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COVID's Impact on the State and Local Sector:

DAVID WESSEL, Session Moderator
Hutchins Center on Fiscal and Monetary Policy
The Brookings Institution

Was Pandemic Fiscal Relief Effective Fiscal Stimulus? Evidence from Aid to State and Local Governments:

Authors:

JEFFREY CLEMENS
University of California, San Diego

PHILIP HOXIE
University of California, San Diego

STAN VEUGER
American Enterprise Institute

The State and Local Sector During the Pandemic:

LOUISE SHEINER
Hutchins Center on Fiscal and Monetary Policy
The Brookings Institution

Panel: Impact of COVID-19 on State and Local Government:

TRACY GORDON
Urban Institute

SHARON KIOKO
University of Washington

KATE NASS
State of Oregon Department of Administrative Services

NICHOLAS SAMUELS
Moody's

LOUISE SHEINER
Hutchins Center on Fiscal and Monetary Policy
The Brookings Institution

STAN VEUGER
American Enterprise Institute

The G (Governance) in ESG:

TIM COFFIN, Session Moderator
Breckinridge Capital Advisors

Gas, Guns, and Governments: Financial Costs of Anti-ESG Policies:

Authors:

IVAN IVANOV
Federal Reserve Board

DANIEL GARRETT
University of Pennsylvania Wharton School

Discussant:

ZACH CONINE
Nevada State Treasurer's Office

The Information Content of Municipal Financial Statements:

Authors:

CHRISTINE CUNY
New York University

KEN LI
McMaster University

ANYA NAKHMURINA
Yale School of Management

EDWARD M. WATTS
Yale School of Management

Discussant:

IVAN IVANOV
Federal Reserve Board

What's Going on in the State and Local Sector?:

DAN BERGSTRESSER, Breakout Moderator
Brandeis International Business School

What's Happening in the Muni Market?:

STEPHEN WINTERSTEIN, Breakout Moderator
Alphaledger

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P R O C E E D I N G S

MR. WESSEL: Great. I'm David Wessel, Director of the Hutchins Center on Fiscal and Monetary Policy at the Brookings Institution. I want to welcome you to the Annual Municipal Finance Conference, the 11th one.

As you know our purpose here is to bring together academics, practitioners and public sector officials to discuss recent research on the municipal capital markets, town and state local fiscal issues more generally. This conference is a joint venture of the Hutchins Center at Brookings, the Rosenberg Institute of Global Finance at the Brandeis International Business School, the Olin Business School at Washington University in St. Louis and the Harris School of Public Policy at the University of Chicago.

I welcome you on behalf of my colleagues, Louise Sheiner at Brookings, Richard Ryffel at Wash U, Daniel Bergstresser at Brandeis and Justin Marlowe at the University of Chicago.

So here's our plan for today. We have two papers both on state and local aspects of the COVID crisis followed by a panel discussion with a number of people who I will introduce later on the broader questions of how state and local governments handled the COVID crisis and what's happened since with all the federal money that went their way.

We then have a break for about 10 minutes and then we have a couple of papers to be discussed. And then finally at 1:45 we have two breakout sessions. One on what's going on in the state and local sector more generally and the other on what's happening in the unibond market. To join those sessions which will be very informal, you'll need to go to Zoom and on the event page for this webinar that you're watching there's a link there. And we'll remind you of that later in the program.

Unfortunately, we don't have an opportunity to hear from viewers directly during this session, but if you have questions there are at least three ways to pose them.

One is on a website called Sli.do, S-L-I dot D-O. You just type in uni-finance when you log on and I'll monitor that. We also, you can put them on Twitter at #Unifinance. And finally, if you can't figure out those ways feel free to email me at dwessel@Brookings.edu and I'll keep an eye on my email.

So we have two papers this morning. One is from that Stan Veuger at AEI is going to present by Jeff Clemens, Phil Hoxie and Stan. Jeff and Phil are at the University of California at San Diego. And it's titled, *Was Pandemic Fiscal Relief Effective Fiscal Stimulus? Evidenced from Aid to State and Local Governments*. Stan will present for about 15 minutes and then following that my colleague, Louise Sheiner, will talk about the work that she's done in the state and local sector during the pandemic. And then we'll get to any of your questions and the panel discussion that follows.

So what that, Stan, the floor is yours.

MR. VEUGER: Thank you, David. And I'm delighted to be here at this conference. I am going to share my screen so that everyone can see my slides.

And so, yes, as David said the work, I'll be presenting is joint work with Jeff Clemens and Phil Hoxie of USCD. I'll briefly touch upon some related work that's joined with my AI colleague, John Kerns (phonetic) as well.

But what I'm going to talk about is the effect of the pandemic fiscal relief for states and localities. In particular, I am going to discuss some of our findings on whether transfers from the federal government during the COVID pandemic have helped preserve state and local government jobs. I'll talk a little bit about the broader macro impact of those transfers so that's on unemployment overall and output on consumption. And then finally, I'll briefly talk about the public health impact of these broad transfers to state and local governments in the sense of, you know, what impact did they have on vaccination testing, of course.

Now, these are important questions obviously. During the pandemic the federal government dramatically increased its transfers to state and local governments by close to a trillion dollars across four different bills. In part, I think this is motivated by concerns that during the Great Recession state and local employment became a drag on the broader macro economy, but of course that's not the sole purpose of these transfers. And that's why we look at this broader range of potential impacts.

Now to first step back for a moment and give some broader context. In the U.S. states and local governments as well face balance budget requirements and as a consequence or perhaps as a cause, the federal government is the primary source of macro stimulation policy in the U.S. system of fiscal federalism. The idea is that when a downturn hits in the absence of federal support, states would have to either raise taxes or cutback on service provision and that doesn't seem like it would be optimal policy.

Now, states do some saving and rain day funds and some other funds, but typically not enough to smooth out those shocks. In part too because they are often restricted legally from how much money they can put into those funds, how they can spend it, et cetera.

Now, what does this federal role look like? The baseline roles that are in the absence of additional measures, there are matching funds that are generated through the Medicaid program. There is money that flows into unemployment insurance that runs through the states. And then there are more targeted funds for formally declared disasters and public health emergencies.

But my focus here is going to be mostly on ad hoc supplemental spending. Congress enacted such supplemental spending both during the Great Recession when it was close to a quarter trillion dollars and over the past year during the pandemic when we were closer to a trillion dollars. And so, that supplemental ad hoc support is going to be

what we're going to be analyzing here.

Now, how do we end up with so much federal relief for state and local governments even though from today's perspective state and local government revenue have held up pretty well? I think they were the large transfers of mostly ultimately caused by dramatic overestimates of state and local government revenue shortfalls early in the pandemic. You know, those shortfalls were basically based on following a few steps.

First, there's a revision of macroeconomic forecasts relative to the situation and trend prior to the pandemic. And then that was translated into tax revenues. Now, how could what looks like a fairly transparent process lead to dramatically overestimated funding needs? I think one quite a few analysts relied on the unemployment rate, which turned out to be a poor proxy for state and local tax basis.

And secondly, the economy just performed much better than those early pandemic forecasts would have suggested in part because of dramatic intervention by the federal government through other programs, right? And so, between those two aspects, I think you can explain a lot of the difference between sort of an estimated $900 billion that some analyst came up with and the real number which was closer to really to zero as the economy recovered much faster than expected.

Now, setting that aside and we can go into those forecast errors a bit more on the panel discussion as I assume we will. What is the variation that we are going to look at to see what effects federal transfers had? We're going to use an instrumental variable approach of use quasi-experimental variation in how much money different states received. And when I say states, I mean states as well as all the local governments in those states.

And that variation is as follows. Small states are overrepresented in Congress. Mostly because of the fact that every state has the same number of senators, but on the margins a little bit, and in the House as well. And what we found, what Jeff Clemens

and I found in an earlier paper is that during the pandemic this overrepresentation predicted additional federal funds per capita quite well and quite strongly.

So here, you see it split out by the four different bills. For each bill, we've ranked order the states based on their representation in Congress from what we called here large, which is the most underrepresented states to small, which is the most overrepresented states. And you see these pretty dramatic differences. In particular, in the Cares Act, you know, it should come as no surprise obviously is the formula used in the Cares Act for the bulk of state and local relief funds was very explicitly one that benefited small states by providing a floor of funding to every state no matter your size.

Putting it differently in a context that shows you how strong the instrument is. Here, I'm showing you the overall federal aid progressive as against number of representatives per million residents. And it shows you that, you know, there's just this very strong positive relationship between how well represented you are in Congress and how much aid you received per resident, right?

So this is almost a one for one relationship with really Wyoming and Vermont, you know, being both dramatically overrepresented and receiving the most funds. And then larger states like Texas, Florida here at the bottom.

Now, of course to be a valid instrument, to be a valid quasi-experiment, this is not the only thing we need to ensure is the case. We also need to make sure that the variation is what we call conditionally exogenous, right? That the amount of funds that you receive varies by how well represented you are in Congress. But that is not driven by the fact that there are factors that both explain, you know, why you are over represented in Congress and why you are getting so much money.

So, for example, perhaps the most obvious example would be if very small states were dramatically worse hit by the COVID pandemic, one would expect them to

receive more funding as well, but that is, of course, not the case. And here, it's important to keep in mind a small state, of course, does not necessarily have a high population density which would be, you know, a route that people at the beginning of the pandemic thought might influence spread of the disease. In fact, a number of the small states have very low population densities.

The small state advantage is also more or less or orthogonal to proxy for dimensions of state and local government funding needs including estimates of revenue shocks, a number of economic shocks, size of the public sector in each state and the amount of federal land in each state, right? And so, these are again factors that might potentially explain the relationship between representation in Congress and the amount of funds allocated that would not be orthogonal to the economic consequences of the pandemic.

And so, you know, we go through a number of these potential ways in which our identification strategy could be polluted and we, you know, I wouldn't be here if we thought that the pollution would be devastating. But, you know, there's much more detail on this in the paper.

But let me highlight. For example, overrepresentation of small states is not as correlated with political partisanship as we often think, right? There's a number of very small Democratic states, Rhode Island comes to mind, Vermont as well. In addition to small population of Republican states like Wyoming.

To further address concerns like this we run a large number of robust checks where we include covariates that control for things like this. Stringency of anti-COVID measures, et cetera. We also do a pretest and we find that the spending variation of our instrument does not predict changes in employment over the months before the pandemic, right? So it's not that small and large states were in different trends going into

the pandemic.

Anyway, all that leads us to the production of a large number of tables that look like this. I'm obviously not going to discuss every coefficient here but, you know, for credibility's sake, I figured I'd show you something that looks like a regression table. Our core estimate that I would want to attract your attention to here is that a million dollars in total aid per resident, we find leads to an additional .78 job months in state and local employment.

Now, to go from the number of job months to a job years. We multiple by 1.5 because our sample covers 18 months and 18 divided by 12 is 1.5. We then invert that number of that number of jobs per million to go from jobs per million to millions of dollars per job. And we get an estimate of AR at $55,000 that's federal money allocated per state and local government job preserved or created.

That number is relatively higher, I think relative to estimates in the literature about the fallout of the financial crisis. It's also larger relative to estimates for other programs in COVID era but there are obvious reasons for that that I'll go into in a second. If you prefer to see the time series of estimated effects this is what it looks like. So that most of the impact, I think that is clearly statistically significant comes first during the Summer of 2020 and then the subsequent omicron wage in February of 2021

As you can see in many months the compensational intervals. It's not exactly zero. So it's really the overall impact that we're more certain of than this time frame.

What we find is that we do not find significant additional effects in the broader labor market. I'm sure when you hear what that same impulse response function looks like for private employment per capita on the top left figure. And we find even less evidence, I'd say for impact on wages on income or GDP. If you squint you can maybe say, well, you know, you don't have enough power to find effects on income. But even there, you

know, the point estimates are relatively modest.

Now, as I said, this $855,000 impact is large relative to some of the estimates for the PPP program, right, which is of course another big COVID era program where you have estimates that go from a job for each $50,000 spent which, you know, admittedly is an estimate by folks at the Treasury Department who are responsible for implementing the PPP program to about a quarter billion from Autor and his coauthors.

This, of course, stands in contrast with estimates for some of the other programs. For UI, the expansions as expected, right, there the impact is negative and more money for UI, less total employment and for the stimulus checks and the municipal equivalent facility. I don't think people have been able to identify big employment effects.

