



**Unintended Consequences of the Energy
Discrimination Elimination Act in Oklahoma**



April 22, 2024

To Whom It May Concern:

The Oklahoma Rural Association (ORA) is deeply concerned about the adverse effects of certain Oklahoma laws, such as the Energy Discrimination Elimination Act (EDEA), on our rural and underserved communities. We are committed to creating and advancing policies and initiatives that promote growth, development, and opportunity in these areas.

Certain Oklahoma laws, such as the Energy Discrimination Elimination Act (EDEA), are burdening taxpayers and hampering investment in and development of critical public projects. While these policies were presented as a 'solution' to combat the misguided perception of boycotting by financial institutions of certain industries, they have resulted in politically motivated attempts to remove certain banks from operating in the state and necessitated a review of the legislation this session.

In response to these policies and discussions this session, ORA worked with Dr. Travis Roach, an associate professor and chairperson of the Department of Economics at the University of Central Oklahoma and founder of the Central Policy Institute, to research the impact of these policies on local taxpayers and municipalities.

In the report that follows, "Unintended Consequences of the Energy Discrimination Elimination Act in Oklahoma," Dr. Roach found a 15.7% increase in Oklahoma municipalities' borrowing costs due to this policy. Further, the state has incurred nearly \$185 million in additional expenses since its enactment – or almost \$11 million each month.

Thank you to Dr. Roach for his diligent research. As the study shows, these costs were avoidable and are the direct result of the EDEA, which is detrimental to Oklahoma taxpayers, municipalities, and businesses. We encourage our Oklahoma lawmakers to enact legislation that reduces current confusion and shortcomings, instead promoting Oklahoma's economic and community growth.

Sincerely,

Monica Collison
President
Oklahoma Rural Association

Unintended Consequences of the Energy Discrimination Elimination Act in Oklahoma

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Executive Summary

The Energy Discrimination Elimination Act (EDEA) passed in the 2022 legislative session. This new policy dictated that governmental entities within Oklahoma cannot use financial institutions that “do not invest in oil and gas for environmental reasons.” This has been popularly referred to as an “anti-ESG” ban. An anti-ESG policy refers to actions taken by governments or other entities to discourage or restrict the consideration of environmental, social, and governance (ESG) factors in investment decisions and business operations.

In accordance with the EDEA policy, policymakers maintain a list of financial institutions that they deem to be “boycotting” the oil and gas industry. The initial list of banned companies included major financial firms, JP Morgan Chase, Wells Fargo, Bank of America, Blackrock, and many other large financial institutions.

The purpose of this report is to investigate the impact that this policy has had on the borrowing conditions for municipal governments in Oklahoma. The EDEA policy stands to limit competition within the banking sector, and moreover, prohibits some of the largest and most experienced financial institutions in the country from providing their services to local governments. Thus, it is possible that limited competition can result in increased borrowing costs for governments that need municipal bond financing to fulfill basic needs.

I use the natural experiment setting that the EDEA policy provides to determine the causal effect of the policy passing on municipal borrowing rates. Oklahoma passed this policy while several other states did not, so these policy-free states can serve as a reliable control group to see how borrowing costs have evolved for these non-adopting municipalities over time.

Summary of Conclusions

- Municipalities in Oklahoma now face an additional cost that is a direct result of the EDEA policy and not due to underlying interest rate fundamentals.

- The policy has raised borrowing costs for municipalities in Oklahoma by 59 basis points (0.59%) on average, a 15.7% increase. This causal estimate is relative to municipalities in neighboring “control group” states without similar policies who faced the same global factors such as changing Federal Reserve policy.
- Because of the increased borrowing costs, I estimate that approximately \$184,777,344 additional expenses have already been locked in as a result of the EDEA policy. An unnecessary \$10,869,256 per month of the policy’s tenure thus far. This is due strictly to increased borrowing costs and elevated coupon rates. These expenses would not have been incurred if the policy was not in place.
- Increased borrowing costs harm municipalities in myriad ways. For those projects that are still financed through a bond despite the higher borrowing rates, there are extra costs that must be accommodated by reduced expenditures in other needed areas or a need for higher taxes.
- Increased borrowing costs also result in delays or complete abandonment of projects intended to improve critical infrastructure or improve basic quality of life aspects. These foregone projects would benefit the community but now they cannot, and these foregone and delayed projects harm the economic opportunities for those who would have been hired to complete the projects.

