How Anti-ESG Pressure Affects Investment: Evidence from Retirement Savings

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Abstract

In this paper, I study how the political environment impacts the availability of ESG options to individuals. I establish the following judicial channel: because the respect of fiduciary duty is adjudicated by politically-oriented judges, some retirement plans are reluctant to offer ESG options due to litigation risk. I document that there is a significant gap in ESG offerings in retirement plans between conservative and liberal judicial circuits, that is only partially explained by demographic characteristics, firm characteristics, and local political preferences. With a decrease in judicial discretion, which reduces the influence of judges' political orientations, retirement plans face more uniform treatment between judicial circuits. This closes a substantial share of the gap in the ESG market between jurisdictions, and employees in conservative areas increase their ESG investments more than employees in liberal areas. I find that this effect is mostly driven by green firms, small firms, and firms located in the liberal counties of conservative circuits. Additionally, adding ESG options to the menu leads employees to contribute more overall to their retirement plans.

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1 Introduction

Over the past decade, interest in Environmental, Social, and Governance (ESG) investing has surged, leading to a rapid growth in the ESG fund universe. The realm of ESG investment has transcended traditional boundaries, emerging not just as a matter of financial debate, but also as a controversial political issue. The push-back against ESG investment has gained significant momentum. For instance, in January 2023, Attorneys General from 25 states filed a landmark lawsuit against the Department of Labor for a rule that facilitates retirement fund managers in incorporating sustainability aspects, such as climate change, into their 401(k) plans investment decision-making process (Figure A1). These attorneys general demanded the rule's nullification and argued that permitting ESG investments in 401(k) portfolios would imperil the retirement savings of many Americans.

In this paper, I study how political pressure influences households' ESG investment opportunities in retirement saving plans through the judicial channel: when legislative clarity is lacking, judges' decisions tend to reflect their politically-oriented interpretations. I document that there is a large gap in ESG investments between liberal and conservative jurisdictions, which survives controlling for demographic characteristics, firm characteristics, and local political preferences. To identify the effect of judicial discretion, I use a Department of Labor reform that reduces federal judges' judicial discretion by clarifying the legal framework of ESG investment considerations in 401(k) plans. I show that as judicial discretion decreases, the gap in ESG investments between jurisdictions closes a substantial amount. ESG offerings and ESG investments increase more for firms located in conservative circuits than firms in liberal circuits. I find that the access to ESG options leads households to contribute more overall, while also making the plans more expensive, especially in conservative circuits in which ESG funds face higher scrutiny in litigation.

Fiduciaries' core responsibility is to act in the best financial interests of their plans' participants. A failure to adhere to a prudent process can make fiduciaries vulnerable to employees' litigation. Such 401(k)-related lawsuits are adjudicated in federal courts. For example, in the case of *Brian P. Spence v. American Airlines*, a pilot has filed a lawsuit against American Airlines, Fidelity Investments and others, in the U.S Northern District

Court of Texas, claiming that they breached ERISA regulations by providing 401(k) plans that include ESG investments[1]. Rulings in each federal circuit court, which are not bound by decisions from other circuits, are based on that court's own established precedents. As a result of the judges' discretionary powers, different circuits can have varying interpretations of ESG regulations. The criteria of how to consider ESG factors without violation of fiduciary duty have some ambiguity. When regulations lack clarity, judges' autonomy can lead to divergent legal interpretations that allow judges to apply their political perspectives to their rulings. Therefore, the interplay among local legal cultures, judicial philosophy, and the makeup of the courts, often results in varying legal outcomes. Fiduciaries who advocate for ESG investments encounter increased legal challenges, particularly in conservative circuits where ESG initiatives are viewed with heightened skepticism. Consequently, in conservative circuits, there is a significant absence of ESG funds within retirement plans.

I demonstrate that there is a large gap in ESG offering in 401(k)s between firms in liberal circuits and conservative circuits. In conservative circuits, the ESG coverage[2] is 3%, while in liberal circuits it is 12%. 8% of the 401(k) plans in liberal circuits offer at least one ESG fund, while only 2% of those in conservative circuits do so. Other than the judicial channel, the difference could be driven by alternative explanations related to investor and firm characteristics. For example, demographic characteristics such as income and age might affect investors' inclination towards ESG investments. In addition, political leaning plays an essential role. Liberal-leaning households are more likely to invest in ESG funds than conservative-leaning households. Firms' different sizes, levels of profitability, and levels of environmental consciousness also could explain the extent to which they offer ESG options. For instance, employees working at eco-conscious companies are more prone to seek ESG offerings in their retirement plans. However, I find that all these variations only explain part of the gap in ESG investment opportunities between liberal and conservative judicial circuits. After controlling for demographic characteristics, firm characteristics, and local political preferences, firms in liberal circuits still hold a close to 3% point advantage over conservative circuits in offering ESG options in 401(k) plans. The remaining gap could be

[1]https://www.planadviser.com/pilot-sues-american-airlines-due-esg-401k-investing-strategy/.

[2]ESG coverage is calculated as the total number of ESG funds / total number of plans.

driven by judicial channel or other unobservable sources of variations in firms' and investors' preferences and I address this via a natural experiment related to the judicial environment.

To address the identification challenge in quantifying the effect of judicial channel on ESG offering, I use the guidance on ESG investment in the Interpretative Bulletin (IB) issued by the Department of Labor (DOL) in October 2015. In this IB, the DOL expressed the first legal clarification at the federal level for how ESG investment fits within fiduciary duty by offering two opportunities to consider the ESG factor to comply with legal standards. This reform provides a unique setting to study the influence of judicial discretion on retirement savings. It distinguishes the investor base from the legal pressure fiduciaries face, as this legal guidance primarily targets the fiduciary duty rather than the investors. Legal guidance on ESG significantly impacts financial institutions and plan investment committees that are evaluating plan diversification and performance.

I examine how the gap in ESG investment across different jurisdictions responds to the DOL's guidance, by conducting a difference-in-difference analysis by comparing the firms in conservative and liberal circuits before and after the reform, while controlling for firm and local investor characteristics. My identifying assumption is that different jurisdictions exhibit similar trends in ESG offerings without the reform, conditional on the firm and employee characteristics. I do not find any evidence of violations of this parallel trend assumption. I find that following the alleviation of judicial discretion, ESG investments in conservative and liberal circuits converge. Firms in conservative circuits exhibit an increase by 2.7% in the probability of offering ESG funds relative to those in liberal circuits. The ESG holdings increase 0.6% more in conservative circuits than in liberal circuits, which corresponds to approximately $342 per account per year. These results suggest that before the 2015 IB, the legal strictness that fiduciaries in conservative circuits face was stronger than that of liberal circuits.

Why do the firms in conservative circuits increase more ESG investment than liberal circuits after the legal clarification? The answer lies in the heterogeneity among households in conservative circuits, including varying environmental concerns and political leanings, which lead to diverse opinions on ESG investments within the same circuit. I show that the treatment effect is especially strong for green firms and firms located in more liberal counties

within conservative circuits. These firms are the major contributors in reducing the gap in ESG investments between jurisdictions after the legal clarification. Employees who work for green firms or lean liberal tend to hold values that are aligned with ESG issues, and show interest in investing in ESG funds, once they become available. I also find that small plans increase their ESG investments more than large plans, suggesting that large plans exercise more caution due to litigation risks and are more careful in incorporating ESG options on the menu.

Next, I discuss how access to ESG funds could influence contributions to retirement plans. To examine this, I compare the plan contribution differences between liberal and conservative circuits before and after 2015. I find that access to ESG options increases the ratio of plan contribution to plan assets by 0.9%, indicating an annual increase in plan contributions of 10% when benchmarked against the average ratio[3], which is a large magnitude change in investor behavior. By comparing the increase in total contribution versus ESG investment, I show that ESG access does not crowd out non-ESG investments within their plans. I further confirm that the increase in *employee contributions* primarily drives the increase in *total contributions.*

In addition, I examine heterogeneity in financial institutions that provide services to retirement plans. Different service providers could vary in both their capability and preferences regarding the selection of ESG investments. I investigate what kinds of service providers increase their ESG offerings. In terms of local market share, while the major industry players often hold the leading spots, the third and lower ranks also include diverse sets of financial service providers, which might be related to regional preferences. I find that the top three financial institutions which cover a significant market share in each region, along with various local partnerships, contribute to the increases in ESG offerings, although the top financial firms exhibit a more substantial increase.

Lastly, I demonstrate how the availability of ESG options alters the plan characteristics, specifically the plan fees. I show that 401(k) plans that offer ESG options typically exhibit a higher average expense ratio than those of non-offering plans. Notably, the difference is approximately 7.5 bps higher in conservative areas than in liberal areas.

[3]The average number of *total contribution/plan assets* is 9%.

Overall, this research identifies the impact of federal judges' judicial discretion on ESG investments. My findings emphasize the heterogeneity of ESG investment preferences within similar political jurisdictions. As the political dynamics of ESG continue to evolve, this study offers insight into how political and judicial environments shape financial markets and investment opportunities. Furthermore, it provides implications for understanding investors' demands and better aligning investors' values with pecuniary benefits.

2 Related Literature

My paper is closely related to several strands of literature. First, it contributes to the extensive literature about the role of financial intermediaries in households' investment choices. Dvorak (2015), Bhattacharya, Lee, and Pool (2013), and Pool, Sialm, and Stefanescu (2016) document trustee favoritism and agency frictions in fund selection, which lead to pricier and less effective options in 401(k) plans. This work has been extended by Cohen and Schmidt (2009) and Davis and Kim (2007), who discover the broader influence of business affiliations on trustee behavior, exceeding beyond mere fund selection to include overinvestment in sponsor-affiliated stocks and the bias of shareholder voting decisions. My paper contributes to the literature by discussing how the legal pressure faced by trustees influences investment opportunities in retirement savings.

My paper also relates to the broad literature concerning investor characteristics among retirement saving investors, such as naïvete in diversification strategies (Benartzi and Thaler (2001)), and the impact of default options and investor inertia (Carroll, Choi, Laibson, Madrian, and Metrick (2009); Choi, Laibson, Madrian, and Metrick (2002)); Choi, Laibson, Madrian, and Metrick (2004)). Brown, Liang, and Weisbenner (2007) explore how menu architecture and investor heterogeneity influence investment choices in 401(k) plans. Others discuss how employees respond to the number of options (Huberman and Jiang (2006)) and the menu size and quality (Goldreich and Halaburda (2013)). Del Guercio and Tkac (2002) discuss the differences in investors' criteria for selecting portfolio managers in mutual funds and pension funds. In more recent work, Egan, MacKay, and Yang (2022) add another layer of complexity by showing that investor expectations also play a central role in port-

folio choices within 401(k) plans. Chalmers, Mitchell, Reuter, and Zhong (2022) show how OregonSaves program change retirement saving. Yogo, Whitten, and Cox (2022) discuss how eligibility influences retirement account participation. I further the discourse by examining heterogeneous investor preferences within the same jurisdiction and how their diverse investment preferences could be constrained due to federal judges.

Finally, this paper intersects with the broad field of ESG investment research. To the best of my knowledge, my study is the first to examine the impact of anti-ESG pressure through the channel of federal circuit discretion. Previous papers have presented mixed views on the ESG-return relationship (Gompers, Ishii, and Metrick (2003); Kempf and Osthoff (2007); Hong and Kacperczyk (2009); Edmans (2011); Di Giuli and Kostovetsky (2014); Khan (2019); Raghunandan and Rajgopal (2022)). The theoretical framework centers around nonpecuniary preferences or expected ESG-related risks (Heinkel, Kraus, and Zechner (2001); Fama and French (2007); Pástor, Stambaugh, and Taylor (2021); Berk and Van Binsbergen (2021); Pedersen, Fitzgibbons, and Pomorski (2021); Baker, Egan, and Sarkar (2022) and Yoo (2023)). Although there has been a significant amount of literature focused on ESG investments, research on the impact of anti-ESG regulations remains scant. Garrett and Ivanov (2022) demonstrate that such regulations can distort financial markets by elevating the funding costs of municipal bonds. Rajgopal, Srivastava, and Zhao (2023) show that anti-ESG legislation in Texas seems to have little substantial impact on state pension funds or ESG investing strategies, suggesting that such laws may primarily serve political ends. My paper enriches this body of work by discussing how anti-ESG pressure influences investment choices in retirement plans through the judicial channel, particularly associated with fiduciary duty concerns.

3 Background

3.1 Private pension - 401(k) plans

Over the past three decades, 401(k) plans have emerged as a prevalent employee benefit, serving as major vehicles for tax-advantaged retirement savings primarily facilitated through

mutual funds. According to the Federal Reserve[4], as of 2019, only 15.2% of US families directly held stock, while 53% held stock in total, and a significant portion held stock through retirement plans such as 401(k)s. This ratio drops to slightly over 30% if only taxable investments are considered[5]. The expanded availability of 401(k) plans plays a pivotal role in driving stock market participation and acts as a primary avenue for investment in the stock market[6]. A 401(k) plan menu is collaboratively crafted by plan sponsors and service providers, who include recordkeepers, investment managers, and other retirement service providers. These entities offer a group of services ranging from administrative tasks to legal compliance, often also serving as investment managers by including their own funds on the menu. A 401(k) menu provides various investment options and asset classes, including mutual funds, collective investment trusts, a firm's own stock, separate accounts, etc. Mutual funds, as the most important asset category, which accounts for over 60% of all investments[7] , are the focus of my research. With a regulatory emphasis on fiduciary responsibilities, these plans are subject to legal scrutiny, primarily in the realms of inappropriate investment choices, self-dealing, and excessive fees. Failure to adhere to these fiduciary duties can result in legal consequences, including civil lawsuits and penalties, underscoring the gravity of the Employee Retirement Income Security Act (ERISA) mandate. The ERISA refrains from prescribing specific investment options for a 401(k) plan; instead, it focuses on the rigor and prudence of the selection process itself. A plan sponsor needs to consider the characteristics of investment options, fee compensation, and the quality of the services. Therefore, fiduciaries are often cautious in their decision-making processes to demonstrate compliance with the ERISA's stringent requirements.

3.2 The ERISA regulation of fiduciary duty

A 401(k) plan must adhere to stipulations set forth in the Employee Retirement Income Security Act of 1974 (ERISA), which is enforced by the Department of Labor (DOL), and Section 401(k) of the Internal Revenue Code, regulated by the Department of the Treasury

[4]Federal Reserve Bulletin, September 2020, Vol. 106, No. 5.
[5]FINRA Insights, Financial Capability
[6]https://www.fool.com/research/how-many-americans-own-stock/.
[7]Investment Company Institute, 401(k) Plan Research: FAQs

and the Internal Revenue Service (IRS). The ERISA imposes a legal obligation on plan fiduciaries[8] (i.e., plan sponsors, trustees, and investment advisors) to act exclusively in the best interests of the plan's participants and their beneficiaries. This mandate extends to a variety of responsibilities, including the prudent selection and monitoring of investment options, ensuring reasonable fees and expenses and providing adequate disclosure and reporting to plan participants. Given the stringent regulations and the potential repercussions of noncompliance, many such plans opt for a conservative stance. Recordkeepers, who are the entities tasked with administering 401(k) plans, are particularly cautious. The introduction of innovative investment options or even addressing topics that might be perceived as complex or ambiguous poses a potential risk. The overarching fear is litigation risk, i.e., the possibility of facing lawsuits on the grounds of not effectively safeguarding the financial well-being of their employees. The ERISA mandates that fiduciaries exercise prudence in their investment decisions, emphasizing that these decisions must pivot solely around the best financial interests of plan participants. This means that while ESG investments might align with the personal values or beliefs of employees, fiduciaries can only consider these options if they are convinced of their financial merit. Given these constraints, the pathway to integrating ESG options into 401(k) plans is intricate. It necessitates a balance between aligning with federal mandates, ensuring the financial robustness of the chosen investments, and addressing the evolving preferences of plan participants.