Now, again, as I said these numbers stand in contrast to some of the earlier literature on other periods as well. There while we find multipliers of about zero, you know, for GDP and income. When I say multiplier, I mean for each millions of dollars spent in stimulus spending. What is the increase in GDP in number of millions? We find a number around zero.

The literature suggests numbers that range from .5 to 2. But of course, you know, our context is a very different one from the typical one. Many of these estimates come from an era where there are, for example, not dramatic restrictions on people's ability to engage in economic activity. It does not come from a period of a pandemic when people are concerned about their health and they prefer to not engage in certain types of activity.

And perhaps most importantly many of those estimates come from periods where there are aggregate shortfalls. That of course, is not the case for certainly the final bid of our sample period. When instead the economy had started entering an inflationary environment with very tight labor markets in, I would think, the conventional macroeconomic view would be that additional stimulus would feed at the price but not quantities.

And so, I don't think it's super surprising that our dollars per job estimates are so much higher or that we don't find large impacts on these other real variables in our estimates.

Now, one area that I wanted to highlight where we do find some evidence of effects is in testing efforts. So this is from a separate paper joined with John Kern (phonetic) as well in addition to the other two coauthors. And here, we've struggled a little bit to come up with a good, intuitive way to explain the size of the effects.

But what we find is that a $1,000 in fiscal relief per resident translated into under 1,200 extra doses of vaccine being delivered. And that was not a statistically significant effect, but we do find an effect on testing that says for each $1,000 in COVID relief per capita, we find an additional 55,000 additional tests per 100,000 people. So that's about one test for every two people.

So the way we interpret this is that it suggests that state and local governments were liquidity constraint when it came to the targeted funding they received for testing. And so, they could use some of these additional general relief funds to ramp up their testing operations. But that was less of a concern on the vaccination side where perhaps the health insurance apparatus played a bigger role. And where perhaps also the manned site issues were more important and so we don't see large effects there.

But, you know, perhaps this suggests that the targeting of specific funds did not work as well as you might have hoped and that state and local governments were able to use some additional flexibility in at least in this area quite productively.

That's it for me. I think I look forward to hearing everyone's comments and to hearing Louise's remarks as well.

MR. WESSEL: Thank you. Louise? You're on mute.

MS. SHEINER: Thank you. Tell me if you can see this. Do you see it?

MR. WESSEL: Yep.

MS. SHEINER: Okay. So I'm going to talk about sort of instead of looking at the questions. Or Stan was like how did this policy effect state and local? I'm going to sort of start it the other way to say, what happened to the state and local sector during the pandemic? Sort of more broadly and then I will talk about how important money was or wasn't.

What I'm talking about is from a chapter that I wrote for Hamilton and Hutchins Center both at Brookings project called *Recession Remedies*, which goes through all the fiscal policy responses to COVID, checks and UI and a bunch of different things. And tries to say, what did we learn that we should learn about others so we think about the next recession. So this is really a little advertisement. You can Google *Recession Remedies* and you'll see a really, if I do say so myself, I think a nice volume. Okay.

So three big questions. So the basic story of the pandemic for the state and local sector, you've heard some of it already. Revenues did quite well. State and local government got tons of federal aid, but employment fell sharply and remains well below pandemic levels today.

So the three big questions I have are why did revenues holdup so well? And why are the projections so wrong given the strong revenues? And about trillion dollars in aid, how is it that employment in the sector is so weak? And third, if they're not hiring people what are state and local governments doing with all the aid they received? You can see a lot of overlap with the presentation you just heard.

So as you heard, in the Spring of 2020 analysts projected state and local revenue losses up to $900 billion over two years. In fact, revenues combine 2020 and '21 actually exceeded reasonable pre-pandemic projections. So in this table, it says, how did revenue losses compare to what would have happened if revenues had actually increased

four percent a year? Which is a pretty strong increase. Basically, a very reasonable, optimistic even, pre-pandemic projection.

You see they were declined 71 in 2020, but up 145 in 2021. This is state and local fiscal years, a state fiscal years. And so, all together they actually were higher, okay? So revenues came in actually higher than you would have expected pre-pandemic. Why were the revenue projections so wrong? As Stan said, a lot of it was based on really pessimistic economic projections.

You know, when that unemployment rate shot up to 14 percent in April private projectors and CBO thought it was going to take a really long time for the unemployment rate to come down. If you say, okay, so using the historical rules of thumb that contributed to the projections of the $900 million losses that we saw. You fed in actual economics what would have happened? Well, you would have gotten much, much smaller projected revenue losses, but still you would have had some revenue losses depending on which rule of thumb you used particularly if you used the unemployment rate. As Stan suggests, it is not the best way of predicting state and local revenues, and it was in a very common rule of thumb. So but you still have had some losses but much smaller than what actually happened. So that was the biggest reason.

The other things, as Stan mentioned, is there was an unprecedent fiscal response. And when you're looking at history and you're looking at relationships with things like unemployment rate and revenues, you know, you're sort of holding historical policy response constant implicitly. And we had an historical just a huge, huge policy response.

That did two things. One, it helped the economy. So UI and checks, it bolstered household's finances. It kept consumption strong. It kept the housing market strong. All those implicitly are supporting the state and local sector through sales taxes and the property taxes. And yet, actually UI's taxable income in most states. So the fact that we

at the beginning of the pandemic when unemployment was so high replacing more than 100 percent of wages for many states that would have actually been a boost to revenues.

Now, in the end after the federal government forgave about the first $10,000 of UI from taxes some states went along too. But that wasn't clear that was going to happen so the UI itself would have boosted directly state and local revenues.

And then third, usually a stock market tumbles in recession, right? So again, that's implicit in the historical relationship. And that happened early in the pandemic but then it completely recovered and was quite strong. So that's going to be boosting taxes off of capital gains taxes.

And then finally, this recession was unusually concentrated among low-wage workers. So recessions are always concentrated among low-wage workers but the fact that this was about service sectors, delivery of people really in the front line and it was really particularly low wage. And that means that for any change in the unemployment rate, the change in income and taxable income is going to be much smaller, okay.

As we said, there was massive, massive aid to state and local governments. Stan said around a trillion. I'm get almost exactly a trillion. You know, it depends on how you count it, but you can see my attempt as we go through all the details of how you get to it. Some of it was general aid directly to states so that's $100 billion was the Medicaid match. And $150 billion in the Coronavirus Relief Fund. And then $350 billion in the (inaudible), the adding to the 600, but then there was all this targeted aid for administrative expenses, aid from K-12.

Public institutions of higher education, health providers. There were public hospitals that got some of that. So it adds up to about a trillion dollar. That's just massive, as Stan said, relative to, you know, during the Great Recession we have an estimate of $275 billion to state and local governments. So way, way, way larger.

And yet, as I said, employment is still well below pre-pandemic levels except for state educations. Let me walk you through this slide quickly. So the blue is state, the red is local. The dotted line is excluding education and the straight lines are education. I'm sorry. The dotted lines are education. I got it wrong. And the other ones are excluding education.

So you can see that employment fell like a rock right at the beginning of the pandemic everywhere except for state government. State government excluding education. State and local recovered some, the red lines, but they're about four percent below the level they were before the pandemic and between like four to six percent below what you would have expected them to be by this time after a few years still today.

State education has completely recovered and looks kind of about where you would have expected it to be. But state is interesting. The state X education didn't really suffer much at the beginning but it just has kind of been going down slowly over time. And it is now about three percent below the level it was.

So let's compare it to the Great Recession. So compared to the Great Recession what was interesting about the changes to employment is they were way quick, right? You didn't see these massive layoffs any time during the Great Recession, which is shown in green. You saw this kind of gradual declines. On the state level you did not see education declining. A lot of people went to school during the Great Recession. But for X, excluding education decline declined.

We kind of got to that same level practically but much faster, right? So it's ironic. We're kind of close to where we would have been about three years after the Great Recession for a state X education. And local went way down and now we're where we would have been after five years basically, right? So with the whole thing, it's quite ironic.

One of the reasons we gave so much aid to state and local governments is

because the story that we all said at the beginning of the product was in the Great Recession, we did not give state and local governments enough money and they cut employment so let's make sure we don't do that this time. And so, we gave them a lot of money and they still cut employment dramatically so, okay.

So why did employment fall so much? So I think the first thing to note is that the huge declines is incredibly rapid declines in the Spring of 2020. I think are mostly about we close offices. We close schools. We didn't need cafeteria workers. We didn't need bus drivers. We couldn't have all the people in our offices. So a lot of it was really just sort of pandemic related and not budget related or anything like that, okay.

In addition, some evidence were literally. You just heard another paper that money did matter at the beginning of the pandemic. I would say that the idea that money matters. I mean money might matter. You might be able to find it, but obviously it's not determinative because we've given them so much money and revenues are fresh and employment is still low. So money may matter but that's not why employment fell so much, not lack of money. There's no way, right?

There is some evidence that giving money directly to cities and counties instead of just to states did help maintain employment in the Spring of 2020. So that's just something interesting from a policy perspective. That first $150 billion in aid went to states and some very large governments. The population had to be greater than $500,000 by 500,000 to people.

The second round in the ARP said, you know what? That didn't work that well. It didn't necessarily flow through from – you know, especially from red states to blue cities. And so, it went directly to many, many, many local governments, maybe thousands and thousands of local governments. And so, that's just something that could be interesting to look at eventually to see if that mattered, okay.

So I did some of this variation across the states to try to understand the employment changes. I tried a whole bunch of stuff. I had like what revenue? What were their expected revenue losses in the Summer of 2020? Well, I had mentioned the shutdowns and school closings and cases and death rates. I had things like, well, were the places that were scarred from the Great Recession. They had employment already losses of those ones to cut off. None of that stuff worked very well.

So I found a few factors that did explain the cross state variation. So states that imposed having freezes at the beginning of the pandemic did have slower employment growth. So some states had hiring freezes and they took a really long time to lift them even though they were flushed with money. So that is a way that money mattered.

Localities that are more dependent on states for K though 12 financing had bigger education employment losses. So I think in the Spring of 2020, there were local governments who were hearing that they were not going to get money from states. State budgets were – it was the start of a new fiscal years. And so, they cut back really a lot.

And then the other thing that I think is quite interesting is that states that were sort of more COVID adverse is the way I think about it. As mentioned by vaccination rates has slower recovery in employment so I'll show you that picture.

So on the right is the percent of population that are fully vaccinated by January 2022. And this is the decline in employment from October 2019 to October 2020. And you can see that the states that, I think of it as caring more about COVID, had bigger employment losses, which would make sense if you think this is coming from closing schools or closing offices. Or even like, you know, Virginia didn't close offices but it still had social distancing so that the number of people who are working in that office was going to be very much smaller because, you know, every other – look at the DMV is empty, for example.

So I think that those are all related to COVID. So I think – the other thing

that I think is quite interesting is either you're trying to say okay. So if I look at the pattern across states and the timing of employment losses. You know, if I see what happens in the Spring of 2020 is that how predictive is that and what happens later? Is it the fact that once you lay somebody off, it just takes a lot longer to build up? That is sort of true but less true.

So if you look at the rest of it in the Spring of 2020. So if you look in the Spring of 2020 versus the Fall of 2020 at the employment declines, you know, they're related but they're not that strongly related. A lot of places had big employment declines and then hired right back up as the economy opened up or brought back all the people who had been laid off.

Once you get to October of 2020, it's really, really a much tighter fit. So if I tell you after the economy is reopened after that first initial shutdown and reopening then the states that have had sort of big deficits in October of 2020 still had maybe deficits by May of 2021. It's probably still true today. I haven't done the most recent ones, okay.

Now, state and local governments do want to hire, right? So they're sitting on all this money. They're hiring is down. These are from the jolt series of these are hiring openings. So job openings for state and local governments together. They don't have local versus state. They have education versus not. They look quite similar.

You can see that, you know, openings fell in the Spring. And sort of right after the pandemic started especially in education. That's the green line. And then beginning in 2021 when the vaccines started rolling out openings had gone up and up and up. So there are a lot of openings. And so, states are trying to hire, right? So I think they shutdown. They got a bunch of money. They tried to hire but they have had trouble hiring. So you could look at here of a hiring rates and the separations.

So the high rates are in green and the separations in blue so these huge separations were the layoffs in the Spring of 2020 and some quits as well. And then you can

see it was kind of like there wasn't a whole bunch of hiring. And then hiring has increased recently so as the blue line has gone up. But so has green lines, separations, that's quits. So you're seeing they're hiring more people except more people are leaving right now.