I. Introduction

In November of 2022, the state of Oklahoma began to enforce the Energy Discrimination Elimination Act (EDEA). This policy dictates that governmental entities within Oklahoma cannot use financial institutions that do not invest in oil and gas for environmental reasons. This has been popularly referred to as an “anti-ESG” ban.

Increasingly, both individual investors and larger financial entities analyze ESG criteria when deciding where to invest or which businesses to support, aiming to prioritize responsible and sustainable practices. However, some policymakers have taken an "anti-ESG" stance, opposing this investment approach. An "anti-ESG" policy refers to actions taken by governments or other entities to discourage or restrict the consideration of environmental, social, and governance (ESG) factors in investment decisions and business operations. To date, 20 state governments have enacted such a policy while several others have made partial progress in enacting their own version of an anti-ESG policy.¹ Some states’ policies govern only where

¹ ESG factors involve Issues like: (E) climate change, carbon emissions, pollution, and environmental sustainability; (S) workplace policies, diversity and inclusion efforts, labor practices, community relations; (G) corporate leadership, executive compensation, ethics, anti-corruption measures.

pension funds can be invested and not the decision-making by local governments. The EDEA explicitly prohibits all public entities from doing business with certain financial institutions.

In accordance with the EDEA policy, state policymakers maintain a list of financial institutions that they deem to be “boycotting” the oil and gas industry. The initial list of banned companies included major financial firms, JP Morgan Chase, Wells Fargo, Bank of America, Blackrock, and many other large financial institutions. However, it ought to be noted that there is no evidence that these financial institutions boycotted the energy industry at all. In fact, these major financial institutions often under-write lending along the entire oil and gas value chain.

Though the intent behind the policy is clear, the effects on borrowing costs due to the policy are not immediately clear. This policy stands to limit competition which could result in higher borrowing costs. Further, because large financial institutions with the scale, scope, and experience of providing municipal bond issuance services are among the list of initially banned companies, borrowing costs may increase simply because smaller firms that cannot take advantage of scale economies.

In this report, I investigate how the EDEA policy may have impacted borrowing costs for municipal governments looking specifically to municipal bonds. Municipal bonds provide a way for cities, counties, etc. to raise money to build new roads, bridges, schools, public buildings and utilities. This analysis is pertinent because even small increases in borrowing costs can have ripple effects that reduce revenues available for other public needs, necessitate an increase in taxes to make up for new expenses, or may cause projects to be abandoned altogether. The ripple effect expands beyond government financing – if higher interest rates make borrowing through bonds too expensive, some construction projects may get delayed or canceled altogether. With less construction happening, it means fewer jobs for construction workers, reduced business for construction companies, and a slowing of economic activity.

If new bond-funded infrastructure projects get put on hold due to high interest costs, it allows aging infrastructure like roads, water/sewer systems, etc. to further deteriorate. Poor infrastructure raises operating costs for businesses, creates transportation bottlenecks, and makes a city less attractive for companies looking to relocate and bring jobs. There are further issues with increased borrowing costs than fewer construction jobs and aging infrastructure. This is the opportunity cost of borrowing at higher rates. The increased interest costs from higher bond rates stand to take up more of a city's budget, and to compensate, municipalities may be forced to cut spending on public services like parks, libraries, public transit, and social programs that benefit the local economy and quality of life for residents and businesses. Or, they may choose to increase taxes to accommodate these new expenses.

The goal of this analysis is to determine if the EDEA has changed borrowing costs for municipalities in Oklahoma in a natural experiment setting. Specifically, I investigate how the EDEA has changed the average “coupon rate” on municipal bonds issued in Oklahoma relative to surrounding states that have not passed an anti-ESG policy that blocks municipalities from doing business with certain banks. The coupon rate is the interest rate charged on debt that has been financed through the issuing of a bond. This rate determines how costly debt is to a municipality.

