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INTRODUCTION

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"IN A BAD STATE: RESPONDING TO STATE AND LOCAL BUDGET CRISES"

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PAPER SESSION 3

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**WESSEL:** [00:00:00] So one of the things we've tried to do in this conference is alternate between traditional academic presentations, discussions and some a different format. And so we have two this afternoon. And the first one, which I'm very pleased to have David Schleicher here from Yale Law School, who going to be interviewed by Justin Marlowe. They did a like a dry run on a podcast, I understand. So this is the - oh, this is a dry run for the podcast. Oh, good. And Justin, if you could hold the book. This is David's new book, and we have copies in our bookstore here. And I saw a little sign about 20% off. And even in municipal finance, 20% is a lot. So help yourself. Over to you, Justin.

**MARLOWE:** [00:00:44] Terrific. Thank you, David. Good to see everyone. And thanks for for coming out. And congratulations to everyone for 12 years of this conference. Really terrific and great to be back in person and have great discussions and including the one that we were about to have. So as mentioned, are fortunate to have with us Professor David Schleicher from Yale Law School. And we're talking to second about the book, which is a I guess we could say a very linear, very structured, very methodical way of dealing with the chaos and nonlinear and unpredictability of the world of state and local government. Fiscal stress comes as Ken from Yale Law School. He's taught at Harvard. He sort of Georgetown. He started George Mason published widely on all things having to do with local government, including in particular local election law, things like land use, property law, and, of course, state and local fiscal policy. You've seen his work everywhere from the Yale Law Journal to the Atlantic to Slate. Certainly makes everything he does very accessible to a general audience. And he has his own podcast was also mentioned called Digging a Hole, a Legal Theory podcast, which makes you a fly on the wall for the kinds of conversations that go on within law school halls, which I think is exciting. We can have that discussion too. And as mentioned, we will, you know, he'll be appearing on our podcast, which is the public money part. But of course this farmer is here. So if you like what you hear here, tune in and get a little bit more when we have him on our podcast very, very soon. So the book again is called "In a Bad State: Responding to State and Local Budget Crises." It's with Oxford University Press. And just to start off, Schleicher, give us a 30-second elevator pitch for why everyone here at the Muni Finance Conference should read the book, or at least maybe buy the book, if nothing else.

**SCHLEICHER:** [00:02:40] Thank you. But I won't promise not to be holding the door open at the end of it now. So state and local budget crises are an inevitable part of American political life. We have 50 states and we have thousands of local governments and further state local budget crises. That is either defaults or near defaults or what have you, or always an issue for the federal government as well as for state and local governments. Federal people who live in states and cities are also Americans. And so they responded. They're represented in Congress and they have externalities. And so it's always been an issue for the federal government. So the book is about how the federal government has and should respond to state and local budget crises. To the extent that the literature and popular discussion of this issue has talked about, which is, quite extensively, it's mostly been about the issue of bailouts. Should the federal government bailout state and local governments, or should it not. But what this has ignored is that in most many, most of such crises, that hasn't really been the operative policy question. The policy question has been how to allocate the costs between austerity and making creditors take haircuts. And further the literature. The literature and popular discussion has mostly ignored the role of courts as policymakers in these areas. And so this book attempts to write a comprehensive set of the options available to federal policymakers in state and local budget crises there, and the likely effects of what the responses will be.

**MARLOWE:** [00:04:04] Terrific. So the old saying is that you can't short municipal bonds, but that's what you've done here with this book and thinking of nothing else, thinking about what might happen or generating more interest in what might happen, and having having a framework, having some thinking in advance about what that response might look like. So speaking of, we want to talk about some of the historical background in the book, and we want to have plenty of time to mention here, too, at the end for some questions from all of you. So be thinking about that as we go through this. Eventually, the framework which you call the trilemma. I wonder if you could unpack that for us a little bit. You mentioned sort of the dilemma that these are that bailouts and fiscal stress is often dealt with at the federal level, but it's obviously more complicated than you lay it out with this framework that you call the trilemma. I want to explain that for us.

**SCHLEICHER:** [00:04:52] Yeah, of course. So the trilemma, I mean, I'm stealing a little bit from Mundell Fleming. For those of you who are interested in that kind of thing. But the the idea here is that when you realize that there are it's not merely a bailout, a bail out bailout, non bailout dilemma, there are three possible harms. And the story of the book is that no matter what choice you make, it's tragic. And so the federal government might want to achieve three ends avoiding moral hazard, avoiding austerity, avoiding avoiding recessionary kind of Keynesian negative things during recessions, and then avoiding harm to investment through harm to creditors. But it can't do all of this actually can only do two of those three things. And so let me unpack that a little. That for a second. So if it does a bailout, we have obvious conversations about moral hazard. And that's something I feel like it's pretty well understood. I will talk a little bit about how I think moral hazard works if you're interested, but I'm a little unconventional. The second would be it could force state, local taxpayers to bear the substantial amount of the harm of this. And we'll talk about I can talk about tools through which they would do so even above and beyond what you might, I think, pushing back on sovereign immunity and other things. And this will avoid harms investment and avoid harm, create avoid creating moral hazard, but will be really bad for the economy and for people who need services during recessions because these crises always happen during recessions. And the third and final and again, this is kind of been the newer element relative to some of the literature is that, well, why not Forced defaults on defaults would reduce the amount, would, you know, wouldn't create the same type of moral hazard. Moral hazard concerns at least in the in that way, and may reduce the amount of immediate economic harm but would create harm to future investors. So why would the federal government care about this? Well, in order to unpack that for a minute, you have to talk a little bit about why if government is encourages state and local investment and the storytelling kind of building on Barry Wine Gas and John Fair, John, is that the program has always relied on states and cities to do almost all investment in anything future oriented from the first Congress. If their government has been proven unable to directly provide and largely to fund infrastructure and other future oriented investments. And why is that? Well, their story, which I'm adopting here, is basically a district in Congress. Such investments devolve into pork spending and also there some informational harm difficulties of doing so, but furthermore still wants to support investment. And so it does so in ways that are direct, like the interest exemption, unusual bonds, but it also do so these and that are indirect. And one of those ways is trying to avoid any individual jurisdiction from defaulting because that will have contagion effects for other effects on other and other investments. And so these are three goals that are going to have them, three potential downsides. And so the trilemma is that they have to choose between one of the fees with one of these problems. They have to choose between one of these three bad outcomes moral hazard, austerity or harms to future investment.

**MARLOWE:** [00:07:45] Got it. We'll ome back to the trilemma in just a second. In some ways, the the book is it's also two books in one in some sense. If you are a fan of the history of state and local budgeting and finance and in particular of state and local fiscal stress and defaults, this is most certainly the book for you. There's extensive research going back. I mean, lots of people who've we're all familiar with make cameos in the book. Alexander Hamilton, we were talking a little bit earlier today about Ravitch, Kevyn Orr and then maybe lesser known characters, just as Samuel Freeman Miller, for instance, and Iowa all kind of contributing to this this tapestry. We could spend the rest of the afternoon talking just about the historical part of the book that I really encourage anyone who is interested in that, too, to look into it. You've mentioned a second ago some of the some of the historical background that informed the trial. And I wonder if you could maybe give another just quick example or two what some specific ways that this historical research contributed to your thinking about how to think about this today.

**SCHLEICHER:** [00:08:47] So I'm not going use the example of I do want to quickly mention Dick Ravitch, who passed away recently, and he was a big we we taught a class together for a number of years and it inspired a lot of the book. And so I'd say my favorite example of the trade offs come in this kind of period set of defaults that happened in between the 1870s and the Eden sixties, 1990. So there were the following a huge set of local investment, local government loans and investments in railroads that happened had repeatedly of in the 1860s the teenage there were series of steep local defaults, huge, huge numbers of defaults on across across the country. And it led to a huge number of Supreme Court cases about to the Supreme Court heard more cases about municipal default between 18, 16, 18, 19 than heard on any other subject go about 300 cases, a huge number of you remember, and the Supreme Court. And there's a little bit of debate about this. The Supreme Court was extreme in these cases, was extremely pro bondholder. It made up all sorts of law. So the real challenge in this was twofold. One was that the bonds were the law of the bonds was they were written under their own states law, and then state supreme courts would declare them unenforceable, which would mean that to under the law in which they issued, they were unenforceable. And the Supreme Court just said, we don't care what state court Supreme courts say about state law, we're just going to make it up for ourselves. And they that I'm not quite quoting, but I'm coming close to quote. And the other one was making them making people actually raise taxes in order to do this. And so the Supreme Court and then federal courts would go around empowering federal marshals to to issue orders against local mayors, to make them raise taxes, often in violation of their charters and other things to this extremely. Isn't that the most amazing of my favorite of these is that at one point Alabama got quite tricky and they did something that few other states did, which was called corporate suicides, which was they would mope. The City of Mobile was heavily indebted, so they created a new city called the Port of Mobile and then transferred the ability to tax property in Mobile, but 95% of it to the port of Mobile. The Port of Mobile bought all of Mobile's assets for a dollar, and then creditors were left suing Mobil and the Court. Yeah, the Supreme Court eventually just said, No, you can't do that. We don't know why, but it better be unconstitutional. But it's this is exactly why, by the way, that same legal issue is. Speaking of Dick Ravitch, it's like deeply, if you think about it a little bit, is very much an issue with the constitutionality of state sales tax bonds. And so from things like the Big Mac bond through Coffina and what have you, and we had been talking about that, if you're interested. And there's some real interesting legal questions there. But the Supreme Court is extremely pro creditor position at the same time, the kind of the end of this period, almost all of the southern states default on their post-Reconstruction debt. So one of the things about the end of reconstruction, the kind of kind of wait redeemer governments wanted to do was they were called coupon killers and they were trying to they were trying to default on a variety of debt. They were making arguments for those of you who are interested in the international finance world that were very similar to kind of what we call odious debt arguments there. But they wanted to default on all the reconstruction your debt, because they said this debt was taken out on behalf of people who were not the real people of Alabama. And by that they meant just white people in Alabama. And I keep saying Alabama. I really usually make Arkansas the example in all of these instances. Arkansas has defaulted three times. I call it the American Argentina. And but but sorry, Argentina. Now it's that but it's on. But the Supreme Court did these two and the Supreme Court, in response to all of these defaults, made up our modern sovereign immunity law. They had been extremely different before 1876 and had been much like the rules they were applying to cities and all of these 300 cases, and they made it up in order to allow for these defaults. And so one, what is the effect of this? Well, one of the effects of on when we saw the cities defaulting in the court enforcing against them, there's the story gets a little more complicated but they won't go too far is that this created extraordinary economic harm. Cities were forced to raise taxes and cut spending. That crime wave Iowa. We had huge economic costs during these recessions from the government cuts in order to pay back these railroad bonds. On the other hand, we had a real preservation of the mutual bond market that allowed for the kind of glory period of investment in in infrastructure in the 1880s, 1890s. And so and John Telford, the historian, has this wonderful thing where he says of the city of Chicago, declared that the buildings needed to be raised to three feet and they were declared that the river needed to be reversed, Chicago River needed to be reversed. And it was the the that the acts of the city of Chicago were like that of the Old Testament God. And this was all funded by the means at the same time because they allowed for southern state default during this period and southern states got a kind of an economic fillip. They didn't have to pay back the debt. And on the other hand, they were barred from bond markets for 20, 30 years, which had real effects on their ability to borrow, which they bought from New York and Chicago. Bond market real effect for their ability to borrow real differentials in their borrowing costs. And if you wonder why all the infrastructure in southern in a lot of cities new. Well because there's a lot of it wasn't there when it was old.