And, you know, whether or not that's part of the story of this sort of great resignation or whether or not these jobs have just become – you hear lots of stories about how these jobs have become worse jobs because you can't work virtually. Kids have a lot of problems for school teachers, the whole issue about guns in school. So they're not making a lot of headway even though they are hiring and have a lot of job openings.

If you look at pay, you can look at pay. This is from the ECI that it holds composition of pay constant. This is quarterly ECI at annual rates. You can see it took a while for the state and local sector to raise pay. State and local is everything except for the green. The green line is private and all the blues and purples are different. The state and local – or in public demonstration in health and in education and it all is this purple line right here.

So you can see pay has gone up, but has not kept pace with the private sector. So the jobs have probably gotten worse. The pay has gotten less competitive. And so, they're having a lot of trouble hiring.

So what are states doing with all the money? So, you know, one of the things that I learned by doing this project is like we have terrible data for the state and local sector in terms of looking for timely data. And it's a huge sector. It's 13 percent of employment and this is a real problem. So we don't really have official data except for state governments in fiscal year 2020, right? We don't really have anything on local.

We do have a report from the National Associative State Budget Offices which is really helpful except one of the problems is that those are just as states report them. And states report unemployment insurance spending really differently. Some of them have it

in there. Some of them have part of it in there. It's really hard to back out. I tried. I couldn't. And so, that makes it hard to interpret the top line.

Still if you look from item by item, NASBO does show very sharp increases for K-12 education and public assistance, right? So if they're sending out checks to people, states in 2021. Overall spending excluding other because other is got this UI thing, which I don't, you know, have to deal with. Although, it also has a lot of COVID spending. Increase about five percent in 2020 and 10 percent in 2021. That's a huge number for state and local. Very massive increases in spending.

If you look at the BA data, the data that actually are in GDP, the study looks quite soft. You don't see that strength. And so, they will revise that once they have official census data. And either the NASBO data are not going to sort of have the same measures or it's going to mean that GDP has been a bit stronger than we think.

States are considering tax cut. You read about them all the time. When they dealing with money? There are going to be tax cuts. But according to the NASBO at least they don't seem that large. The mid-year state tax cuts that actually were a pass for like one billion and the proposed tax cuts are about 15 billion or 1.3 percent of general revenue so tax cuts but not massive.

And then finally, states have saved a lot of the money, right? And this is just states because this is from NASBO. This is total balances so that's rainy day and then if you have money just in your general fund that's not in a named rainy-day fund that's included here too. So that you can see balances went up like crazy in 2021, 2022 and I think this has been predicted to come down. And then a lot of money went to states as I said especially from the ERP. And that might be sitting in late local coffers as well, right? We don't have any data on local rainy-day funds. So some of that maybe sitting there. So that's it. Thank you so much.

MR. WESSEL: Can you stop your screen, Louise?

MS. SHEINER: Yes, sir.

MR. WESSEL: Great. Thank you very much to both of you. So here's the plan going forward. We have a terrific panel that we put together because it represents different perspectives on the situation at state and local governments both during the pandemic and right now.

We have Tracy Gordon from the Urban Institute. Sharon Kioko from the University of Washington. Kate Nass from the State of Oregon who also happens to be president of the National Association of State Budget Officers. Nick Samuels from Moody's. And Louise and Stan and some of Stan's coauthors are going to join us as well.

As I said earlier if you have questions or comments, you can post them at Sli.do, S-L-I dot D-O, #Unifinance or do the same on Twitter.

And, Nick, maybe I can start with you. So from the point of view of state and local credit. Presumably state and local credit looked pretty good given that they didn't actually lose a lot of money. What did you observe during the pandemic that may have surprised you? And then what kind of condition are state and local finances in right now from the point of view of a credit rating agency?

MR. SAMUELS: Yeah. So it's just a little question there, right? So thanks for having me.

You know, like we just talked about, right? This obviously was a very large and unexpected type of downturns, but, you know, there was a couple of things to take of note going into the COVID downturn. And, you know, I think the first one is that heading into this two-thirds of the states were in our two top rating categories, triple A and double A one.

So that implies that they had the most fiscal flexibility, the strongest tools available to them to withstand some type of downturn. And one of those was that states had

tremendously strong reserves coming in to COVID. More than half the states had reserve levels that by more than one times could cover the largest revenue decline that they had had – one year revenue decline that they had had since 2000. So really tremendously strong reserve levels relative to the size of their revenues.

Also, fixed costs for debt service, pensions and retiree healthcare while there's some outliers, some notable outliers, really were not a burden for the state sector. So coming into a period where states had to really navigate a lot of different things financial, they had a lot flex to be able to do that.

So then, of course, as we just talked about, the federal government stepped in with, you know, a really extraordinary set of extraordinary measures to help both the economy at large and the states specifically. And like we just talked about, you know, extended unemployment benefits, assistance to small businesses, rental assistance, emergency food assistance. Those types of things kept property owners paying property taxes and consumers spending.

And we're doing this meeting virtually. I am now a fully remote worker. Kept people with office going jobs working and their wage income. And we talked a little bit about the early pandemic market, but then the markets did very strongly. So, you know, income tax is performing very, very, very strongly.

And then, of course, we had direct aid to state and local governments in the form of Arca, $350 billion worth. You know, very, very significant and direct aid to downstream entities. Mass transit hiring. The types of things that might need additional assistance directly from states themselves.

And so, you know, really notably through that period, we had one state downgrade. We had a couple changes in outlooks to negative that since have either gone to stable or to positive. But only one downgrade through that whole period and I think that

really, you know, looking back is surprising to me having also been through as a rating analyst some prior downturns as well.

So, you know, we also we talked about reserves. Only 11 states drew on their rainy-day funds or their other budget reserves through that period because there was so much other money flowing through them. And that's really remarkable. And those monies have largely been restored into those reserve funds now and then some. So I think, you know, the more forward looking story now is that states are even better positioned than they were coming into the COVID downturn in terms of reserves at least.

We published a report last week on the state of California that's got a budget reserve now equal to 17 percent of revenue. It's just like remarkable for a state like California that has a lot of revenue volatility. And based on our own metrics that's more of a triple A rated state level of reserves than anything else.

So, you know, a lot of states, their economies are not back to normal. We're talking about employment and things like that are not back to normal, but I think in terms of budgets. You know, another thing to note and maybe we'll talk about this later also very, very, very few states have been issuing cashflow notes in the last couple of years to balance the mismatch between revenues and expenditures. I think only two states in the fiscal year that just ended two weeks ago, the sum of it less than a billion dollars. Really remarkably little. A lot of liquidity there for states now and this is a very, very credit positive thing.

MR. WESSEL: So, Kate, tell us how the world looks from Eugene, Oregon. Do you recognize the characterization that Louise, Stan and Nick are giving? What's unusual about Oregon? And what do you see that is typical?

MS. NASS: Thanks, David. And so, as part of NASBO, I feel like every time we talk to somebody, our colleagues across the states, it's always everyone has their own unique version. So every state, you look at one state you see the one state and I think

we all know that.

And so, I have been saying and I think a number of people have felt this. Over the last year, two years, I just feel like I've gone through what I call the budget whiplash. And so, in our state we do an official revenue forecast every quarter. Prior to the pandemic, it was pretty uncommon to see, you know, a $500 million swing on our revenue forecast just to get quantified. Now, almost every single revenue forecast has had that type of a swing in the last two years.

And so, it's just been from going to pulling reduction lists together of what kind of horrific reductions we're going to have to pull together and make recommendations to the governor on how to balance. I mean we were looking at, you know, I think an 18 percent reduction when we first went into the Spring 2020 timeframe.

And then as you're all hearing from everyone else here on this panel is that didn't come true. And so, we had done all these hiring freezes and everything. And a number of agencies had to go through layoffs because of their specific revenue streams but not – it wasn't across the board. We did more hiring freezes and tried to just slow the roll out of new programs.

But then once we saw that our revenues were coming back and then the federal aid was coming through, we kind of started – we had to bring it back up. And so, to move from doing an almost hard stop to a ramp up again was just incredibly – I don't know it was just a whiplash. I mean everyone knows it's been difficult, but it was definitely, I felt like a whiplash.

And then to continue to see additional federal funding come through and then revenues still continuing to come in. And how do you deploy that funding in a one-time basis as opposed to creating this ongoing structural imbalance has been a real struggle for Oregon. And so, we're watching that pretty closely.

Oregon is a biannual budget state so we have a little bit when we do a two-year budget, we have a little bit of time to kind of – it's not – it has its pluses and minuses in talking to my colleagues across the country. But it does give it a little bit more time to do some planning between one budget proposal to another.

So yeah, so I feel like that's kind of where we've been in Oregon. It's just this whiplash. And I know that's probably where everyone else has been too.

And so, I did want to speak a little bit because the hiring is a thing especially in specific programs and specific classifications. I took a little look at our kind of where we've been over the course of the last – I don't know – eight to ten years.

And in Oregon, where our legislature has a position authority so they actually in their budgets when they pass the budget for a specific agency, they say there's this many numbers of positions allowed for that agency. And so, we kind of do a position control as well as then there's the vacancy of how you actually hire into those positions. And what I've noticed is that our vacancy rate has been creeping up.

What's weird is it actually started to creep up kind of right before the pandemic and then it creeped up even more. But on top of that because of additional funding coming in, in our revenue picture, there's been an interest in having more staff too. So we have gone – we have also increased the number of staff. So we've been increasing the number of actual individual employees, but it's not to the level that we need in order to make the programs that we've been authorized to do to actually go forward.

So we've been really struggling and there's been – it's been very specific in certain agencies and programs. Like for example, our Department of Corrections is running almost at 20 percent vacancy in their staffing for an institution. So those are the kind of places that we're kind of running into problems.

MR. WESSEL: Thanks. Just an example, when you say – I can understand

why you don't want to add a lot of people if you have one-time money. But are there one-time investments that you're making in Oregon? Is there an example or two you can give?

MS. NASS: Well, gosh. Yeah, so we did some infrastructure obviously with especially using some of the federal fundings that came in through the state. We partnered with local entities on kind of getting some infrastructure work done.

From a hiring perspective, we didn't do bonuses, but we've had a couple of hiring bonuses. There was cost of living increases where that did kind of – and that's been helpful with where we are with inflation right now, but probably not to the level that I think really is making a difference given the fact that it was authorized prior to where we are right now.

We've done – there's been some large – it's like school projects where we've helped different school districts with like getting schools moved and things like that to get them kind of more – their own infrastructure.

MR. WESSEL: And just to pick up on questions being asked in the chat. Did you actually lay people off in Oregon? Or just to stop hiring?

MS. NASS: We did have to do some layoffs in some agencies. So like, for example, our lottery agency had to do layoffs. Our Parks and Rec had to do layoffs. And so, there's – in Oregon where there were certain funding streams that we were seeing a decline very quickly, we did have to do some layoffs but it was kind of isolated to revenue streams.

MR. WESSEL: Thanks. Sharon, you've done a lot of looking at what state and local governments are reporting. Does the tone of this conversation coincide with your observations that we expected worse? We got better and now states are in a pretty good position? Or truly as we head towards another recession?

MS. KIOKO: Absolutely. And just to echo what Nick Samuels mentioned.

Yes, states were very well positioned before the start of the pandemic. It was the strongest position at least with the data that I have in the last two decades. So it was a strong position going in.

Also, what we see from the data is the fact that the general fund balances, again, as Nick mentioned, is a significantly higher. At least half the states were reporting double digit fund balances. So at least 18 percent or more in the general fund balance. And then when you look at the unassigned fund balance, which is the money that they have the most flexibility. And during the Great Recession those unassigned fund balances were actually negative in 2009, 2010.

And then you see in 2020 and 2021, they were actually positive and it actually grew from about 5.5 percent median in 2020 to about 11.5 percent in 2021. So it was a really strong position at the end of the last fiscal year. Of course, 2022 data is going to come out when the financial statements are published. But that just showed tremendous strength at least in the reserves for the states that they had coming into the pandemic and then also just comparing it to the Great Recession. It was a really strong position.

One other thing to highlight is I think just looking at changes in revenues and changes in expenditures and just noting the fact that expenditures also grew significantly especially when you look at the entirety of the government as an easement to including the unemployment funds, including public universities. Spending did actually go up and it actually went up in the double digits, but the good story there is there was a lot of federal stimulus dollars that went into state coffers. So again, also the revenues were up in the double digits. So for the first time in again two decades, we have the states reporting surpluses in what we considered a recession.