In most cases, fiduciaries are not early adopters and are very cautious of new developments. Fiduciaries usually rely on regulators to establish the rules of the game, especially in determining what actions are prohibited, and then ensure they operate within these established limits. For ESG investments, the rule has not been very well defined; thus, most fiduciaries keep their distance from this area[9]. Figure 3 shows the gradual increase in ESG investment in 401(k) plans over time.

[8]Including plan sponsor, ERISA 403(a) Trustee, 3(16), 3(21), 3(38) Investment Manager. ERISA 404(a) lists their fiduciary duties, and 404(c) lists the safe harbor for investment decisions.

[9]Fiduciary Update: Using ESG Factors in ERISA Plans

3.3 ESG investing in retirement savings

In Nuveen's 6th Annual Responsible Investing Survey, which was published in 2021, 96% of millennial investors said that it is important that their asset managers are knowledgeable about responsible investing. Additionally, 94% said they would be more comfortable working with an asset manager who has experience in responsible investing. Among all investors, 63% agreed that their financial adviser could do much more to help them see the specific societal or environmental benefits of responsible investing.

There has been much discussion about introducing sustainable investing into 401(k) plans. In a recent Barron's article[10], Fidelity Investments mentioned a growing interest, especially among younger people such as millennials and Gen Z, in having investment choices that match their values. This trend is making plan sponsors think seriously about including ESG options in their 401(k) plans. However, plan sponsors are concerned about legal issues related to fiduciary duty. There is a gap between CEOs and employees; while some CEOs say they are open to ESG options, they see no employee demand for such, yet some employees feel that their companies are not offering the choices they want. Bob Salerno, a senior executive at Fidelity Investments, emphasized that new regulations could help bridge this gap, bringing the two perspectives closer together and potentially making ESG options a common feature in 401(k) plans.

3.4 Politics around ESG

Prominent figures such as Florida's Governor Ron DeSantis and New Hampshire's Governor Chris Sununu have openly criticized ESG investment. They accused President Joe Biden of prioritizing his political objectives over the genuine welfare of the American workforce. Furthermore, some conservative states have implemented specific anti-ESG policies. For example, in Florida, state funds are required to solely prioritize financial returns when allocating capital. This requirement emphasizes the state's stance of sidelining nonfinancial considerations, such as environmental and social impacts, in favor of pure economic gains. Texas has taken an even more confrontational approach by cutting business relations with

[10]https://www.barrons.com/articles/esg-investing-funds-401k-51638473685.

major financial institutions, notably BlackRock, which has taken a negative view of the energy sector in their investment strategies. Such actions show the allegiance of conservative states to their traditional industries and their resistance to what they perceive as external pressures potentially reshaping their economic landscape.

The formation of the Republican ESG Working Group by the House Financial Services Committee Chairperson Patrick McHenry in early February, 2023 emphasizes the rising prominence of the ESG debate within the U.S. Republican Party. The Republican stance diverges not only from the prevailing trend favoring ESG investments but also from the preferences of their own voter base[11]. According to a September 2022 survey conducted by Pennsylvania State University and ROKK Solutions, 63% of voters oppose government restrictions on ESG investing. Indeed, nearly 7 in 10 Republican voters resist ESG constraints, asserting that such limitations overly intrude upon free market principles. These statistics illuminate a telling divergence between political posturing and public sentiment. Despite certain Republican leaders pushing for constraints on ESG investments, a substantial majority of the electorate, including potentially a significant segment of the party's own voter base, appears to be in favor of preserving the flexibility of ESG investing without undue interference by the government. As politicians across the spectrum strive to imprint their ideological stances onto financial policy, there is an imperative to shift the focus to the ground realities; i.e., are households interested in ESG investing for retirement savings? This question holds particular resonance for those living in conservative regions.

In summary, it is important to understand how legal pressures can inadvertently constrict the choices available to investors, especially in a world where there is a growing emphasis on sustainability and ethical investing. It is crucial to discern between political posturing and genuine investment needs and to understand the desires of the public. Due to financial literacy and other constraints, 401(k) plans could be the only choice to make mutual fund investments for many American households. ESG options in 401(k) plans could be an innovative way to attract more younger people to become involved in retirement savings.

[11]https://www.reuters.com/legal/government/republicans-swim-against-tide-esg-money-2023-03-02/

4 Data Description

4.1 Data

401(k) data. The majority of the data that I use about retirement plan characteristics are drawn from the BrightScope Beacon database, which provides detailed information on 401(k) plans. BrightScope Beacon captures plan information including company description, address, administrator, sponsor, contributions, plan assets, investment options, etc. Data are sourced directly from the DOL, IRS, FOIA, and audited financial statements. Generally, administrators or sponsors of pension and welfare benefit plans that are subject to the Employee Retirement Income Security Act (ERISA) must file Form 5500 with the Department of Labor. The investment menu of each plan is recorded in Form 5500, Schedule H. I also obtain data on plans' service providers, such as recordkeepers, asset managers, insurance agents, and financial advisors.

Mutual fund data. I restrict my sample to focus on the mutual fund options on 401(k), since mutual funds serve as a major investment category. The Center for Research in Security Prices (CRSP) provides monthly mutual fund returns and fund characteristics such as the expense ratio, investment style, turnover ratio, and fund age at the quarterly level. I merge the 401(k) investment menu with the CRSP Mutual Fund Database via the fund ticker so that I can access the detailed fund level information.

Morningstar ESG metrics. To identify whether the mutual fund is an ESG fund or not, I use the Morningstar fund classification. Morningstar defines a strategy as a "sustainable investment" if the use of one or more approaches to sustainable investing is central to the strategy's overall investment process, based on fund prospectuses.

In its annual sustainability report[12], Morningstar defines the U.S. sustainable funds universe as open-end funds and exchange-traded portfolios that explicitly declare in their prospectus that they "incorporate ESG criteria into their investment process", focus on "sustainability-related themes", or aim to achieve quantifiable "sustainable impact alongside financial return". This approach does not include funds that only use "value-based exclusionary screening" that is not related to sustainability. This generates a more limited

[12] Sustainable Funds U.S. Landscape Report

selection of funds compared to what the Morningstar socially conscious fund screen would yield. However, this narrower selection aligns more closely with the principles of sustainable investing. It effectively distinguishes between sustainability-focused investments and other forms of value-based investing, such as religious beliefs, which are called "biblically responsible investing." This approach gives me a rigorous scope of ESG funds by definition.

ESG offering and ESG holdings. *ESG offering*$_{i,t}$ is an indicator variable, that identifies if there is at least one ESG option in the 401(k) plan i at time t. Most of the plans that offer ESG choices only offer one fund.

I define the variable ESG holdings as the percentage of allocation balance of ESG investment within the whole 401(k) plan. Participate loans are extracted from plan assets. I(ESG Fund$_{j,t}$) is an indicator variable that equals one if the mutual fund is an ESG fund.

$$ESG\ holdings_{i,t} = \frac{\sum_{j=1}^{c} \text{Fund Balance}_{i,j,t} \times \text{I(ESG Fund}_j)}{\text{Plan Assets in Mutual Funds}_{i,t}}$$

Political leaning of U.S. federal circuits. The liberal federal circuits comprise the 1st, 2nd, and 9th Federal Circuits, whereas the conservative circuits comprise the 3rd, 4th, 5th, 6th, 7th, 8th, 10th, and 11th Federal Circuits (Broscheid (2011), Sawicki, Ellman, Schkade, and Sunstein (2007)). Figure 1 shows the geographic boundaries of the U.S. federal circuits. The DC District Federal Circuit is excluded from the sample because of its specialty. The liberal federal circuits are plotted in different shades of gray, and the conservative federal circuits are plotted in different shades of red.

Refinitiv ESG metrics. The greenness of firms could be a factor influencing ESG offerings in retirement plans. It could be a proxy for employees' ESG preferences. Employees who are passionate about ESG issues tend to work in high-ESG-score firms, and are more likely to promote ESG options on the menu. I obtain the ESG scores for firms from the Refinitiv Database, from which I also obtain the ESG pillar scores separately. An Employer Identification Number (EIN), also known as a Federal Employer Identification Number (FEIN) or Federal Tax Identification Number, is a unique nine-digit number assigned by the Internal Revenue Service (IRS) to business entities operating in the U.S. for identification and tax purposes. Using a firm's EIN from File 5500, I link it to the firm CUSIP code from the

CRSP Database, and then obtain the corresponding ESG score from the Refinitiv Database. Most ESG scores are only available for publicly listed firms. Thus, I restrict my sample to publicly-listed firms.

Demographic characteristics and local political leaning. Investor characteristics influence the demand for ESG investment. I obtain demographic and local economic characteristics, including income, age, and housing value, from the American Community Survey conducted by the U.S. Census Bureau. Additionally, political preference is highly related to people's attitudes toward ESG investing. I construct a proxy for local political preference based on the voting ratio between Democrats and Republicans during the 2016 presidential election at the county level. The data are from the MIT Election Lab. I match 401(k) data with the characteristics data based on the locations of firms' headquarters. I do not consider the possibility of employees working in branch locations. However, it is a reasonable assumption, given that litigation typically commences in the location of the firm's headquarters[13]. Accounting for local political preferences is crucial. By doing so, I can more accurately discern the differences in ESG investment across various circuits for individuals with the same political preference since what I would like to identify is the effect of the legal discretion of federal circuits.

Other firm characteristics. Not every firm has the financial resources to provide ESG or other innovative options for their employees. It is costly to run a 401(k) plan, and could increase the financial burden of the employer. To address this, I control for firm size and firm profitability. Firm size presents a dual-edged sword. Larger 401(k) plans could leverage their size to negotiate lower fees, particularly for in-demand ESG funds. However, they are also more likely to obtain lawsuits associated with higher-cost ESG options. The suitability of ESG funds in 401(k) menus thus needs to be carefully evaluated. This raises questions about the suitability of expensive ESG funds in 401(k) menus that prioritize cost efficiency.

[13]Based on 29 U.S. Code 1132, "Where an action ... is brought in a district court of the United States, it may be brought in the district where the plan is administered, where the breach took place, or where a defendant resides or may be found."

4.2 Summary statistics

My final sample includes 1,723 401(k) plans of 1,546 U.S. firms with full observations. The period of my investigation spans from 2010 to 2019. The average investment count is 20. There are 1,291 types of different mutual funds in my sample[14]. Table 1 presents the summary statistics for plan observations in my sample. Table 2 presents the summary statistics of ESG investments in liberal and conservative areas. There are much fewer ESG offerings and investments in conservative areas. On average, 8% of the plans in liberal circuits offer ESG funds, while only 2% of those in conservative circuits do so. Regarding the percentage of ESG holdings, employees in conservative areas on average invest 0.11% of their mutual fund account balance in ESG funds, while employees in liberal areas invest 0.38% of their balance in such funds. When I focus on the firms that have ESG options in their 401(k) plans, the difference in ESG holdings between liberal and conservative circuits shrinks, which suggests that the low number of ESG investments in conservative areas is actually constrained by menu offerings.

Table 2 also presents the summary statistics of demographic characteristics, plan characteristics, and firm ESG metrics for liberal and conservative circuits. The liberal circuits have higher values in median housing and income than conservative circuits. Not surprisingly, there is also a significant difference in the voting ratio of Democrats and Republicans in the two areas. On average, the ESG scores of the two groups are very similar. The Morningstar ESG metrics have a value between 0 and 1, with a mean value of 0.4. Notably, ESG scores are not solely determined by the industry in which a firm operates. Rather, they are benchmarked relative to other companies within the same sector. Thus, even firms located in conservative circuits tend to focus on traditional sectors such as the oil and gas industry and do not automatically receive a low ESG score. In terms of firm characteristics, firms in liberal circuits have higher profitability and are larger in size than those in conservative circuits. Overall, the presence of heterogeneous investors across liberal and conservative circuits is a challenge to address to study the causal effect of legal discretion.

[14]This number does not account for different share classes.

5 Effects of Judicial Discretion on Investments

In this section, I examine how judicial discretion influences ESG offerings and ESG investment. First, I study how ESG offerings are different across federal circuits. I exploit cross-sectional evidence and show the difference in ESG investment opportunities in liberal and conservative circuits, controlling for observable characteristics. Second, I discuss the identification challenges to studying the effects of legal discretion and how I address them in my empirical design. Third, I discuss what kinds of firms and employees are the major contributors to the treatment effect by studying the heterogeneity effects using firms' and employees' characteristics, as well as the different financial institution services.

To show the stylized facts of the relation between legal circuits and ESG offerings in different jurisdictions, I compare the ESG offerings in liberal and conservative circuits. More specifically, I estimate the following regression:

$$y_{i,c,t} = \alpha + \beta Conservative\ Circuit_c + X_{i,c,t}\phi + \lambda_t + \eta_m + \epsilon_{i,c,t} \tag{1}$$

where $y_{i,c,t}$ denotes the ESG offering, which is a dummy variable that equals 1 if there is at least one ESG option on the 401(k) menu. $Conservative\ Circuit_c$ is a dummy variable that equals 1 if the firm headquarter location is in one of the conservative circuits. $X_{i,c,t}$ denotes the control variables, which include demographic characteristics, firm characteristics, political preference, and firm greenness level. Demographic variables include income, age, and housing value at the county level. A firm's greenness level is a factor that influences firms' consideration of providing ESG options on their menu. In the 401(k) sense, the employees are the investors. Firms that place more emphasis on environmental and social issues usually attract employees with similar values and thus promote more ESG options on their menus. The firm characteristic variables include firm size and profitability. A larger firm is more likely to have a wider employee base that may demand financial innovation, and they could be able to afford the potentially higher cost of providing these options to their employees. I use the voting ratio at the county level between Democrats and Conservatives during the 2016 election to proxy for employees' political views. Since all the data are at the firm level, which is an aggregate for all the employees working there, this measure of political view is

an approximation of the residents' views living in that particular region. λ_t is the year fixed effect, and η_m is the service provider fixed effect. Standard errors are clustered at the circuit by year level.

The results in Table 3 show a negative correlation between legal pressure and the likelihood of firms offering ESG options in their 401(k) plans. Column 1 shows that without any controls, firms situated in conservative circuits exhibit a 6.4 percentage point lower likelihood of making ESG choices than those in liberal circuits. When I control for demographic characteristics, local political leaning, and firm characteristics, I find that firms located in liberal circuits still hold a 2.8 percentage point edge in offering ESG options, benchmarked against an average of 4.4% in the whole sample. These findings are significant at the 1% level. Beyond the realm of legal constraints, I also need to consider the potential influence of variations in fiduciary services across federal circuits. To account for this, I introduce provider ID fixed effects in the next table. In Table 4, I find that the observed effects remain robust. Firms located in liberal circuits hold a 2.9 percentage point edge in offering ESG options. This suggests that for the same fiduciary, the decision-making process around menu offerings varies with judicial discretion, irrespective of the provider's ability to offer innovative fund types. Given that ESG funds are never a default choice, it is plausible to rule out the impact of the difference in default behaviors between liberal and conservative circuits. The findings show that heightened legal pressure curtails ESG investment in regions marked by steep litigation risk. In the following section, I use a natural experiment to study the causal effect of legal discretion on ESG investment opportunities.