**MARLOWE:** [00:14:09] Indeed, and as a resident of Chicago, I can attest that lots of things about Chicago are Old Testament. So the so to get to the some of the what I call modern application right or more recent application of this, which I'm sure is of interest to to many in our audience here. So we have the we have the framework and then we have a series of tools, so to speak. You've mentioned default, and we'll talk about some of those others in a second. And thinking about applying those tools relative to the framework you really emphasized in the book four Key principles, right? Those are prudence, balance spreading and resilience. Prudence, balance spreading and resilience. What about those four principles makes them paramount for you?

**SCHLEICHER:** [00:14:55] So to start off with, I want to note that these are all like second level goals for policy. The first level, should we do a bailout or not? Should we should we enforce austerity or or allow for defaults? And I don't give an answer to whether what the optimal answer in all situations is. I in order to answer that question, you need to have some we have to agree about how to rate the future relative to the past. We'd have to agree ideologically across a whole number of dimensions, and we'd have to. Each crisis could be different for another. And I don't have a single answer to how we should think about that problem. Instead, I offer a variety of second level. Insurance. If you're going to do bailout, default or austerity, what would be the best way to do any one of those things? And I kind of break the budget that values have into two categories and one way defined by the what I call the war games principle and the movie war games. If you remember saying it, it is a strange game. The only way to win is not to play well. The only way to win a state and local budget crisis. From the perspective the federal government is not to have one. And so the federal government should try to build into whatever policy when it's responding to a crisis, to try to make other crises less likely. Call that prudence. The second one was that how can we reduce the cost of income? It's going to be inevitable that at some point over long periods of time and many, many, many jurisdictions that we're going to have some state, local fiscal crises, how should we how can we minimize the cost? And I break that out in a couple of ways in terms of spreading balance and resilience. And I can talk about a little bit about what those values are. But the basic idea is that it's resilience would be wise to kind of allow the national economy to recover from state and local crises a little more quickly. Balance would be spreading it across as many jurisdictions as possible because the marginal you know, the there are increasing returns set to harm from from any number, any kind of particular policy response. And yes, that those that those are the ideas.

**MARLOWE:** [00:16:49] Makes sense. So let's talk then about specific responses to particular crises. So we'll take you know, we could talk all day about the different types of of potential responses that you talk about in the book. But there's a few that I think, again, will be of particular interest to this audience. So let's start with default. In fact, the chapter title is Building Better Defaults. You talk a little bit about, you know, defaults and and the way that they've been practiced so far and with some specific reference to Chapter nine, which you have some views on Chapter nine that are well, you have some views on Chapter nine. Let's have you share your views on.

**SCHLEICHER:** [00:17:31] Yeah, I do. I mean, so the the question is like, how can we build into any one policy response to some of these values and to one, I focus at a couple of things. I focus on my talk about how to make defaults or particularly how to make Chapter nine better. One is allowing multiple jurisdictions in at the same time. And so what does this mean? So that one of the notable things about Detroit's bankruptcy is at the same time Detroit went bankrupt, Detroit school district was bailed out. And this is lead to some really weird Detroit school district is there's the same geographic boundaries as the city of Detroit. And this with some weird outcomes like teacher pensions where 100 got 100 cents on the dollar, but police officers didn't. This is kind of weird. These were both promises the people of Detroit made on behalf of the exact same taxpayers, and we treated them somewhat differently. And the argument is that in many cases, when you see local fiscal stress, you're going to see it in lots of overlapping jurisdictions at once. So to take an example that I'm not doing a particular credit analysis, Uber, like one of the types of jurisdictions that people are like most concerned about this is the city of Chicago. In the city of Chicago has one that is the most indebted city per capita in the country. It's got in one of the most indebted school districts. It's one of the most indebted counties, one of the most indebted transit districts.

**MARLOWE:** [00:18:46] We got it. We got it.

**SCHLEICHER:** [00:18:48] States, community college districts, you know, whatever. And one thing that you might worry about is the interaction between these two things. If we ever get to a crisis situation so that that the city might try to pawn off debts on the school district or vice versa, the jurisdictions may avoid making cuts in order because they think that if another jurisdiction is going to default, they're going to get some of the tax base in order to do so. And so coming up with a way to make chapter nine on work for all of these would be to allow multiple filings in one case. And this is an idea a lot like substantive consolidation of corporate bankruptcy. And for those of you who are interested in that kind of thing, another thing that I think is a little more controversial and maybe where you're picking at, is that I agree with David Skeel that we should probably create a state bankruptcy chapter that would allow for chapter nine for states. The idea here is notable. I mean, so the this is received a good bit of criticism, I think, as you might imagine. And I think you had indicated I think. Yeah, but one of the ideas is that states can default without bankruptcy. They're different from citizens because they have sovereign immunity and because of the way the Supreme Court is, detectives have an immunity. And so the question is like what benefit with a state bankruptcy chapter provide? Well, the question is if they can default anyway, well, why would they need bankruptcy? And my argument that bankruptcy provides a lot of important tools from the perspective of a higher level government towards them. And one of them is that jurisdictions that by giving some kind of neutral arbiter who's respected and gets to wear robe and stuff on the ability to declare that this jurisdiction is similar, different from other jurisdictions would provide a real benefit in reducing contagion risk for other for other people. And from the perspective of the state, deep bankruptcy might. Provide them with an ability to avoid having to make choices about which creditors to pay, which might help them out of some political problems.

**MARLOWE:** [00:20:38] Makes sense. Another tool, bailouts or another response, I guess we should say bailouts. You go into some detail about bailouts as they've happened so far. What does a better bailout look like, in your opinion?

**SCHLEICHER:** [00:20:54] Well, so, I mean, it's not like all unhappy bailouts are happy or unhappy like or something that would say happy in their own way. Now, the the basic move I make in discussing bailouts, I do a couple of different things in bailouts and I can talk about some of the things I think went well. I don't want to only be critical of something. I'm quite a fan, for instance, of Chapter nine. And so I could talk about some of the things I think of ways it works really well and ways that some other reforms people suggested are not good. I could talk about some of the things that work well in bailouts too, but one of the things I'm somewhat critical of, particularly in our last rounds of kind of COVID era, was the absence of any conditionality in the bailout process. The idea here is that if we want to use our crises to create situations, to improve, to avoid future future crises, we might have used, this is in a particular moment in order to encourage better budgeting practices and other things going forward. So if we're going to have a crisis, you know, never let a crisis go to waste. While this might have been a real opportunity and I could tell you this creates a real set of legal challenges. So conditionality is something that the Supreme Court has regulated quite substantially on the Sebelius decision, I think. But I think that you can get around that and you could imagine all sorts of types of policy responses that where the federal government was attempting to encourage greater state fiscal rectitude. These can range from simple to really controversial. And so I kind of provide a like a menu rather than I. But since you're encouraging it, I'm here, I'm going to say the more controversial ones rather than that. And the the one thing you can imagine is they could say in return for some ongoing streams of revenue like the interest exemption on these people, that you have to put covenants in your bond to promise to do certain things with respect to your budgets. And these would be enforceable by individual covenant, by individual bondholders. You can imagine things like the types of the budgeting conditions that New York State imposed on New York City after New York City's crisis or even things that are more dramatic. So I think a requirement that all states adopt volatility caps the way in their bonds, the way that Connecticut did in the lead up to the crisis, which led to Connecticut being on kind of one of our the great fiscal success stories of the of the COVID era.

**MARLOWE:** [00:23:02] Sure. And some of those are maybe less controversial or at the face of it, less controversial and a little bit more technical. Get channeling Dick Ravitch. You talk about accrual budgeting, for instance. That's as.

**SCHLEICHER:** [00:23:13] Another absolute. That's that was the New York example I've talked about, which is they they know this New York state obviously has greater control over New York City than does the federal government over any width through the use of conditionality and then through the use of conditionality to require covenants. You can create an enforcement mechanism that might might succeed.

**MARLOWE:** [00:23:30] You're talking about austerity. Yeah. And we could talk again all afternoon just about the austerity measures that you describe and talk about ways that that could be done more effectively. There's a piece on the austerity chapter, I think, that's of particular interest to this audience. And they talked about pension reform. We've talked a little bit about, you know, that the both the the the practical approach to be done with respect to pension reform. But then you also tangle with some of the constitutional issues, particularly at the states maybe start start narrowing.

**SCHLEICHER:** [00:24:05] So it's it's yeah, it's been a couple of chapters, but yeah, it's the obviously a big topic. And the first thing I'd say is that I think people largely speaking, probably not in this group, but large out there yonder on this poor benighted souls who aren't here with us today and misunderstand what's going on with underfunded pensions in an important way. And so what are what is that pension underfunding system? People usually understand it as some problem with two pensions that are too big. And that's not right. And it could be that pensions are too big or could be that they're not big enough and have any real. But rather underfunding Pension is a way of borrowing without having to comply with your state fiscal constitution, debt limits, voting requirements. The idea is that you're able to adopt something that works in every way like that. You have legal responsibilities to pay, but you don't have to put it to a referendum. You you you don't it doesn't go usually good for your balance budget requirements to underfund your debt. And so it's a cut state, constitutionally preferred method of borrowing. And so it is a the and and again, it is constitutionally protected either by a state contract clause or by specific state pension clause. And the this has some implications for how we should think about what the pension problem is or is not. The the first thing implication it has is that one of the things that it's borrowing, but unlike borrowing for a bridge, there's nothing associated with it. So that is to say normally we borrow in order to get something better to buy a house and you've got a house. And whereas pensions are you're borrowing to have received services in the past, and there's some elements that are a little different than how you think of it. Schools becomes a little complicated in that context because you can think about that as an investment. But the the broad idea is that is that this meet what this means is that when we say we have a pension underfunding problem, what we really mean is that we're using a great deal of our borrowing capacity for nonproductive investments. And so one thing you saw in the great in the kind of post great recessionary era where we see a real explosion in underfunded pensions is we should have been a period of vast infrastructural innovation. We had low interest rates, high unemployment. It should have been the time for building bridges and roads. Everything should have been great. And I know we should have had high speed rail and teleportation, hyper loops or whatever would have been awesome. But instead we used our borrowing capacity to underfunded pensions. And so that's a way to understand what the underlying problem of underfunded pensions is. Ask question about reform of pensions. So the on one level, if you see reforms that are very targeted directly at if we've underfunded pensions, we ought to directly attack the pension underfunding problem. This summer, many of you remember another dearly departed friend, Jim Spyros, idea of having a pension specific bankruptcy system, or that the pensions themselves should go bankrupt. And I think this is bad and wrong because their debts, like anyone else, their promises made on behalf of the people of a state or jurisdiction that are the same as other times, there's no reason. And I think there would be real legal difficulties in isolating them one way or another. On the other hand, there often have legal protections that go above and beyond ordinary protections for bonds. And so for those of you who are interested in something called the California rule, which is a special protection, that some, though not all, states, apply to their pension systems, the idea here is that states cannot reduce the the terms by which pensions are given from an employee's first day on the job so that if you work, start work as a teacher at 25, you can never reduce the mechanism through which pensions are earned for the life of that person's career. And I think this leads to unbalanced outcomes. So the idea is that like we might want to, if we're going to have to make cuts across things, we're we end up firing more people or reducing wages more than we do pension, and that that's probably a bad outcome. So I think the California and there there's some really complicated legal issues. It's completely plausible that in states that have adopted the California role for pensions, those are now protected by the federal contracts clause and to removing it except on a prospective basis would be impossible even if you did a city country amendment which was discussed in Illinois on. But it would be better if we had and had adopted the same type of cultural practices we see in states like Michigan or other places.

**MARLOWE:** [00:28:26] That maybe do about one or two more questions and then we'll turn it over to all of you. Wonder, if you might, stepping outside of this book specifically just for a second, in a lot of your work, you've talked about changes to local zoning or zoning reform, and that's a kind of an implicit theme in some sense throughout the book. I wonder if could talk a little bit more about the overlay there. Are there ways that in thinking about specific types of zoning reform that might alleviate some of the underlying fiscal stress that would hopefully prevent the need to do so?

