>Marriage</i>	0.060*** (15.42)	0.010*** (8.12)
<i>College Education</i>	0.212*** (41.63)	0.056*** (29.74)
<i>Family Size</i>	-0.032*** (-14.21)	-0.006*** (-9.76)
<i>Children</i>	0.016*** (5.94)	0.004*** (5.06)
<i>Log(Family Income)</i>	0.023*** (13.52)	0.004*** (12.40)
<i>Log(Wealth)</i>	0.007*** (32.11)	0.001*** (23.95)
<i>Corporate Fraud</i>	0.001 (0.00)	0.001 (0.06)
<i>Firm Age</i>	-0.001 (-0.40)	-0.001 (-0.67)
<i>CAPX</i>	-0.031 (-1.18)	-0.014** (-2.32)
<i>LEV</i>	-0.002 (-1.38)	0.001 (0.52)
<i>ROA</i>	0.001 (1.42)	0.001 (0.94)
<i>Firm Size</i>	-0.015*** (-3.70)	-0.003** (-2.45)
<i>Corporate Governance</i>	-0.010 (-0.60)	-0.001 (-0.05)
<i>High Litigation Industry</i>	0.121*** (3.36)	0.025*** (2.63)
<i>State Market Capitalization</i>	0.007*** (3.18)	0.002*** (2.84)
<i>State Stock Return</i>	-0.005*** (-4.54)	-0.001*** (-4.70)
<i>State GDP Growth</i>	0.001 (0.06)	0.001 (0.63)
Year F.E.	Y	Y

State F.E.	Y	Y
N	54,080	54,080
Adjusted R-squared	0.181	0.104

Table 6 reports the OLS regression results for the cross-sectional differences in the effect of CSR on stock market participation with respect to media coverage. The dependent variables in Columns (1) and Columns (2) are *Equity Participation* and *Equity-Wealth Ratio*, respectively. *High Media Coverage* is an indicator variable coded 1 if the total number of news articles in a state is higher than or equal to the average number for a given year, and 0 otherwise. See Appendix A for variable definitions. Individual controls and state controls are the same as those in Column (1) and Column (2) of Table 4, respectively. State and year fixed effects are included in all the regressions. Standard errors are clustered by state and year. ***, **, and * indicate that coefficients are statistically significant at the 1%, 5%, and 10% levels, respectively.

Table 7 Cross-sectional Tests Based on Stakeholders' CSR Demands

Dep. Var. =	<i>Equity Participation</i> (1)	<i>Equity-Wealth Ratio</i> (2)
<i>CSR × Democratic States</i>	-0.006* (-1.94)	-0.002 (-1.43)
<i>CSR</i>	0.008** (2.36)	0.004*** (3.21)
<i>Democratic States</i>	0.031*** (4.11)	0.012*** (4.72)
<i>Log(Head Age)</i>	0.054*** (22.86)	0.017*** (15.33)
<i>Male</i>	0.015*** (11.01)	0.006*** (7.55)
<i>Marriage</i>	0.028*** (15.33)	0.014*** (12.08)
<i>College Education</i>	0.194*** (21.30)	0.064*** (29.04)
<i>Family Size</i>	-0.012*** (-12.34)	-0.007*** (-11.80)
<i>Children</i>	0.009*** (8.02)	0.004*** (6.66)
<i>Log(Family Income)</i>	0.005*** (10.43)	0.005*** (13.17)
<i>Log(Wealth)</i>	0.003*** (22.35)	0.002*** (27.11)
<i>Corporate Fraud</i>	-0.011 (-0.25)	-0.020 (-1.18)
<i>Firm Age</i>	0.001 (1.28)	0.001 (0.79)
<i>CAPX</i>	-0.024 (-1.53)	-0.008 (-1.09)
<i>LEV</i>	-0.002*** (-2.73)	-0.001* (-1.72)
<i>ROA</i>	0.001*** (3.23)	0.001** (2.30)
<i>Firm Size</i>	-0.008*** (-3.57)	-0.003*** (-2.97)
<i>Corporate Governance</i>	-0.036*** (-4.29)	-0.003 (-0.77)
<i>High Litigation Industry</i>	0.060*** (3.62)	0.028*** (3.31)
<i>State Market Capitalization</i>	0.001 (0.56)	0.001** (2.25)
<i>State Stock Return</i>	-0.002*** (-2.90)	-0.002*** (-5.18)
<i>State GDP Growth</i>	-0.001* (-1.76)	-0.001 (-0.24)
Year F.E.	Y	Y
State F.E.	Y	Y