In nearly every state, I think I have only about four or five states that actually reported a deficit in that period and a very small deficit. Whereas in 2009, 2010 particularly

every state reported deficits and reported deficits over multiple years. So we're talking about 2008, 2009 and 2010. So it was a really strong performance. And again, it's no surprise that agencies like Moody's, Fitch and SMP didn't actually downgrade the states or you just didn't see a wave of downgrades for state governments because of positions were very strong, the revenues were actually more robust. The federal stimulus dollars were flowing to state governments much faster.

So they gave these governments a lot of cushion. And then also the data shows that that issuance was also very low because these governments just had a lot of money that they had either in reserves or coming in because again the stimulus dollars plus also individual spending through their benefits from the federal government.

MR. WESSEL: Thanks. So, Tracy, I know you have lots of interesting things to say. And I'm going to let you say all of them, but may I ask you one question? So looking in the rearview mirror everything looks great. But looking through the windshield, we have rising interest rates, high inflation. We maybe on the cusp of a recession. And the federal tap is pretty much closed and I'm not particularly convinced that we'll reopen in the next recession.

So I'm curious. What's on your worry list looking forward? And then whatever other points you want to make are welcomed.

MS. GORDON: Yeah. I was tempted to kick off by saying, I'm glad that states are in such a good position because they're going to need it.

I'm not only worried about the headwinds that you mentioned but also sort of federal – you know, there's always this entrenched difference between the federal – as I don't mean to tell people on this call. The federal government and state and local governments. And people in federal government will say things like, governors don't even balance state budgets because they get, you know, 20 to 30 percent of their revenues from

federal grants.

And then people like me and others on this call will say, those grants are not just pure fiscal support. Those are funds that the federal government gives to state and local governments because they want them to do something with them. But I make that point only to say that there is this sort of inherent suspicion of state and local governments and Washington. And I think a lot of that is focused on the magnitude of the assistance that has gone out the door already. But I calculate numbers that Louise presented. You know, nearly a trillion dollars.

You know, I'm old enough to remember back when the Recovery Act in 2009, everyone thought was huge at $280 billion. And 150 was flexible for a lot of states to use it with very few strings attached. And the 600 billion now is just really, really shocking. But I think that the design, the structure really matters as well.

And I heard of a while ago noting that during the Great Recession, we talked about the three Ts, timely, targeted and temporary. And I really thought that we should be focusing now on the three Fs. So fast, flexible, formula driven. And Congress did pretty well with fast, right? Within three weeks in March of 2020, they got $2.5 trillion out the door not just for state and local governments but to spur the economy.

And as Stanworth has shown and Louise did as well, those checks to individuals, those checks to businesses, did a lot for state and local governments for property, for personal income taxes and for sales taxes, which everybody thought were going to plummet. And in which we saw plummet but a lot of that was due to the shift in filings of ones but rightful in the federal government and states passed because they didn't want people, you know, seeking help, filing their taxes and interacting with other folks that was the social distancing thing.

So the federal government did pretty well on fast. Flexible not so much

particularly the Cares Act but the Coronavirus Relief Fund had to be used for only – I don't need to remind people but, you know, only COVID related expenses by the end of the year although that got extended. And also, they really loosened up the definition of what COVID related meant. And it couldn't be used for things that are improvement that sounded like a weird incentive for places that were actually prepared in the best systems.

But they missed an opportunity on the formula driven. So they basically – the Cares Act was per capita, which is more politically expedient especially if you needed those small states onboard. But the part that was dialing up existing formulas really didn't take into account multiple economic conditions. And that's so strange to me because for years in this recession there was this persistent drumbeat about automatic stabilizers need to look at a conditions, which they did to a certain extent in targeting the aid under the American Rescue Plan, but not the timing.

So you could have had triggers. You could have had on/off switches that would have taken effect if, for example, the federal government overshot and sent too much money to the state and local sector. That was a missed opportunity.

And now, here we are where my (inaudible) has tracked state revenue forecast and they basically are flat in fiscal '23. California and New York hesitate from (inaudible) wording of the same headwinds that David mentioned. As my colleague, Richard Oxsure (phonetic) has shown, 31 states passed income tax – sorry, passed some kind of tax cuts this year, 29 states last year. And some of those are income tax cuts, rate cuts which benefit everybody. And so, they're very expensive.

A more targeted increase in our fundable credit like the earned income tax credit is less expenses, potentially more sustainable. But there have been, you know, pressures to suspend or prevent increases in gas taxes or to get to further relief from the (inaudible) taxes. Sometimes just rebates are going out the door.

So I think that this shows that it's also not really politically sustainable to hold onto reserves as something like 17 percent of the budget. So there will be pressure on the savings that states are building up and there will be suspicion at the federal level because there's a sense of, well, we can save with all this money.

The silver lining, I think is that just like with the Recovery Act maybe more so recently there has been a lot more communication between the sectors of government and I think that will be helpful in terms of sort of that early heads up or better information about the timing of assistance which they got so wrong during the Great Recession of a better level and the reporting.

So there's been, you know, a lot more accountability, a lot more transparency. I think that might help with just trust. And this focus on equity is really interesting to me. There are these scheduled performance reports that states, cities and counties about certain population level need to file to show how their investments are benefiting equity. How different people are coming to the table and deciding how funds should be used. And I think that might have some lasting benefit.

So, you know, some headwinds ahead, some silver linings but I do worry that there was a big missed opportunity.

MR. WESSEL: Thanks. So, Louise, there's some questions on the Sli.do about that how good is the data on state and local employment? Are there issues with how the BLS collects the data? Were there unusual patterns and seasonal adjustment? And were there really layoffs or just freezes? So could you speak to that?

MS. SHEINER: Yeah. So there were differences in seasonal patterns in the sense that in the Spring of 2020 a lot of people who are typically laid off in the summer were laid off earlier. And so, you could see a recovery in the Summer of 2020. And that wasn't necessarily people being brought back but just that you're sort of catching up with the

people who would have been laid off anyhow, those bus drivers and janitors.

There were layoffs. The picture I showed you of separations that was a lot – mostly layoffs. And one thing I showed was kind of interesting. Kate's view which is one of the things we heard was one of the reasons that if you were state government, you were doing your lower wage workers a big favor in laying them off rather than paying them and not telling them to come to work because unemployment insurance during that time was going to be more generous than their wages.

And so, there were a whole bunch of layoffs. I don't know how much of – just a story we've heard, but there were layoffs. And the data are pretty good so there are two sets of data. There's a household data and then there's establishment data. The establishment data is practically it's kind of got every state and a lot of local government. It's quite good and we've checked it with this QCW, which is the data that comes out later but is actually like quite, you know, administrative data and it's pretty good.

So the data are good. There were definite seasonal patterns. But one of the reasons I do everything always related to a month. Not everything is seasonally adjusted once you get down to the sort of education/noneducation. And so, I always do things relative to the same month. But I knew the data pretty good basically. Employment is down. I don't think there's any question about that.

MR. WESSEL: Stan, what do you conclude from your work and the conversations so far about how we ought to think about, A, does state and local governments if we slide into recession in 2023 or 2024 in part because the fed wants to slow demand and bring down tuition? Should we do anything? Should we do different things?

MR. VEUGER: I mean I think it will be – I think we should do different things. I think the goal should really be to let state and local governments plan as early as possible in the recession and knowing how much money they will end up receiving.

I think that money we should distribute just, you know, based on national indicators of how hard the economy is hit. I'm a little skeptical of trying to adjust the state economic conditions among the lines of what Tracy suggested just because it's so easy to game – to start gaming conditions once you start doing that. So before the pandemic, one of the leading proposals was to tie this kind of relief to increases in the EFMAP in the matching rate for Medicaid.

Now, you know, the reason to do that, I think and a lot of the people who proposed it, would probably even acknowledge that. Is that a lot of the money goes to – is based on your inframarginal number of Medicaid recipients, right? And so, that kind of approach, you know, there's some element of, you know, if the number goes up dramatically you get more Medicaid money. But mostly, it just depends on how large a Medicaid program is to begin with.

And so, I have this paper with Jeff Clemens and Bennett Balletto (phonetic) where we show that the EFMAP increase that we did this time was targeted so poorly that it was less related to your increase in the number of Medicaid beneficiaries as a state than the ARC money was which wasn't tied to Medicaid at all.

And so, I don't know that our political system is setup to target based on real estate, level economic condition. Even the ARC money was a little sneaky how that formula was designed whether it was based on absolute numbers of the unemployed. And so, that funding helped states that have high structural levels of unemployment which of course is also, you know, a set of states that, you know, we know which states are and so, I'm skeptical.

So I would base it on national economic aggregates and make clear in advance what the amount of funding is going to look like based on those aggregates so the state and local governments can plan ahead. Then if economic conditions get better faster

than we expect that means states won't, you know, won't get as much money because it will continue to be tied to the evolution of those national economic aggregates.

But of course, if the economy recovers more rapidly that also means that the state and local governments will have more revenue. And so, you know, it would still let them budget with a lot more certainty than the way it has been now. And so, I would be hesitant to focus too much on the economic conditions of specific states.

Let me also add a note on a different point. On the reduction in state and local employment relative to trend. I don't think that's something we should be super concerned about or really even that it's something that should be very surprising. So if you look at the numbers that Louise presented, there were maybe three or four percent below where we were before the pandemic. Add some trend growth and you're at six or seven percent.

Seven percent vacancy is about where the economy as a whole is. And so, I don't think that's super surprising, right? So right now, we have about the 11 million vacancies and 158 or so million employed workers and that's seven percent. And so, I don't think it's surprising that the state and local sector would have a similar shortfall in workforce as the rest of the economy. Though, I certainly don't think the federal government should try to push that rate lower for state and local government that it is for the private sector. And so those are my --

MR. WESSEL: The private sector employment has returned to pre-pandemic levels.

MS. SHEINER: Exactly, yeah.

MR. WESSEL: And the state hasn't. So it seems like there is some –

MR. VEUGER: You don't like that way of thinking about it?

MS. SHEINER: No. Because the vacancies are about how many jobs they

post. So what you're saying is that they're not posting as many. Relative to what the post maybe they're not having more trouble filling them. That they're not posting as many as you would expect given where they were before the pandemic.

So they're clearly below. Like they're second to leisure and hospitality in the deficit relative to where you would expect. So I think what you're saying is maybe they're not having that much trouble hiring relative to other sectors.

MR. WESSEL: Tracy, how would you design automatic stabilizers to avoid all the issues of standard industries?

MS. GORDON: So I guess I'm a big fan of that paper on Medicaid, but the whole point of the EFMAP was to just cut states a larger check than what they were expecting and have that flexibility.

So, you know, yes, there might be an increase in Medicaid enrollees and it would help cover that too. But mainly, it was supposed to be flexible fiscal relief. And I completely agree, it should have been like it was in the Recovery Act somehow tied to local unemployment rates and that would have made it more targeted. But, I guess, you know, I have a paper that's been long in development with (inaudible) and (inaudible) at the Tax Policy Center where we tried to implement something like the Sound Rule.

So this is getting unemployment over a three-month period or changing unemployment rate would allow these, you know, automatic payments to kick in. And I agree completely with Stan's point about how certainty would be very helpful so that state and local governments don't do things that are -- you know, I think it's worth remembering that at the start of this states thought that they were almost done with their budgets.

And so, they had to make some big adjustments in a short period of time. And as Louise mentions, you know, it's easier to do layoffs if people had outside opportunities. And in some cases, you know, people didn't want to come to work. So I

think, you know, there are formulas that are out there. I'm not as concerned about political manipulation if you're talking about something like an unemployment rate. You'd have to be a pretty dastardly governor to purposefully drive down your employment too. But I also take Stan's point that actually deciding on a formula, you know, these are not philosopher kings that are coming out and responding to political incentives. And, you know, maybe looking at numbers versus rates is the outcome of that process.

MR. WESSEL: Thanks. Nick, so we now enter a period of high inflation and rising interest rates. How does that affect the outlook for state and local fiscal conditions in general? But also, for their willingness to spend on infrastructure?

MR. SAMUELS: Yeah. I mean I think it creates, I think, obviously, pretty obvious headwinds. You know, one is the cost of finance capital. And in our system in the U.S., you know, 99 percent or something of the deficit in local government's issue is fixed rate, level debt service on amortizing on debt for capital.