**SCHLEICHER:** [00:29:00] Yeah, so much more traditionally, much, much more a landscaper than a finance guy. The I think it depends a lot on jurisdiction, right? So there's a lot of evidence that local zoning restrictions in aggregate have real macroeconomic effects. We've had conferences here where we've spent a lot of time talking about have really large effects by biasing where people live. The basic way these find these materials and by the way, the size of the macroeconomic effects, they are so large that they're hard to believe. So the idea is that that if people were able to move to the jurisdiction where they had the highest wages and this is all pre, you know, work from home and everything that we could see that basically in these models, like literally the entire population of Nevada moves to Los Angeles. And if there was enough building and the effect of that would be in some of these models to increase the size of the U.S. economy by a third, which is like that's too big to believe. But even if they're off by ten, if they're off by an order of magnitude, it's still really big. And so it's a these effects can be really, really large. In some jurisdictions, this means that that that also face fiscal problems that they could attempt to solve their fiscal problems by liberalizing their land use regimes. And so if you think about a place like New York City, New York City is imposing upon itself a limitation on the size of its economy by not allowing housing to be built. And you know this because rents are really high. I pay them. They're terrible. It's odd, but it's a it's a it's, um, you know, they're. And they might be able to address their fiscal concerns that way. On the other hand, the underlying implicit idea, though, is that if they do that, people are going to be moving from somewhere. And we are. And that might create fiscal problems elsewhere. And so the the and we see that in without a change, like, you know, a lot of people moving to Texas away from California in and firms in response to the more more liberal housing construction we see there on and that has fiscal implications for California. But California's kind of choosing to bear those costs by not allowing housing to be true.

**MARLOWE:** [00:31:04] One more question before we go to the audience. You. Toward the end of the book, contract fact, I think at the very end of the book, you mention, you know, the rule of political polarization, ideological polarization, especially at the state level as a contributing factor here. Let's talk a little bit more about that and how that maybe improves or does not improve the prospects for the kind of thinking that you offer.

**SCHLEICHER:** [00:31:27] So I'll I'll answer the kind of analytic question before I get to that. So the first one is that it's a that one of the maybe the biggest trend for those who study state and local elections is being called to call the nationalization of elections. That state and local elections have increasingly followed national cues in ways that are really, really, really dramatic. The correlation in voting between state legislators and president have increased really substantially over time to the point that they're in the high nineties. The percentages are really, really dramatic. And one of the and by the way, no one thinks that's because people have strong opinions about the state legislature and then say, well, President Biden must be the same. It's my state legislature. It's not how it works. And so the one of the implications of that is that it's not clear that much about that happens in statehouses and in local elections, again, excepting nonpartisan, which most local elections, but some of them are heavily partizan. So I don't want to get too, too caught up there on a is. It's unclear that what happened with the vote on that has any influence on elections in off on and governors and executives are a little outside of this a little bit but it's and though they're increasingly like that as well and so this has really dramatic implications for how we think about we might the political feedback that we think might generally address respond to fiscal crisis. We generally think they have services get worse, people get angry, politicians get voted out of office. There's downsides to wasting money. And it's just not clear that that's true. I mean, it might be true in extremis under certain circumstances, but the the the prospect typically of legislative elections at the local level is really, really, really broken on. And so the this creates real problems for state and local finances. So one of the sources of this and there are multiple sources, but one is there is like decline in state, local media has real effects that we see when a newspaper close is split, ticket voting goes down really dramatically. So people just don't know enough to vote for anyone other than their national parties and friends. So like, why? And this has direct effects and borrowing costs that jurisdictions when a newspaper closes, borrowing costs shoot up. Why? If you're lending money that jurisdiction, you suddenly know no one's paying attention anyway. And so who knows what these guys are going to steal the money or whatever else going to happen.

**MARLOWE:** [00:33:41] A paper that was presented at this conference.

**SCHLEICHER:** [00:33:43] So it's a it's a really dope one. And it has the the if you take that a little broader, you say that, well, what are the and this suggests that the nationalization of elections should have a increase on bar assist a systematic increase on kind of fiscal mismanagement going forward. And so we might imagine something like not not not just mean everything's been mismanaged just means that like relative that it's a bad force. The absence of state and local democracy are the limits on state. Local democracy would have a negative effect on state local budgets. One of the things we might imagine that would work that is that as it gets worse, like when we see crises, we're like unclear about the way the political system will respond in the way it has in the past into some of our mental models for thinking about how this might have worked in part may not be true now. Now, of course, a crisis may shake us out of it. And so, you know, I'll say one last thing I like. What extent does polarization influence the kind of proposals here? So one of the things when I was working on the book, it was like the crisis happened. And like many experts, you talk to a lot of political figures during a crisis. And one of the things that I realized was that the and the our discussion of state and local fiscal crises, which again was front page news. Right. So we're spending a lot of time to blue state bailouts, banks, federal but state bankruptcy, which like, you know, on the cover of The New York Times and everything but the ability to talk about it or kind of explain what the upsides and downsides of different proposals had kind of fallen into this kind of easy partisan rhetoric. And so I wrote the book in what I think of as kind of a relatively naive. Would you just like to say, Hey, here are the upsides and downsides? I'm not trying to tell you what you should do, how you should answer the question. Fundamental questions of bailout versus austerity versus first default or mechanisms for default in case of bankruptcy. But we should attempt to do that. One thing experts or whatever we are can attempt to do is lay out the costs and benefits in a neutral, neutral ish way to both give politicians and also potentially voters if they're paying any attention on the ability, the tools for assessing these policies. And so that's what the book is really an attempt to do. It's a I think of it like it's an old fashioned type idea of it's not giving strong form answers to what they're how you respond to these policy questions, as much as it's try and create a variety of tools and values that you might want to incorporate into your policy responses. And leaving it to our political figures to figure that out.

**MARLOWE:** [00:36:15] Said we have plenty of time for questions and I'm sure there are many. And yeah, microphones are coming around. Please be sure to introduce yourself when it comes time.

**AUDIENCE MEMBER:** [00:36:35] Kent Hiteshew. David, masterpiece, thank you so much. And it's just a brilliant synthesis of looking back at 250 years of history and making some kind of policy sense out of the whole thing. Other than your book, which didn't exist when I could have used it. Where where are these federal policies written down And and are they just in the DNA or are they embedded in various Supreme Court decisions and laws? Or because I don't get the sense that people gather at Treasury or the Fed or the White House and say, hey, let's get David's book out and figure out what to do. There is no sort of federal policy handbook or guidebook that I'm aware of.

**SCHLEICHER:** [00:37:24] I mean, let's hope that happens, Alex. You know, I think the right is that you're talking about a variety of different policy makers using a variety of different tools and then thinking about it in kind of siloed ways. And there isn't a single method for a way of thinking about it. And that's not unusual for this type of policy rather than other that we make policy through a whole variety of different. The federal government is a very narrow net and it includes lots of different ways of looking at problems. And there isn't a single. So, I mean, it's sometimes said I mean, the the that one of the types of things that was said when people talked about the Great Recession, the federal policy response is the federal government doesn't bail out states and cities. And this has been a long running federal policy. And of course, this isn't true at all. You know, like we're in Washington, D.C., I don't know how you want to think about what happened in 1995, but I think the best way to think about it is a bailout. And the federal government also, we think of for the city drop dead. But in fact, the federal government supported the Seasonal Financing Act, which is a form of federal aid. And then and so it's a these there aren't there isn't a handbook on this. Isn't this I mean, this is you know, I used to like a program on to a handbook. I don't know. It's a but it's the the but I will say that you get a lot of sense from officials that they're groping towards a lot of these answers and so on. You see, for instance, to take something I'm not going to talk about you and your I got to talk to Ed before I worked on this or while I worked on this. And when you talk about think about something like the municipal liquidity facility, you see that people are understand a lot of these things, whether or not they announce it in the way that I show, you know, giving loans without giving conditionalities, really dangerous for the federal government. And so why was the federal liquidity facility so unwilling to do what some policymakers wanted to do, which was like open the floodgates? Well, you know, they were very they you know, I mean, I'm not saying that quoting it in here, but like, the way to look at it from the outside is to say, well, the federal government had real concerns about doing so without conditions. And the Federal Reserve isn't in a great place to do conditionality. And so I celebrate the kind of policy stances in this in the book. But for that, exactly that reason. So I don't think there's a guidebook. I you know, I think that to accept this book succeeds, it will be in providing kind of some methods or kind of common language for talking about these things. But, you know, generally speaking, we don't provide guidebooks to federal officials. We appoint them and let them worry about it.

**AUDIENCE MEMBER:** [00:39:54] I just might have a one word answer. I'm Dan Bergstresser from Brandeis. But is there anything interesting or relevant going on outside of the United States when it comes to restructuring of something national?

**SCHLEICHER:** [00:40:08] Really good. So the the kind of the the the book to which you might think of this as a kind of a bookend with which is one of the best books on musical. Hamilton's Paradox by Jonathan Roddan is all about. It's all it's a series of international comparisons, right? So it says we have a real in the we create a single method for thinking about subnational debt crises across countries. And what this book does, in contrast with that book, is attempt to use variation across American time of American history in order to pull out certain lessons rather than undoing the international comparison. And so the story in Rodney's book, which is again about is that there's a real that federal bailout to create a real without federal kind of direct oversight of state finances create a real problem because mixed sovereignty. And so the way his model works is something like ordinarily, if we had this with a huge set of of of provincial default crises in the mid 1990s that created huge international financial problems on their kind of through their response that that if federal governments see state and provincial defaults with their normal response to do is is to bail them out and then take over their taxing and borrowing decisions. And this creates a problem which you lose some of the benefits we might see from federalism. You know, you don't get now all the the things you might, you know, talk about when you kind of a college class, when you talk about federalism. But you do get and what you see in these countries is that there's a real a narrowing of spreads between provincial bonds and national to the point that in many countries there's no difference between lending money to a province and lending money to the national government because they're the same thing from the creditor perspective on and the U.S. is held outside of that as a this is the other other way you can go. And for rotten the really bad outcome is if you do bailouts but don't take control because in that situation then you're just going to do big bailouts over and over and over again. And there are some things that this book kind of notes that it's like in the American experience, you have to think about it a little differently and that some of the sources of why we encourage state and local borrowing are really different, because in most countries, infrastructure, in many countries, infrastructure is a national responsibility as opposed to state and local responsibility. But the you're interested in the international comparisons, I recommend that book very much.

**AUDIENCE MEMBER:** [00:42:31] Mike Givsic, Bancroft Capital, kind of touched a little bit on it there. But my question was going to be, given your trilemma, how you would envision and maybe some of the recommendations, your thoughts on where we stand with Puerto Rico and how you would get involved or not, and which of those what changes for, you know, Commonwealth as opposed to, you know, one of the 50 states.