I briefly note here that there is an important difference between a percentage point or “basis point” change and a calculated percent change. For example, an increase from 4% to 5% is a 1 percentage point increase or a 100 “basis points” increase. Equivalently, I could state that an increase from 4% to 5% is a 20% increase in borrowing costs. Put yet one more way, a 100 basis point change means that there is an

additional \$100,000 in interest costs per year for each ten million dollars that are financed. When coupon rates are higher, it increases the overall interest costs the municipality must pay over the life of the bonds. This means more taxpayer dollars go towards debt service rather than funding core public services. I will eventually show that coupon rates are now 59 basis points higher than they would have been if the EDEA policy had not passed, an unnecessary 15.7% increase in public debt expenses.

II. Methodology

To study the impact of anti-ESG policies I compare changes over time for two groups: municipalities in Oklahoma that must abide by this policy, and municipalities in states without such policies. This is known as a “difference-in-differences” analysis, and this methodology allows for *causal* effects of policies to be analyzed.

Put simply, for the first group of municipalities impacted by anti-ESG laws I look at borrowing costs before and after the policies took effect. For the second unaffected group, I also track their borrowing costs over the same periods. This second group is often referred to as a “control group” and the analysis of the policy allows me to assess the natural experiment of a policy implementation. The key insight comes from analyzing the "difference" in how borrowing costs changed for each group. If anti-ESG policies truly raised costs, we'd expect to see a bigger increase or "difference" in borrowing costs for the first group compared to the second.

Importantly, by contrasting the trajectories of these two sets of municipalities, I can filter out other confounding factors and more reliably isolate the specific impact of anti-ESG legislation itself on borrowing costs. For example, municipal bond coupon rates are closely related to the underlying interest rate set by the Federal Reserve that is a basic rate on which the interest rate for all bank loans, credit cards, and other debt products are based on. This Federal Funds rate is a “global” factor, and it effects municipalities in states like Oklahoma that have introduced an anti-ESG policy and those that have not. In essence, I am using the control group as a baseline to identify and quantify the unique effect that anti-ESG policies had on the municipal bonds issued in Oklahoma that enacted them. I will eventually find that coupon rates have increased in Oklahoma as a direct result of the policy.

I also estimate a “placebo” test of this policy. To do this, I have also collected data on corporate bonds from companies in Oklahoma and surrounding states and I use these data to see if there is a similar effect on coupon rates issued by corporate entities as I find in municipalities. Corporations are not subject to the same anti-ESG restrictions in Oklahoma, and so by definition, this policy *shouldn't* have an effect on corporate coupon rates. If I were to find an effect due to the policy on corporate bonds, then that would be an indication that something else was driving bond borrowing rates higher in Oklahoma relative to other states. I do not find evidence that corporate rates have been affected by the anti-ESG policy, and this placebo test adds credence to the finding that the EDEA policy has raised borrowing costs for municipalities.

For my analysis, I use data on each municipal bond issued in Oklahoma and surrounding states from January 2018-March 2023. These data are gathered from a Bloomberg terminal, and they include information on: the coupon rate, the amount financed, the period of payback, the recipient (e.g. City of Stillwater or Okmulgee County Independent Schools), and the date issued. In total, I have data on 61,549 individual bonds across Oklahoma, Arkansas, Colorado, Kansas, Missouri, and Texas. Among these states, only Texas has passed and enacted a policy similar to the EDEA which I account for below.

Descriptive statistics for all variables used in the regression model are shown in Table 1. Each observation is an individual bond. Coupon Rate refers to the coupon rate on the municipal bond. Maturity Size is the total amount financed through the bond, this variable is shown here in millions of dollars (e.g. 2.71 is \$2,710,000). Years to Maturity is the time horizon under which the bond will be paid back. Federal Funds Rate is the Federal Reserve’s primary policy rate. I also include descriptive statistics for the corporate coupon rate in this table for ease of exposition, but this variable is only relevant for the placebo robustness exercise.