N	89,315	89,315
Adjusted R-squared	0.241	0.116

Table 7 reports the OLS regression results for the cross-sectional differences in the effect of CSR on stock market participation with respect to stakeholders' CSR demands. The dependent variables in Columns (1) and Columns (2) are *Equity Participation* and *Equity-Wealth Ratio*, respectively. *Democratic States* is an indicator variable coded 1 if the state is Democratic-leaning states, and 0 otherwise. See Appendix A for variable definitions. Individual controls and state controls are the same as those in Column (1) and Column (2) of Table 4, respectively. State and year fixed effects are included in all the regressions. Standard errors are clustered by state and year. ***, **, and * indicate that coefficients are statistically significant at the 1%, 5%, and 10% levels, respectively.

Table 8 Cross-sectional Tests Based on Demographic Characteristics

Dep. Var. =	<i>Equity Participation</i>			<i>Equity-Wealth Ratio</i>		
	(1)	(2)	(3)	(4)	(5)	(6)
<i>CSR × College Education</i>	-0.001 (-0.17)			0.013*** (4.46)		
<i>CSR × High Wealth</i>		-0.006 (-0.86)			0.014*** (2.79)	
<i>CSR × High Age</i>			-0.006** (-2.29)			-0.001 (-0.30)
<i>CSR</i>	0.013** (2.49)	0.012** (2.39)	0.016*** (2.94)	0.005* (1.83)	0.006** (2.16)	0.008*** (2.77)
<i>College Education</i>	0.204*** (47.19)	0.178*** (44.37)	0.203*** (50.56)	0.114*** (39.26)	0.104*** (36.64)	0.120*** (40.50)
<i>High Wealth</i>		0.178*** (25.99)			0.100*** (21.06)	
<i>High Age</i>			0.038*** (14.14)			0.032*** (17.05)
<i>Log(Head Age)</i>	0.072*** (20.24)	0.069*** (19.12)		0.058*** (22.13)	0.056*** (21.50)	
<i>Male</i>	0.021*** (7.88)	0.019*** (7.12)	0.016*** (5.89)	0.015*** (7.63)	0.014*** (6.98)	0.011*** (5.71)
<i>Marriage</i>	0.056*** (17.53)	0.046*** (14.47)	0.062*** (19.74)	0.026*** (12.36)	0.020*** (9.61)	0.030*** (14.80)
<i>Family Size</i>	-0.031*** (-18.74)	-0.033*** (-20.73)	-0.031*** (-19.05)	-0.020*** (-16.80)	-0.021*** (-18.25)	-0.021*** (-17.30)
<i>Children</i>	0.015*** (7.98)	0.017*** (9.39)	0.015*** (7.55)	0.011*** (8.49)	0.013*** (9.55)	0.011*** (8.35)
<i>Log(Family Income)</i>	0.022*** (18.06)	0.014*** (15.08)	0.021*** (18.14)	0.012*** (17.88)	0.008*** (14.33)	0.012*** (18.08)
<i>Log(Wealth)</i>	0.007*** (37.46)	0.006*** (34.74)	0.007*** (38.56)	0.004*** (37.11)	0.004*** (34.62)	0.004*** (38.02)
<i>Corporate Fraud</i>	-0.054 (-0.87)	-0.048 (-0.80)	-0.055 (-0.87)	-0.084* (-1.93)	-0.080* (-1.93)	-0.085* (-1.92)
<i>Firm Age</i>	0.001 (0.97)	0.001 (1.28)	0.001 (1.04)	0.001 (0.18)	0.001 (0.53)	0.001 (0.39)