**SCHLEICHER:** [00:42:57] Really good, I mean, one of the I mean, so Puerto Rico, obviously, if you think about it, it's like we encouraged a default or we allowed for a default and create a process for a default and tried to agree that one of the things I think is really good about bankruptcy systems, of which I'm more in second on Puerto Rico, is that it allows for some balancing across it gives some some outside entity to balance between the size of defaults and the effect of austerity. And one of the things you see with respect to Puerto Rico is that we made a whole point of not calling it bankruptcy. Puerto Rico. We have something now, the title three provision, and this was because they didn't want it to create any risks for states so that maybe we call it something different. It won't have any effect on borrowing in other places. The but that's something you see with respect to capital cities all the time. Characteristics treat their capital cities quite differently. And so two examples. One is Washington, D.C. It gets a bit, but no one thinks because Washington, D.C. got a bailout, that means New York is going to get a bailout, Then it's kind of different. And you see Connecticut, I can I get earlier and Connecticut agreed to pay 40 years of Hartford's debt. It's pure bailout, as you'll find. That's the bailout. But no one thought that it would have the effect of encouraging moral hazard in New Haven or Bridgeport or wherever else. There were also heavily indebted jurisdictions because the state capital is different. So we offered to kind of hive off some of these examples. And so, you know, like Puerto Rico is a really complicated set of examples, and particularly because although we decree that because you regime, we then have this huge flood of of of federal disaster money in that followed that federal debt disasters that came afterwards and that kind of in some ways limited the efficacy of the oversight board. But I guess I would say the way I'd say about Puerto Rico is that it actually continued to follow. A lot of the models of the Puerto Rico oversight board is directly modeled on the New York and D.C. oversight boards. And there are ways to condition the and reduce some of the negative effects you might imagine, of both on both kind of the federal level, federal aid and also of bankruptcy. And so I you know, I think it's pretty similar in a lot of ways. That was my way. I didn't quite answer the question. So I'm going to go back and move on. It's hard it's a hard question to look at.

**AUDIENCE MEMBER:** [00:45:12] Mark Jaffe, Cato Institute. I want to drill down a little more on your response about the American Rescue Plan Act from 2021. I think your point about there being no conditionality is is really important. But the thing that bothered me about it was there was there was no variability. So we didn't look at which which states and cities were most fiscally distressed or which were facing the biggest revenue loss from COVID. It was just pretty much everybody got the same amount of money.

**SCHLEICHER:** [00:45:41] Well, so that is a way of trying to reduce moral hazard. So the reason that the one reason you might imagine and it had a little more directionality, then it had something that looked that way. The one that had absolutely none was the first big back basket based committee, which was just basically a population to benefit small states and then on. But the reason when we saw is that the money was given to every state and the reason you'd give money to every state in with a not targeting it fiscal kind of like real fiscal need is that if you target fiscal need, you create a lot of concerns about moral hazard rates that if you target if jurisdictions get more money because they're more indebted, that might be a signal to future politicians or to lenders, which is usually the channel through which moral hazard works. And to that they'll be rewarded for being heavily indebted. And so the huge size of the error when most people's criticism of their party in legal aid is just that's too big. Right. And that had effects on inflation and yada, yada, yada on the on. And I'm not a macro economist. I'm not going to like. But it's like that's the normal line of criticism. But the reason it was so big or a reason it was so big, which will give enough money to jurisdictions to fill their full the budget is they do have a lot more money to jurisdictions that didn't have budget holes in order to vote. And so you can think about the way we structured it as a method for avoiding or reducing the moral hazard effects of bailout, but with other costs.

**AUDIENCE MEMBER:** [00:47:15] Hey. Leonardo Mayer, WMATA. I just had a quick question. I know you probably dig deeper in the book, but you mentioned that in the 1860s through 1890s, there are a bunch of railroad defaults in local governments. And I just wanted to kind of know how that what the funding structure was like to lead to all those bailouts or lead to all the defaults.

**SCHLEICHER:** [00:47:41] Yes. So it's a really good question. So that the story starts in the 1848 states and the territory defaults on their debts after. And one of the ways they responded to this was to pass what we now call state fiscal constitutions. And they've evolved over time. But these were limits on the ability of state and local governments to borrow, state governments to borrow. And everyone then immediately said, Oh, heck, they didn't say that. Who's going to help us invest in infrastructure? You don't have vast state officials, group of state officials and state civil servants to build infrastructure. And so you start seeing these court cases that say and the most famous of this is Sharpless versus City, Philadelphia. And we see these state constitutions, which both limited borrowing and limited investment in private infrastructure companies, which the main mechanism for parades and didn't apply to cities. And so then what happened was that cities became the main venue for investing in infrastructure. And the mean the railroads, the most important technology of this period, the federal government ends up providing huge subsidies to the intercontinental railroads. So they end up giving land equal to the size of Texas to in land grants to fund, to fund, to fund. But the American railroad network, that's not that valuable unless you have lots of spur railroads that go to all the farms that allow the farms. Right. And so you see this huge, huge expansion in jurisdictions borrowing money to buy stock, mostly, although sometimes they did in other mechanisms in railroad companies to encourage them to go through towns. And the railroad promoters would go through a place like Iowa. And for those of you who are Simpsons fans, it was a lot like the monorail episode, monorail, monorail, monorail! Got a few fans here. Yeah, it's a it's a it's a when I do jokes like that with my students who are all like 23 years old, it's like never works at all. They're like, What the hell happened? But we saw this huge run of investment in build in local investment in building railroads, a huge overexpansion, which led to a huge number of bankruptcies. And that's the normal story we tell about this period. The the when we talk starting that the defaults we end up in this where the states then said again oh heck and started changing the law. And so the most famous case from this period case called Delta versus Dubuque where the state had decided in seven years earlier that localities could borrow to fund infrastructure that was not, if not an illegal subsidy to private industry. Seven years later, after a bunch of defaults, they say, in fact, they can they cannot do that, whether they cannot borrow. And these bonds are all ultra virus. The Supreme Court was faced with the question of how to look at that backward looking. Now that revision and the court rules in favor of the bondholders. And so that's like the basic story about what happened. And it happened in successive periods because building railroads is literally the most important thing in the American economy this period, and it's not the most. So one of the things that's funny about this literature I've always found is that it's like very concentrated on itself. And so you'll see people write things like the most important thing that happened, the history of American federalism in the 19th century was the defaults of 1840. You're like, I don't know, there was this whole Civil War thing that seemed pretty like a pretty big deal. I don't know. You know, it seems like a period seems important, but the building on railroads was really, really, really important. And that's the broad story about the we see the state fiscal constitutions followed by these court cases that allow for local investment, followed by a lot of a lot of growth, followed by a lot of defaults, and get really into like two or three separate patches where this private pattern repeated, followed by federal court intervention largely on behalf of the bondholders, would actually happen to the bonds. A little more complicated because after these opinions, you can't like get choose from a stone. And so they're end up being bond work out that work absence of them get 100 cents on the dollar or anything. But that's the broad story.

**MARLOWE:** [00:51:31] Maybe one more quick question, if anyone has one?

**AUDIENCE MEMBER:** [00:51:40] Would you talk a little more about the dimensions of moral hazard? And the reason I'm asking it is that the importance of moral hazard is kind of assumed. And I just wonder if given history, it should be isn't.

**SCHLEICHER:** [00:52:00] Really good. So moral hazard to really weird phenomenon. The idea here moral hazard that if the federal government gives bailouts, it will encourage future fiscal profligacy. And that's the kind of ordinary story. And it runs into some theoretical problems that you might run into. You might imagine that, like even before we get into impure acts, just which is one, is that one of the reasons we assume states get into states and cities get into budget problems in the first place is that they're extremely short term focused. They think, well, we'll take out a lot of debt now and some other sucker politician will have to pay it back. But right now, I'll get a lot of ups. And if that's true, then moral hazard can't really happen because it also something that happens in the future. So why would we see moral hazard and the broad stories that I think that moral hazard mostly happens through debt markets rather than through individual politicians. The basic idea is that there's a great story about that. So after Hamilton's assumption of state debts, which is a bailout on, there's a question of on, you know, how would foreign lenders think about state debts going forward and would the federal government stand behind state debts in the future, which the states start borrowing money like crazy? First, the that the Erie Canal and that works out great. So everyone needs their own Erie Canal and their whole bunch of investment state banks. And after after the end of the first bank second back in the United States. Nicholas Biddle is the head of the Bank of Pennsylvania, and he goes to London and tells all of London, all the investors in London this their government stands behind states. Of course, you can invest in the debts of Pennsylvania. Like a year later, Pennsylvania defaults on its debts. And this actually has an amazing denouement. The story, which is after both that default and the defaults of the southern states in the 1880s and when the U.S. is owed a lot of money by Great Britain following the end of World War One, one of Great Britain's arguments in response saying we shouldn't pay it all back is look at all the defaults made by states. And that's that story is because the investor didn't make any distinctions or the government didn't make a distinction between like, what's a Georgia who cares? And this is the channel through which I think moral hazard mostly operates. They have all the incentives to their long term, you know, yacht and all the things you might wear, which would mean which would create present day fiscal considerations. And so you don't have the same kind of theoretical problems as you might imagine. That's the channel through which I think moral hazard operates. How big an effect it is. It's like a it's like hard to say. So how much do investors or or present day politicians predict that this bailout will affect them in the future? Is a really difficult question. So this bailout come because the mayor of this town is friends with the president or not, that it might not be predictable and that the the size of the effect is hard to say, but I suspect it had happened in the bond markets.

**MARLOWE:** [00:54:55] The book is "In a Bad State: Responding to State and Local Budget Crises. Professor David Schleicher, thanks so much for taking time with us.

**WESSEL:** [00:55:07] Thank you, David and Jason. And as I said, there are copies for sale in our bookstore. I think we're on the right to the next panel. So, Mark, if you want to, Haowen's going to load the slides and is Mark in the room? Yes, Mark can take over.

**WESSEL:** [00:57:39] We're going to resume so you can either take your seat or take your conversation outside. Mark.

**FUNKHOUSER:** [00:58:04] All right. So the usual, is this thing on? All right. Tracy mentioned Dick Ravitch and a couple of other people. I want to take a second to just say Dick was an incredible friend to the Govern Governing magazine. And what I thought was a worthy intersection of politics and finance. And of course, throughout all these papers, I sit here and think about the finance issues. In this session, we're going to talk about two papers, current issues and state and local finance. The first one "Did retiree health benefit promises affect municipal financing?" And we're going to have Sara Holland present that.