Table 1. Summary Statistics

	Obs	Mean	Std. dev.	Min	Max
Coupon Rate	66,176	3.78	1.34	0.00	9.75
Maturity Size	66,067	2.71	11.90	0.01	760.00
Years to Maturity	66,176	11.81	6.67	0.33	43.29
Federal Funds Rate	66,176	2.34	2.07	0.05	5.33
Corp. Coupon Rate	2,097	4.40	1.96	0.00	16.45

Data for this study come from individual bond issuances in Oklahoma and surrounding states. The policy-free “control” group states are Arkansas, Colorado, Kansas, and Missouri, and I have complete data on all bond issuances in these states for the period from January 1, 2018 through March 1, 2024. I also have observations from Texas which I discuss below.

For my main analysis I make two important choices. First, I exclude observations from Texas because Texas has passed and enacted a similar policy, so municipalities in this state could reasonably be considered poor candidates for a “policy-free” control group. In a robustness exercise I later include the approximate 20,000 observations I have from Texas that are strictly from before the Texas policy was enacted or strictly after the Oklahoma policy was enacted.² Second, I limit the sample to only the observations that have a coupon rate lower than 10 due to concerns of data credibility. This eliminates less than 1% of the sample, but these outliers could be influential. I ultimately find that excluding these observations does not change the main result. The regression model and a brief description of control variables are included in the technical appendix.

For all analyses, I make use of a standard workhorse regression model in policy evaluation known as “differences-in-differences.” This methodology makes use of a policy-free control group to determine the true effect of a policy. First, one considers how the group of observations subject to a policy changes over time (the first difference), and then compare this to the change over time for a policy-free control group (the second difference). Thus, the difference in the differences shows us the net change due to the policy while controlling for changes that would have happened absent the policy. For example, interest rates were lowered to stimulate the economy over the Covid recession, but they have since ratcheted up significantly to combat inflation. This increase in interest rates happened nearly concurrently with the EDEA policy, and it would be naïve to conclude that municipal borrowing costs have increased in Oklahoma solely due to the EDEA policy. Importantly, it is crucial to monitor by how much coupon rates for observations in the policy group and the control group have increased while accounting for changes in the Federal Funds rate and

² To preview results, I do not find that including or excluding Texas observations change the main result at all.

compare the difference in differences of the two groups. This is the estimate of the causal effect of the policy on municipal bond coupon rates. Each table below displays this estimate next to the variable description “EDEA Law”.

III. Results

Table 2, below, presents estimates for my main results. Column one shows estimated coefficients from the preferred model specification, and columns two and three show variants of this model with toggled control variables.

I find that the EDEA caused an increase in municipal borrowing costs of 59.2 basis points. This is the “difference-in-differences” estimate that shows the change in borrowing costs for Oklahoma municipalities relative to municipalities in the policy-free “control group” states.³ Indeed, across all modeling strategies I find that borrowing costs have increased for Oklahoma municipalities, and in the preferred model specification⁴ this increase is statistically significant at the 1% level.

It is useful to provide context for what an increase of 59 basis points means. The mean coupon rate across all states from 2018-present is 3.78, so a 59-basis point increase is equivalent to a 15.67% increase in borrowing costs. This estimate resonates with reporting on the changing realities faced by municipal governments in Oklahoma. For example, *The Oklahoman*⁵ recently reported that the City of Stillwater abandoned street and water infrastructure projects because borrowing costs would increase by nearly \$1.2 Million dollars when switching from Bank of America to another bank. It’s reported in the article that, “[t]he next best lender had an interest rate 0.7% higher, which would cost Stillwater nearly \$1.2 million in additional costs.” For this specific example in Stillwater, this 70 basis point difference resulted in a 9% increase in costs over the original \$13.5 Million they sought to finance through municipal bonds. On a per-household basis, this is equivalent to an additional \$63 in taxes that each Stillwater household would pay for a single project, and this increase is due solely to the EDEA and not underlying interest rate fundamentals like changes in the Federal Funds rate.

Bank lending in general is highly dependent on the underlying policy rate set by the Federal Reserve, the Federal Funds rate. I find that the same-month Federal Funds rate is a significant determinant of municipal borrowing rates. This is expected, and it is useful in showing that controlling for this “global” factor is important. Even after controlling for changing Federal Funds rates over the 2018-2024 period, I find that municipal coupon rates have increased in Oklahoma relative to surrounding states that did not adopt the same policy.