And we know about infrastructure condition, right? That there's a lot of need. And state and local governments have a lot of need to be able to access the capital markets to finance that infrastructure. That's become much more expensive now. You know, both in terms of getting into the market and then take a typical debt issuance of what you can get for what you just issued because materials costs are so high, right? The producer price index for construction materials is kind of leading the inflation metrics. It's at, you know, the highest that it's ever been and construction wages too. So that creates pressure, credit pressure.

You know, the whole discussion just on wages creates credit pressure for the state sector also. I mean, Kate talked about 20 percent vacancies in corrections. Those aren't really discretionary jobs that we can say, you know, we'll get to this later. Those are pretty essential, very direct public sector types of jobs that you're only going to get certain

types of people. And you're probably going to have to pay more to get people into those jobs.

And, of course, you know, are hiring people at higher wages now or giving colas or things like that. You're also memorializing, you know, some of this aspect of inflation possibly longer than inflation will be. And so, that's going to get built into your pension liabilities over time, right?

So I mean rates are going up in the way that we adjust pension liabilities. Those liabilities are going to come down a bit. But to the extent that you raise wages now that will in longer run have negative impact.

And I kind of wanted to add something because it's interesting just on the discussion of public sector workforce, right? Because I think, you know, obviously, we talk about, you know, you can probably make more in the private sector, right? And so, that people are looking towards those jobs. There's also something generational, right? There have been a lot of retirements from the public sector and that's left a lot of openings.

And then, you know, I think somewhat more antidotally, I think that, you know, governments have probably been stricter about return to office and how that type of work is going to be done versus the private sector. And if you are a younger worker who, you know, could not conceive of working for the same place for 20 or 30 years and isn't necessarily all that interested in a government pension. You're going to look for something a lot more flexible, I think. And I think that adds to the story and makes attracting people into the public sector just that more difficult.

MR. WESSEL: The New York Times had a story about how the city of New York is facing this problem. Where the mayor wants everybody to come back. Unfortunately, the employees don't want to.

Sharon, you've thought some about infrastructure. Do you think we're on

the cusp of an infrastructure boom? Or have we seen everything we're going to get?

MS. KIOKO: I think there's an opportunity as Nick mentioned. There's this huge need at the state and local level. Then there are the infrastructure monies that is currently available at the federal level. So there is an opportunity to leverage those federal dollars plus what they have in terms of revenues to actually invest.

And again, we know when we do investments in infrastructure, we're actually building wealth within the community. There's a lot of, you know, property values increase, a lot of businesses that are opening. We're increasing the quality of life so we're thinking about the quality of our drinking water and managing waste water so there are a lot of improvements that are a positive.

And what I would urge state and local governments to think about is there is a way – the cost of borrowing is going up, but it's going up from a very low rate to still what is a low rate. So it's not as expensive as it was pre-2008 when that cost of borrowing was much higher.

And actually, they do have within their budgets, they actually have, one, a lot of reserves. But they also have predictable cashflows coming in from a lot of that tax revenues. And they do have the gas tax to back that up and a lot of other user charges and fees.

I think the part that I worry about is when you hear discussions about let's lower the gasoline tax which has been so low for so long. And yet, people are driving more and more gas efficient vehicles or hybrid vehicles or electric vehicles. So we're actually getting less revenue from the gasoline tax than what we were before. Yes, lower income households are not the ones driving those fuel-efficient vehicles. But we get into a period where if we lower those gasoline taxes or we lower our income tax or we lower our sales tax getting them back up would be very difficult. So it goes to back to Tracy's point.

What are the headwinds that we're going to see going forward? We're going to see higher employee costs. We're going to see higher pension cost. We're going to see higher production cost because the cost of materials is going up. Yet, we've lowered our taxes because it looks like we are flush now.

So I would say hold back and make the investments in the community. So don't horde the reserves. Make the actual investments in your communities. Borrow money. Build the infrastructure. Repair your schools. Repair your roads. Improve your water infrastructure. Build broadband. All those things that you're getting funding for.

And that will grow your economy but also it would demonstrate to your, you know, taxpayers and your citizens that you are doing the right things for the right reasons. And you're not doing this in a very temporary basis or haphazard basis because we are seeing what I consider to be a temporary change in our economy and not a permanent situation.

MR. WESSEL: So, Kate, when you look out over the next 12 to 24 months what are the two or three things on your worry list?

MS. NASS: Two or three, okay.

MR. WESSEL: I'm trying not to go into that. Don't you think to have a worry list?

MS. NASS: Yeah, exactly. Well, I think those of us that work in budget pretty much are worriers. Like if we're good at budget, it means we probably are worriers so when we say two or three.

The ones that keep me up at night right now is the shift of moving from go, go, go, spend, spend, spend to slowing it down. And like we talked a lot about and Sharon was just mentioning this is that the structure work. We've been trying to get that money out the door. Of course, cost of construction is expensive and all that kind of stuff. So it's a little

– things are coming in. Projects are coming in at higher cost than we expected so we're having to adjust for that, which so far, we're having those conversations.

But as we move into how do you slow down? That's going to be a pretty hard transition. We haven't had in Oregon really – we haven't had a true real recession from budget, program budgets, since the 2008, 2009. And for us it was the 2011 and '13 biannual budget that was really difficult for us. And we haven't had that first. I mean it's been a while.

And so, those people – the people that have been our new members in the legislature, new administration, new agency directors, new program directors, we've had a significant turnover since then. We haven't dealt with those kind of reductions yet. And how do you put those together? And how do you weigh the new amazing things that we've just moved forward with, with our core programs that have been going on for so long? And how do you have those conversations to make those priorities?

And depending on – I think we're all seeing this kind of slow down or whether it's a true recession or not or when that hits, but seeing that slowdown is going to be kind of just how do you actually move towards implementation of a slow down without burning through your reserves right away? So it's great that we have our reserves, but without knowing where that bottom of any kind of slowdown looks, we don't want to burn through in the first time we see that revenue forecast go down.

And so, we want to – or slow. And we want to be able to adjust for that. I think that's to really say the thing that's really keeping me up at night.

MR. WESSEL: And so, if the governor called you said, Kate, I've been reading all this talk about recession in the papers. Do you think we're going to get a big dallop up of federal aid? What would you tell her?

MS. NASS: Right now? I would say not to the extent that we've seen

before. I would hope there would be something, but I don't know. I think what we're used to in the last two years, I don't see that coming again. And so, I think we should level our expectations on that.

MR. WESSEL: Thanks. So I want to give Stan and Louise the last word maybe a minute each because anything you want to hit that we haven't hit already? Or anything you want to reinforce, Stan? And no is an acceptable answer.

MR. VEUGER: Well, not that. I would say that I agree with Kate's comment that the big challenge right now is to try and slow down the spending a little bit and transition to a new more sustainable budget path. In part, just because we're in the inflationary environment we're in.

And so, I understand some states are forced to, you know, do debt rebates and the like with the surplus that they have. But I think it's important to limit those as much as possible. Now, I agree with Louise that it's not enormous numbers but, you know, every little bit helps on some level.

MR. WESSEL: Louise?

MS. SHEINER: Yeah. I just want to say that I don't worry too much about the recession that's coming. I mean obviously it's possible that will be really bad, but we're sort of coming down from a very high level and that's slowing down.

But I do really worry that we're going to overlearn the lesson of this recession for future recessions that are really sort of more, you know, demand in bad recessions not making the fed that says, oh, you don't have to give state and local governments money because we gave them so much. And then we're going to be back in. So I want to try to make sure that this pandemic was a really unusual recession and that we should not learn the lessons from the past which isn't typical recessions that state and local governments should be giving it.

MR. WESSEL: Right. And with that we're going to take a 10-minute break and then come back. We have a couple of really good papers. One on the financial cost of anti-ESG policies in Texas. And another on the information content of municipal financial statements.

And as I said earlier, we're going to have a couple of informal breakout sessions at 1:45 p.m. and you'll have to join those on Zoom. And there are instructions how to do that on the event page or if you have a problem, you can use Sli.do or the Twitter #Unifinance and we'll help you do it.

So with that I want to thank Stan and Louise for their papers. And Nick, Kate and Sharon and Tracy for their contributions to the conversation. It's always hard when you have so many people and limited time to cover everything, but I think we actually covered a fair amount of territory. So with that stay tuned and we'll see you all back here at 12:30.

(Recess)

MR. WESSEL: Welcome back to the Municipal Finance Conference. On behalf of the Hutchins Center at Brookings and my colleagues at Brandeis WASU and the University of Chicago, thank you for joining us. We have two really good papers to follow and I'm going to turn the session over to Tim Coffin of Breckinridge Capital Advisors who is going to moderate the next session. So thank you. Tim, the floor is yours.

MR. COFFIN: Thanks, David. Hi, everybody. Nice to see everybody virtually and a great start to the conference so far. So again, the next session is going to be the presentation of two papers by their authors and that will be followed by observations and comments from the discussant, from a discussant.

And I'm going to each introduce them separately, but right before each paper. So there's no panel in this part of the presentation. In fact, you're the panel. The

audience is the panel. And so, with that in mind please if you have questions visit the Sli.do website and enter the code uni-finance, all one word, capital N, capital F. And make sure those get in. And they'll get forwarded to me in the chat function.

So each of these papers, we get 35 minutes. So that's a brief amount of time for all the work that has been put into these. I'm kind of thinking like 15 to 20 minutes from the authors, another five to 10 minutes of observations and comments from the discussant and then hopefully a five to 10 minutes of answering your questions. So if I sense we're running long in any of those, I am going to take the liberty to interrupt, but if I interrupt you please understand it's just a courtesy.

And anyway, so our first paper we'll get right to it. The presentation is on the paper *Gas, Guns, and Governments: The Financial Costs of Anti-ESG Policies*. And the authors of this paper are Ivan Ivanov. He's a principal economist with the Federal Reserve Board. And Dan Garrett from Wharton. Dan is an assistant professor of finance. And then the discussant following will be Treasurer Zach Conine, he's currently serving as the 23rd State Treasurer from Nevada. A role which he was elected to back in November of 2018.

So I'm going to turn it right over to you Ivan and Dan. And thanks. And keep the questions coming in.

MR. GARRETT: Sounds great. Thank you. Thank you so much, Tim, for the introduction and thank you so much to all of the organizers and sponsors for this event. It's a huge, huge privilege to be here. As an academic, I'll say it's kind of the highlight of our year to actually get to talk to the practitioners and the people engaging in the municipal bond space with our research and try to see are we doing something that's worthwhile?

So this is, I should note, joint work with Ivan Ivanov. And the views expressed in this paper are those of the authors and not those of the Federal Reserve Board

or the Federal Reserve System.

So let me jump into it and tell you about the kind of new conflict over ESG policies that we're observing right now. So there's a huge amount of interest in environmental, social and governance impacts of investment decisions. This interest has skyrocketed in recent months. We've seen this manifest in a variety of ways.

One of these ways is that investment inflows into these environmental, socially and governance related funds has more than doubled between 2019 and 2021. It's really large amount of money at this point. But what I really want to talk about today is that many large banks in the U.S. have committed to some sort of ESG policy or set of ESG policies and try to take into account the social, environmental and governance related impact of their decisions.

So banks are really important. I don't think it's probably too controversial to say that banks are really central in intermediating credit to households, businesses and governance. They do a lot to push capital to where it will be used, consumed or invested into production. So they have this outsized importance for the adoption of these ESG policies. And so, we think their policies are pretty important.

And there's already – let's say, there's a lot of research in recent years saying that fossil fuel companies are facing increasing scrutiny in credit markets as a result of these kind of policies on the part of banks. And so, what really the key to our paper is a governance that are dependent on these firms in conflict with social factors. And we try to punish banks who are engaging in ESG adoption.

So this happened a few weeks ago in a Wall Street Journal Op-ed where former U.S. Vice President Mike Pence called on states to adopt, "measures to discourage the use of ESG principles." And one of those measures is kind of what this paper is about. And so, our paper wants to answer the question what are the costs of such actions taken to

punish a bank that has some ESG adoption? And why are the costs what the costs are?

So we want to characterize and assess the impact of anti-ESG laws on effected market shares. We're going to start by focusing on a large regulatory change in the state of Texas. This was called Senate Bills 13 and Senate Bill 19. These barred Texas municipalities from contracting with banks that limit funding to oil and gas companies or firearms companies in certain ways. They were both implemented in September of 2021 so just a few months ago. And the laws led to, by our calculation, the abrupt exit of five of the largest underwriters in the state.