5.1 Identification challenge

There are several important challenges to quantifying the causal effect of legal pressure on investment. The employees, employers, and plan trustees all play roles in deciding 401(k) plan investment. First, the differences in liberal and conservative circuits could be driven by employees' preferences, instead of the financial frictions induced by legal concerns. Employees in liberal areas could be more likely interested in investing in progressive funds since they are typically more aligned with their political values. As a result, they will ask their firms to include ESG funds in plan offerings. Thus, the higher probability of such an ESG offering

in liberal areas could be driven by employees' ESG investment preferences.

Another potential source of omitted variable bias arises from the characteristics of the firm itself. Firms that are eco-friendly or involved in technological innovation may possess superior insights into the ESG sector. To demonstrate their commitment to sustainability, these firms are also more inclined to include ESG options in their 401(k) offerings. The composition of a 401(k) plan menu could also primarily reflect the values of the employer, particularly if there is insufficient communication between employers and employees. For instance, if a firm's CEO is actively involved in advocating for the traditional energy industry, the investment options in the 401(k) menu may be influenced by the values of the senior management team. These values may not necessarily align with those of the broader employee base.

The availability of ESG options in 401(k) plans may also be influenced by regional variations in the competitive landscape of financial service providers. Different areas are serviced by a diverse array of 401(k) providers, each with their own set of investment options. These regional variations may impact ESG offerings in 401(k) plans and may not be directly related to legal considerations. To address these identification challenges, I leverage a change in legal pressure stemming from an announcement by the Department of Labor about ESG investing. This approach enables me to isolate and study the causal impact of legal considerations on ESG offerings in 401(k) plans.

5.2 Identification strategy

In October 2015, the Department of Labor provided legal clarification for fiduciaries in providing ESG options in 401(k) plans. This was the first DOL interpretative bulletin to specifically mention ESG factors instead of just economically targeted investments (ETIs). Note that IB 2015-01 attempted to remove the perceived stigma attached to ESG in IB 2008-01. Actually, even the DOL itself would concede that the 2008-01 IB set a "higher and unclear standard" for fiduciaries reviewing ETIs. In IB 2015-01, the DOL stated that ESG issues may have a direct relationship to the economic value of the plan's investment. Such issues are proper components of the fiduciary's primary analysis of the economic merits of competing investment choices. The DOL emphasized that "fiduciaries need not treat commercially reasonable investments as inherently suspect or in need of special scrutiny merely because

they are ESG investments." Labor Secretary Thomas Perez openly commented that the 2008-01 IB gave "cooties" to impact investing, and the 2015-01 IB marked the first time that the DOL corrected misperceptions. It changed from openly discouraging fiduciaries (2008-01 IB) to using a welcome tone (2015-01 IB) for such investments. The DOL commented regarding the 2008-01 IB that this previous clarification "unduly discouraged plan fiduciaries from considering social responsible mutual funds."

In the 2015-01 IB clarification, the DOL addresses ESG issues by providing fiduciaries with a road map of how to comply with ERISA fiduciary standards. It offered two opportunities to consider ESG goals. First, the ESG fund could improve the risk and return profile. Second, if all the other factors are the same, then ESG factor could serve as tie-breakers between otherwise equal investment opportunities. Fiduciaries could consider collateral benefits, which are something beyond risk and return, and involve options that are consistent with employees' values. Because fiduciary standards emphasize process over results, 2015-01 IB clearly states that fiduciaries should use their normal procedures to review ESG investments, and they are not required to provide these options. "The Department does not construe consideration of ETIs or ESG criteria as preemptively requiring additional documentation or evaluation beyond that required by fiduciary standards applicable to plan investments generally."

The legal clarification diminishes the discretionary power of judges in liberal and conservative circuits, which suggests a convergence between the two groups in response to the policy shift. Following the alleviation in legal discretion, firms located in conservative circuits, which have historically faced greater legal pressures to incorporate ESG funds than liberal circuits, exhibited a more rapid expansion in ESG offerings and investment within their 401(k) plan menus, thereby narrowing the gap with firms in liberal circuits.

To better quantify the effect, I conduct a difference-in-difference test to study how the ESG offering change in the conservative circuits around the announcement from the DOL compared to that in the liberal circuits. My identification strategy relies on the assumption that IB influences the legal discretion faced by fiduciaries without influencing employees' investment preferences.

After checking the *ESG offering* of a firm, I substitute the outcome variable with the

ESG holdings. In the following test, $y_{i,c,t}$ could be *ESG offering* or *ESG holdings*:

$$y_{i,c,t} = \alpha + \beta(Conservative\ Circuit_c \times Post_t) + X_{i,c,t}\Phi + \lambda_t + \gamma_s + \eta_m + \epsilon_{i,c,t} \quad (2)$$

where λ_t denotes the year fixed effect, γ_s denotes the state fixed effect, and η_m denotes the service provider fixed effect. Standard errors are clustered at the circuit-year level. Figure 4 provides a visual representation of the regression coefficients for $Conservative\ Circuit_c \times Year_t$, revealing no signs of nonparallel trends during the pretreatment period. Table 5 shows the results for ESG offering and ESG holding separately. I find that the decrease in legal discretion closed the gap of ESG offering and ESG investment between the liberal and conservative circuits. It increased the probability of a firm providing ESG options by 2.7% higher for firms headquartered in conservative circuits than liberal circuits. The result is statistically significant at the 1% level. The average account balance in my sample is approximately $101,000, with $57,000 in mutual funds. Employees working in conservative circuits increased their ESG investment more than those working in liberal circuits, by 0.60% of their average mutual fund account balance, which equates to approximately $**$342**[15] each year. The coefficient, β, becomes notably positive in 2016, aligning with the DOL IB in October 2015. This suggests a lagged response, as fiduciaries took time to adjust their 401(k) menu offerings. Notably, the data indicate that fiduciaries in conservative regions are more likely to increase ESG options in their menus than those in liberal areas. This upward trend continues until it marginally diminishes in 2019, echoing the sustained interest in ESG offering. Additionally, I examine the policy's impact on employee investment behaviors and find even greater persistence. Beginning in 2016, there is a significantly positive treatment effect each subsequent year. This shows that investors modify their portfolios when presented with ESG options in their 401(k) plan menus. Given the slow-paced nature of changes in retirement savings, it appears that investors take time to incrementally increase their ESG allocations. In terms of aggregate effects, employees residing in the conservative circuits on average hold mutual fund assets totaling $238 billion every year. This signifies that, on an annual basis, there is an additional investment of $1.4 billion[16] in ESG within conservative

[15] $\$57,000 \times 0.60\% = \$342$

[16] $\$238$ billion $\times$ 0.60% =$1.4 billion

circuits when compared to liberal circuits, given all the same investor characteristics. My sample represents 25% of the total plan assets; thus, an aggregate additional increase in ESG investment in conservative circuits would equate to $5.6 billion dollars in the entire U.S. 401(k) market.

5.3 Plan contribution

I next discuss how access to ESG options influences employees' savings behavior. Surveys have shown that offering ESG investment options could increase plan contributions. According to the Schroders 2022 U.S. Retirement Survey[17], of the 31% of 401(k) plan participants who know that their plan offers ESG options, nine out of ten invested in those options, and almost three-quarters (73%) estimate that they allocate 50% or more of their assets to socially responsible choices. To account for the possibility that savings behavior may be influenced by a multitude of factors varying between liberal and conservative circuits, I employ coarsened exact matching (CEM) to compare the firms and counties with the exact same housing value, income, age, ESG score, size and profitability in liberal and conservative circuits. Table 6 shows the results of the following regression:

$$Contribution_{i,c,t} = \alpha + \beta(Conservative\ Circuit_c \times Post_t) + X_{i,c,t}\Phi + \lambda_t + \gamma_s + \delta_k \times \lambda_t + \delta_k + \epsilon_{i,c,t} \tag{3}$$

where $Contribution_{i,c,t}$ is total contribution/plan net assets, λ_t denotes the year, γ_s denotes the state, $X_{i,t}$ denotes all the control variables, and $\delta_k \times \lambda_t$ is the fixed effect obtained from coarsened exact matching(CEM), where δ_k indicates the subgroup k from matching. More details about CEM can be found in A1. I find that after the 2015 IB, the total contribution/plan net assets increase 0.9% more in conservative circuits than in liberal circuits. Since the average number of $Contribution_{i,c,t}$ is 9%, this means that the total contribution increases by 10% per year. To further test whether ESG investment crowds out other types of investment in the menu, I compare $Contribution_{i,c,t}$ with $ESG\ Holdings_{i,c,t}$[18]. Table 6 shows that employees in conservative circuits increase their total contribution by 0.90%

[17] Schroders 2022 U.S. Retirement Survey

[18] Here I assume that the ESG holdings in mutual funds represent ESG investment behavior in the total 401(k) retirement account.

compared to their counterparts of the same type in liberal circuits and increase 0.86% more in ESG holdings. This comparison shows that the increase in ESG holdings does not crowd out other types of investments; instead, it boosts the total contribution in the 401(k) plans. Furthermore, I confirm that the increase in total contribution is primarily driven by employee contribution.

5.4 Heterogeneity of responses

A crucial issue to address is how to identify the driving force behind the observed increase in ESG investment, as this has implications for understanding the underlying mechanisms at work. Since I find that firms in conservative areas increase their ESG coverage in their 401(k) plans more than their counterparts in liberal areas, the question arises as to what kind of firms actually make such contributions. If people working in high-ESG-score firms value ESG more, then one would expect that the employees in high-ESG-score firms are more likely to increase their ESG investments in their 401(k) plans. The results in this section are consistent with the proposed mechanism that while some employees located in conservative areas have demand for ESG investment, they simply do not have such offerings due to legal discretion. In Table 7, I show that the treatment effect is 2% higher for employees working at green firms. These employees working in conservative circuits increase their ESG holdings by 0.20% more than those working in liberal circuits, which is equal to approximately $\$\mathbf{456}$[19]. I also explore how age and generation impact ESG investing. I divide the age distribution in 2010 into three groups. Table 8 shows that the employees in the middle group increase their investment in ESG funds by 0.7%. The effect becomes weaker for older households, which suggests that the old-age group does not show much enthusiasm toward ESG investment. The effect of young employees is not significant. Interestingly, while young individuals often express enthusiasm for incorporating ESG options into the menu[20], their level of concern for their retirement savings is not as high. In addition, I analyze how the treatment effects differ across plan sizes by dividing plans into three groups based on their plan net asset size in each year and estimating Equation (2) in each subgroup. In Table 9, I show that large

[19] $\$57,000 \times 0.80\% = \$456$

[20] Charles Schwab 401(k) Study

plans increase their ESG offerings by 3.8%, while small plans increase them by 9%. A similar comparison holds for ESG investments. This suggests that large plans are more cautious about litigation risk and act more prudently in selecting ESG funds. Small size plans are the major contributors to the increase in ESG offerings and investments.

5.5 Local political preference

I explore political preference at a more granular level by comparing the treatment effects of liberal and conservative counties. The political ideology in a circuit is highly related to local politics. However, these concepts are not exactly the same thing. For example, conservative states such as Montana and Idaho are located in a liberal circuit (No. 9), while Maryland and Colorado are located in a conservative circuit (No. 4, No. 10) based on definition. This simple classification does not capture the broader political dynamics or nuances of individual states. At the county level, households in different geographical locations could have very different political and social views, even if they are located in the same circuit or state[21]. Liberal counties in conservative states are typically urban or metropolitan areas that lean Democratic in their voting patterns, even though they are located within states that traditionally vote Republican. These urban areas often have a higher concentration of young professionals, a diverse population, and educational institutions, which may contribute to more liberal voting trends[22]. For example, Dallas County in Texas, Durham County in North Carolina, and Summit County in Utah all have strong liberal leaning compared to their average state politics. In Modoc County, California, registered Republicans comprise half of the registered voters. I estimate the following regression:

$$\begin{aligned} y_{i,c,t} = \alpha + \beta_1(\text{Conservative Circuit}_c \times \text{Post}_t) + \beta_2(\text{Conservative County}_c \times \text{Post}_t) \\ + X_{i,c,t}\Phi + \lambda_t + \gamma_s + \epsilon_{i,c,t} \end{aligned} \tag{4}$$

Table 10 shows that the treatment effects of ESG offering and ESG investment are higher in liberal counties than in conservative counties. I also conduct a subsample analysis on

[21] https://www.vox.com/2014/6/22/5830288/this-map-shows-the-most-liberal-and-conservative-towns-in-your-state

[22] https://stacker.com/politics/most-liberal-county-states-highest-percentage-conservatives

liberal counties and conservative counties separately. In Table 11, I further confirm that the treatment effects are driven by the liberal counties located in the conservative circuits. The ESG investments in 401(k) menus increase 0.88% in liberal counties, while conservative counties do not have a significant change in ESG investment after DOL guidance.

5.6 Financial institution landscape

In this subsection, I illustrate the market share distribution of various financial service providers across different U.S. states and how that influences the treatment effects. I find that Fidelity is a dominant player, securing the top rank in many states. Other financial giants such as Charles Schwab, Principal Global Investors, LLC, and T. Rowe Price are frequently represented in the sample as well. However, the market competition varies from one state to another. While Fidelity frequently leads, the degree of its dominance is inconsistent. For example, in Delaware, Fidelity has a substantial market share of 0.80, but in Alabama, it is a modest 0.22. A further point of interest is the variability in the lower-ranking position across states. While the leading spots are often held by major industry players, the third and lower ranks include a diverse set of financial service providers. This diversity might be attributed to factors such as regional preferences, local collaborations, or specialized services particular to certain firms. In the subsequent analysis, I study whether the changes in ESG offerings are influenced by the major financial service giants or whether locally diverse partnerships with less market share play a pivotal role. In my sample, the median number of how many states and territories in which a financial institution carries services is 48. (To be clear, there are firms that only service a few states; however, few firms choose their services.) I perform subsample analysis for the fiduciaries that cover fewer states or all 50 states. As shown in Table 12, I find that the treatment effect is primarily driven by nationwide financial institutions. However, this does not mean that local partnerships do not matter. After excluding the top three financial institutions that cover most of the market share in each region, I find that various local partnerships also contribute to the increase in ESG offerings, although by a lower magnitude than the top three financial firms.

6 Implications for Fund Selection

To address the challenges of investment risk in 401(k) plans, both plan sponsors and participants may seek assistance from service providers in selecting investment options. The ERISA states that a person who "renders investment advice for a fee or other compensation, direct or indirect, with respect to any moneys or property of a plan or has any authority or responsibility to do so" [23] is a fiduciary and thus is subject to the fiduciary standards outlined in laws and regulations. Since ESG funds typically face more rigorous scrutiny due to fiduciary concerns, especially in conservative circuits, fund managers might select less-risky strategies and gain corresponding compensation for carrying such legal risk, especially in areas with high legal pressure. One way that the service provider could gain compensation is through the investment choices in the plan, such as revenue sharing[24]. In this section, I study how legal discretion influences ESG fund selection by asset managers. I test the hypothesis by comparing fund performance, fund expenses, and plan expenses for ESG and non-ESG conditions in different legal circuits.