**HOLLAND:** [00:59:01] Thanks, Mark. Thank you guys so much. I am super psyched to be here. I am.

**FUNKHOUSER:** [00:59:07] Closer, speak up.

**HOLLAND:** [00:59:09] Got it. Okay. I am super psyched to be here. I am learning a lot today, and I hope I can tell you guys something about how retiree health benefits affect municipal financing. This is a project with a couple of buddies of mine, Sebastian Betermier at McGill and Sean Wilkoff at UNR, who I think some of you know who has been to this conference a few times before. So the first thing that I want to try to convince you guys of is that this benefit is substantial, right? So right now, depending on some estimates, we're looking at over $1,000,000,000,000 and retiree health and other post-retirement benefits, which is really actually just mainly retiree health. That's the bulk of it, as some people in this room and some others have tried to quantify. And, you know, we've already talked about pensions just in the last session. The amount of public sector retiree health benefits is on par with these pension obligations. And we've got some other evidence suggesting that the pension problem is affecting municipal finance. But the retiree health benefits has largely been ignored. And so our goal here is to just kind of try to fill this gap by asking how does and how does retiree health insurance affect the ability of the public sector to access financial markets? And hopefully we can convince you that it matters. But I also want to tell you why it matters. And I also want to talk about why promised public sector retiree health benefits are unique relative to pensions. The first I think and most interesting thing is that with these retiree health promises, there is a lot of contracting flexibility, way more contracting flexibility than what we see in the pension literature. So the terms of the benefit vary significantly across states, much more than your standard pension benefit of 2% of your salary per year of service. We got a lot more going on because instead of promising a dollar amounts. All right, these states are promising a service. Right. And that's a really important distinction. And then unlike pension plans, there's a lot more flexibility in changing the terms of the health benefit rate. So I think that there's an understanding that the pensions are all constitutionally protected. That is not the case with the retiree health insurance benefits. Another interesting thing about these retiree health insurance benefits is they are relatively opaque. All right. And reporting only becomes more uniform, beginning with The New Gatsby standards from 27 that are introduced in 2728. And so we're actually kind of, you know, where we were in 2023. We're actually in a New Gatsby reporting regime. So we've kind of had two regimes. Our paper is going to focus on the first regime in which people are just made aware of what the size of these things are. Right. And so we're going to contribute to some of the literature there. And then I think the third interesting thing about public sector retiree health benefits is that these things have been largely unfunded until recently with benefits on a pay as you go system. Right. So if a retiree is making a claim than the public sector employer just says, okay, here's the cash, let's do it, then nothing's set aside. Okay. So given all of these, like cool, unique things about public sector retiree health benefits, our question is, how does it all affect financial markets? And what we find kind of like our headline is that higher liabilities for public sector retiree health insurance benefits are going to increase municipal bond yield spreads. Okay. With the idea that state borrowing costs are going to increase in order to compensate investors for the risk to their promised cash flows. And then we also find that higher contributions to funding. Right. So largely unfunded up until now. But as they increase the funding, it's going to lower these yield spreads. Okay. So that's like our headline. And hopefully I've convinced you that this stuff is unique, but I want to dig a little bit deeper and try to tell you what's cool about what we find, Right. So not just the headline estimate. So as I said just a second ago, unlike the pension promises in which you're promising a specific dollar amount going forward, we are promising or the public sector employers are promising a service. Right. And it's going to have an uncertain cost because we're talking about health care. Right. Something that has grown to like 20% of GDP. Right. Or close to 20% of GDP. And, you know, we see a lot of. Fluctuation in the prices of health care. And so I think that part of what we're doing in this paper is not just talking about how this is affecting municipal finance, but I think that we're also shedding some light on how financial markets value health care. Right. Which we know is kind of a big topic in terms of understanding like, oh, we spend tons of money on health care and what is the value of this, Right. So. Turning to financial markets, we're getting closer to understanding what's the value of this. And in this sense, we contribute to some of the past literature on health and asset prices. Some of it in the muni market, looking at the effect of like opioids on municipal financing or aging on municipal financing. But even outside the muni space papers, looking at the effect of kind of like county level obesity and firm value. Right. But. As I said before, one of the things that I think is kind of interesting about this promised service in the future is that states have a lot of flexibility in designing plans in order to, like, mitigate the risk that the service that they are promising is going to cost a whole lot of money. Right. So we take a deeper look and we find that there's a lot of variation and plan details and that for public sector employers who offer insurance plans with less generous premium contributions can actually mitigate the risk that we see in terms of the higher yields and the higher yield spreads in the muni market. So in this paper, we're also able to show basically how the contracting environment or flexibility is going to affect the outcome. Okay. Now I'm going to throw like another wrench in my story here. Like, oh, okay. Yeah, they can change the terms of the contract, but I've got these like stakeholder employee people who might be covered by collective bargaining agreements who are going to try to prevent you from your ability to renegotiate the terms of the contract. So we take a deeper dive into that as well. And basically what we find is the contracting environment is going to affect the outcomes and there are higher yields instead. And states with more public sector employees covered by collective bargaining agreements. Okay. And so overall, I think that by showing all of these affects on muni yields, we're also like taking a next step in the literature that has first and foremost just tried to say like, hey, how big is the health insurance liability? And that's what some of the people in this room and others listed on my slide have done. Okay. So I've basically already given the entire story away. And so now I'll just tell you what we do to get to the conclusion of that study. So we're basically going to use two types of data. We're going to look at retiree health benefit data, and then we're going to look at bond offering yield spreads. So the retiree health benefit data, as I said, was opaque until 2004. This is when Gatsby statements 43 and 45 are introduced that give states an incentive to report, and most states take the bait. There's a couple of states like Nebraska that are just like, No, no, we'll opt out. So it's optional to report. But the big incentives is that when states do report their retiree health insurance liabilities, they're able to use more favorable discount rates, more favorable discount rates and computing the liabilities. We get a bunch of our data. We get all of our data on health benefits from the Pew Charitable Trust Project. So like I said, we're in the first distinct reporting regime of 28 to 2016, and we've got some new guys be statements kicking and after that. So we're just going to focus on first round of Gatsby or we've got like total liabilities and assets and how much is unfunded and things like that. And Pew takes all of this from the state comprehensive annual financial and actuary reports. Then we've got muni data, kind of like the typical stuff that you guys might care about, like yields and issuance amounts and yield to maturity and stuff like that. And we're going to use the offering yield spreads following the literature. And then kind of like basic regression model, we're going to look at the effect on yield spreads of retiree health promises at the state level. We're going to control for all the bonds stuff that you care about, like offering type and insurance and stuff like that. We're going to also control for some state level stuff. I think that probably the one that you're going to think is most important is we're talking about promises to retirees. So we are going to be controlling for state level pension characteristics as well. And then we're going have some fixed effects on there because stuff changes over time and it matters what month stuff happens. And then it matters what state we're talking about. Right. Because Illinois and Florida and Oklahoma and California, they're all different for all of those kinds of reasons. Okay. So that's the game plan. All right. I want to tell you guys, since we're looking at the differences across states, that the promise retiree health benefit liability varies across states. So basically, I'm just giving you a snapshot here. So the darker color is going to be bigger promises. The lighter color is lower promises, lower liabilities, things like that. So you can see that Oklahoma, my home state, doesn't promise the retirees a whole lot, but something like New York does promise a whole lot. But I also want to emphasize that it's not just about the size of the promises. This variation is due to different benefit levels, but also due to different plan design and eligibility criteria and assumptions about health care cost, inflation, discount rates and other actuarial assumptions. So there are a ton of moving pieces behind this variability, and we're going to exploit that. Funding also varies across states as well as over time. And what I really just want to emphasize in this slide, without spending too much time on it, is just because you promise a lot doesn't mean you fund a lot. So we basically like we got all the boxes here. So I promise a little, I fund a little. I promise a lot. I fund a lot. I promise a lot. I fund a little. I promise a lot. I fund a lot. All right. All of those boxes are happening here. One other thing that I want to say is it's also not 1 to 1 with pension funding. All right. So we've got states that have, you know, very low funding of retiree health benefits and both very high pension funding and both very low pension funding and then also high funding of health benefits. Right. With high funding of pensions or low funding of pensions. So take away lots of variation here, lots of variation. It's not just like all part of the same story in a particular state. Okay, cool. So I only got a couple of minutes left and I'll just tell you, I'm just kind of like walking through our results without spending too much time on it. So we run that regression that I talked about, where my dependent variable is yield spreads and we got. Okay. Positive effects here. So larger promise retiree health benefits increase yield spreads to compensate investors for bearing the risk. Cool. What if we decide to fund those promises? Okay. Yes. So that's going to mitigate the risk and the odds are going down. And then. Instead of just looking at like the size of the funding. What if, like, we just look at states that fund versus don't fund? And here I'm kind of like, Oh, okay, Well, so basically if you fund, that's actually going to increase yields. Why is that? So a couple of things, right? So it could be the fact that once you decide to fund, you set up a dedicated trust which explicitly says it's protected from creditors. Right. Which is kind of cool because I think that there's probably two types of people in the room right now looking at my headline result of, oh, more promises, higher yields. I think that there's some of you who are like, Oh yeah, that makes logical sense. And then I think that there's another type of person in this room is like, Wait, why is there an effect at all? Because like, they should just hose the retirees, right, if they can. Right. So maybe that is like kind of surprising that they're not. Yeah. Okay. Okay. So I want to spend like a a minute and a half talking about the other results. So we're we're promising a service and we know that health care costs vary geographically. So it's in the health literature. It's also in the news. If you live in Minnesota, they do a great job. They're so efficient with health care if you live in Florida. Bad job, right? Everything is very expensive. And so we break our sample into states where they've got health care costs under control versus states where they don't have health care costs under control. And what do we see? We basically see that retiree health insurance liabilities are going to increase, mean municipal financing costs only. In my states, you have high health costs, right? So it's really only a problem for the states where I'm anticipating, oh, the service that I have promised to these retirees in the future is going to be way more expensive. Okay. Lots of flexibility in plan design. For example, states can promise this benefit in several ways. They can either pay a portion of the premium right to 20%, 50% affordable. They can pay a fixed dollar amount. I'm only paying $1,000 for your premium, or they can pay no contribution at all. Right. There's still a benefit to the worker there because you can stay in the risk pool with the other young, healthy workers. Right. But you can see that. These different planned choices are going to expose the public sector employer to different forms of risk. Right. So if you promise a proportion of the premium, right, you're on the hook for a lot. If you're the public sector employer, if you're not given anything, you're just letting them stay in the risk pool. That's not a huge promise. Basically what we find is that states that pay a portion of the premium face the most risk, right? Because that proportion of premium contribution is going to increase, right, as the health care costs increase. Okay. And then finally, we talked about collective bargaining agreements. And so when we split the sample into states where a lot of public sector workers are covered by collective bargaining agreements versus not, we find that our effects basically are only present in the states where there is above median union coverage. Okay. I'm going to not tell you about all the other contracting environment stuff, but it's basically all consistent. I do want to address kind of like the one question that you have, which is, oh, maybe retiree health insurance is driven by financing ability. Right. Versus the other way around. Right. So we got an I.V. regression. We're going to look for instruments that affect health costs. And so what are we going to do? We're going to exploit regulatory reform that varies across states and time. So we look at state tort reform for medical malpractice, Right? So tort reform should lower health costs, which should help the states. We're going to use reforms about nurse practitioner and practice and prescription authority. So looking at states where nurse practitioners can do more, which should lower health costs. And basically our main takeaway is, yeah, when we were on the I.V., the results hold. So we're good to go. I hope that I've convinced you that promised public sector retiree health benefits affect community finance. Do I think there are limitations of what we do? Yeah, there are several limitations. Do I think that there are some improvements? Yes, probably many. But I don't want to steal Byron's thunder, so I won't talk about this.