<i>CAPX</i>	-0.068*	-0.073**	-0.069*	-0.028	-0.031	-0.032
	(-1.76)	(-2.15)	(-1.74)	(-1.00)	(-1.21)	(-1.07)
<i>LEV</i>	-0.002	-0.002	-0.002	-0.001	-0.001	-0.001
	(-1.10)	(-1.05)	(-1.18)	(-0.39)	(-0.34)	(-0.44)
<i>ROA</i>	0.001**	0.001**	0.001**	0.001	0.001	0.001
	(2.05)	(2.19)	(2.10)	(1.30)	(1.31)	(1.27)
<i>Firm Size</i>	-0.015***	-0.013***	-0.015***	-0.006***	-0.005**	-0.007***
	(-4.08)	(-3.68)	(-4.28)	(-2.68)	(-2.30)	(-3.09)
<i>Corporate Governance</i>	-0.028*	-0.025*	-0.028*	-0.014	-0.012	-0.013
	(-1.93)	(-1.78)	(-1.90)	(-1.63)	(-1.43)	(-1.50)
<i>High Litigation Industry</i>	0.123***	0.115***	0.127***	0.091***	0.086***	0.095***
	(4.51)	(4.30)	(4.63)	(5.10)	(4.80)	(5.20)
<i>State Market Capitalization</i>	0.005***	0.003**	0.005***	0.001	0.001	0.001
	(3.34)	(2.42)	(3.40)	(1.25)	(0.40)	(1.49)
<i>State Stock Return</i>	-0.005***	-0.005***	-0.005***	-0.004***	-0.004***	-0.004***
	(-5.00)	(-5.41)	(-5.11)	(-6.00)	(-6.48)	(-5.91)
<i>State GDP Growth</i>	-0.001	-0.001	-0.001	-0.001	0.001	-0.001
	(-0.93)	(-0.69)	(-1.00)	(-0.11)	(0.18)	(-0.13)
Year F.E.	Y	Y	Y	Y	Y	Y
State F.E.	Y	Y	Y	Y	Y	Y
N	89,315	89,315	89,315	89,315	89,315	89,315
Adjusted R-squared	0.183	0.199	0.180	0.133	0.146	0.130

Table 8 reports the OLS regression results for the cross-sectional differences in the effect of CSR on stock market participation with respect to demographic characteristics of household investors. The dependent variables in Columns (1)-(3) and Columns (4)-(6) are *Equity Participation* and *Equity-Wealth Ratio*, respectively. *College Education* is an indicator variable coded 1 if the household head has at least 16 years of education, and 0 otherwise. *High Wealth* is an indicator variable coded 1 if the household's net worth is in the top tertile of the sample distribution in a year, and 0 otherwise. *High Age* is an indicator variable coded 1 if the age of household head is higher than or equal to the sample median, and 0 otherwise. See Appendix A for variable definitions. Individual controls and state controls are the same as those in Column (1) and Column (2) of Table 4, respectively. State and year fixed effects are included in all the regressions. Standard errors are clustered by state and year. ***, **, and * indicate that coefficients are statistically significant at the 1%, 5%, and 10% levels, respectively.

Table 9 CSR and Stock Market Expectation

Dep. Var. =	<i>Expectation_1y</i> (1)	<i>Expectation_10y</i> (2)
<i>CSR</i>	0.011* (1.95)	0.010* (1.72)
<i>Log(Head Age)</i>	-0.081*** (-4.82)	-0.046** (-2.55)
<i>Male</i>	0.098*** (13.49)	0.092*** (12.75)
<i>Marriage</i>	-0.010 (-0.98)	-0.015 (-1.54)
<i>College Education</i>	0.105*** (3.54)	0.066** (2.07)
<i>Log(Family Income)</i>	0.075*** (15.70)	0.091*** (18.68)
<i>Corporate Fraud</i>	0.087 (1.15)	-0.058 (-0.59)
<i>Firm Age</i>	-0.001 (-0.48)	0.001 (0.07)
<i>CAPX</i>	-0.031** (-2.07)	-0.066*** (-3.50)
<i>LEV</i>	-0.001*** (-3.07)	0.001*** (6.12)
<i>ROA</i>	-0.001 (-0.83)	-0.001 (-0.04)
<i>Firm Size</i>	0.014 (1.20)	-0.010 (-0.94)
<i>Corporate Governance</i>	-0.010 (-1.00)	-0.009 (-0.83)
<i>High Litigation Industry</i>	0.240 (1.60)	0.260** (2.01)
<i>State Market Capitalization</i>	0.055*** (3.71)	0.019 (1.01)
<i>State Stock Return</i>	-0.013 (-0.63)	-0.035 (-0.83)
<i>State GDP Growth</i>	-0.001 (-0.55)	0.002 (1.59)
Year F.E.	Y	Y
State F.E.	Y	Y
N	61409	61239
Adjusted R-squared	0.044	0.074