6.1 Fund performance

I begin by outlining two competing predictions for financial manager risk shifting. First, ESG funds might experience a high bench-marking pressure due to the additional scrutiny of ESG investment in concern of fiduciary duty under the ERISA, especially for the funds selected by firms located in conservative circuits. The fiduciaries in these areas might face higher benchmark pressure and thus have a greater tendency to choose riskier ESG funds to beat the benchmark. On the other hand, ESG fund managers might choose a lower beta just to minimize the risk and potential return fluctuations in an attempt to avoid potential lawsuits. To test the effect, I run the following regression:

$$f_{i,c,t} = \beta_0 + \beta_1 Conservative\ Circuit_c \times ESG_i + \text{Control}_{i,t} + \lambda_t + \gamma_s + \eta_m + \theta_j + \epsilon_{i,c,t} \quad (5)$$

[23] ERISA section 3(21)(A)(ii), 29 U.S.C. § 1002(21)(A):

[24] United States Government Accountability Office 2011 Report, " 401(K) PLANS: Improved Regulation Could Better Protect Participants from Conflicts of Interest"

where $f_{i,c,t}$ denotes the performance for fund i during year t. Fund i belongs to a 401(k) menu of a firm that is located in county c. $Conservative\ Circuit_c$ is a dummy variable taking the value of one if the fund is part of a 401(k) menu from a firm located in a conservative circuit. ESG_i is an indicator variable for ESG funds. The regression model includes control variables, including the fund's expense ratio, turnover ratio, and age. Fixed effects for year, state, service provider, and Morningstar and BrightScope risk category (θ_j) are also incorporated. Given the substantial variability in betas across different fund styles, it is crucial to compare ESG funds with other funds in the same risk category. Standard errors are clustered at the fund level. This regression aims to elucidate the differences in risk-taking behaviors among mutual funds offered in various jurisdictions. I find that ESG funds tend to have lower market betas than non-ESG funds within the same Morningstar-BrightScope risk category, suggesting that the legal pressure reduces the amount of market risk that asset managers are willing to take. Specifically, as shown in Table 13, in conservative areas, ESG funds exhibit market betas that are 3 bps lower than non-ESG funds, although this difference is not statistically significant in liberal areas. After the policy change in 2015, the magnitude of the ESG effect on beta diminished, yet the divergence between federal circuits remained a consistent pattern over the years, which suggests a long-lasting impact on asset manager behaviors in different circuits.

Moreover, I employ both annual absolute returns and abnormal returns as dependent variables in the regression models. No significant differences in returns are observed for ESG funds between liberal and conservative circuits. I calculate the abnormal return using the benchmark of the Fama-French three-factor model and do not find significant differences in abnormal returns either. While ESG funds perform better than non-ESG funds on average, as shown in Table A2, this outperformance is not statistically significant when benchmarked against funds in the same Morningstar category. Specifically, the average net return for ESG funds during the sample period is 14%, compared to approximately 10% for non-ESG funds. These returns are net of all management expenses and 12b-1 fees but do not account for either front or rear load fees. Figure 6 illustrates the annual average returns for ESG and non-ESG funds. Starting in approximately 2013, ESG funds in 401(k) plans began to outperform non-ESG funds, potentially driven by both the surge in ESG attention and changes in 401(k)

ESG fund selection. In the 2015-2019 period, no significant return difference is observed for ESG funds added before and after the 2015 IB. When I limit the analysis to ESG funds that are present throughout the sample period, the trend remains consistent. This suggests that the observed differences in returns are more likely driven by the surge in ESG fund interest rather than shifts in ESG fund selection over time.

6.2 Fund expenses

6.2.1 ESG fund expense

Another critical aspect to explore is the compensation structure of 401(k) plans. I find that ESG funds tend to be more expensive than their index fund counterparts. In Table A3, I show that ESG funds in liberal regions charge fees that are 12 bps lower than those in conservative areas, suggesting that legal discretion has an effect. However, when I control for service provider fixed effects, I find that the ESG index funds charge higher fees for firms located in liberal circuits. This observation emphasizes that the fiduciary landscape plays a role in ESG fund compensation. It also aligns with findings from Egan et al. (2022) and can likely be attributed to the elevated demand for ESG options in 401(k) plans at firms in liberal circuits.

6.2.2 Are they choosing the same ESG funds?

The same fund offered in different plans, might have a different expense ratio. I observe that the ESG fund expense ratio varies significantly across different circuits for identical funds. For instance, when examining the same fund with the same share class offered in both liberal and conservative circuits, the expense ratio is noticeably lower in the former than in the latter. This discovery prompts further inquiry into the selection criteria for ESG funds between two distinct regions.

My analysis reveals both overlaps and divergences between the areas in question. Figure 7 illustrates the distribution of the differences in expense ratios for funds available in both regions, contrasting general funds with ESG-specific funds. Intriguingly, the characteristics of ESG funds are diametrically opposed to those of general funds. While the left figure shows

a mean of 8.1 bps and a positive skewness of 1.98, the right figure presents a mean of -8.3 bps and a negative skewness of 1.75. Given that liberal circuits predominantly encompass coastal regions characterized by higher incomes and a more diverse range of financial services, one might expect higher expense ratios in these areas. However, this trend reverses entirely regarding ESG fund investments. My finding emphasizes the legal pressure in conservative circuits specifically targeting ESG investments.

6.3 Plan-level compensation

Generally, 401(k) plans are subject to a wide range of administrative fees that are charged alongside investment fees. These administrative fees cover costs such as customer support, legal services, record keeping, and transaction processing. While some of these fees are covered by the employer, typically most fees are passed onto the plan's participants (i.e., the employees). All of these fees are lumped into the aggregate expense ratio for the 401(k) plans. In this subsection, I measure plan compensation using the average expense of all options on the same menu and then employ it as the outcome variable. I find that plans featuring ESG investment options tend to command higher plan fees, particularly in conservative regions. As illustrated in Figure 8, 401(k) plans in liberal areas generally levy higher fees than those in conservative regions. However, when focusing solely on 401(k) plans that offer ESG options, this trend reverses; i.e., conservative areas consistently feature more expensive plan fees than liberal regions, as shown in Figure 8. Taken together, these findings suggest that legal pressures in conservative jurisdictions significantly influence the compensation structure of 401(k) plans. Table 14 shows that plans offering ESG investment options generally exhibit a higher average expense ratio than those without such options and the difference in conservative circuits is 7.5 basis points higher than that in liberal circuits. After the introduction of the 2015 IB, the elevated costs associated with ESG offerings in 401(k) plans decreased by 3.3 bps, yet the disparity between the liberal and conservative circuits continued to persist. Considering that plan sponsors require time to adjust their investment menu offerings, it is plausible that there might be greater convergence between conservative and liberal areas in the future. This finding is related to the revenue sharing in the 401(k) plan structure. Providers who help sponsors establish and maintain their plans

may receive third-party payments from investment fund companies, which gives them an incentive to offer expensive funds on the menu. Service providers could benefit themselves if the expenses are not structured fairly[25]. In conservative circuits where fiduciaries face more legal scrutiny of offering ESG funds, the plans that feature ESG become more expensive to compensate for the litigation risk.

7 Robustness Checks and Other Discussions

First, to ensure that the increase in ESG offerings after legal clarification is not solely attributed to a single information technology sector, I exclude firms in the technology industry and perform the same analysis using Equation (3). To define the technology industry, I include all the North American Industry Classification System (NAICS) codes that are classified as a tech industry in all three of the NAICS-based industry definitions (BLS, Brookings, and CompTIA), which include manufacturing, data processing, other information services, etc. I also conduct the same analysis for firms outside the software information services industry. The results are robust, as presented in Table A5.

Second, to further confirm that circuit discretion instead of state politics influences the ESG offering, I compare states with different political leanings. I estimate the following two regressions:

$$y_{i,c,t} = \alpha + \beta(Conservative\ State_s \times Post_t) + X_{i,c,t}\Phi + \lambda_t + \gamma_s + \eta_m + \epsilon_{i,c,t} \tag{6}$$

$$\begin{aligned} y_{i,c,t} = \alpha &+ \beta_1(Conservative\ Circuit_c \times Post_t) + \beta_2(Conservative\ State_s \times Post_t) \\ &+ X_{i,c,t}\Phi + \lambda_t + \gamma_s + \eta_m + \epsilon_{i,c,t} \end{aligned} \tag{7}$$

where $y_{i,c,t}$ denotes either ESG offering or ESG holdings. $Conservative\ State_s$ is a dummy variable that equals one if county c belongs to a state s that voted Republican in the 2016 presidential election. Similarly, X denotes a list of control variables, including demographic variables, firm characteristics, and local political leaning (at the county level). In Table 16, I find that the treatment effect diminishes when comparing states. I detect no difference

[25] The Equitable Allocation of Revenue Sharing to Participants

between ESG offerings in their 401(k) plans at the state level in response to the legal shock. I find that employees in conservative states have lower levels of ESG investments than those in liberal-leaning states, but the divergence is smaller than that found in the circuit comparison. Additionally, when integrating both conservative circuit and conservative state indicator variables into the regression, the state variable exhibits a substantially lesser effect than the circuit. My findings align with the fact that 401(k) plans are regulated at the federal level, in contrast to state pension funds, in which states have complete control.

8 Conclusion

In this paper, I investigate the effect of judicial discretion on fiduciaries' 401(k) menu designs and employees' asset allocation. Because the legal interpretation of fiduciary duty is determined by politically-oriented judges, retirement plans in conservative circuits are reluctant to offer ESG options due to litigation risk. I show that a reduction in judicial discretion leads to a higher likelihood of firms in conservative regions offering ESG options in their 401(k) menus compared to their counterparts in liberal areas. Furthermore, employees in conservative circuits demonstrate a more pronounced increase in their ESG investments than those in liberal circuits. This shows that judicial discretion could significantly influence both financial institutions' and individuals' ESG investment behaviors. The treatment effects are concentrated among green firms, small firms, and those located in liberal counties of conservative circuits. This suggests that employees who work in such firms in conservative areas care about ESG issues and have demands for ESG investment. However, they are constrained from acting on these interests due to judicial discretion. I find that adding ESG options to the 401(k) menu leads employees to contribute more without crowding out other non-ESG investments. I find that plans featuring ESG investment options command higher plan expenses, particularly in conservative circuits, where fiduciaries face higher legal pressure to introduce ESG funds. I also conduct a list of robustness tests to confirm my findings in causal inference and related mechanisms.

My findings provide important insight into the implications of current anti-ESG movements. The increasing integration of ESG principles into financial decision-making represents

a significant shift in contemporary investment strategies. However, the emergence of anti-ESG policies poses questions about the future trajectory of sustainable investing. Understanding the impact of anti-ESG policies will equip investors with the knowledge necessary to navigate an increasingly complex investment landscape when investing in ESG instruments.

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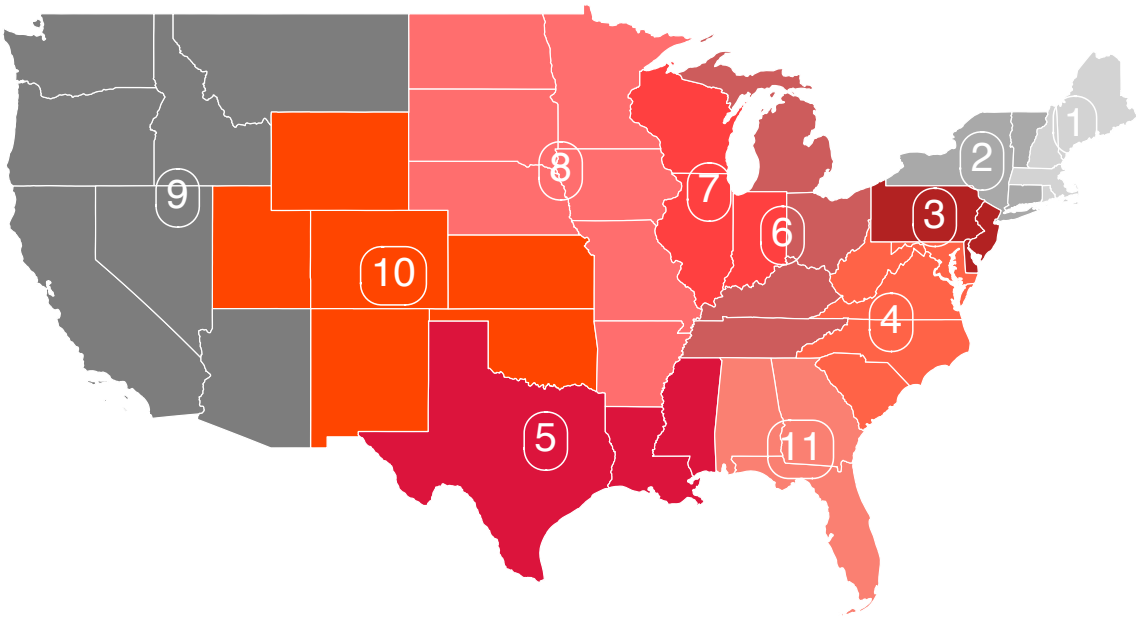
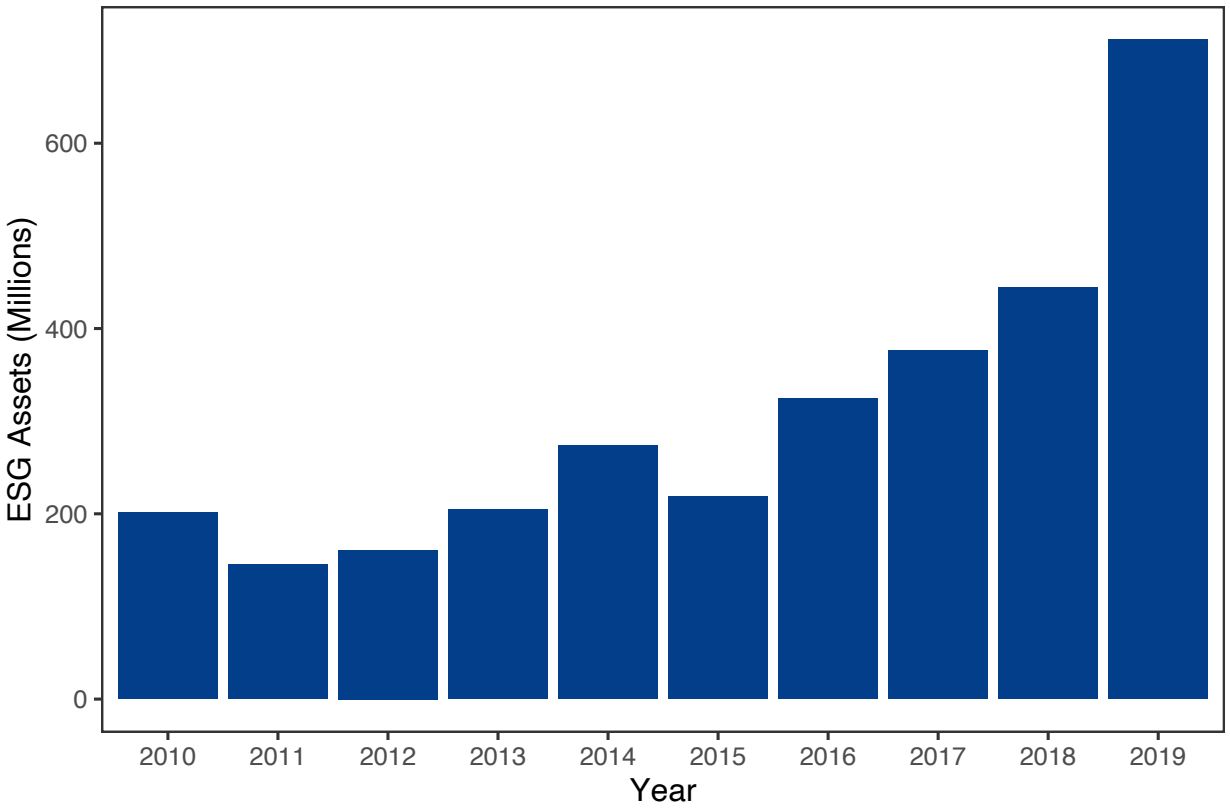
Fig. 1. Geographic Boundaries of U.S. Federal Circuits