**FUNKHOUSER:** [01:16:12] Thank you, sir. And we're going to have Byron Lutz be the discussant. Byron.

**LUTZ:** [01:16:31] Okay. Oh, there we go. Okay. So I'm really happy to be here today discussing this very nice paper. I do need to start with the somewhat tedious but important caveat or disclaimer that everything I say solely reflects my own opinion and not that of the Federal Reserve Board. Okay, so there's really a lot to like about this paper. I learned a lot. You know, it's fundamentally asking a very important question. Do liabilities for OPEB influence muni bond yields? This is important, as Sara said, simply because these liabilities are pretty enormous. You know, credible attempts to estimate the size of these using are economically reasonable. Discount rates almost always come in with estimates north of $1 trillion. And just to put this into context, this is equal to about half of annual state and local government owned source revenue. And they're largely unfunded, meaning in principle, there's a lot of potential there to cause fiscal distress down the road. And because of this, I at least found it very surprising that this is the first paper to examine this question. And it's great that they're approaching it. There is also a lot to like in the empiric. The panel data fixed the fact the approach is quite sensible. It's exactly what you'd want to see. And the authors do a lot of work to look at heterogeneity in the effect on yields of OPEB by various characteristics like the contribution method or the way the plan is set up. All these results come up with results that are quite intuitive and what you would expect, and this really increases the confidence in the results and that they're capturing what they think they're capturing. And the last thing is the authors go to a great length to rule out pension obligations as a spurious explanation for what they're finding empirically. You know, when I picked it up, that was one of the first things I worried about. But I didn't have any concerns after getting through the paper. Okay. So I'll now turn towards, you know, doing my job is to discuss and trying to offer some constructive suggestions. The first is a couple of places where I think the paper could do a better job with the discussion and fleshing things out. And Sarah actually pointed to this with an aside about hosing retirees. But I think this point needs a lot more attention upfront in the paper. You know, OPEB benefits generally lack strong legal protections and governments have a lot of latitude to change these. And in fact, they've been paring them back very systematically for about 20 years, particularly during periods of fiscal stress. They'll often cut back. So they're reduce or eliminate subsidies, they'll close it to new entrants. And in a number of cases, they've just wholesale gotten rid of them overnight. And a number of places have done this successfully. And this raises a really important question If a government is under sufficient stress to be unable to make its debt payments or this is a concern, how likely is it that they will continue their OPEB benefits? You know, which is to say, if they can just shed these, how much should this really be a, you know, affecting muni bond yields? I just think the paper would benefit from upfront discussion of this and some establishing of basic facts, you know, thing like things like what has happened, OPEB benefits and municipal bankruptcies over the last ten years and talking about some examples like of what happened in Chicago where these benefits were cut way back. You know, all this said there are good reasons why this should matter for bond yields. You know, not all governments are going to be able to eliminate them. Collective bargaining commander, as Sarah said. And there also may be cost to dropping OPEB benefits even if you're legally allowed to do so, it may make it harder to attract high quality workers and retain them. So, you know, but I just think that all of this needs to be fleshed out a bit more. The second thing is, you know, we saw results that a lot of the results are driven by states that have high health care costs. And the first thing I thought about this is, well, if you have high health care costs, the actuarial valuation should capture this. It should just be in a higher liability. Why isn't this just captured in the liability? Why does a market participant care if the liability is large? Because the state has an efficient health care provision or because the state legislatures were generous 20 years ago. Now the paper goes on to just say sort of quickly, well, it's risk being priced in, but I think we need some discussion of this because it wasn't obvious to me at least why this would be more risky. I think the idea is that almost all the rise going forward in OPEB benefit payments is due to rising health care costs, or the expectation, as captured by the actuaries in this may imply greater risk. You know, if national health care costs end up being higher, you're starting from a higher base, then you're going to be more exposed. Also, if you found yourself with an inefficient system, it may grow even more inefficient and imply a little risk. But there needs to be some discussion of this. Okay. The other thing that I was another thing I was kind of hungering for is a reader with some intuition for the size of the effect, you know, is the size of the effect reasonable? This was a general point. But the thing that really kind of caused me a bit of concern was that the Ivy Estimates are an order of magnitude larger than the oh estimates. And it seems a little tough to believe that both are reasonable magnitude. You know, as I read the results, at least they're showing that for the funding ratio on the Ivy estimates that if you move from 0% funding to 100% funding, you're going to have a 300 basis point swing in your muni yield that, you know, there are people in the room better position than me to judge whether that's reasonable. Seems extraordinarily large to me. So again, just some discussion of that. Okay. So I'll now turn to some places where I think the empiric might be tightened up a little bit in all the specifications in the paper, liabilities in the funding ratio are explored distinctly in separate regressions. But these these measures aren't really substitute measures of OPEB obligations. They are complementary, which is to say, you know, they capture different aspects of the OPEB situation. You can see this very simply by just considering the fact that a large liability implies risk that should be priced in in the market, even if it's, quote, fully funded, simply because the accounting rules in that situation allow you to use a very risky discount rate. So, you know, the real sort of natural thing to do here is just enter them simultaneously in one regression. You know that I think that would be the place to start. If you want to use a single measure. It seems kind of equally intuitive that the place to start is just to use the unfunded liability as opposed to the total liability, you know, denominated by state personal income or something. Okay, So the next thing I want to hit is somewhat similar heterogeneity in the fact by things like the the way the plan makes contributions to the health care is explored by segmenting the sample and running two separate regressions by the category. And then when we get different coefficient estimates across those two samples, you know, it's declared that these are different. My concern here is that a lot of those the point estimates are really similar or close enough that it seems very unlikely they're statistically different or even close to it. And again, the kind of logical standard approach in this case is simply to one, run regression, you know, interact the OPEB measure, say the funding ratio with, you know, the variable of heterogeneity being explored. And then if you know, the beta three coefficient here is precise and significant, you know, you have a meaningful difference. And then the last thing I wanted to hit was the instrumental variable result. So here where we're using health care cost factors as instrument for OPEB liabilities. So the latitude nurse practitioners have to practice freely without oversight is used as an instrument simply because the more freedom they have, the lower our health care costs. The issue here is the instrument or variable approach requires that the instrument is only affecting bond yields solely through the OPEB obligation. And I think a little more could be done to establish this, You know, a first order thing in this space that jumps out to me is does nurse practitioner status affect Medicaid outlays and how much they cost? You know, if nurse practitioners ability to practice more freely lowers Medicaid spending, then, you know, that's going to be a problem for the instrument. I think that needs to be explored a little bit. But I'll just end with this was a really interesting paper tackling an absolute first order question. You know, I would think for anybody in this room and it's kind of surprising nobody's done it. And I definitely encourage everybody to take a look because I learned quite a bit. So thank you.

**FUNKHOUSER:** [01:26:12] All right. I agree with. I agree with Byron. It's an interesting paper. And having spent a lot of time looking at, again, individual specific instances of OPEB liability in specific jurisdictions, it was interesting to see this overall look and hear his response. What's your your initial response to what Byron had to say, Sara?

**HOLLAND:** [01:26:41] I mean, so thank you very much is my initial response because those are all super awesome suggestions. Some of them, yes. I think that we definitely need to consider some of those things. You know, a couple of the things that I want to respond to, just first and foremost, I'm thinking about the nurse practitioner. I mean, what I've read is that mostly that's lobbying on the part of, you know, kind of like industry groups, nurse practitioner groups. But I think that we could certainly look into any kind of correlation between Medicaid expenditures or something like that. I think that would be it's always worthwhile to provide stronger justification for the instrument in terms of the assumptions about health care costs. I guess I just want to say like also when we're splitting the sample based on high health cost states versus low health care states. So we're getting the data from the Dartmouth Health Atlas, which is specifically looking at expenditures for Medicare recipients, which we think is kind of like nice for our sample because we're talking about retirees. And it's unclear to me if when states are making their actuarial assumptions, if they're using individual like, you know, state level estimates of health care inflation or if they're using just like a national health care inflation index. And so, you know, based on my searching to see if there were an index at the state level, I couldn't find one. Like you can find it like, you know, health care inflation outpaces GDP by X percent or something every year. But it's not clear to me that they're using something more sophisticated and for their state in particular. And yes, I totally agree that we could probably we do need to spend more time talking about the fact that there is some tension here about who is going to get paid. And you're absolutely right that states are cutting back on their benefits. I think that there's only one state specifically who has just completely stopped giving these retiree health insurance or OPEB benefits, and that's Idaho, even though they're still on the hook for their, you know, retirees that worked under contract, but no more, they're going to do this. And I do think that one thing thinking about our paper is that I'm thinking about like, yes, if they cut the OPEB benefits, then what are the implications? And other markets like labor markets, I mean, like Mark was saying at lunch today, I'm talking about having a hard time hiring, right? So there's this tension between you get rid of the OPEB benefits and then that's like a nice benefit that people who, you know, usually get paid something like below market wage or whatever are going to value. And then as long as they're I mean, my other way of thinking about it is these people are probably still also getting pension benefits. And if I'm getting a pension, then I'm probably also the type of person who values retiree good retiree health care even more. Right? Because if I get a pension, I want to live forever so that I can keep collecting that pension over and over again. Right. But if I have a defined contribution plan or I've just got a stack of dollars, then like I'm going to jaywalk or like go motocross or something like that. Right? So yeah, those are my initial reactions. But seriously, thank you so much for all of your comments.

**FUNKHOUSER:** [01:30:08] You know, there are only 50 states, and when I think about the cutbacks that you were talking about, Byron, I realize now that I was thinking about local governments where i would interview city managers and HR directors and cfos and ask them about their opeb liability and they said, well, we don't have that anymore. You know, particularly after the recession in 2010, 1112, i'm interviewing people and they had done away with it. Questions from, and comments. Well, yes. Mark Jaffe, if this is your baby.

**AUDIENCE MEMBER:** [01:30:44] Thanks for the cite. So when I was going through the all the OPA documentation and at first I noticed that in a lot of cases there were either caps on the amount that was available to an individual retiree or simply a fixed amount that all retirees received. So to the extent that. Do you think that that's the case in the data that you're looking at? Because I looked at, you know, 20, 20, 2019, I think. So It might have been something that was newer. If it is something that affects your data, does that mean that looking at, you know, health care spending trends is less important because the plan is the open plan is insulated from it? And a quick question for Byron. In your non official capacity, would you agree with me that OPEB liabilities should be added to the Federal Reserve Z1 accounts to the United States? Thanks.

**FUNKHOUSER:** [01:31:41] You want to go first? Give you a time to formulate a response. Yeah.

**HOLLAND:** [01:31:44] Okay. So I will say so. As I mentioned, there's kind of like two reporting regimes, and this paper is firmly in reporting regime one. So we stop it 2016. And so the the contracting data that we have in terms of whether or not they're making a fixed contribution or they're capped or whatever, that data comes as of 2016. So entirely possible, you know, as part of balanced discussion, mentioned that they are changing the contracting environment. And so they're very well might be these additional gaps in 2020 from your data. Right. That we just don't have yet. And I mean, my short answer is yes, I think it is entirely possible that. With these kinds of new contracts being written that the health care cost situation has mitigated for sure.

**LUTZ:** [01:32:45] So yeah, these are purely my own opinions here. To be sure. I assume you're talking about the financial accounts of the U.S.. You know, I think there's kind of two offsetting major factors that would inform that decision. I'm not really sure where it balances out. You know, they did include pensions on an accrual basis, you know, not that recently anymore, but after just a huge effort was undertaken to add those, I think adding OPEB liabilities would be conceptually, methodologically quite similar. And given that there was a rationale for the pensions, you know, that would seem to carry over to OPEB. On the other hand, I do think there's a significant difference because the legal protections on pensions are just radically stronger. They make it a durable form of debt that is going to be paid and, you know, at least many future states of the world. You know, my reading of the legal stuff from the last 20 years is that it's just a lot less clear for OPEB. And I think that pushes in the other direction. And I think a judgment would need to be made on how those balance out. But I mean, that's an interesting suggestion. It would again, you know, my colleagues who did that, it was a massive lift and that would be another massive lift. But it's an interesting suggestion.

**AUDIENCE MEMBER:** [01:33:56] I guess I get the proximity award for that. So I'm wondering, in the last panel we talked about moral hazard. And then back to the issue of sort of sticking it to the member in terms of reducing OPEB and so on and the flexibility that is there. I've heard in many rooms in the financial communities in my career of saying, well, you know, if worst comes to worse and they get into fiscal stress, they can just slash and cut the OPEB. And that did happen in a number of bankruptcy cases. But I'm also wondering if you looked at the shift when the ACA was implemented, the state marketplace plans, because I believe there were a number of state plans that said, okay, we're still continuing to provide the benefit, but you got to go to the ACA and buy it and maybe we'll give you a check to make it a little bit easier. I don't know if you looked at that.

**HOLLAND:** [01:34:50] Yeah, No. So awesome question. And yes, we have looked at that and there doesn't seem to be an effect of the ACA. Like no difference. I mean, just splitting the sample on kind of like book prior to ACA implementation versus post ACA implementation. And so I think that, you know, one explanation is that our sample ends in 2016. So the bulk of our sample is pre ACA implementation. The other thing that I would also mention is yeah, I think that there was also a hypothesis, you know, pre ACA passage and implementation that a lot of private sector firms were going to ditch out of their employer sponsored health insurance and push everybody onto the exchanges. And most of the research in the health literature suggests that that didn't really happen. So that could be the other reason, like there were threats of it, but in terms of like big time changes, we haven't actually seen a lot of that.