Table 9 reports the OLS regression results for the effect of CSR on stock market expectation. The dependent variables in Columns (1) and Columns (2) are *Expectation_1y* and *Expectation_10y*, respectively. *Expectation_1y* is an indicator variable coded 1 if the respondent believes that the chance that the stock market will go up in the next year is more than 50%, and 0 otherwise. *Expectation_10y* is an indicator variable coded 1 if the respondent believes that the chance that the stock market will go up in the next decade is more than 50%, and 0 otherwise. See Appendix A for variable definitions. Individual controls and state controls are the same as those in Column (1) and Column (2) of Table 4, respectively. State and year fixed effects are included in all the regressions. Standard errors are clustered by state and year. ***, **, and * indicate that coefficients are statistically significant at the 1%, 5%, and 10% levels, respectively.

Table 10 Other related outcomes

Dep. Var. =	<i>Equity Entry</i> (1)	<i>Other Financial Assets</i> (2)
<i>CSR</i>	0.008** (2.36)	0.007 (1.64)
<i>Log(Head Age)</i>	0.002 (0.55)	-0.002 (-0.36)
<i>Male</i>	0.005** (2.27)	0.003 (0.69)
<i>Marriage</i>	0.025*** (8.46)	0.113*** (22.89)
<i>College Education</i>	0.102*** (22.17)	0.126*** (25.77)
<i>Family Size</i>	-0.011*** (-9.16)	-0.033*** (-13.02)
<i>Children</i>	0.001 (0.59)	-0.001 (-0.45)
<i>Log(Family Income)</i>	0.012*** (14.35)	0.056*** (22.09)
<i>Log(Wealth)</i>	0.004*** (20.58)	0.008*** (24.83)
<i>Corporate Fraud</i>	-0.006 (-0.16)	-0.193* (-1.66)
<i>Firm Age</i>	-0.001 (-0.13)	0.001 (1.25)
<i>CAPX</i>	-0.049** (-2.08)	-0.022 (-0.30)
<i>LEV</i>	-0.001 (-0.03)	-0.003 (-1.61)
<i>ROA</i>	-0.001 (-0.91)	0.001 (1.03)
<i>Firm Size</i>	-0.005** (-2.20)	0.018** (2.04)
<i>Corporate Governance</i>	-0.016 (-1.59)	0.010 (0.59)
<i>High Litigation Industry</i>	0.063*** (3.35)	0.014 (0.15)
<i>State Market Capitalization</i>	0.003*** (3.31)	-0.015 (-1.46)
<i>State Stock Return</i>	-0.002*** (-3.64)	-0.019*** (-6.21)
<i>State GDP Growth</i>	-0.001 (-0.80)	-0.001 (-0.76)
Year F.E.	Y	Y
State F.E.	Y	Y
N	76,382	89,302
Adjusted R-squared	0.100	0.237

Table 10 reports the OLS regression results for the effect of CSR on stock market entry and investment in other financial assets. Column (1) presents the OLS regression results for the effect of CSR on stock market entry, and

column (2) presents the OLS regression results for the effect of CSR on investment in other financial assets. The dependent variables in Columns (1) and Columns (2) are *Equity Entry* and *Other Financial Assets*, respectively. *Equity Entry* is an indicator variable coded 1 if the household did not participate in the stock market in the prior survey year but does in the current survey year, and 0 otherwise. *Other Financial Assets* is an indicator variable coded 1 if the household has a checking or savings account, money market funds, certificates of deposit, government bonds, or treasury bills, and 0 otherwise. See Appendix A for variable definitions. Individual controls and state controls are the same as those in Column (1) and Column (2) of Table 4, respectively. State and year fixed effects are included in all the regressions. Standard errors are clustered by state and year. ***, **, and * indicate that coefficients are statistically significant at the 1%, 5%, and 10% levels, respectively.