So what we can do is we can identify the effect of these anti-ESG policies on market participants. So we can say that they are borrowers in Texas who used to rely really heavily on these exiting underwriters or what I'll refer to as targeted underwriters. And these municipalities with more exclusive reliance are those that we see are most effected.

So just to give you a highlight of where we're going. What we find is that these municipal borrowers in Texas, which I will refer to as issuers, were previously reliant on targeted banks. Are much more likely to negotiate pricing instead of holding an auction after these rules come into place. They receive worse pricing on bond offerings. Our estimates suggest when taken at face value that this suggests $300 to $500 million of additional interest costs on the $32 billion in borrowing in the first eight months after the rules.

We also see some really changes in how these bonds are placed. So we see an increase in underpricing and we see an altered placement in the secondary market that is consistent with kind of the new banks having a different placement style than the banks that wind up leaving the market.

We're going to put most of this vexed on two channels and mostly on the first channel. First underwriter competition decreases. So we're actually able to look and

zoom in on the competitive deals and look at the auctions that take place in Texas. What we can see is people who used to underwrite with these five targeted banks, given that they still hold an auction, they get a lot less bids. They get higher bid variance and higher winning bids. Just kind of consistent with a decrease in competition in the market.

We're also going to go through this placement that is reliant on smaller issuers. So we see in the first few days after a bond is issued is it being placed with investors? It's placed with a much larger number of smaller trades. So it looks like the trading patterns are a little bit different in the secondary market. So it looks like there is some real effect here on how these bonds are placed and not just a peer competitive effect. Although, as we have time, I'll talk about how the competitive effect is the largest.

So let me tell you a little bit about the background and about Senate Bills 13 and 19. So to give a really bird's eye view, we see it as some Texas lawmakers saw this rapid adoption of ESG policies in banks as bad for their state. Or as the Adams-Heard article in 2021 described it. If you boycott Texas oil, Texas will boycott you. So as with Governor Abbott with the new law.

So Texas Senate Bill 13, this was originally put forward in March of last year. What it does is it bands municipalities from contracting with banks that have certain environmental policies. So they're no longer essentially allowed to participate in public finance in this state. There was a companion legislation that was passed a month later which was Senate Bill 19, which was intended to be protective of firearms firms. This is called the Firearm Nondiscrimination Act.

It prohibits governance in Texas from contracting with lenders that limit business with the firearm industry. And so, this was also implemented on September 1, 2021. So I'm not going to kind of disentangle these two things, but we're still going to get the combination of these things starting on September 1st of last year.

Texas, I think we should all care quite a bit about. Texas is a really massive market. So they have about $50 billion of bonds issued a year or about one-eighth of the total U.S. municipal bond market. We usually think of them in this space as being generally competitive. In the underwriting data we see 62, what we describe as regularly active underwriters.

And the issues are representative of the public finance market. They have a combination of short-term notes and very long-term bonds. The kind is relatively representative of what we see in public borrowing in the rest of the U.S. And so, for this reason there are a bunch of papers that focus on Texas in particular.

Also, Texas has a history of setting legislative agendas that other states can follow. I should note there's a lot of literature going into what's happening and a lot of articles going into what other states are doing right now. So there are a large number of other states that are contemplating the same or similar rules as the Firearm Nondiscrimination Act including Oklahoma. And so, this is not something that's just restricted to Texas. This is something that I think by the end of this presentation I'll convince you it is something that we should expect more of going forward. Okay.

The data sources here are relatively straightforward. In particular, I want to highlight we're using the basic data from Mergent, Mergent's municipal database. And it's going to cover all of the basic characteristic of bonds. It's going to cover our offering yields and our identities of the underwriters.

So what happens on September 1st is that we see a lot of really big banks leave the market right away. So we have a data different approach to try to identify which banks wind up leaving the market. And so, we have a series of tests for being a large bank that does not submit a letter to the Attorney General's office in Texas that underwrote at least five issues before September of 2021 in Texas and underwrites at least five issues

outside of Texas after September of 2021.

So this gives us a list of five banks, Citigroup, JP Morgan, Goldman Sachs, Bank of America and Fidelity. These banks historically underwrote kind of between 10 and 40 percent of the market on any given month on an average right around – well, 25 percent of the competitive market and about 35 percent of the overall market. So we think these are really substantial share of banks.

And they were consistently a large share of the underwriting market. In September here, this is the dash line I've written on the graph. The market share drops to zero. So none of the underwriters underwrote an issue in September. We can see later on, and I'll talk about this a little bit, Citigroup has been trying to reenter the market. So I've included Citigroup in the solid blue line. The dash red line doesn't include Citigroup so it's only the other four banks.

So we see they were a really substantial portion of the market and then they are just gone after these rules. And so, we're going to try to see what sort of effect this has on the market. So our empirical approach here is we're going to compare issuance outcomes around the implementation of the Texas law.

So we're going to be looking at particularly from 2017 up through April of 2022. And we're going to be trying to say, what happens to bonds issued by Texas issuers who had relatively more of their previous bonds underwritten by exiting banks or what we call targeted banks after this rule? So essentially, after these banks leave what happens to the borrowing outcomes for the issuers who used to hire these underwriters?

So we're going to use what we call a difference in differences specification. Where essentially we're just going to find this targeted share for each issuer I where targeted share is going to be the standard deviations of what share of your previous bonds were underwritten by these targeted banks. So one standard deviation is saying 24 percent

of your bonds were underwritten by these banks. And so, it's kind of what we can think of (inaudible) we're going to compare an issuer who never underwrote with these banks before to an issuer who had 24 percent of their issuers underwritten with these targeted banks.

Our outcome, we're going to be looking at here in particular is going to be the offering yield and a dummy variable equal to one if an issuer uses a negotiation to place a bond. I should note that we're looking at September of 2021 through April of 2022. So one big concern is that interest rates were secularly rising quite a bit during this period.

So we're actually going to use this 5-sub-T characteristic. This is going to be a day fixed effect so we're only going to compare bonds that are issued on the same day. So essentially, we're going to take out any of this kind of change in prevailing interest rates and only focused on variation across different types of issuers to try to get around the fact that interest rates are not constant during this period.

We're also going to be looking at only where an issuer fixed effects. So we're only going to be looking at changes in issuance outcomes relative to the issuer's own historical outcomes. So this is going to be getting around the fact that there could be changes in the composition of who issues bonds in Texas.

So with that let me jump into some of the results. So first, I'll say the first outcome we look at is do you hold a negotiation or do you have a competitive sale? And so, I'm going to focus our attention here on this first column, which is going to be within Texas comparing issuers with one standard deviation more alliance on the targeted underwriters to an issuer with one standard deviation less.

So we see is they – at one standard deviation increase in reliance on these previous underwriters leads to an eight percentage point increase in the likelihood of having a negotiation instead of a competitive sale. This is economically a striking result. In Texas about half of the bonds are placed by negotiation instead of competition. And we think

negotiation is really important because this tells us the negotiation has a lot of flexibility that a competitive sale doesn't have.

And so, there's a lot of old literature that kind of says a negotiation is a really good thing to do if you have a very uncertain outcome in the market or if there is a high level of market uncertainty about what the interest rate could be or about whether you will be able to get financing at all. That you might want to negotiate because it gives you some flexibility.

And so, we do see it looks like issuers think that there is a lot of uncertainty in the market and so they're fleeing from competitive sales to negotiated sales. If we focus here on the fourth column and we look at only those issuers who have more than half of their previous issues underwritten by these targeted banks. They have a 25-percentage point increase in the likelihood of negotiation. Essentially you can think of that as going from 50 percent to 75 percent likelihood of negotiating.

And so, if we actually – we can graph this out of our time. So these are end quarterly estimates going from the first quarter of 2017 through the second quarter of 2022 or through April of 2022. We can see historically from 2017 all through the craziness that happened during the COVID period. There's not a huge change in how negotiations versus competition are done. But there's this massive spike for these borrowers after September 2021.

And so, I should note the statistical significance of these final three coefficients equal to that fourth column in the previous table where it's a strongly significant 25 percentage point increase in the likelihood of negotiation.

When we turn to offering yields, this is what we think of kind of the policy relevant, our cost increasing. Again, if we focus on this first column at one standard deviation increase in the targeted share, we associate with a 9.7 basis point increase in the yield. And if we focus on those really most exposed borrowers, we say that if you have more

than half of your previous bonds underwritten by these banks that you have an almost 40 basis point increase in your borrowing costs. This is economically massive.

I should note in the time series, we can see the same thing where it's pretty consistent from 2017 through the craziness of COVID. Then we see a striking increase and again the pooled coefficient of these three coefficients is statistically significant at the one percent level.

So let me put these magnitudes into kind of something useable here. So once one standard deviation increase in reliance, we say is associated with a 9.7 basis point increase in yields. If we multiple that by our average reliance on these underwriters which again I told you is about 35 percent so 1.59 standard deviations. If you multiple by the total amount of borrowing and the duration of these bonds, you get an idea of how much more money would tax municipalities have raised if they had raised this – issued these bonds at a yield that was 9.7 basis points lower per standard deviation of reliance on these banks.

This gives us a magnitude of .3 billion dollars or $300 million for all of the borrowing done in Texas during the first eight months after this rule. So I'm going to skip this for the sake of time. I just want to mention instead of comparing within Texas, people who are more and less reliant on these targeted underwriters. We can instead compare Texas borrowers who were reliant on these underwriters to borrowers in other states, say, Florida or Illinois or any number of states. But we do all the states and then we do different groups of states.

But we can essentially compare within Texas, these borrowers that used to borrow through JP Morgan or through Citigroup, they're really large. And so, we may think they're different than different borrowers who didn't borrow through JP Morgan before. And so, essentially, we're going to try to compare people who got underwriting with JP Morgan and underwriting in Texas and underwriting with JP Morgan outside of Texas.

And so, when we do that we actually – in the negotiation we see, remember our original coefficient was eight percentage points, now it's 7.9 percentage points. It's still very, very similar when we compare these exposed borrowers in Texas to similar borrowers outside of Texas.

And for the sake of time, let me jump to the yielder's part. This is the really important one so in column two, this is our kind of referred specification of one standard deviation increase in reliance on these targeted banks in Texas. It is associated with 12.4 basis point increase in cost. So it's actually bigger when we compare Texas to the states outside of Texas instead kind of Texas exposed borrowers to unexposed borrowers in Texas.

We can do a bunch of robustness. So essentially, there are a lot of decisions we have to make as we try to do these comparisons about what is the comparison group? How do we structure the controls? How do we structure the actual measurement of our variables? We actually find very, very similar results across a bunch of different specifications. So we think this is a very robust result. Texas borrowers are paying a lot more after they lose access to these five underwriters.

So just briefly, I want to mention two channels. So we can look at just when we restrict to the set of auctions. We can say – we can look at three outcomes using our original kind of difference in different specification where we can say, are the winning bids going up? Which is defined in terms of yield to maturity. Are the number of participating bidders going up or down? And is the variance of submitting bids going up or down?

I'll note for all three of these outcomes, the targeted shares associated with an increase in the winning bid or since you're paying more interest on the bonds, it's just one standard deviation is increase in targeted shares associated with about .77 less bidders and an increase in bid variance. So all of this is consistent with the idea that market competition

is decreasing as the number of bidders and they're shading their bid. The remaining bidders are shading their bids quite a bit more.

Also, we can look at the placement of these bond offerings. So we know that the kind of role of these underwriters is to place bonds with final investors. So the targeted underwriters are just potentially different than the remaining underwriters. They usually have large national distribution networks. And so, it's likely that the issuers have less access to these specific networks of these banks after the law's implementation.

And so, we do see this as increased underpricing. Although, the effects we see on underpricing are quite small. They are statistically significant in some specifications. But what we really want to focus in on is, is anything just kind of look different about how these bonds are placed? So I want to show you three outcomes here, which are the log number of trades, the log trade size and the total volume.

I'll note first customer volume is increasing and statistically significant at the one percent level. Dealer volume is statistically kind of a mess so I'm not going to look at these DR columns too closely. Customer volume is increasing, but it's worth noting that average trade size is decreasing substantially by about 13.4 percent and a number of trades are increasing. So although we do see kind of an increase in volume, which you might think of is good for liquidity. This is a real difference in how these bonds are being placed after the rule.

I'll just briefly note before I conclude. There is a mechanical impact of some of these choices. So you can say, we show there is a big move towards negotiations, right? And so, we want to get an idea of how big could this increase in negotiations be in terms of explaining the results we see in higher borrowing costs.