³ Note, that I do not include any observations from Texas at this point. The control group of states are Arkansas, Colorado, Kansas, Missouri

⁴ This model includes state-specific trends to account for unobserved heterogeneity, more description is available in the technical appendix.

⁵ [“Oklahoma may be hurting itself with a ban on some big banks and financial firms”](#), *The Oklahoman*, Ben Felder, May 18, 2023.

Table 2. Main Results

EDEA Law	0.592*** (0.184)	0.509*** (0.127)	0.444** (0.207)
Federal Funds Rate	0.404*** (0.103)	0.531*** (0.077)	0.411*** (0.102)
Federal Funds Rate _{t-1}	-0.016 (0.188)	-0.210 (0.141)	-0.030 (0.180)
Federal Funds Rate _{t-2}	-0.102 (0.223)	-0.050 (0.181)	-0.069 (0.219)
Federal Funds Rate _{t-3}	0.192 (0.118)	0.178* (0.101)	0.168 (0.117)
Years to Maturity	-0.002 (0.003)	0.011*** (0.003)	-0.002 (0.003)
Issuer FE	Y	N	Y
State-Specific Trend	Y	N	N
State-Period FE	N	N	Y
State FE	Y	Y	Y
Year FE	Y	Y	N
Month FE	Y	Y	N
Maturity Size FE	Y	Y	Y
R-Squared	0.718	0.508	0.721
Obs.	43754	44014	43754

Notes : ***, **, * denote statistical significance at the 1%, 5%, and 10% levels, respectively

Table 3, below, offers an additional view of the EDEA effect on borrowing costs for Oklahoma municipalities and the robustness of this result to changes in the underlying data. Column one recreates the main result from Table 2, and columns two and three make two substantial changes that could affect the main result if the model is poorly specified.

In column two, I include observations from municipal bonds in Texas. Texas has a similar policy in place as Oklahoma, and their law went into effect earlier than the EDEA policy.⁶ For this regression, I only include bonds issued before Texas implemented their law or after Oklahoma implanted their law (2018 and 2023-present, respectively). The number of observations now climbs to 63,353. Even when I include Texas observations, I find that the Oklahoma EDEA policy is associated with an increase in borrowing costs of 59 basis points. In fact, this estimate is identical to the third decimal as the main result from Table 2. The standard error on the estimate is only marginally changed. I can conclude that the main result is robust to including nearly 20,000 more observations from another state that also has an anti-ESG policy.

⁶Prior research has also found that the anti-ESG law increased municipal borrowing rates in Texas; Garrett, D and Ivanov, I. (2024), Gas, Guns, and Governments: Financial Costs of Anti-ESG Policies.

Table 3. Control Group Robustness

EDEA Law	0.592*** (0.184)	0.592*** (0.188)	0.583*** (0.189)
Federal Funds Rate	0.404*** (0.103)	0.368*** (0.101)	0.362*** (0.102)
Federal Funds Rate _{t-1}	-0.016 (0.188)	0.039 (0.183)	0.044 (0.184)
Federal Funds Rate _{t-2}	-0.102 (0.223)	-0.113 (0.211)	-0.103 (0.212)
Federal Funds Rate _{t-3}	0.192 (0.118)	0.201* (0.110)	0.194* (0.111)
Years to Maturity	-0.002 (0.003)	-0.017*** (0.003)	-0.018*** (0.003)
Issuer FE	Y	Y	Y
State-Specific Trend	Y	Y	Y
State FE	Y	Y	Y
Year FE	Y	Y	Y
Month FE	Y	Y	Y
Maturity Size FE	Y	Y	Y
R-Squared	0.718	0.735	0.689
Obs.	43,754	63,353	63,383

Notes : ***, **, * denote statistical significance at the 1%, 5%, and 10% levels, respectively

Column three also includes observations from Texas, but now I use the full suite of possible municipal bonds data. All prior results have excluded bonds that have a coupon rate above 10. This encompasses 66,176 of the candidate 66,549 individual observations. However, there are 373 observations that have coupon rates that are very large and are either true outliers or are mistakes in the underlying Bloomberg data.⁷ When I include the observations, I again find that borrowing rates in Oklahoma have increased relative to surrounding states. The estimated coefficient is still statistically similar to before – only differs by less than one basis point – and thus this result is not unduly influenced by including or excluding outliers in the data.