Table 11 CSR and Stock Market Participation - CSR Subcategories

Dep. Var. =	Equity Participation						Equity-Wealth Ratio					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
<i>Community</i>	0.025 (1.27)						0.015 (1.31)					
<i>Diversity</i>		0.041*** (4.58)						0.023*** (4.37)				
<i>Employee Relations</i>			-0.007 (-0.82)						-0.003 (-0.50)			
<i>Environment</i>				0.025** (2.39)						0.016*** (2.63)		
<i>Human Rights</i>					0.004 (0.42)						0.007 (1.06)	
<i>Product</i>						0.016 (1.27)						0.013* (1.81)
<i>Log(Head Age)</i>	0.072*** (20.26)	0.072*** (19.27)	0.072*** (20.32)	0.072*** (20.26)	0.075*** (20.55)	0.072*** (20.33)	0.058*** (22.13)	0.057*** (20.94)	0.058*** (22.21)	0.058*** (22.18)	0.060*** (22.23)	0.058*** (22.23)
<i>Male</i>	0.022*** (7.95)	0.021*** (7.35)	0.022*** (7.96)	0.021*** (7.96)	0.022*** (8.12)	0.021*** (7.94)	0.015*** (7.67)	0.016*** (7.46)	0.015*** (7.67)	0.015*** (7.68)	0.015*** (7.77)	0.015*** (7.66)
<i>Marriage</i>	0.056*** (17.46)	0.057*** (16.63)	0.056*** (17.50)	0.056*** (17.51)	0.052*** (16.85)	0.056*** (17.51)	0.026*** (12.25)	0.026*** (11.68)	0.026*** (12.36)	0.026*** (12.37)	0.025*** (11.55)	0.026*** (12.38)
<i>College Education</i>	0.204*** (50.76)	0.207*** (48.43)	0.204*** (50.73)	0.204*** (50.73)	0.203*** (51.08)	0.204*** (50.67)	0.120*** (40.68)	0.122*** (38.81)	0.120*** (40.62)	0.120*** (40.62)	0.120*** (39.49)	0.120*** (40.61)
<i>Family Size</i>	-0.031*** (-18.71)	-0.031*** (-17.76)	-0.031*** (-18.73)	-0.031*** (-18.73)	-0.031*** (-18.80)	-0.031*** (-18.75)	-0.020*** (-16.74)	-0.020*** (-16.09)	-0.020*** (-16.75)	-0.020*** (-16.75)	-0.020*** (-16.73)	-0.020*** (-16.76)
<i>Children</i>	0.015*** (7.92)	0.015*** (7.41)	0.015*** (7.90)	0.015*** (7.94)	0.015*** (8.00)	0.015*** (7.92)	0.011*** (8.40)	0.011*** (7.90)	0.011*** (8.40)	0.011*** (8.44)	0.011*** (8.27)	0.011*** (8.41)
<i>Log(Family Income)</i>	0.022*** (17.96)	0.022*** (16.92)	0.022*** (18.05)	0.022*** (18.07)	0.021*** (17.72)	0.022*** (18.05)	0.012*** (17.82)	0.013*** (16.99)	0.012*** (17.91)	0.012*** (17.93)	0.012*** (17.45)	0.012*** (17.90)
<i>Log(Wealth)</i>	0.007*** (37.16)	0.007*** (35.39)	0.007*** (37.21)	0.007*** (37.39)	0.007*** (38.46)	0.007*** (37.19)	0.004*** (36.79)	0.004*** (35.67)	0.004*** (36.77)	0.004*** (37.00)	0.004*** (36.25)	0.004*** (36.77)
<i>Corporate Fraud</i>	-0.092 (-1.40)	-0.099 (-1.56)	-0.085 (-1.31)	-0.063 (-0.97)	-0.090 (-1.20)	-0.070 (-1.08)	-0.107** (-2.37)	-0.103** (-2.23)	-0.102** (-2.29)	-0.090** (-1.99)	-0.106** (-2.07)	-0.094** (-2.12)
<i>Firm Age</i>	0.001 (1.31)	-0.001 (-0.33)	0.001 (1.64)	0.001 (1.46)	0.001 (1.42)	0.001* (1.71)	0.001 (0.67)	-0.001 (-0.93)	0.001 (0.99)	0.001 (0.79)	0.001 (1.06)	0.001 (1.10)
<i>CAPX</i>	-0.074* (-1.77)	-0.052 (-1.65)	-0.083* (-1.87)	-0.077* (-1.90)	-0.085* (-1.87)	-0.082* (-1.83)	-0.035 (-1.15)	-0.025 (-0.95)	-0.040 (-1.25)	-0.037 (-1.22)	-0.037 (-1.20)	-0.040 (-1.22)
<i>LEV</i>	-0.002	-0.002	-0.002	-0.003	-0.003	-0.002	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001