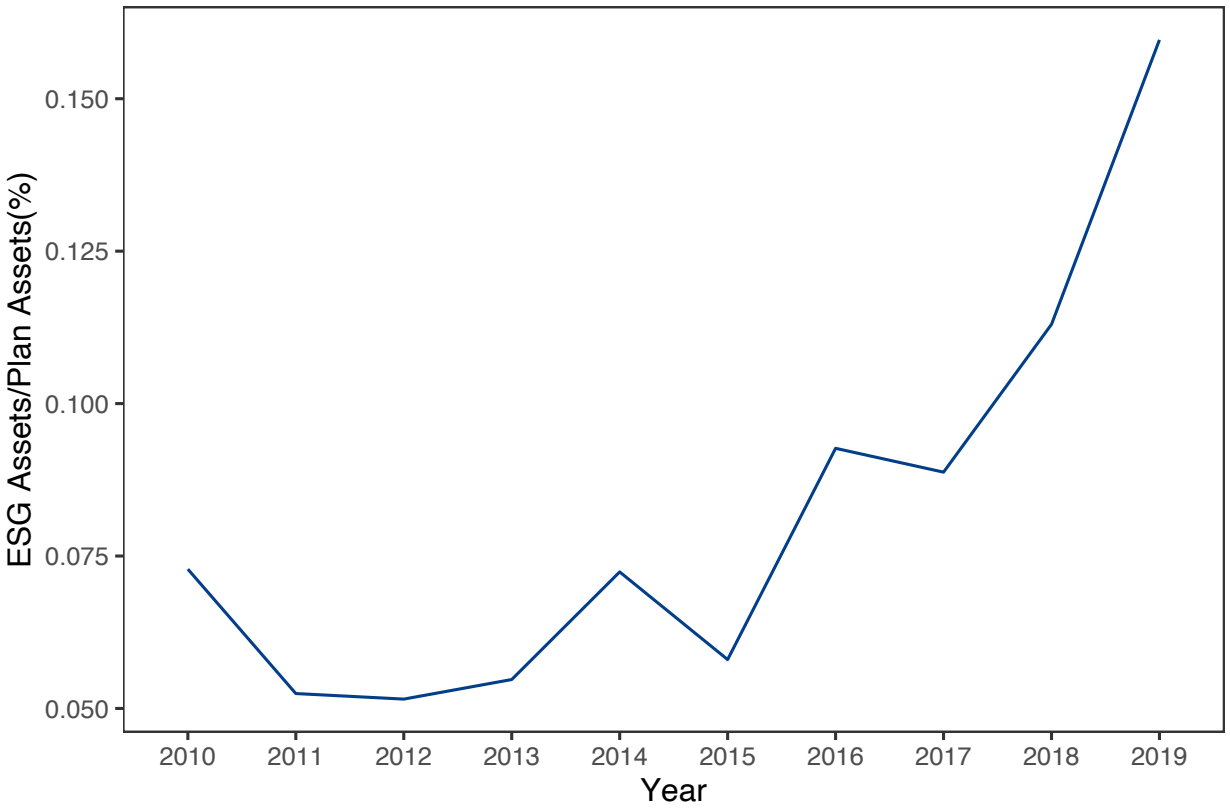
This figure gives the geographic boundaries of U.S. federal circuits. Different colors represent different circuits. The gray areas indicate the liberal circuits, which comprise circuit numbers 1, 2, and 9. The red areas indicate the conservative circuits, which comprise circuit numbers 3, 4, 5, 6, 7, 8, 10, and 11. The DC Circuit is excluded from analysis due to its specialty.
Source: Court Role and Structure

Fig. 2. ESG Investments in 401(k) Plans



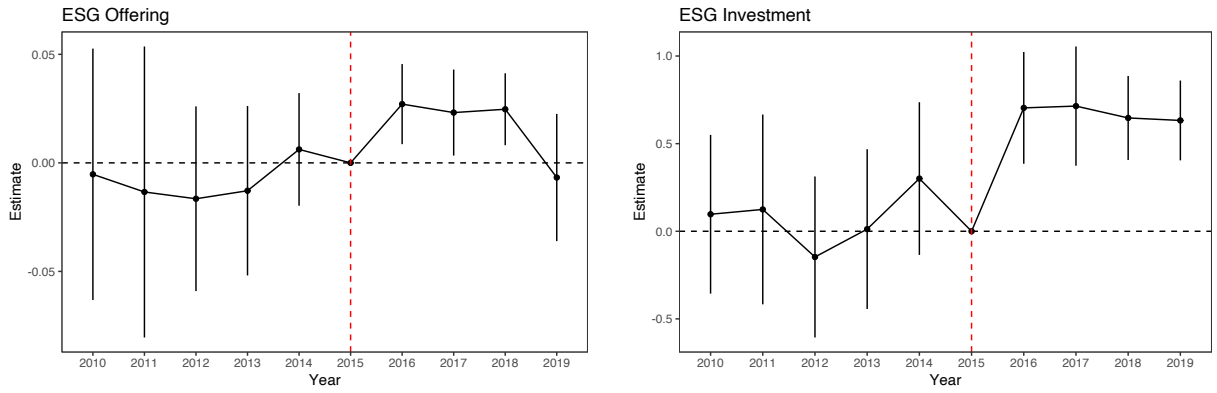
The figure shows the size of ESG assets in 401(k) plans from 2010 to 2019. I identify the ESG funds via the Morningstar classification. Morningstar defines the U.S. sustainable funds universe as open-end funds and exchange-traded portfolios that incorporate or indicate ESG and sustainability-related criteria into investment. I include the ESG funds of all share classes.

Fig. 3. ESG Investments in 401(k) Plans



This figure displays the share of ESG fund assets in 401(k) plans from 2010 to 2019. The x-axis reports the year. The y-axis reports the ratio between ESG assets and total plan assets. The plans assets do not include the participant loans and focus on mutual fund investment.

Fig. 4. Event Study on ESG Offering and ESG Investment

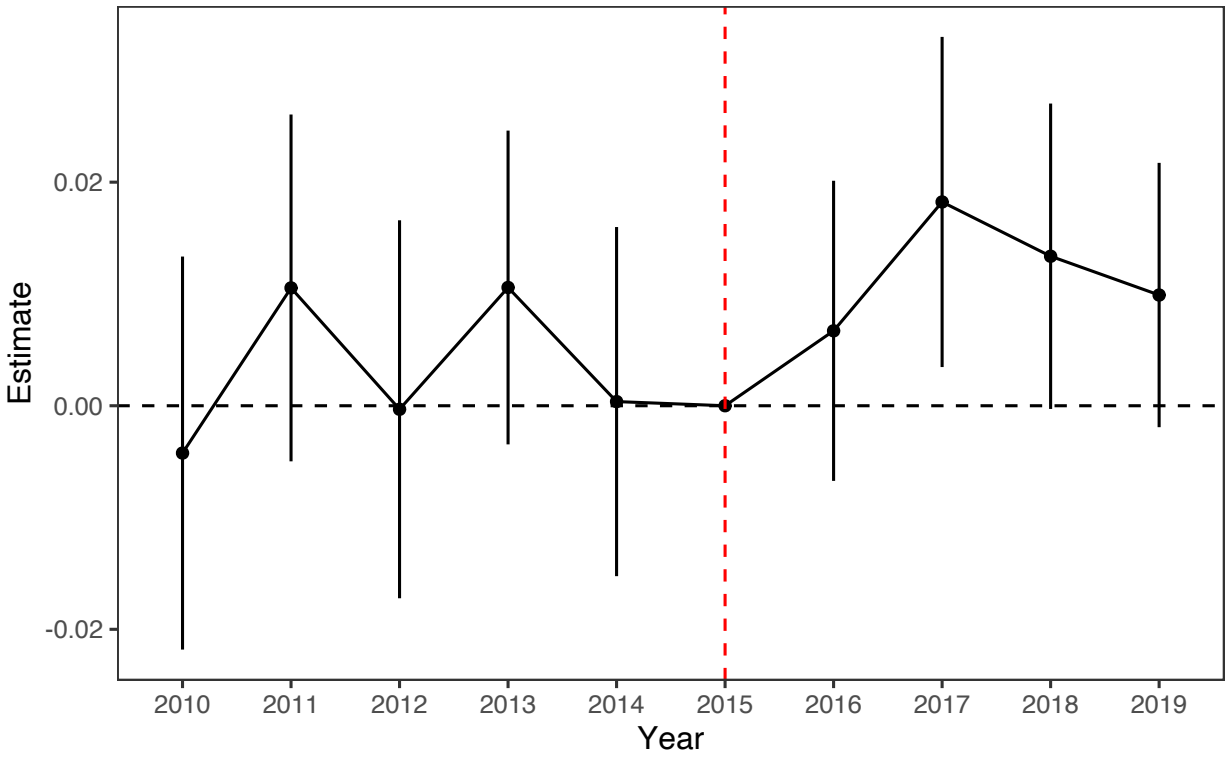


This figure shows the coefficients and the associated 90% confidence intervals of the interaction terms (β_t) from the following estimating equation. Panel (a) shows the result for ESG offering, while Panel (b) shows the result for ESG investment. The estimating equation is as follows:

$$y_{i,c,t} = \alpha + \sum_t \beta_t (Conservative\ Circuit_c \times Year_t) + X_{i,c,t}\Phi + \lambda_t + \gamma_s + \eta_m + \epsilon_{i,c,t}$$

where $y_{i,c,t}$ denotes the ESG offering (left panel) or ESG holdings (right panel). The ESG offering variable is a dummy variable that equals 1 if there is at least one ESG option on the 401(k) menu. The ESG holdings variable is the percentage of ESG investment relative to all mutual fund investment. λ_t denotes the year, γ_i denotes the state, η_m denotes the service provider ID, and $X_{i,t}$ denotes all the control variables. *Conservative Circuit*$_c$ is a dummy variable that equals one if the firm is not located in the No. 1, 2 or 9 Circuit. The x-axis indicates the year. The y-axis indicates the point estimates associated with the β_t estimate. The sample spans the period from 2010 to 2019. Standard errors are clustered at the circuit-year level.

Fig. 5. Event Study on Plan Contribution

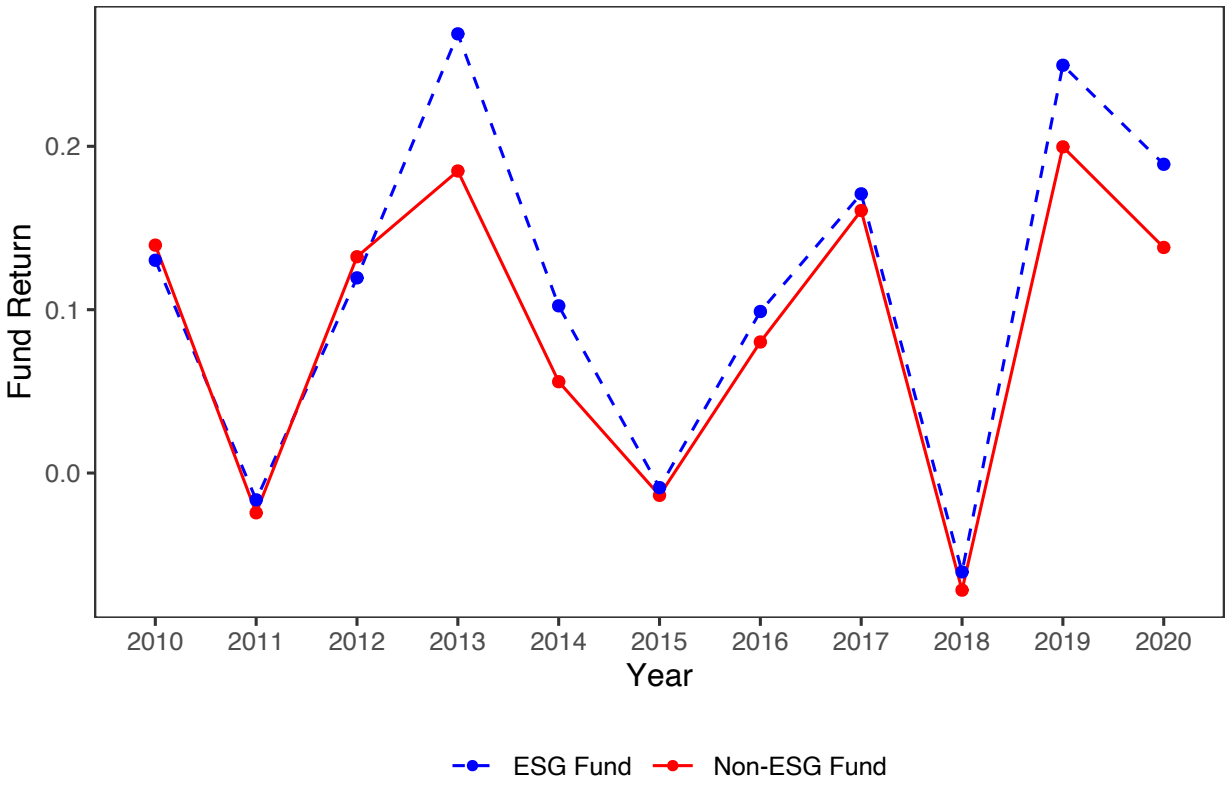


This figure plots the coefficients and the associated 90% confidence intervals of the interaction terms (β_t) from the following estimating equation. Panel (a) shows the result for ESG offering, while Panel(b) shows the result for ESG investment. The estimating equation is as follows:

$$y_{i,c,t} = \alpha + \sum_t \beta_t (Conservative\ Circuit_c \times Year_t) + X_{i,c,t}\Phi + \lambda_t + \gamma_s + \delta_k \times \lambda_t + \delta_k + \epsilon_{i,t}$$

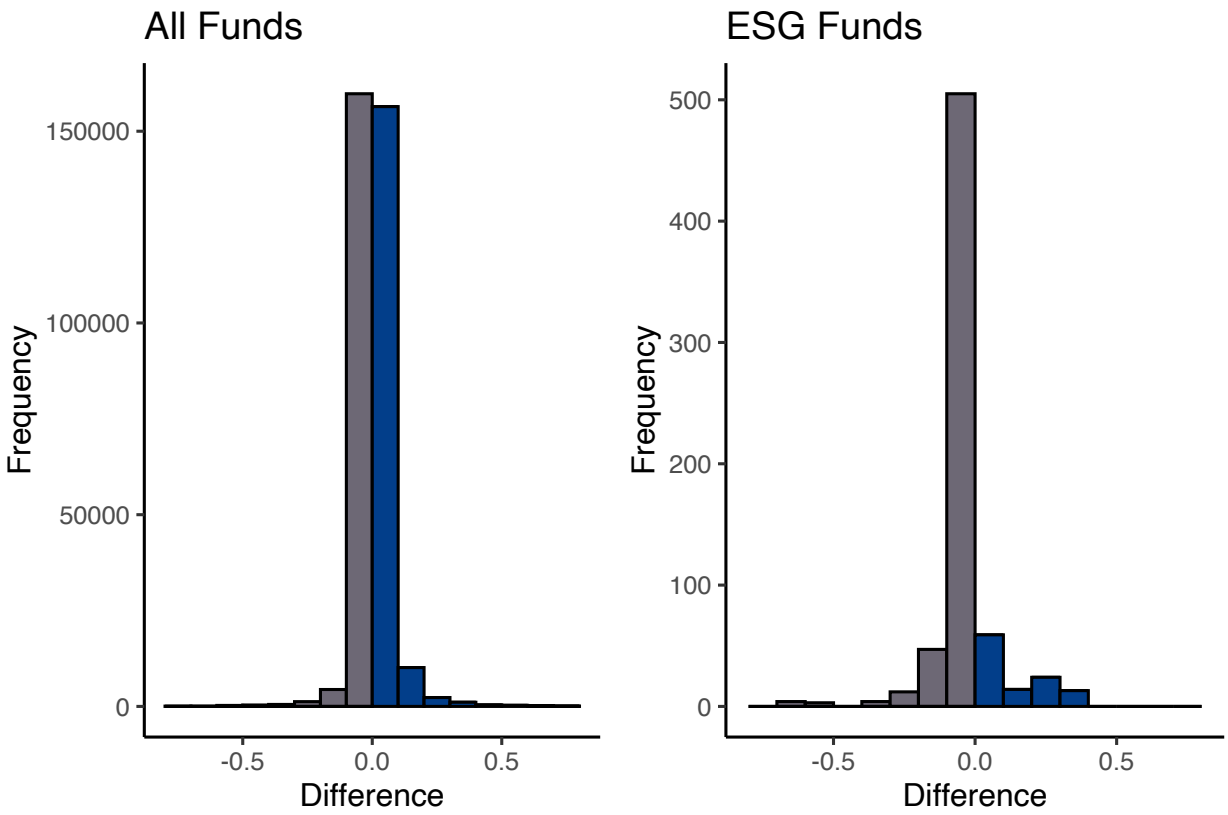
where $y_{i,c,t}$ is the ratio between total contribution and plan assets. λ_t denotes the year, γ_s denotes the state , $X_{i,t}$ denotes all the control variables, and $\delta_k \times \lambda_t$ is the fixed effect obtained from coarsened exact matching(CEM) , where δ_k indicates the subgroup k from matching. More details about CEM can be found in A1. *Conservative Circuit*$_c$ is a dummy variable that equals one if the firm is not located in the No. 1, 2, or 9 Circuit. The x-axis indicates the year. The y-axis indicates the point estimates associated with the β_t estimate. The sample spans the period from 2010 to 2019. Standard errors are clustered at the circuit-year level.