IV. Placebo Robustness Test – Corporate Bonds

The above analysis examined the EDEA policy in Oklahoma and its effect on municipal borrowing rates. I made use of the “natural experiment” of the policy passing in one state to determine how outcomes have changed in Oklahoma relative to a control group of several surrounding states that did not pass a similar policy. All states are subject to the same global factors like the onset of the Covid-19 pandemic and changing Federal policy rates, but only Oklahoma excluded certain banks from participating in municipal bond offerings. I found that coupon rates increased by a statistically and economically significant amount

⁷ For instance, what should be a coupon rate of 7.5 wrongly entered into the terminal as “75”.

Table 4. Corporate Bonds Placebo Test

EDEA Law	-0.815 (1.052)	-0.552 (0.599)	-0.606 (0.489)
Federal Funds Rate	0.519* (0.250)	0.546* (0.282)	0.968*** (0.294)
Federal Funds Rate _{t-1}	-0.178 (0.559)	-0.225 (0.579)	-0.253 (0.566)
Federal Funds Rate _{t-2}	-0.023 (0.617)	-0.013 (0.656)	0.042 (0.527)
Federal Funds Rate _{t-3}	0.118 (0.200)	0.115 (0.246)	-0.239 (0.245)
Bond Quality Rating FE	Y	Y	Y
State-Specific Trend	Y	N	N
State FE	Y	N	Y
Year FE	Y	Y	N
Month FE	Y	Y	N
Maturity Type FE	Y	Y	N
R-Squared	0.542	0.531	0.453
Obs.	2055	2055	2057

*Notes : ***, **, * denote statistical significance at the 1%, 5%, and 10% levels, respectively*

as a direct result of the policy, and this result is robust to the toggling of control variables (Table 2) and changes in the policy-free control group (Table 3). Specifically, I found that municipal borrowing rates increased by 59 basis points due to the anti-ESG law, and that this increase is statistically significant at the 1% level.

In this section, I put this result through further scrutiny. The EDEA policy is only applicable to public entities, and thus, bond issuances from private corporations are not under the same regulation and should not see a similar effect. In other words, I am able to test whether or not the “placebo” corporate bond data is immune from the EDEA policy which it should be by law. I use the exact same difference-in-differences modeling methodology as before in which corporate bonds issued from Oklahoma companies are part of the “treated” group, and surrounding states without the EDEA policy serve as a “control” group. If the placebo test is “failed”, then that means some unobserved factor is causing borrowing rates to go up for both municipal and corporate entities and that the EDEA policy is not behind the result that municipal borrowing rates have increased. If the placebo test is “passed”, then this means the placebo test does not detect an increase due to the policy (just like it shouldn’t by statute).

Table 4, above, displays results for the placebo test. I do not find evidence that the EDEA law impacted corporate coupon rates at all. Again, column one shows the preferred modeling specification, and the latter two columns show variants of this model. In all cases, I can confirm that the EDEA policy did not impact corporate borrowing rates. This indicates a “passed” placebo test and that the main result that municipal borrowing rates have increased due to the policy is not due to some unobserved additional factor. The

estimated coefficient is the opposite sign as before, and the standard errors are nearly four-times wider than those observed in Table 2. I again find that the same-month Federal Funds rate is an important determinant of coupon rates, and that lags of this variable are not statistically significant. This is an indication that borrowing costs are reliant on underlying interest rate fundamentals.

V. Conclusions

I find that the Energy Discrimination Elimination Act (EDEA) passed in Oklahoma has resulted in a significant increase in borrowing costs for municipal governments in the state. Specifically, I estimate that the EDEA policy has raised municipal bond coupon rates by 59 basis points, or about a 15.7% increase in borrowing costs compared to the average rate. This increase in borrowing costs imposes an unnecessary financial burden on Oklahoma municipalities, potentially forcing them to cut spending on important public services or infrastructure projects, or raise taxes to cover the higher debt servicing costs. The analysis also includes a placebo test using corporate bond data, which confirms that the EDEA policy only impacted municipal borrowing and not corporate borrowing, providing confidence that the results are directly attributable to the anti-ESG law and not other confounding factors.