So there are several papers here. I know there have been papers here presented at this conference before that define estimates of large cost increases or in terms

of the yield to maturity for bonds that are issued via negotiation instead of by competitive sale. So how much does that explain?

So we say that explains about 1.5 basis points of our 12 basis point effect or about 12 percent of our total effect. So that increase in negotiations as a share of driving the cost increase is very small. Of the underwriter identity, we think of as nesting things like what is the distribution network of the underwriter? Is this underwriter able to place bonds with the investor with the highest value?

So we can try to say – and we use a series of underwriter fixed effects in trying to define this. We find that this only explains about 17 percent of the yield increase. So when we combine the switch to negotiations and the mechanical impact of underwriter identity, who you might think of as kind of nesting this change in how bonds are placed. It only explains it a total of 29 percent of our cost increase. So about nine basis points is remained. Is unexplained by the observable changes of the offering and underwriter type.

So the story I want you to takeaway is there is a big change here. There's a lot of changes in behavior, but the yields go up a lot more than can be explained by the changes in behavior. And so, this is really indicative of likely that competition is kind of our driving factor here.

So let me briefly conclude. ESG policies can pose a significant challenge for jurisdictions that are reliant on what we think of as less sustainable industries such as oil and gas or firearm manufacturing or et cetera. So this Texas law really highlights how governments around the world, not just in the U.S., can respond to ESG policies in an attempt to punish banks. I do want to highlight in the U.S., I think we're going to see a lot of these fights in this municipal space. This is something that states have a lot of control over. How they can do government procurement of financing. And so, I think this is a place we're going to keep seeing this happen.

It's worth noting banks do leave the market. The ESG policies for these banks are not purely green washing. The effective governments do incur higher borrowing costs and a lot of reduced access to external finance that we see manifest as a striking increase in the amount that they're paying for financing costs. I want to note that I don't think this is likely to be a U.S. only phenomenon.

As economics around the world attempt to undo ESG policies through the financial sector it's likely that they're going to face adverse consequences as selected banks. And potentially largest and most national connected banks are those that are going to leave the markets. So thank you so much for having me. I'm really excited for the discussant's comments and for questions from the audience.

MR. COFFIN: All right. Thanks, Dan. That was great. So we have about 10 minutes left. Now, Treasurer Conine, why don't I turn it over to you. There are a couple of questions. So if you are able to leave a couple of minutes, but obviously I want to give you the opportunity to speak. Thanks, Dan.

MR. CONINE: Always hard for a politician to leave a couple of minutes on the table, but I will do my darndest. Thanks, Tim. And thanks to Dan and Ivan for the paper.

And this is a conversation that we actually have a lot. So just a little bit of background. As the treasurer of the state of Nevada, I am the issuer for the state. We have issued about $675 million worth of bonds since I became treasurer in 2019. Of course, that doesn't include bonds that were issued by local school districts or water treatment centers or the rest.

So we issue a fair amount of bonds in Nevada at least for our size. And this conversation comes up a lot. Especially in the West. Recently actually, the state of Nevada under my leadership did a little bit of change.

We are no longer working with companies that support the manufacturer or

sale of assault style weapons defined based on a law that we actually took from the state of Rhode Island and my friend, Treasurer Magaziner, over there who had basically updated the 1990s firearm law.

So this is a conversation that's happening each and every day, you know, and we amongst treasurers are always looking for information like this. So let me start off with thank you because this is information that will be used in the field quickly. I think we'll probably use it more on my side of the aisle than the other side of the aisle because it supports our thesis. But, you know, government.

So a couple of quick comments. You know, one is in some states if you don't participate in one section of financing, you're not able to participate in another. And I was wondering, Dan, if you looked at kind of secondary impacts or if you thought about looking at secondary impacts because there are some states where if you do not bid in a municipal space, you're not able to provide other banking services, right?

And they really try and make sure that if you're participating in one section or not participating in one section that you're doing it on the other side. And so, I wondered if there was any look at kind of the crossover? Not just municipal issuance but in other facets of government?

MR. GARRETT: Do you want me to respond to questions now? Or do you want to go through all of your kind of comments and then I can respond at the end?

MR. CONINE: Tim?

MR. COFFIN: Why don't you respond to that if we're just – I'm keeping an eye on the clock. We're going to try to end this session at 1:05.

MR. GARRETT: Okay. So I'll be really quick. We have not looked into this specifically as something we really want to look into. I'm not familiar off the top of my head with the source of these kind of data requirements to say who you have to bid.

So that's something that we definitely do want to look into so we are in the process of looking into things like customer lending, mortgage lending, small business lending, these sorts of things to see if there are any kind of spillover effects in these other markets. We have not done it yet. That is something that we absolutely need to do.

MR. CONINE: Okay. And my last question and I'll go quick here. One of the things we wonder looking at this is obviously when you have new underwriters coming into a space, they typically are a little bit more expensive especially if they are in the space due to the necessity of the issuer as opposed to say them trying to break in and maybe trying to price a little bit lower to get new business, right?

And so, I'm wondering does this sort of mitigate over time as the market corrects, right? Do those new issuers – those new underwriters, excuse me, have to sort of get a little bit lower? Or are they just setting a new watermark for the market because of the necessity? And that's my last question. Thanks for having me.

MR. GARRETT: That is – I thank you so much for the question. This is a really good question. I think is the heart of one of the things we wish we could do perfectly and we're not quite able to because we only have eight months of data. And so, we don't get to see the full future to know kind of what things would look like on a world where – and maybe we will someday.

But to know kind of will entry be sufficient enough to drive down borrowing costs from the way we see them being elevated now? There could be. And I think there's a chance it could. But I think one really salient feature of this change has been the people who left are very large and they were a huge portion of the market.

And any entrant into the Texas municipal underwriting space who has the same characteristics as them. It was a large national global bank also has some incentives to have whatever socially responsible policies their investors want. So there might be some

entry. And I think entry is something that we expect Texas as a pretty healthy competitive market. It's a massive market so we think that there are some incentives there for people to enter. But unless they really have the same characteristics as these exiting banks it's not likely that we'd ever see the borrowing costs drop down to exactly what they were before.

So I think there's some truth to entry being good, but maybe not. Potentially not sufficient because of the whole selection of who left.

MR. COFFIN: And that's actually a good segue to one of the questions from the audience which was, you know, Texas is big and banks left the market. And, you know, how are you going to consider this if you start seeing in other embellished states? Have you modeled that out at all? Or is that next year's paper?

MR. GARRETT: That's next year's paper to see kind of what happens. Like that list of states I put up. There could be – so the calculus we think of as these banks kind of making this decision as they're facing a tradeoff, right?

They want to have their social and environmental stances for other stakeholders, their investors, whomever. But then also they do think the Texas market is profitable. I mean we see credits – or excuse me, Citigroup regularly trying to get back into the Texas market.

So it's clear that Texas was profitable for them in some way. So they would prefer to be in Texas instead of out of Texas. And so, if that group of states becomes, say, 50 percent of municipal bonds market instead of one-eighth of the municipal bond market does that change the tradeoff that Citigroup is making if they're designing their kind of policies?

I think it changes the tradeoff a little bit. I don't think it would be enough for a bank like Citigroup that has their hands in so many different things to change. But this is not something we're directly modeling in the paper. It's kind of a different set of questions,

but a really good one.

MR. COFFIN: And I'm actually going to take a little bit of liberty to tweak this next question a little bit because it's a question about other sectors besides kind of political sectors.

So what about a – have you seen anything from healthcare issuers or some of the more revenue enterprise oriented issuers as opposed to political issuers?

MR. GARRETT: So the all issuers in Texas as far as we can tell are subject to Senate Bills 13 and 19. So if you were a borrower in Texas. So this is, for instance, one of the kind of contentious moments in the last few months has been Dallas, Fort Worth, which is --

MR. COFFIN: So just to – that makes – so your answer makes it so I shouldn't have tweaked the question because the question is better than I gave it credit for. How is this impacting lower quality (inaudible) where there are fewer underwriters to show up at those deals to begin with, right?

MR. GARRETT: Yeah. So we think the marginal impact of competition is likely larger the less detention you're getting. And so, kind of losing one bank paying attention to you is bigger if you only have three banks paying attention. And if you have 15 banks paying attention.

So I think it's likely the case that – or what we might think of as a lower – or with lower kind of rated or what have you. Getting less attention from the market borrowers that they could have a bigger effect. I think that's absolute plausible. Right now in the paper, we control for this. So given that we only have eight months of data. We don't have like an infinite amount of data to slice the data as thin as we would like because we only are working with a few thousand issues already.

But yeah, I think it's absolute plausible and given the fact that we see kind of

competition --

MR. COFFIN: It has a multiplier effect from a liquidity standpoint? For when liquidity borrowing was a premium.

MR. GARRETT: If liquidity was already a premium, it could be the factor that that premium becomes part of it. Larger, yes. That's where we could see the biggest effects.

MR. COFFIN: Interesting.

MR. IVANOV: One thing if I can add here if I may?

MR. COFFIN: Sure.

MR. IVANOV: So I think that's exactly the case. And I think what this kind of uncertainty that Dan showed you may have gone to the market is that some of these smaller and riskier issuers may not have gone to the market and trying to weigh it out, right? So the effects would model that we show maybe a lower bout of the actual effects.

MR. COFFIN: It's interesting. That's a good observation. Thank you, Ivan. And I don't know where this comes in from a protocol standpoint, but I'm going to take advantage of my role with the microphone here. I do as of – so Breckinridge, you may know, we've been integrating the ESG now for over a decade. And I would like to point out that I think a lot of – and you're not alone here, Dan.

Everybody is conflating ESG with negative screening. And they really are two different things. Screening out sectors whether it's – well, I mean screening out sectors really – was really pioneered by faith-based investors. So I mean Quakers have been screening out treasuries and other kind of events, you know, that they believe are conflicted with their faith. Catholics often screen out pharmaceuticals and life sciences. And certainly, environmental foundations and schools and universities sometimes will screen out fossil fuels.

But ESG by design is really an investment philosophy that is intended to take a more holistic view of risks and opportunities by better understanding the sustainable business practices of companies or local governments. And how well they will – you know, it's about raising your sidelines on the horizon and considering things like whether it's climate or governance factors or social issues and things like that.

So ESG really is not political. It is about identifying sector specific decision useful sustainability factors that give investors a more holistic view of what they're investing in over the medium to long term. So just using my position here. You're not – everybody is getting a rung, but they are two different things. Negative screening is a policy decision. ESG is an investment decision.

MR. GARRETT: I appreciate that. That's something that I think we could do a better job being really clear about. So thank you.

MR. COFFIN: Well, thank you. That was a great presentation and, Treasurer Conine, thank you for your observations. It's an interesting point as well. And so, here we are right on time for the second paper.

And this is the – the title of this paper is the Information Content of Municipal Financial Statements. So we have the authors of this paper, Christine Cuny. I hope I'm pronouncing your last name correctly. An associate professor of accounting at the Sterns School of Business at NYU.

And Ken Li is an assistant professor of accounting and financial management at McMaster University in the great province of Ontario. And Anya Nakhmurina is the assistant professor of accounting at the Yale School of Management. And also, Edward Watts. Ed Watts, he is also an assistant professor of accounting at Yale. So those are the authors of the paper who will be presenting it. And then Ivan is switching hats for this panel and will be the discussant. And again, Ivan is an economist with the

Federal Reserve Board.

So I'll turn it right over to the authors. Again, let's try and follow kind of the same way. We have 35 minutes, let's try and do kind of 15 to 20, followed by five to 10 and five to 10.

MS. NAKHMURINA: Okay. Great. Thanks, Tim. So I just want to start by also thanking the organizers for the opportunity. We're like Dan, we're very eager to get feedback from people that deal with these issues every day.

So that's, Dan, we're going to, you know, within this governance umbrella, we're going to shift things now to a slightly different topic, which is disclosure. So essentially what we're doing in this paper is we're revisiting a question that's been looked at a lot in the corporate space. Which is do municipal financial statements have information content?

And this is a question that has not been recently addressed in the municipal space where only two studies. And both of them use hand collected data from the 80s and 90s to answer this question. So, you know, we thought that the world has changed a lot since then and we should revisit this with big data.

So essentially what we're going to do to operationalize this question is we're going to look at the entire universe of annual disclosure filed in EMMA since 2009. And we're going to look at trading around those disclosures. And if these disclosures have new value relevant information, we expect to see heightened trading.