Fig. 6. ESG and Non-ESG Fund Performance



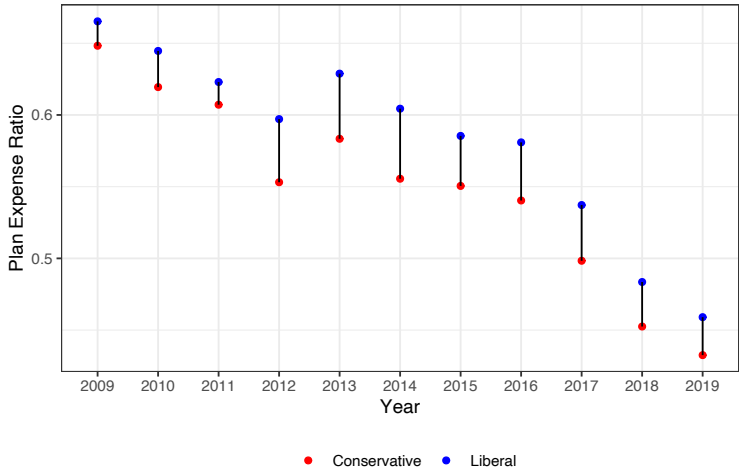
This figure displays the performance of ESG funds and non-ESG funds across years. Fund return is an annual return (in percentage) calculated by the following: 12 $\times$ average monthly log return.

Fig. 7. Fund Expense Ratio Difference

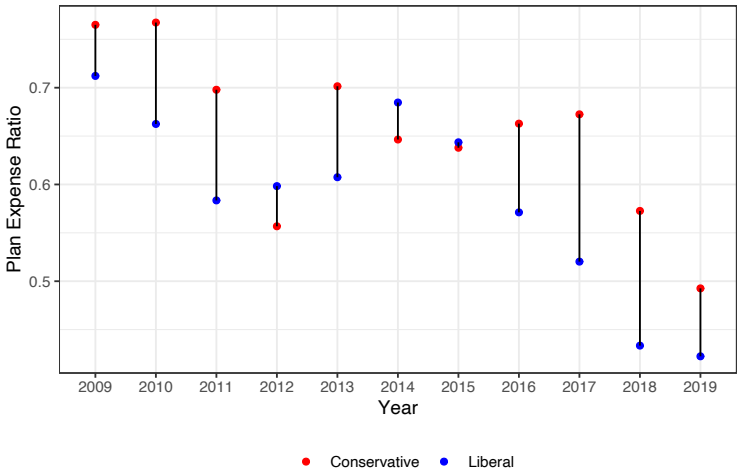


This figure shows the distribution of the expense ratio difference for exactly the same fund between liberal and conservative circuits. The left figure plots the distribution for all the funds. The right figure plots the distribution for ESG funds only. The x-axis represents the difference in expense. The y-axis represents the frequency.

Fig. 8. Plan Expense Ratio Difference



(a) Plans with and without ESG offerings



(b) Plans with ESG offerings

This figure plots the plan expense ratio of 401(k) plans (Panel (a)) and the 401(k) plans that feature ESG options (Panel (b)). The plan expense ratio is measured by the average expense ratio of all the mutual fund options on the 401(k) menu. Liberal circuits include the areas in the No. 1,2,9 Circuits. Conservative circuits include the areas in the No. 3, 4, 5, 6, 7, 8, 10, 11 Circuits. The DC Circuit is excluded from the sample.

Table 1
Summary Statistics for All Variables

Statistic	Mean	St. Dev.	Min	Max
Participant Loans	18,646,604	65,954,418	0	2,871,860,736
Investment Count	20.36	15.06	0	617
Active Participants	12,590	52,887	0	1,520,869
Participants with Balance	12,437	44,664	0	1,052,751
Avg Acct Balance	100,932	711,349	0	64,524,100
ESG Score	0.43	0.19	0.004	0.95
Age	38	3	25	57
Housing value	367,628	264,862	77,200	1,233,600
Income	58,578	25,480	2,499	250,001
Net Assets	1,098,254,512	3,316,906,009	0	57,518,961,418
Index Fund Assets	351,217,983	1,248,223,774	0	28,068,697,707
Mutual Fund Percentage	62	49	0	1,291
ESG Offering (Number)	0.06	0.37	0	8
ESG Offering (Indicator)	0.04	0.20	0	1
ESG Holdings	0.21	3.27	0	100
Voting ratio	2.20	1.49	0.23	10.22
Size	17,648	46,862	16	1,073,391
Profitability	8,653	102,944	−5,173,541	5,332,086

This table provides summary statistics for the variables of interest. The columns provide the mean, standard deviation, min, and max for the plan data used. Age, housing, and income are obtained from the U.S. Census Bureau. Size and profitability are obtained from CRSP/Compustat. The ESG Scores are obtained from the Refinitiv. The Voting ratio is the voting ratio between Democrats and Republicans during the 2016 presidential election, obtained from the MIT Election Lab. *ESG Offering* (indicator) is a dummy variable that equals one if there is at least one ESG option on the menu. *ESG Offering* (Number) is the number of ESG options in the plan. *ESG holdings* variable is defined as the proportion of ESG investment relative to the total mutual fund investment, reported as a percentage.

Table 2
Summary Statistics for Liberal versus Conservative Circuits

	Liberal Circuit			Conservative Circuit		
	Mean	SD	Median	Mean	SD	Median
Participant Loans	17 543 912	81 818 330	2 426 286	19 282 400	54 755 720	4 736 380
Investment Count	21	20	19	20	11	18
Active Participants	9623	25 599	2179	14 300	63 437	3671
Participants with Balance	10 638	29 648	2475	13 474	51 337	3876
Avg Acct Balance	116 585	1 153 215	79 953	91 907	175 810	73 728
ESG Score	0.43	0.20	0.39	0.43	0.19	0.41
Age	38	2	38	38	3	38
Housing value	602 329	291 096	547 800	232 303	108 041	200 800
Income	69 005	29 522	63 716	52 567	20 551	49 396
ESG Offering (Number)	0.12	0.50	0	0.03	0.27	0
ESG Offering (Indicator)	0.08	0.28	0	0.02	0.14	0
ESG Holdings	0.38	4.79	0	0.11	1.89	0
Voting ratio	2.99	1.78	2.72	1.71	0.99	1.45
Size	20 833	60 750	4607	15 811	36 409	4202
Profitability	10 927	127 694	3288	7343	85 463	2584

This table provides summary statistics for the 401(k) plans of firms located in liberal and conservative circuits based on the location of their headquarters. Liberal circuits include the areas in the No. 1, 2, 9 Circuits. Conservative circuits include the areas in the No. 3, 4, 5, 6, 7, 8, 10, and 11 Circuits. The DC circuit is excluded from the sample. ESG Offering (indicator) is a dummy variable that equals one if there is at least one ESG option on the menu. ESG Offering (Number) is the number of ESG options in the plan. ESG holdings are reported as a percent. The sample spans from 2010 to 2019. Columns 2-4 represent the mean, standard deviation, and median for the liberal circuits. Columns 5-7 represent the mean, standard deviation and median for conservative circuits.

Table 3
Legal Circuit and ESG Offering

	Dependent variable:				
	ESG Offering				
Conservative Circuit	-0.064^{***}	-0.030^{***}	-0.030^{***}	-0.029^{***}	-0.028^{***}
	-8.43	-4.13	-4.12	-4.16	-4.12
Demographic characteristics	×	✓	✓	✓	✓
ESG score	×	×	✓	✓	✓
Political leaning	×	×	×	✓	✓
Firm characteristics	×	×	×	×	✓
Observations	8,646	8,646	8,646	8,277	8,277
R^2	0.025	0.035	0.036	0.037	0.038
Year FE	Y	Y	Y	Y	Y
Plan Provider FE	N	N	N	N	N
Note:			*p<0.1; **p<0.05; ***p<0.01		

Notes: This table reports the effects of legal pressure on ESG offering. I estimate the following regression:

$$y_{i,c,t} = \alpha + \beta Conservative\ Circuit_c + X_{i,c,t}\phi + \lambda_t + \epsilon_{i,c,t}$$

The dependent variable is ESG offering. Demographic characteristics include age, income, and housing value. ESG value preference is measured by the ESG score of the firm. Political preference is measured by the voting ratio in the 2016 election. Firm characteristics include firm size and firm profitability. Specifications include year fixed effects. Standard errors are clustered at the circuit-year level. ***, **, and * represent statistical significance at the 1%, 5%, and 10% level, respectively.

Table 4
Legal Circuit and ESG Offering by the Same Service Provider

	Dependent variable:				
	ESG Offering				
Conservative Circuit	-0.063^{***}	-0.030^{***}	-0.030^{***}	-0.030^{***}	-0.029^{***}
	-9.14	-4.60	-4.60	-4.64	-4.62
Demographic characteristics	×	✓	✓	✓	✓
ESG score	×	×	✓	✓	✓
Political leaning	×	×	×	✓	✓
Firm characteristics	×	×	×	×	✓
Observations	8,646	8,646	8,646	8,277	8,277
R^2	0.082	0.092	0.092	0.094	0.095
Year FE	Y	Y	Y	Y	Y
Plan Provider FE	Y	Y	Y	Y	Y
Note:			*p<0.1; **p<0.05; ***p<0.01		

Notes: This table reports the effects of legal pressure on ESG offering considering service provider fixed effects. I estimate the following regression:

$$y_{i,c,t} = \alpha + \beta Conservative\ Circuit_c + X_{i,c,t}\phi + \lambda_t + \eta_m + \epsilon_{i,c,t}$$

The dependent variable is ESG offering. Demographic characteristics include age, income, and housing value. ESG value preference is measured by the ESG score of the firm. Political preference is measured by the voting ratio in the 2016 presidential election. Firm characteristics include firm size and firm profitability. Specifications include year and provider ID fixed effects. Standard errors are clustered at the circuit-year level. ***, **, and * represent statistical significance at the 1%, 5%, and 10% level, respectively.

Table 5
Legal Discretion and ESG Investment

	ESG Offering		*ESG Holdings*	
Conservative Circuit × Post	0.032**	0.027**	0.83***	0.60***
	2.13	1.99	5.07	4.39
Controls	✓	✓	✓	✓
Year FE	✓	✓	✓	✓
State FE	✓	✓	✓	✓
Provider ID	✗	✓	✗	✓
Observations	8,102	8,102	8,089	8,089
R^2	0.056	0.109	0.013	0.106

Note: *p<0.1; **p<0.05; ***p<0.01

Notes: This table reports the effects of the Department of Labor guidance on ESG offering and ESG investment in different jurisdictions. I estimate the following regression:

$$y_{i,c,t} = \alpha + \beta(Conservative\ Circuit_c \times Post_t) + X_{i,c,t}\Phi + \lambda_t + \gamma_s + \eta_m + \epsilon_{i,c,t}$$

where $y_{i,c,t}$ is ESG Offering or ESG holdings. The ESG Offering variable is a dummy variable that equals 1 if there is at least one ESG option on the menu. The ESG holdings variable is the percentage of ESG investment relative to all the mutual fund investment. λ_t denotes the year, γ_s denotes the state, η_m denotes the service provider ID, $X_{i,t}$ denotes all the control variables, and *Conservative Circuit*$_c$ is a dummy variable that equals one if the firm is located in a circuit other than the No. 1, 2, or 9 Circuit. Standard errors are clustered at the circuit-year level. ***, **, and * represent statistical significance at the 1%, 5%, and 10% level, respectively.

Table 6
Legal Discretion and ESG Investment (Matched Sample)

	Dependent variable:		
	ESG Offering	ESG Holdings	Total Contribution
Conservative × Post	0.009	0.86***	0.90**
	0.51	2.78	2.15
Controls	✓	✓	✓
Year FE	✓	✓	✓
State FE	✓	✓	✓
Subgroup × Year	✓	✓	✓
Observations	7,461	7,451	7,461
R^2	0.176	0.099	0.097
Note:			*p<0.1; **p<0.05; ***p<0.01

Notes: This table reports the effects of the Department of Labor guidance on ESG offering and ESG investment in different jurisdictions for the matched sample. I estimate the following regression:

$$y_{i,c,t} = \alpha + \beta(Conservative\ Circuit_c \times Post_t) + X_{i,c,t}\Phi + \lambda_t + \gamma_s + \delta_k \times \lambda_t + \delta_k + \epsilon_{i,c,t}$$

where $y_{i,c,t}$ is ESG offering, ESG holdings or plan contribution rates. The ESG offering variable is a dummy variable that equals 1 if there is at least one ESG option on the menu. The ESG holdings variable is the percentage of ESG investment relative to all the mutual fund investment. The plan contribution rate is measured by the total contribution divided by the plan assets. λ_t denotes the year, γ_s denotes the state, $X_{i,t}$ denotes all the control variables, $\delta_k \times \lambda_t$ is fixed effect obtained from coarsened exact matching(CEM), where δ_k indicates subgroup i from matching. Standard errors are clustered at the circuit-year level. ***, **, and * represent statistical significance at the 1%, 5%, and 10% level, respectively.