	(-0.87)	(-1.04)	(-0.98)	(-1.27)	(-1.20)	(-0.86)	(-0.20)	(-0.27)	(-0.35)	(-0.62)	(-0.55)	(-0.17)
<i>ROA</i>	0.001***	-0.001	0.001***	0.001***	0.001***	0.001***	0.001**	-0.001	0.001*	0.001*	0.001**	0.001**
	(3.34)	(-0.18)	(3.17)	(2.84)	(3.53)	(3.68)	(1.97)	(-0.14)	(1.96)	(1.70)	(2.19)	(2.28)
<i>Firm Size</i>	-0.017***	-0.011***	-0.019***	-0.017***	-0.019***	-0.018***	-0.008***	-0.004*	-0.009***	-0.008***	-0.009***	-0.009***
	(-4.86)	(-2.97)	(-5.21)	(-4.86)	(-5.05)	(-4.97)	(-3.60)	(-1.78)	(-3.95)	(-3.48)	(-3.82)	(-3.84)
<i>Corporate Governance</i>	-0.023*	-0.011	-0.024	-0.030**	-0.021	-0.030**	-0.010	-0.003	-0.011	-0.014*	-0.009	-0.015*
	(-1.67)	(-0.84)	(-1.64)	(-2.11)	(-1.37)	(-2.07)	(-1.23)	(-0.41)	(-1.24)	(-1.71)	(-1.03)	(-1.77)
<i>High Litigation Industry</i>	0.125***	0.125***	0.121***	0.118***	0.135***	0.121***	0.093***	0.088***	0.091***	0.088***	0.101***	0.090***
	(4.51)	(4.42)	(4.57)	(4.36)	(4.87)	(4.52)	(5.06)	(4.57)	(5.16)	(4.93)	(5.51)	(5.11)
<i>State Market Capitalization</i>	0.005***	0.003**	0.006***	0.005***	0.005***	0.006***	0.002*	0.001	0.002**	0.002*	0.002*	0.002**
	(3.44)	(2.49)	(4.23)	(3.74)	(3.65)	(4.34)	(1.69)	(0.66)	(2.30)	(1.83)	(1.67)	(2.53)
<i>State Stock Return</i>	-0.004***	-0.006***	-0.004***	-0.005***	-0.004***	-0.004***	-0.003***	-0.004***	-0.003***	-0.004***	-0.004***	-0.003***
	(-4.15)	(-5.37)	(-3.94)	(-4.85)	(-4.27)	(-3.91)	(-4.94)	(-5.81)	(-4.91)	(-5.66)	(-5.15)	(-4.59)
<i>State GDP Growth</i>	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	0.001	0.001	0.001	0.001	0.001	-0.001
	(-0.84)	(-0.67)	(-0.76)	(-0.72)	(-0.58)	(-0.89)	(0.02)	(0.17)	(0.08)	(0.14)	(0.04)	(-0.08)
Year F.E.	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
State F.E.	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
N	88,675	80,905	89,315	89,315	83,890	89,276	88,675	80,905	89,315	89,315	83,890	89,276
Adjusted R-squared	0.182	0.184	0.182	0.182	0.177	0.182	0.133	0.134	0.132	0.133	0.131	0.133

Table 11 reports the OLS regression results for the effect of CSR subcategories on stock market participation. The dependent variables in Columns (1)-(6) and Columns (7)-(12) are *Equity Participation* and *Equity-Wealth Ratio*, respectively. *Community*, *Diversity*, *Employee Relations*, *Environment*, *Human Rights*, and *Product* denote the overall community-related CSR performance score, the diversity score, the employee relations score, the environment score, the human rights score, and product score, respectively. See Appendix A for variable definitions. Individual controls and state controls are the same as those in Column (1) and Column (2) of Table 4, respectively. State and year fixed effects are included in all the regressions. Standard errors are clustered by state and year. ***, **, and * indicate that coefficients are statistically significant at the 1%, 5%, and 10% levels, respectively.

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