**FUNKHOUSER:** [01:35:45] All right. We've only got 30 seconds left. I don't think that's enough time for another question or response. What I would say, though, Sara, is, you know, this may be the first paper, but you've opened a can of worms here that is worth taking a look at. Thank you. Thank you. All right. Our next paper is "School District Borrowing and Capital Spending: The Effectiveness of a State Credit Enhancement." And it's presented by Kate Yang of George Washington University.

**YANG:** [01:36:45] All right. Good. Good afternoon. This paper looks at the long existing, but I would argue under examined program quote, credit enhancement program in states. And I look at its impact on school districts borrowing cost and their capital spending. So to motivate the paper a little bit, I show you two pictures. On the left is a high school in the Bay Area. On the right is another high school in a relatively small town in Georgia. As you can see, school districts spend cap capital spending accruals to projects like school facility construction, evaluation, purchase of school busses, etc. and also ways you can visually see here there is great variation across districts in what they are buying, how much they're spending on average or in total. I should say. School districts spend $80 billion a year on capital projects. That represents, on average, 10% of their total spending. 10% is not a lot, but capital spending projects are long. PE They are a big ticket items that need to be spent upfront and then the physical assets that are acquired would be good for a number of years and districts you should, because such a large investment districts issue bonds to finance those capital projects and the interest they pay very on those bonds. There is some literature showing that many districts are in need of updating and replacing their building system.

So one reason why I'm interested in this projects to see whether kind of access to a credit market is one barrier that may be preventing districts from investing more in their capital projects. And there is also other papers showing that there is disparity, again supported by the data in districts capital spending, unsurprisingly, return districts, meaning that those with higher of property tax base spend more on a per pupil basis on capital projects. Why? Why do we even care about capital spending? Although evidence is mixed, we believe, at least in some places, there is data suggesting that additional capital investment can lead to increasing academic academic performance and also housing prices, showing that residents also care about those type of investments. Okay. So some additional background information, which is not news to this audience. Districts issue bonds and the bond yields reflect kind of investors perception about the credit worthiness of those bonds. Districts may pay for underlying credit rating. They may also see credit enhancement. This is most likely when their underlying rating is low, right? Why, say, purchasing or receiving enhancement? I should say they receive an enhanced rating. A traditional channel of that enhanced rating or source of value has rating is private bond insurance. Okay. But what I'm examining in this paper is state statecraft enhancement programs as a source of enhancement. And this type of program exists in 24 states. They provide in-kind assistance to district districts, I say in kind because they do not require an upfront investment by the states. So states will essentially commit certain revenue sources to pay back those districts that if districts had trouble paying themselves in 14 states, they state promise to intercept theft state aid and use that money, state aid to those particular districts and use that money to pay back the districts debt. In three states, state statutes contain language about appropriations that will be made. One districts are about to default, and in six states, instead of a language about appropriation which still carry certain political risk, the states guarantee or has or promise to use a guaranteed state funding to pay back to districts that and you say states there are permanent funds available for purposes such as paying back district that in the case of pending district default and they are usually considered very safe and pledge because those permanent funds are not competing against other state priorities. Okay, so this paper examines two main questions. First, whether those state credit enhancement programs are associated with lower interest rates paid on districts bonds. Second, if the answer to the first question is yes, then the lowered borrowing costs we would suspect, will translate into increased capital spending by those school districts. And if the answer there to a second question is also yes, one might also be interested in knowing whether it now improves academic outcomes. And lastly, I think very importantly, we are interested in this average effect, but we should be more interested in kind of a heterogeneous effect across districts, namely which districts benefit the most from this type of programs. And. A preview of the finding. It's the poorer districts, the ones with lower credit underlying credit ratings. Okay. So to give you some descriptive statistics, also introduce you to the data. I'm using this project, the first data or the primary bond market insurance are interested. Here I show zooming onto the ratings of the bonds. So looking at school districts, bonds issued between two nine 2019 I have I show you histograms of three subset impulse state enhancement. So bonds enhanced by states, bonds enhanced by private buying stress and the hands bonds X access or the credit rating kind of index zero being unrated six being triple A, and the shaded bars are underlying rating. So first thing you observe is that for I I me hence bonds have higher underlying rating only nine enhancements. Unsurprising if your underlying rating is really high, you see less of a need to to to seek enhancement. The hollow bars or enhanced ratings. So post 2009 probably about insurance no longer could provide kind of a triple A rating across the board. But some of the state has more programs, perhaps Texas permanent farm program being the most famous and the the heavily used given the size of the state still provides triple-A rating. So that means state has the problems are actually able to provide enhancement to a wider range of school bonds as compared to a private buying insurance. A few more things I would like to talk about with regard to those programs is that I reviewed all the statutes related to those programs and talk to program state officials running those programs he has written. And a few things are, I think, important to point out. Enhanced ratings are mostly tied to state rating. I say mostly because the exception there is permanent farm programs. Yeah, for permanent funds, those enhanced ratings are not tied directly to the states already. That means that we have variation across states, but also variation over time. One A states all rating changes. Then the program's rating was change. Second, some program card application approval. So this is not unconditional kind of, you know, guarantee, right? There is some state involvement in making those packages. And I just want to point out, I presented here a few years ago about defaults of general property governments. School district defaults are also extremely rare. Okay. So the second source fee that our school district data I'm not going to dive into the details. I look at enrollment, student composition, district, financial variables, etc.. I'm showing you the baseline statistics, right? Not all districts. There are about 12,000 districts in this country. Not all of them issue bonds. But more importantly, I want to draw your attention to this highlighted in red kind of row of numbers. I break the sample down to a by their highest the district's highest underlying rating during this analysis period. What you see here is poverty rate is negative negatively correlated with their underwriting rate. Districts with no and low underlying ratings have the highest children child poverty rate. Again, it's just this is showing you that rich districts have a higher ratings and poorer districts have lower underwriting this. I'm very conscious of all my times. I'm looking and I probably won't be able to show you all the results and all the tables have put together. So I want to give you a quick visual preview of the final. So what I want to I think the main contribution of the paper is that there's another paper showing there's a narrowing gap. There is first a gap between high and read poor and rich districts in terms of their capital spending. But that gap has shrunk after the Great Recession. What I'm trying to argues that that narrowing in the gap might be due to credit enhancement problems. So this chart right here shows you the percentage of district bonds that are enhanced by private insurance, the Sally Line versus those in sorry nationally versus those enhanced by state has no programs. The solid line, again, unused to this audience, private insurance, really the percentage really went down after a great recession. Right. If we look at per pupil capital spending for the same period, it's actually a longer period. But if you look at post 2008 period right here, I split the districts into two groups. First states without credit enhancement programs on the left and then stay west. Credit has a program on the right. And I look at average per pupil capital spending by districts in the highest poverty quintile versus those in the lowest poverty quintile. So on the left, what you see is that those in the highest poverty quintile. Solidly spends more on a per pupil basis on capital projects than poorer districts. Right. Again, that's a gap more interesting if we care about equity in kind of school finance in absolute sense, then we we do not want to see that that gap and those two lines move in parallel in states without capital. Sorry, credit enhancement program. But I'm not right. What you see is that for the lower poverty districts in states with capital credit enhancement programs, the trend is similar to the graph on the left. But for high poverty districts in state, what is creating has been program. It's pretty stable. Capital per pupil capital spending did not change dramatically. It's quite stable after the Great Recession. And that, I argue, is because of a credit enhancement program. Those districts are most likely to participate in the program and benefit from the program as a result. Okay. Now, empirically, as a academic who wants to do rigorous research or perhaps somebody publish a paper, I want to be sure that I'm after a costly fact as opposed to a simple comparison of simple descriptive analysis. Unfortunately, staying has been programs have existed for a long time, so there is not a pre policy post policy comparison to make. And there is no, of course, random assignment of credit enhancement. I mean, essentially comparing cross sectional bonds, issued bonds with credit enhancement versus bonds without credit enhancement or districts a year observations with enhancement versus those without. So I make two comparisons now, hopefully, and I'll show you. They generate very similar results. The first comparison is between districts that are always enhanced and those other never. So essentially what I'm doing there is compare poor districts who have very low underlying ratings, therefore always but always produce a bit unit enhancement program versus those rich districts with high underlying ratings, therefore never participating in the enhancement programs. Okay. So that's a first comparison I'm using to assess the impact of enhancement. The second comparison I'm using is kind of within district in comparison. Districts are able in some states that is able to receive enhancement only they are on outstanding levels are low OC. So I'm comparing ways in a district bonds that are enhanced versus those are not. I don't have the time to go into the details, but I argue those two sources of variation on those two types of comparison should give me two different effect estimates and they should be biased if any biases exist in different directions. Therefore, I should my true estimate should lie within. Okay. Again, not going into all the details. I want to jump directly into the results. The first one is looking at impact on bond yield. Here. I'm using a yields spread to a synthetic risk free bond. And the first column is kind of that never enhanced versus always enhanced comparison. The second column is a district within the district comparison, which is my preferred specification because it controls for more observed factors. Here you see the effect estimates. It's very consistent. It's about 13 basis point reduction. And in the third column, I look at kind of the heterogeneous impact across different districts and interacting has variable with baseline poverty rate. Here you can see that high poverty districts or districts with very high baseline poverty receive additional yield reductions from participating in this program. And that is perhaps due to the level of rating elevation that they are able to receive when they receive the enhanced rate. Right. So in the last column, I essentially create a bunch of indicator variables measuring the level or magnitude of rating elevation from credit enhancement provided by the state. As you can see that the more matches that the rating is in hot and enhanced, the larger the yield reduction is. Okay. Moving now, lower. That's the lower interest rate or lower borrowing? Lower borrowing costs translate into more capital spending. Very short on time. I just show you this event. Study, analysis graph. Yes, it does. So after zero is one the year one, a district first received credit enhancement. You see that their capital spending increases. To interpret this result requires some quick analysis. I just cut to the chase. It's about a 2% to 7% increase in per pupil capital spending, depending on how we estimate the useful life of a capital asset. And that benefit or that increase in capital spending, I should say, happens mostly in districts with low and medium baseline poverty. Okay. Since I'm short on time and just skip. All the way to the last table. I encourage you to take a look at this. I think it's a low cost program, and I tried to calculate the potential benefit if other states adopt this program. And I would argue that this is something state policymakers should look into because this really truly, I think, a low hanging fruit. Thank you.

**FUNKHOUSER:** [01:52:46] Thank you, Kate. And yes, it's a program that clearly states ought to adopt. All right, Christine Cuny will have the response.