Table 7
Heterogeneous Effects by Green and Brown Firms

	Dependent variable:			
	ESG offering		ESG holdings	
	All	Green firms	All	Green firms
Conservative Circuit × Post	0.027**	0.047***	0.60***	0.80**
	1.99	2.78	4.39	2.18
Controls	✓	✓	✓	✓
Year FE	✓	✓	✓	✓
State FE	✓	✓	✓	✓
Provider ID	✓	✓	✓	✓
Observations	8,102	2,966	8,089	2,807
R^2	0.109	0.192	0.106	0.197
Note:				*p<0.1; **p<0.05; ***p<0.01

Notes: This table reports the heterogeneous effects of the Department of Labor guidance on ESG offering and ESG investment in different jurisdictions based on firm ESG scores. I estimate the following regression:

$$y_{i,c,t} = \alpha + \beta(Conservative\ Circuit_c \times Post_t) + X_{i,c,t}\Phi + \lambda_t + \gamma_s + \eta_m + \epsilon_{i,c,t}$$

where $y_{i,t}$ is ESG Offering or ESG holdings. Green firms are the firms with the top 30% of environmental pillar score by year. The ESG offering variable is a dummy variable that equals 1 if there is at least one ESG option on the menu. The ESG holdings variable is the percentage of ESG investment relative to all mutual fund investment. λ_t denotes the year, γ_s denotes the state , η_m denotes the service provider ID, $X_{i,t}$ denotes all the control variables, *Conservative Circuit*$_c$ is a dummy variable that equals one if the firm is located in a circuit other than the No. 1, 2, or 9 Circuit. Standard errors are clustered at the circuit-year level. ***, **, and * represent statistical significance at the 1%, 5%, and 10% level, respectively.

Table 8
Heterogeneous Effects by Median Age of County

	Dependent variable:		
	ESG Holdings		
	Old	Mid	Young
Conservative Circuit × Post	0.02	0.70**	0.15
	0.92	2.11	0.66
Controls	✓	✓	✓
Year FE	✓	✓	✓
State FE	✓	✓	✓
Observations	3,063	3,182	3,086
R^2	0.120	0.259	0.085
Adjusted R^2	0.080	0.226	0.038
Note:	*p<0.1; **p<0.05; ***p<0.01		

Notes: This table reports the heterogeneous effects of the Department of Labor guidance on ESG offering and ESG investment in different jurisdictions based on the median age of the county. I estimate the following regression:

$$y_{i,c,t} = \alpha + \beta(Conservative\ Circuit_c \times Post_t) + X_{i,c,t}\Phi + \lambda_t + \gamma_s + \epsilon_{i,c,t}$$

Where $y_{i,t}$ is ESG offering or ESG holdings. I classify the observations into three groups based on the age distribution at the beginning of the sample. The ESG offering variable is a dummy variable that equals 1 if there is at least one ESG option on the menu. The ESG holdings variable is the percentage of ESG investment relative to all mutual fund investment. λ_t denotes the year, γ_s denotes the state , η_m denotes the service provider ID, $X_{i,t}$ denotes all the control variables, and *Conservative Circuit*$_c$ is a dummy variable that equals one if the firm is located in a circuit other than the No. 1, 2, or 9 Circuit. Standard errors are clustered at the circuit-year level. ***, **, and * represent statistical significance at the 1%, 5%, and 10% level, respectively.

Table 9
Heterogeneous Effects by Plan Size

	Dependent variable:			
	ESG Holdings		ESG Offering	
	Large	Small	Large	Small
Conservative Circuit × Post	0.161***	1.872**	0.038***	0.090**
	3.32	2.54	2.80	2.45
Year FE	✓	✓	✓	✓
State FE	✓	✓	✓	✓
Provider ID FE	✓	✓	✓	✓
Observations	5,002	2,020	5,013	2,022
R^2	0.089	0.558	0.119	0.222
Note:				*p<0.1; **p<0.05; ***p<0.01

Notes: This table reports the heterogeneous effects of the Department of Labor guidance on ESG offering and ESG investment in different jurisdictions based on plan size. I estimate the following regression:

$$y_{i,c,t} = \alpha + \beta(Conservative\ Circuit_c \times Post_t) + X_{i,c,t}\Phi + \lambda_t + \gamma_s + \epsilon_{i,c,t}$$

where $y_{i,t}$ is ESG Offering or ESG holdings. I classify the observations into three groups based on the plan size. The ESG offering variable is a dummy variable that equals 1 if there is at least one ESG option on the menu. The ESG holdings variable is the percentage of ESG investment relative to all mutual fund investment. λ_t denotes the year, γ_s denotes the state , η_m denotes the service provider ID, $X_{i,t}$ denotes all the control variables, $Conservative\ Circuit_c$ is a dummy variable that equals one if the firm is located in a circuit other than the No. 1, 2, or 9 Circuit. Standard errors are clustered at the circuit-year level. ***, **, and * represent statistical significance at the 1%, 5%, and 10% level, respectively.

Table 10

Legal Discretion and ESG Investment in Liberal and Conservative Counties

	Dependent variable:	
	ESG Offering	ESG holdings
Conservative Circuit × Post	0.037**	0.859***
	2.41	5.28
Conservative County× Post	−0.027**	−0.167**
	−2.37	−2.42
Controls	✓	✓
Year FE	✓	✓
State FE	✓	✓
Observations	8,102	8,089
R^2	0.058	0.013
Note:	*p<0.1; **p<0.05; ***p<0.01	

This table reports the effects of the Department of Labor guidance on ESG offering and ESG investment in counties with different political preferences. I estimate the following regression:

$$y_{i,c,t} = \alpha + \beta_1(Conservative\ Circuit_c \times Post_t) + \beta_2(Conservative\ County_c \times Post_t) + X_{i,c,t}\Phi + \lambda_t + \gamma_s + \epsilon_{i,c,t}$$

where $y_{i,t}$ is ESG Offering or ESG holdings. The ESG offering variable is a dummy variable that equals 1 if there is at least one ESG option on the menu. The ESG holdings variable is the percentage of ESG investment relative to all mutual fund investment. λ_t denotes the year, γ_s denotes the state, $X_{i,t}$ denotes all the control variables, and Conservative County_c is a dummy variable that equals one if the county voted for Republicans in the 2016 election. Standard errors are clustered at the circuit-year level. $***$, $**$, and $*$ represent statistical significance at the 1%, 5% and 10% level respectively.

Table 11
Heterogeneous Effects by Counties' Political Leanings

	Dependent variable:			
	Liberal Counties		Conservative Counties	
	(ESG Offering)	(ESG Holdings)	(ESG Offering)	(ESG Holdings)
Conservative Circuit × Post	0.039***	0.872***	−0.039***	−0.125
	2.58	5.37	−3.52	−1.32
Controls	✓	✓	✓	✓
Year FE	✓	✓	✓	✓
State FE	✓	✓	✓	✓
Observations	7,034	7,021	1,243	1,243
R^2	0.063	0.013	0.115	0.046
Note:				*p<0.1; **p<0.05; ***p<0.01

This table reports the heterogeneous effects of the Department of Labor guidance on ESG offering and ESG investment in different jurisdictions based on the county's political leaning. I estimate the following regression:

$$y_{i,c,t} = \alpha + \beta(Conservative\ Circuit_c \times Post_t) + X_{i,c,t}\Phi + \lambda_t + \gamma_s + \epsilon_{i,c,t}$$

where $y_{i,c,t}$ is the ESG Offering or ESG holdings. The Liberal County variable stands for counties where the voting ratio between Democrats and Republicans in the 2016 election is more than one. The ESG offering variable is a dummy variable that equals one if there is at least one ESG option on the menu. The ESG holdings variable is the percentage of ESG investment relative to all mutual fund investment. λ_t denotes the year, γ_s denotes the state, $X_{i,t}$ denotes all the control variables, and *Conservative Circuit*$_c$ is a dummy variable that equals one if the firm is located in a circuit other than the No. 1, 2, or 9 Circuit. Standard errors are clustered at the circuit-year level. $***$, $**$, $*$ represent statistical significance at the 1%, 5% and 10% level respectively.

Table 12
Heterogeneous Effects by Service Providers

Panel A: National vs. Nonnational

	Dependent variable:	
	ESG offering	
	(National)	(Nonnational)
Conservative Circuit × Post	0.034^{***}	-0.002
	2.87	-0.12
Controls	✓	✓
Year FE	✓	✓
State FE	✓	✓
Observations	6,610	4,641
R^2	0.074	0.228

Panel B: Not Top 3 vs. Top 3

	Dependent variable:	
	ESG offering	
	(Not Top3)	(Top3)
Conservative circuit × Post	0.021^{*}	0.047^{**}
	1.84	2.46
Controls	✓	✓
Year FE	✓	✓
State FE	✓	✓
Observations	6,912	1,730
R^2	0.060	0.075
Note:	*p<0.1; **p<0.05; ***p<0.01	

This table reports the heterogeneous effects of the Department of Labor guidance on ESG offering and ESG investment in financial service providers . I estimate the following regression:

$$y_{i,c,t} = \alpha + \beta(Conservative\ Circuit_c \times Post_t) + X_{i,c,t}\Phi + \lambda_t + \gamma_s + \epsilon_{i,c,t}$$

where $y_{i,t}$ is ESG offering or ESG holdings. The ESG offering variable is a dummy variable that equals 1 if there is at least one ESG option on the menu. The ESG holdings variable is the percentage of ESG investment relative to all mutual fund investments. λ_t denotes the year, γ_s denotes the state, $X_{i,t}$ denotes all the control variables. Standard errors are clustered at the circuit-year level. $***$, $**$, $*$ represent statistical significance at the 1%, 5% and 10% level respectively.

Table 13
Legal Circuit and Fund Performance of ESG and Non-ESG Funds

	Dependent variable:		
	Fund Beta	Fund raw return	Fund abnormal return
	(1)	(2)	(3)
ESG × Conservative Circuit	−0.0003*	−0.005	−0.00004
	−1.70	−1.06	−0.12
Fund Controls	✓	✓	✓
Year fixed effects	✓	✓	✓
Fund style fixed effects	✓	✓	✓
Observations	307,259	304,729	307,419
Note:			*p<0.1; **p<0.05; ***p<0.01

	Dependent variable:		
	Fund beta	Fund raw return	Fund abnormal return
	(1)	(2)	(3)
ESG × Conservative Circuit	−0.001**	−0.005	0.0003
	−2.42	−0.75	0.77
Fund Controls	✓	✓	✓
Year fixed effects	✓	✓	✓
Fund style fixed effects	✗	✗	✗
Observations	307,259	304,729	307,419
Note:			*p<0.1; **p<0.05; ***p<0.01

Notes: This table shows the performance difference between ESG and non-ESG funds across various jurisdictions. I estimate the following fund-level regression:

$$f_{i,c,t} = \beta_0 + \beta_1 Conservative\ Circuit_c \times ESG_i + \text{Control}_{i,t} + \lambda_t + \gamma_s + \eta_m + \theta_j + \epsilon_{i,c,t}$$

$f_{i,c,t}$ is the fund raw return, beta, or abnormal return. The fund raw return is the annual raw return calculated from the monthly return from the CRSP Mutual Fund Database. Fund abnormal returns are calculated using the regression of the Fama-French three-factor model. The fund beta is the coefficient of the market risk from the regression. The fund style denotes the Lipper objective and BrightScope fund category. Standard errors are clustered at the fund level. $***$, $**$, $*$ represent statistical significance at the 1%, 5% and 10% level respectively.

Table 14
Legal Circuit and Plan Expense Differences

	Dependent variable:		
	Plan Expense		
	(All)	(Liberal)	(Conservative)
ESG Offering	0.037***	0.041***	0.112***
	6.21	6.09	3.28
ESG Offering × Conservative Circuit	0.075**		
	2.21		
Observations	8,297	3,061	5,230
R^2	0.513	0.544	0.517
Year FE	✓	✓	✓
Provider ID FE	✓	✓	✓
State FE	✓	✓	✓
Note:			*p<0.1; **p<0.05; ***p<0.01

This table shows the plan expense difference between plans that feature ESG options or not across various jurisdictions. I estimate the following regression at the plan level:

$$y_{i,c,t} = \beta_0 + \beta_1 Conservative\ Circuit_c \times \text{ESG Offering}_{i,c,t} + \text{Control}_{i,c,t} + \lambda_t + \gamma_s + \eta_m + \epsilon_{i,c,t}$$

where $y_{i,c,t}$ is the plan expense ratio, which is the average expense of all the funds in a menu. The ESG Offering variable is a dummy variable that equals one if there is at least one ESG option in the plan. Specifications include year, state, and service provider fixed effects. $***$, $**$, $*$ represent statistical significance at the 1%, 5% and 10% level respectively.

Table 15
Legal Pressure and Plan Expense Differences

	Dependent variable:	
	Plan Expense	
ESG Offering	0.075***	0.057***
	3.61	5.56
Conservative Circuit × ESG Offering		0.066*
		1.75
ESG Offering × Post	−0.023*	−0.033***
	−1.88	−4.02
Conservative Circuit × Post		−0.019
		−1.62
Conservative Circuit × ESG Offering × Post		0.022
		0.61
Year FE	✓	✓
Provider ID FE	✓	✓
State FE	✓	✓
Observations	8,123	8,123
R^2	0.513	0.515
Note:	*p<0.1; **p<0.05; ***p<0.01	

This table shows the plan expense difference between plans that feature ESG options or not across various jurisdictions in the preguidance and postguidance periods. I estimate the following regression at the plan level:

$$\begin{aligned} y_{i,c,t} = \alpha + \beta_1(&Conservative\ Circuit_c \times \text{ESG Offering}_{i,c,t} \times Post_t) + \\ &\rho_1(Conservative\ Circuit_c \times Post_t) + \rho_2(\text{ESG Offering}_{i,c,t} \times Post_t) + \\ &\rho_3(Conservative\ Circuit_c \times \text{ESG Offering}_{i,c,t}) + X_{i,c,t}\Phi + \lambda_t + \gamma_s + \eta_m + \epsilon_{i,c,t} \end{aligned}$$

where $y_{i,c,t}$ is the plan expense ratio, which is the average expense of all the funds in a menu. ESG $\text{Offering}_{i,t}$ is a dummy variable that equals one if there is at least one ESG option in the plan. Specifications include year, state, and service provider fixed effects. $***$, $**$, $*$ represent statistical significance at the 1%, 5% and 10% level respectively.