The EDEA policy has been in force for approximately 17 months. Over this time, approximately \$4.6 Billion has been financed through bonds at a coupon rate that is now higher than it would have been absent the policy. I conservatively estimate that this has resulted in an additional expense of \$184,777,344. This additional expense is due solely to the increase in municipal coupon rates in Oklahoma relative to municipalities in non-EDEA adopting states. Put differently, this is an unnecessary \$10,869,256 per month of the policy's tenure thus far. This number will continue to grow for as long as the EDEA policy restricts municipalities from participating in a free market and selecting banks that meet their economic needs.

Overall, my findings suggest that the EDEA policy has had significant unintended consequences for Oklahoma's local governments, ultimately harming taxpayers and communities across the state through potentially higher taxes, reduced public services, and delayed infrastructure investments. Policymakers should carefully consider these downstream impacts when evaluating the merits of anti-ESG legislation, because at present, it has caused a statistically significant and economically meaningful increase in borrowing costs.

VI. Technical Appendix

In this report I make use of a standard workhorse regression model in policy evaluation known as “differences-in-differences.” This methodology makes use of a policy-free control group to determine the true net effect of a policy. First, one considers how the entity that has seen a policy change changes over time (the first difference), and then compare this to the change over time for a policy-free control group (the second difference). Thus, the difference in the differences shows us the net change due to the policy while controlling for changes that would have happened absent the policy.

This regression model is shown below:

$$\begin{aligned} \text{Coupon}_{it} = & \beta_0 + \beta_1 \text{Oklahoma}_i + \beta_2 \text{EDEA}_t + \beta_3 \text{Oklahoma}_i * \text{EDEA}_t \\ & + \sum_{i=0}^n \pi_{0+i} \text{FedFunds}_{it} + \beta_4 \text{Quintile}_i + \beta_5 \text{Tenor}_{it} + \mu_i + t * \sigma_i + \phi_t + \Gamma_{it} + \varepsilon_{it} \end{aligned}$$

The dependent variable is the coupon rate on bond i in period t . “*Oklahoma*” and “*EDEA Law*” are dichotomous indicator variables marking whether a bond is issued in Oklahoma and if a bond is issued after November 2022, respectively. Their interaction, “*Oklahoma * EDEA Law*” is the difference-in-differences parameter.

The second line of the regression equation shows control variables. First, is the contemporaneous Federal Funds rate and lags of this policy variable. I also include fixed effects for which quintile the size of the maturity is in, and a variable capturing the length the debt will be paid. These variables capture the fact that coupon rates may differ based on the ultimate size of the bond or the length of payback. The latter half of this equation shows that I control for recipient fixed effects, period fixed effects, and a state-specific linear trend. These variables account for unobserved heterogeneity that could reasonably affect a bond’s coupon rate. For example, the recipient fixed effect captures unobserved factors like an institution’s history of passing a bond. For example, perhaps a school district is generally viewed favorably by the community and/or lenders due to past performance on bond issuances. This fixed effect will capture changes in coupon rates that may be impacted by the school district’s credibility in paying the bond. The state-specific linear trend captures potential pre-trends in borrowing rates for municipalities that are due to outside factors and not the policy itself. For example, perhaps a state government has run a budget surplus and has elected to use these funds to improve infrastructure needs across the state that may have otherwise been completed through a municipal bond. This term will control for this potentially unobserved behavior. Finally, Gamma captures the other various fixed effects that I toggle the inclusion of for robustness. All standard errors are robust and are clustered by recipient. For Table 2, there are 2,440 clusters, and in Table 3 there are 3,349 individual clusters.

In the placebo test model, I use all of the same fixed effects and trend variables as before. Instead of a recipient fixed effect or cluster, though, I include a fixed effect based on the bond rating (e.g. AAA or BBB), and I cluster by bond ratings.