**CUNY:** [01:53:14] Okay, great. Okay. So thank you for the for the opportunity to discuss this paper. Thank you, Kate, for the excellent presentation. There's going to be a lot of overlap between what she showed and what I show. So this is also a nice opportunity. I didn't know a whole lot about school enhancement, and now I do, so. So just I'm just going to start with a high level overview. I like to work in pictures, so you'll notice it's very visual. All right. So the basic research objective, as Kate accurately articulated, is that you have these state enhancement programs. They lead to lower borrowing costs. That leads to increased capital spending, which then leads to improved student outcomes. So it's quite a long causal chain with a lot of links. So what are her findings? Okay. So as she as she showed you, borrowing costs are lower when you have state enhancement. Okay. Especially for high poverty districts, which I think Kate really focused on in the presentation. And I encourage you to focus more on it in the paper. I think it's kind of a it kind of differentiates the paper a bit to to show this heterogeneity. State enhancement also leads to increased capital spending. And she didn't get a chance to show you that there's no effect on test scores. Okay. So all of these findings, I think, are very reasonable. They're what I would have expected. Right. If I had to guess before reading the paper, this is what I think you would have found. Right. So my first step in trying to put together the discussion was to say, okay, let's place this in the context of existing literature. What is it that we already know? Okay. So the state credit enhancement programs, the stated purpose of them is to lower borrowing costs and give access to credit markets, to school districts that otherwise might not get it right. Okay. So there is literature. Granted, it's older, but shows that, yes, borrowing costs are lower when you have these state enhancement programs. Okay. Now, there are caveats, right? So enhanced rates aren't quite as good as a natural triple-A. They are better than private insurance. So better than like an Ambac guarantee or something like that. It's already been shown in the literature. Does this work now that when you have a lower credit rating, you get a bigger benefit? Right. So your the adjustment is better. And also when the state program has a better credit rating, the benefit is bigger. Okay. So all of this is kind of already been done. And maybe there's a benefit to showing that it still holds in a more current sample. But what I'm going to focus on is this second link, because I think the second link is the one with the greatest potential to change our priors and contribute to to kind of the broader literature. Okay. So if state enhancement programs affect capital spending in a causal way, right. That your you have the state enhancement in for whatever the reason, which I'll talk about in a little bit. Your capital spending goes up, particularly in the high poverty districts. Okay. So this is what I'm going to focus on. And I'm just going to give two kind of high level suggestions to try to bolster this this contribution. So my first comment is that I think would be helpful to benchmark this increase in capital spending against other enhancement options. Right. So private insurance is still an option. It's much less used than it once was, but there's still a critical mass. So, you know, is this capital spending increase greater for state enhancement? Is it in some way different than just getting private insurance? And then the other benchmark that I think would be nice to see is direct state aid. Right. These districts can, of course, and do get direct state funding for capital projects. Okay. And then my second comment is about the mechanism nailing down, you know, why exactly does capital spending increase when you have these state enhancements? Okay. So the paper currently articulates that it's because you have a lower interest rate, which of course makes sense. Right? You have more money now to to spend because you're paying lower or lower rate. You have better access to the market, all of that. But there's also a possible possibility that it's just some kind of latent state preference to support low, high poverty districts. Okay. So with regard to the first benchmark, the private insurance. Okay. So what I'm thinking here is that you compare the two. Right. So a district that gets state enhancement leads to some increase in capital spending. Is that more or less than a similar district that just got private insurance? Okay. Now, part of the reason I think this is interesting is the figure that Kate already showed that she's in the paper, which shows the substitution between these two, which isn't surprising. Right. You don't you wouldn't think you need to enhancements really. But you know when when bond insurance kind of dried up after the after the credit crisis, you see that the state enhancements increase. One thing that I do think is interesting is that the aggregate aggregate amount of enhancement is lower now than it once was. Right. So if you add those up, it used to be 90% of this market. It was in some way enhanced. Now it's, I don't know, roughly 62. So that's interesting. Right. Nonetheless, the broader point was that I it's it will be helpful to benchmark these, too. And you do have, you know, 20% of the market insured by private insurers. So you have a a reasonable sample, I think, to compare. You also have some heterogeneity across states that I think can be helpful here. So I pulled the Texas the permanent state fund data. Roughly 90 something percent of district bonds in Texas are enhanced. So that state enhancement program. They do have some that are insured. You can see this bottom line, something less than 5%, but you can see there's substantial heterogeneity across states that would lead to this kind of figure that you see here. Another nice benefit of benchmarking against insurance is it'll help with identification, Right. In the sense that you have two districts that chose to be enhanced and they were granted the enhancement. Right. So you're more likely comparing apples to apples. Okay. The second benchmark that I thought would be interesting is to just look at direct state aid. So does capital spending increase more when you have state enhancement or when you just get direct funding? Okay. The reason I thought that this would be a reasonable thing to look at is because of this table two. Okay. So, Kate, show this really briefly, but I'm going to show it for a little longer. Okay. So focus on these first two columns here on the left, the number enhanced versus the ever enhanced the ever enhanced get get get greater federal transfers and they get greater state transfers. So there is some kind of selection going on here with who gets enhanced. Also, if you look at the ratings, when you go from low, medium to high, the lower rating districts, they tend to get more federal aid and they tend to get more state aid. So this is something that I think is a potential kind of correlated added variable here. So I think would be helpful just to benchmark or control for this. Okay. And then finally, the mechanism. So I just briefly want to talk about why is the state enhancement leading to greater capital spending? Okay. So the paper's preferred mechanism is you've got lower borrowing costs, which I think is probably a reasonable story, but I think more can be done to to bolster that. That story in particularly the alternative is that there's just some state preference, some latent state preference to support low income districts and that latent preference and jointly determines this the enhancement as well as borrowing costs and capital spending. Right. Okay. So two suggestions for ways to isolate the mechanism. One is that you're right that all these state enhancement programs have existed for a long time, so there's not a lot of variation. However, in 2011, Texas started allowing their charter schools to get enhancement. So this might be a nice shock to kind of identify, okay, what happens when we suddenly throw in this enhancement option? The second is, if you could do like a path analysis, you know, where you you directly try and. Link. The change in borrowing cost to capital spending is another another option. Okay, so in conclusion, I really enjoyed reading this paper. I think it's a very interesting topic and has it has a high likelihood of making an impact in academic journals. I think that you can enhance the contribution a little bit more by focusing more on the capital spending piece. Of course, that's just my view benchmarking against other enhancement alternatives and zeroing in on the mechanism. So good luck.

**FUNKHOUSER:** [02:03:04] Thank you, Christine. That was great job. One of the things that struck me about the paper, Kate, was that there seemed to be no cost to the state. To do this is where the other alternatives might have some costs, state aid or whatever. Here's something that they could do to lower the borrowing costs for property jurisdictions with no impact.

**YANG:** [02:03:30] I talk about this in the paper, I did not have time to present. One potential cost would be a moral hazard since our favorite word of the day to two additional hostile states is states are essentially committing themselves to two battle districts. One when districts have troubles, even though I talked about how that rarely occurs. District defaults rarely occur. But if that that's the case, then states are essentially kind of sacrificing their own creditworthiness. So in the paper I looked at whether that's the case kind of from a by doing a descriptive analysis, looking at state's geo interest rate and whether that's correlated with the amount of school district that they are enhancing. And I do not see a statistically significant correlation there, but the sample is pretty small and I by no means could argue that it's causal, but is showing that that's not the concern. So I'd be interested in learning from other academics and practitioners about why states are not doing this. I talked to the Baltimore Comptroller, County Comptroller and they are very interested in this program and they just they have never heard about it. Maryland actually does not have a program like this. So I wonder if it's a lack of knowledge. I don't know. It's a pretty obscure program in some sense, but yeah.

**FUNKHOUSER:** [02:04:54] Your reactions to Christine's comments?

**YANG:** [02:04:57] Those are great comments. I there is a know the literature, right. This this again those have existed for such a long time and people have looked at them in the eighties. So I'm trying to add some new kind of data to this. And also this is the first national analysis existing. A previous literature looks at this kind of on a state specific basis. And also I'm bringing some of the it's not it's our new methodology anymore, but it's the methodology of the 21st century. And and those are the other comments are all great. I'm going to incorporate them to my best capacity. Yeah. And there's definitely there's there could definitely be bias right. Comparing especially comparing the never enhanced districts to the always enhanced districts those are just different districts where comparing I'm comparing poor districts to return districts and that's that there could be a viable variable bias. So I'm arguing that since the two different identification strategies give the same or very similar effect estimates of confidence, this is likely causal, although it can can't really conclusively say that. I think there are recent new developments in this space that could be very interesting to explore. The Texas Charter example is a great one and there has been some new developments with regard to the Texas Permanent Farm program. They were getting very close to the limit, actually. There were other limits, and then there were legislative attempts to kind of get rid of that limit. And I think they are successful. So can looking at those shocks would be interesting, arguably where would be zooming on to one state. But I think that could those those events could provide opportunities for further estimating kind of a causal impact.

**FUNKHOUSER:** [02:06:55] Questions or comments for Kate or Christine? There's a couple here.

**AUDIENCE MEMBER:** [02:07:00] Yeah. I just have a question about what the capital spending is. Do you have any idea about that? And and I ask because I'm from Texas. And so when I think capital spending, I don't see, like nice new classrooms. I see Friday night lights. So, yeah. Do you have any idea about what they're building?

**YANG:** [02:07:22] My data does not do not show me that directly. There has been in education, education policy research space, there has been some effort to kind of go back to the official statement and look at the kind of language there and and try to pull out some statistics regarding whether we're spending our money on facility construction versus building stadiums versus purchasing busses. I just don't think we have that yet. But I think that would be really interesting. Interesting, Janelle.

**FUNKHOUSER:** [02:07:55] Are there other comments or goes one over here. While he's getting the mic, there is an $80 billion gap, GAO says, between, you know, what we're spending on schools and what we need to.

**AUDIENCE MEMBER:** [02:08:09] Leonardo Meyer, WMATA. I just had a quick question about so you mentioned the moral hazard, which is the buzzword for today. And I just one was wondering what you evidence that Texas had a pretty successful enhancement program. What frameworks do they have to preventing such moral hazards? Yeah.

**YANG:** [02:08:34] I think this is not unique to Texas, although Texas is very unique because their program has a large amount of asset rain. It's kind of going back all the way to when they first used their land to kind of build up their farm program. But I think that's lack of. More moral hazard. Generally speaking, this rare occurrence of school district defaults is related to how well functioning. There is probably more to add to this kind of well-functioning credit market that we have. I think districts are generally worried that if they ever default, that will affect their future access to the credit markets. And and that has been, you know, we just don't see that many district defaults.

**FUNKHOUSER:** [02:09:23] Way in the back there.

**AUDIENCE MEMBER:** [02:09:30] I think it's great paper. Just one thing. Did you or have you been able to make a connection between capital spend and test scores? And because because that's for your upcoming book. I know there's a whole book in that. It'll be kind of interesting to know which kind of capital spend leads to which kind of improvement or decrease in test scores.

**YANG:** [02:10:11] I always get that question if I'm presenting. If I were to present this to our education policy cohort, you're nothing about. You only care about test scores. But but yes, Chris, you mentioned that and I do not have time to present. I do look at test scores. That's not education outcome. That's not the only education outcome. Right. But that's where where I have data. And I do look at that and I do not see a statistically significant impact on test scores. Part of it, I think there's a well-established literature about this, actually, because we're looking at pretty marginal increases in capital spending to 2 to 7%. And it's not huge. It's really hard to, I guess, make a difference when the spending increases are small. At least that's what meta analysis performed by other scholars seem to to to point out. And and going back to your second question, because I could not observe on one thing what kind of capital assets school districts spend money on. I cannot directly answer that question.

**AUDIENCE MEMBER:** [02:11:23] Hi, Will Kent. Oh, loud, sorry. Question for you: How much of the increase in PA, which seems substantial, is due to just interest rates being lower and keeping the same debt service burden? Right. So the proportion of PA increases versus an increased debt service level that might indicate more access to capital markets.

**YANG:** [02:11:46] When you say, I guess, increase in service level. What do you mean?

**AUDIENCE MEMBER:** [02:11:50] Sorry. So meaning like if a school district can pay $1,000,000 a year in debt service payments and interest rates are lower than you know, they can raise more money. Right. But how much of the cap increase capital spending was just pure interest rates versus maybe like increase access to markets or more the ability to finance more, you know, facilities?

**YANG:** [02:12:13] I do not I don't think that I can directly measure the but the but I can look at the percentage increase that yield reductions about. I think if you look at the 13 basis point and compare that to kind of average yield is about 6% and the increase in capital spending is roughly around that number as well. So I would say it's. If I were to make a bad taste, mostly driven by the driven by the reduction in borrowing costs. But I cannot I guess would I be able to test that directly? I do not believe so.

**FUNKHOUSER:** [02:12:49] All right. That's all the time we have. But thank you, Kate, for a great paper and Christine for great comments.