Table 16
States' Politics and ESG Investment

	Dependent variable:					
	ESG offering			ESG holdings		
Conservative State	−0.006			−0.191*		
	−0.87			−1.83		
Conservative State× Post		0.011	−0.011		0.288*	−0.296**
		1.15	−1.33		1.89	−2.27
Conservative Circuit × Post			0.030**			0.744***
			2.33			5.08
Controls	✓	✓	✓	✓	✓	✓
State FE	✗	✓	✓	✗	✓	✓
Year FE	✓	✓	✓	✓	✓	✓
Observations	8,642	8,642	8,642	8,629	8,629	8,629
R^2	0.035	0.055	0.112	0.004	0.009	0.102
Note:						*p<0.1; **p<0.05; ***p<0.01

This table reports the effects of the Department of Labor guidance on ESG offering and ESG investment in states with different political leanings based on the 2016 presidential election. I estimate the following regressions:

$$y_{i,c,t} = \alpha + \beta \text{Conservative State}_s + X_{i,c,t}\Phi + \lambda_t + \eta_m + \epsilon_{i,c,t}$$

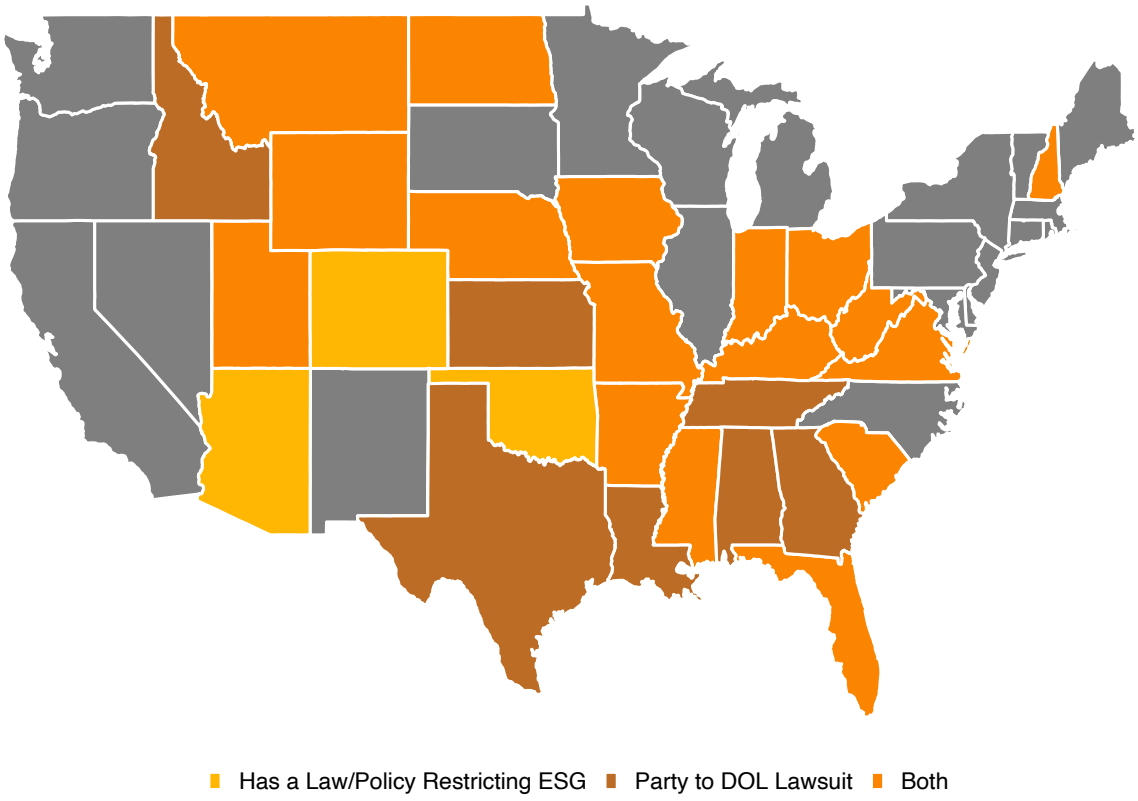
$$y_{i,c,t} = \alpha + \beta(\text{Conservative State}_s \times \text{Post}_t) + X_{i,c,t}\Phi + \lambda_t + \gamma_s + \eta_m + \epsilon_{i,c,t}$$

$$y_{i,c,t} = \alpha + \beta_1(\text{Conservative State}_s \times \text{Post}_t) + \beta_2(\text{Conservative Circuit}_c \times \text{Post}_t) + X_{i,c,t}\Phi + \lambda_t + \gamma_s + \eta_m + \epsilon_{i,c,t}$$

where $y_{i,c,t}$ is ESG offering or ESG holdings. The ESG offering variable is a dummy variable that equals 1 if there is at least one ESG option on the menu. The ESG holdings variable is the percentage of ESG investment relative to all the mutual fund investment. λ_t denotes the year, γ_s denotes the state , η_m denotes the service provider ID, $X_{i,t}$ denotes all the control variables, and Conservative State$_s$ is a dummy variable that equals one if the county votes for Republican in the 2016 election. Standard errors are clustered at the circuit-year level. $***$, $**$, $*$ represent statistical significance at the 1%, 5% and 10% level respectively.

A Appendix

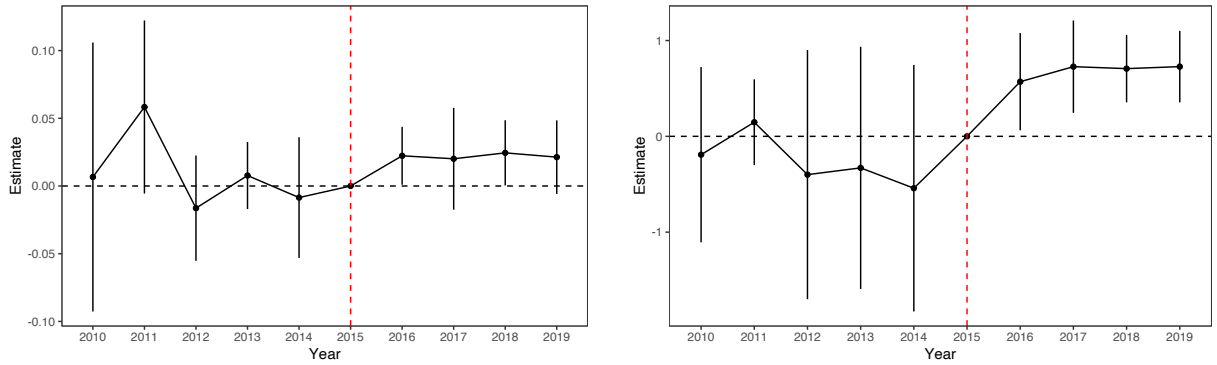
Fig. A1. Political Battle of ESG Investment in 401(k) Plans



This figure shows the states that have filed a lawsuit[25] against the Department of Labor for allowing ESG investment in 401(k) plans, have a policy restricting ESG currently in effect, or have proposed such a policy in 2023. Such policies only consider those actions impacting ESG in terms of fiduciary duties, not including boycotts or divestitures. The data are as of February, 2023.
Sources: Ropes & Gray LLP and United States District Court.

[25]Plaintiffs: State of Utah, State of Texas, Commonwealth of Virginia, State of Louisiana, State of Alabama, State of Alaska, State of Arkansas, State of Florida, State of Georgia, State of Indiana, State of Idaho, State of Kansas, Commonwealth of Kentucky, State of Mississippi, State of Missouri, State of Montana, State of Nebraska, State of New Hampshire, State of North Dakota, State of Ohio, State of South Carolina, State of Tennessee, State of West Virginia, State of Wyoming, Liberty Energy Inc., Liberty Oilfield Services LLC, Western Energy Alliance, James R. Copland, Alex L. Fairly, and State of Oklahoma.

Fig. A2. Event Study on ESG Offering and ESG Investment (Matched Sample)



This figure plots the coefficients and the associated 90% confidence intervals of the interaction terms (β_t) from the following estimating equation. Panel (a) shows the result for ESG offering, while panel(b) shows the result for ESG investment. The estimating equation is as follows:

$$y_{i,c,t} = \alpha + \beta(Conservative\ Circuit_c \times Post_t) + X_{i,c,t}\Phi + \lambda_t + \gamma_s + \delta_k \times \lambda_t + \delta_k + \epsilon_{i,t}$$

where $y_{i,c,t}$ denotes the ESG offering (left panel) or ESG holdings (right panel). The ESG offering variable is a dummy variable that equals 1 if there is at least one ESG option on the 401(k) menu. The ESG holdings variable is the percentage of ESG investment relative to all mutual fund investment. λ_t denotes the year, γ_i denotes the state, η_m denotes the service provider ID, and $X_{i,t}$ denotes all the control variables. $\delta_k \times \lambda_t$ is the fixed effect obtained from coarsened exact matching(CEM) , where δ_k indicates subgroup k from matching. More details about CEM can be found in A1. *Conservative Circuit*$_c$ is a dummy variable that equals one if the firm is not located in the No. 1, 2 or 9 Circuit. The x-axis indicates the year. The y-axis indicates the point estimates associated with the β_t estimate. The sample spans the period from 2010 to 2019. Standard errors are clustered at the circuit-year level.

A.1 Coarsened Exact Matching (CEM)

Table A1
Summary of Balance

(a) Matched Data

	Means Treated	Means Control	Std. Mean Diff.	Var. Ratio	eCDF Mean	eCDF Max	Std. Pair Dist.
ESG Score	0.43	0.42	0.04	1.03	0.02	0.05	0.40
Housing	12.29	12.36	-0.17	0.65	0.04	0.09	0.73
Income	10.77	10.74	0.07	1.04	0.03	0.11	0.48
Age	3.63	3.64	-0.13	1.18	0.03	0.17	0.40
size	12414.01	14710.35	-0.06	0.98	0.07	0.15	0.29
profitability	7153.76	6311.00	0.01	1.13	0.06	0.15	0.20

(b) All Data

	Means Treated	Means Control	Std. Mean Diff.	Var. Ratio	eCDF Mean	eCDF Max	Std. Pair Dist.
ESG Score	0.43	0.43	0.03	0.95	0.02	0.03	
Housing	12.26	13.18	-2.19	0.58	0.41	0.69	
Income	10.79	11.05	-0.63	0.84	0.16	0.26	
Age	3.63	3.65	-0.22	2.44	0.05	0.28	
size	15811.95	20833.79	-0.14	0.36	0.02	0.03	
profitability	7343.37	10927.06	-0.04	0.45	0.05	0.10	

I use the coarsened exact matching (CEM) method with local demographic, economic conditions and firm-level characteristics. I classify the income, age, housing, ESG score, size, and profitability into three groups as the cutoff points. The treatment group is composed of the firms that are in conservative circuits. There are 8646 observations in total before matching. After matching, there are 7867 observations in the matching sample. Coarsened exact matching gives me subgroups that are constructed by the distance between observations. The empirical specification is as follows:

$$Y_{i,t} = \alpha + \beta(Conservative\ Circuit_c \times Post_t) + X_{i,t}\Phi + \lambda_t + \gamma_s + \delta_k \times \lambda_t + \delta_k + \epsilon_{i,t} \quad (8)$$

where $(\delta_k \times \lambda_t)$ denotes the Subgroup $\times$ Year fixed effect, λ_t is the year fixed effect, and γ_s is the state fixed effect. Other specifications remain consistent.

Table A2
Fund Performance of ESG and Non-ESG Funds

	Dependent variable:		
	Fund raw return		
	(All)	(Index)	(Nonindex)
ESG	0.017^{***}	0.053^{***}	0.008
	$t = 2.86$	$t = 9.69$	$t = 1.14$
Fund Controls	✓	✓	✓
Year fixed effects	✓	✓	✓
Observations	358,332	79,583	278,749
Adjusted R^2	0.646	0.754	0.628
Note:			*p<0.1; **p<0.05; ***p<0.01

Notes: This table shows the performance difference between ESG and non-ESG funds. I estimate the following fund-level regression:

$$f_{i,t} = \beta_0 + \beta_1 \times ESG_i + Control_{i,t} + \lambda_t + \epsilon_{i,t}$$

Fund raw return is the annual raw return calculated from the monthly return obtained from the CRSP Mutual Fund Database. The first column includes all the funds. The second column includes only index funds. The third column includes nonindex funds. $Control_{i,t}$ denotes fund characteristics. Standard errors are clustered at the fund level. $***$, $**$, $*$ represent statistical significance at the 1%, 5% and 10% level respectively.

Table A3
Legal Circuit and Fund Expenses

	Dependent variable:		
	Expense Ratio		
	(All)	(Index)	(Nonindex)
ESG	0.051	0.119***	0.124***
	$t = 0.93$	$t = 2.73$	$t = 2.93$
ESG × Conservative Circuit	0.117***	−0.026	0.066**
	$t = 2.91$	$t = -1.17$	$t = 2.01$
Fund Controls	✓	✓	✓
Year fixed effects	✓	✓	✓
Fund style fixed effects	✓	✓	✓
Provider fixed effects	✗	✗	✗
Observations	331,452	72,884	258,568
Adjusted R^2	0.371	0.300	0.303
Note:			*p<0.1; **p<0.05; ***p<0.01

This table shows the fund expense difference between ESG and non-ESG funds across various jurisdictions. I estimate the following regression at the fund level,

$$f_{i,c,t} = \beta_0 + \beta_1 Conservative\ Circuit_c \times ESG_i + Control_{i,t} + \lambda_t + \gamma_s + \theta_j + \epsilon_{i,c,t}$$

where $f_{i,c,t}$ is the fund expense ratio. Specifications include year fixed effects, state fixed effects and fund style fixed effects. Fund style denotes the Lipper objective and BrightScope fund category. $Control_{i,t}$ denotes fund characteristics. Standard errors are clustered at the fund level. $***$, $**$, $*$ represent statistical significance at the 1%, 5% and 10% level respectively.

Table A4
Legal Circuit and Fund Expenses by the Same Service Provider

	Dependent variable:		
	Expense Ratio		
	(All)	(Index)	(Non-Index)
ESG	−0.034	0.127***	0.022
	$t = -0.75$	$t = 5.33$	$t = 0.85$
ESG × Conservative Circuit	−0.015	−0.040**	−0.020
	$t = -0.92$	$t = -2.31$	$t = -1.34$
Fund Controls	✓	✓	✓
Year fixed effects	✓	✓	✓
Fund style fixed effects	✓	✓	✓
Provider fixed effects	✓	✓	✓
Observations	331,452	72,884	258,568
Adjusted R^2	0.737	0.786	0.667
Note:			*p<0.1; **p<0.05; ***p<0.01

This table shows the fund expense difference between ESG and non-ESG funds from the same provider across various jurisdictions. I estimate the following regression at the fund level,

$$f_{i,c,t} = \beta_0 + \beta_1 Conservative\ Circuit_c \times ESG_i + Control_{i,t} + \lambda_t + \gamma_s + \theta_j + \eta_m + \epsilon_{i,c,t}$$

where $f_{i,c,t}$ is the fund expense ratio. Specifications include year fixed effects, state fixed effects, fund style fixed effects and service provider fixed effects. The fund style denotes the Lipper objective and BrightScope fund category. $Control_{i,t}$ denotes fund characteristics. Standard errors are clustered at the fund level. $***$, $**$, $*$ represent statistical significance at the 1%, 5% and 10% level respectively.

Table A5
Treatment Effects w/o Tech Firms

	Dependent variable:			
	ESG offering		ESG holdings	
	(w/o software)	(w/o tech)	(w/o software)	(w/o tech)
Conservative Circuit × Post	0.025**	0.020*	0.821***	0.996***
	$t = 2.44$	$t = 1.86$	$t = 4.80$	$t = 5.25$
Controls	✓	✓	✓	✓
Year FE	✓	✓	✓	✓
State FE	✓	✓	✓	✓
Observations	8,094	7,455	8,081	7,446
R^2	0.057	0.057	0.013	0.015
Note:				*p<0.1; **p<0.05; ***p<0.01

This table reports the effects of the Department of Labor guidance on ESG offering and ESG investment in different jurisdictions based on whether the sample includes tech firms. I estimate the following regression:

$$y_{i,c,t} = \alpha + \beta(Conservative\ Circuit_c \times Post_t) + X_{i,c,t}\Phi + \lambda_t + \gamma_s + \eta_m + \epsilon_{i,c,t}$$

where $y_{i,c,t}$ is ESG offering or ESG holdings. Green firms are the firms with the top 30% of ESG scores by year. The ESG offering variable is a dummy variable that equals 1 if there is at least one ESG option on the menu. The ESG holdings variable is the percentage of ESG investment relative to all the mutual fund investment. λ_t denotes the year, γ_s denotes the state , η_m denotes the service provider ID, $X_{i,t}$ denotes all the control variables, and Conservative Circuit$_c$ is a dummy variable that equals one if the firm is not located in the No. 1, 2, or 9 circuit. Standard errors are clustered at the circuit-year level. $***$, $**$, $*$ represent statistical significance at the 1%, 5% and 10% level respectively.