So the kind of theoretical underpinning for that idea that we should see heightened trading is essentially illustrated in this figure here. So basically, the idea that before the disclosure investors have heterogenous beliefs. So they all believe different things about what the value of a bond is. The disclosure comes out and the investors update those prior beliefs differently and we end up with a new kind of post-disclosure value, a belief for each investor.

Okay. So with that kind of framework underlying our question here. There are a lot of reasons to expect by trading will not increase around municipal disclosure filings. So the first reason is that there is evidence from the 80s and 90s that there's no investory action to these disclosures. So, you know, maybe the world has not changed the much and we're not going to see heightened trading.

MR. COFFIN: Christine, I just want to interrupt you. It looks like your slides are not advancing. Is that intentional?

MS. CUNY: No. They should be advanced. All right. Maybe I'll stop sharing. Can you see it now?

MR. COFFIN: Okay.

MS. CUNY: Yeah, you're good now?

MR. COFFIN: Yeah, good.

MS. CUNY: Thanks, thanks. Okay. All right. So I'll just stay here. So I was just saying that there are a lot of reasons to expect that trading won't increase around disclosure filings.

One of the reasons is that these disclosure as all of you probably are aware, they're really untimely. And there's a bunch of survey evidence that says untimely disclosures are not likely to be useful.

The third reason not to expect trading is that these are low risk securities and it's costly in terms of time and effort to monitor for new disclosures. So that would also lead to no trading. And finally, there's, of course, high retail participation in this market. So the cost of, you know, understanding what's in the disclosure can also be quite high.

Okay. So the flip side of that. You may expect trading around financial disclosures for a couple of reasons as well. So the first reason, this happens in the corporate equity and the corporate on space. Investors trade around earnings

announcements. Another reason to expect that you might see trading is based on survey evidence again. So in the Municipal Finance Journal there's a study that surveyed municipal analysts and found that 80 percent of analysts believe financial statements are useful.

The third reason. If I take you back to this slide that you didn't see. This notion that before the disclosure is filed, we have this diverse set of beliefs that should be particularly true in the muni space because there's not a whole lot of alternative sources of information.

And then finally the last reason you might expect to see trading is that a lot of things have changed since the 1980s and the 1990s. So we have the internet. We have EMMA. We have better access to information. And so, that could lead us to believe that we might expect to see trading around municipal financial disclosures.

Okay. So let me talk a little bit about the data that we used. So what you see here is a snapshot from EMMA, which I imagine a lot of you are familiar with. So basically, you go to the EMMA site. You type in a CUSIP or an issuer and you have an option to go a continuing disclosure page where you'll just see a list of disclosures that have been filed. And they're categorized as you can see.

And what we're interested in is the first two categories here. The annual financial information, which is usually unaudited financial statements. And the audited financial statements which are also sometimes called CAFRs (phonetic) or AFRs (phonetic).

Okay. So this gives us a giant dataset. So we've got roughly 413,000 disclosures from 2009 to 2020. When we link those to individual bonds that's about 8.3 million bond disclosures. And then we're going to look at a five-month window around the disclosure filing. So when we take each bond disclosure and look at the five-month window, we've got about 40.6 million bond disclosure month observations so it's very large data.

What are the disclosures? It's a roughly even split between the audited and

not audited financial statements, slightly skewed towards the audited. Let's talk about timeliness because timeliness is, you know, a large ongoing concern in this market. So this is just a plot essentially where on the Y axis you have the probability, the cumulative probability that a disclosure has been filed from zero to 100 percent. And then along the X axis, the number of days that have passed since period end.

So the line over here towards the axis is the median time to file a 10K. So after 54 days after year end, not very many municipalities have filed the initial statements, of course. Roughly, let's see, 50 percent of our sample have filed after 191 days. And once you get a year out, about 90 percent of the sample has filed. So these are not very timely disclosures but there's a lot of variation on how timely they are.

All right. What are the bonds for? About a third of the sample is for education, primary and secondary education. Another third is general purpose and then the final third is a variety of other things.

Okay. So we're going to look at trading activity around the financial disclosure filings. So how do we measure trading activity? So we're looking at it in three different ways. So we're going to look at turnover which is the percentage of the par value of the bond that's traded in a month. We're going to look at volume in thousands of dollars. Again, trading per month. And then the number of trades that occur in the month. And the reason I want to just show you these statistics is because if you look even at the 75th percentile, those measures are all zero. So as you know this is really a liquid market.

Okay. So what do we find? Well, this is just looking at averages. So we're not controlling for anything here. This is just simple averages in the six months around the disclosure filing. Okay. So what you can see here, this is using turnover. You see a spike in trading activity in turnover in Month Zero. The month the disclosure is filed and the month after. So Month Zero and One, we see a heightened trading activity. You see the same

thing with volume and you see the same thing with the number of trades. So we've got kind of corroborating evidence here across these three measures.

Okay. Now, of course, we should formally test this, right? So we put it into our aggression framework where we control for time and maturity, time since issuance and rating. We also include bond disclosure fixed effects so that in this five-month window for each individual bond, we're taking out the mean level of trading activity so that we can look at the individual bond and see kind of any variation that happens in Month Zero and One.

So this disclosure month variable that we have here, it's equal to one in the month of the disclosure and the month after. Okay. And what you see here after we've controlled for these things, you still see a positive and significant increase in trading activity across all three measures.

In terms of economic significance, this is about a one percent increase in trading, which seems small. But if you, you know, think back to how infrequently these bonds trade, you know, it's economically important even though it's not, you know, highly significant.

Okay. So this is kind of our main result that I wanted to share with you. It's in contrast with, you know, with the prior literature from the 80s and 90s. So it suggest that the world has changed since then. Now, we want to do a couple of, of course, tests to dive deeper into this and understand why this trading happens. You know, when does it happen? And why does it happen?

Okay. So the two things that we currently do is we partition by trader type. So this is just based on trade size. So it's just the standard cutoff of greater than 100,000 is institutional, less than 100,000 is retail. And so, we see across all of these measures that trading activity increases for both institutional and retail trades. So it's not driven by one or the other. It's both but increased trading.

Statistically, the retail increase is a little bit larger than the institutional increase, which does stand to reason, right, because institutional investors likely had access to some of this information prior to the disclosure. Whereas it is more likely to be new information for the retail.

Okay. We also partition on timeliness because, of course, timeliness is a regulatory concern in this market. So we split the disclosure sample into those that are the least timely. So the least timely is the core tile of the sample that takes the longest to file and then the rest are the more timely disclosures. So let's see. That is 261 days is the cutoff here.

Okay. So you can see visually here our findings really only exist for the timely disclosures. The less timely ones not surprisingly this information is either stale or already came out from another source. There's not a trading response around those disclosures. We confirm that, of course, in the regression framework we formally tested. So timely disclosures those are pronounced reaction. The least timely disclosures which is more than nine months after period ends, there is statistically no reaction.

Okay. So, you know, those are the kind of key findings that we wanted to share today. So essentially, just kind of recap. We're just revisiting this kind of age-old question, do financial statements have information content? And we find that investors trade around financial disclosure filings. It's consistent across retail and institutional. It's more pronounced when the disclosures are timely. And so, we conclude from that that municipal disclosures have information content. Okay. So I'll stop there. And I want to say, thank you, of course, to the organizers again and the discussant.

MR. COFFIN: Thanks, Christine. That was great. Really interesting. I have a lot of questions myself, but I want to first turn it over to the discussant, Ivan, for some observations and comments. And we can't hear you, Ivan.

MR. IVANOV: All right. Sorry. It's a little bit slow here. All right. Thank you very much for inviting me to do this discussion. Okay. First of all, I wanted to say the views expressed here are my own and not those of the Fed.

Okay. So I'm not going to spend too much time on this because the authors did a very good job with the talk. I just wanted to say that I was really like excited about this study and I am. Like still very much heard about it because it's very much the first one large symbol study of any other reports. And how the market perceives them and how much market aligns from them, right?

So if the author like mentioned already. I think this has been explored in prior work but mostly for really small samples and mostly a long time ago. And we know very well like all the things have changed in the market since then. And so, this is super informative to like what we should know to regulate this market.

So just very quickly. The authors find that activity goes up around when these annual reports are released in the market and these results are very stable. They're not sensitive of the control fixed effects and all sorts of changes in specification. And let me just dive into it because I don't have that much time.

So okay. So this is a great paper. I really, really like it. What I found really important about the paper is that it has like very far reaching implications. So you have benefits, large benefits to increasing the disclosures and making them more timely. So why is that? Well, because even like nine months after the information. Basically, right, nine months after these reports still carry a lot of value.

So my comment related to three main points, empirical setting. The authors I think can also do more in terms of showing some better geneity. And then there's some other points on the secondary market intermediation. And I think we can learn a little bit more on that end too.

So okay. So the first comment is very basic. I think the authors can easily deal with that. So my concern here is that the annual report maybe released around the time when issuers release other type of, you know, information. So one such example here is that issuers can release information about important events over the life of a bond such as bond calls and re-filings.

And I can give you these three examples here, these three entities that did exactly that. They released their annual report and then like a week or two later, they announced the refunding. So what I was wondering here is do you see this always happening around releases of annual reports or this relates only for some issuers?

And I think either way, you can account for it. You observed these data so you can either control for that information or you can separate the sample into those reports that tend to like release at the same time without having that information and those reports that are not. So this could be like something nice that you can do here.

Okay. So what I would like to understand more results if there is like trade trends. So charted that you show are very nice. So they basically show you how things evolve in event time. So far it seems like there's some weak evidence of pre-trends and reversals which is -- like which I think is not an issue at all for you. I think it would just change the story that you tell a little bit.

So to the extend that you have reversals this would mean that the municipal investors like wait for this information to arrive. They tell you the time this information arrives and they trade less after this, which is like fine for you. But the pre-trends are interesting as well. So I think you could look into that.

But again, I don't think it's an issue for you. This may mean that the market like expends effort to like understand what information would be good in this report. Or you may have some information leaks.

One other thing that I wanted to ask here is whether these reports are predictable? When they do they occur at the same time each year? So I think that's something that you could also easily answer. And I think it would be useful because to the extent of the market has some expectations of like where things would end up. Some of them more sophisticated investors may trade in the preemption to these reports. And I think you can like relay predictable to the ones that they're not predictable in terms of like how things go.

Okay. So the second point. I think I have a number of things that you could look into. I think that would improve the paper. You can look at the substance of the data where these annual reports are most informative. So you know from the prior work that large insurance, they tend to supply more information to the market. So these annual reports may not be as useful like among those insurers. But it could be more useful for smaller and midsize insurers, right? So you can look into that.

Information as we know is a lot more useful for weaker insurers or like bonds that may not be graded. And I think another aspect that I think would be good to like explore is that you can like slice a sample as to whether bonds are more or less liquid. I know that's tough because most bonds here are not very liquid. But I think the information maybe easier to, I think, incorporate into the substance that's liquider. So something to look into.

For the other ones, audited is something that I think would be nice to look at to it, audited reports have more information than the ones that they are not audited. And like, I know this is not related to your paper as much. But maybe you can look at whether it's informative and it also does change when market and certainty also changes.

And so, I think all these tests would be really nice to show, and I think they would improve the paper. I think we can learn more.

Now, my final point here relates to – like it's actually a few points in this point really. So I think it would be nice to see whether the trading activity comes from like dealer or customer trades. I know you have like a size split in terms of the trade, but I think in the EMMA data you can basically look at what was just in intermediation change trade or whether it was like an end user trade.

And I think that's important for how we interpret the results as well. For example, in the notation of the insurer here, you could have like a really long intermediation change, the first case right here. And so, this basically would imply like a relatively little like increase in overall end user trades relative to overall trades to the second case where you have like just one intermediary between the buyer and the seller.

Now, this would be helpful to engage how important for the market. These like reports are. I mean either way I think these reports are going to be like important, but they're probably going to be slightly more important in the latter case.

Now, the other thing that I think could be good to look at is whether relevance of these financial reports have changed over time? I know you're time series is not very long, but I think you could still do something on that end. Since '09, we have both information in trading cost being lower than they are now. So it might make sense nowadays for these investors to just pay directly rather than wait for the annual report to like arrive nine months later, right? So I think you could see my point here.

The other – the final thing I would like to recommend, I don't think it's a must have for you, but I think it would be nice to look at. Is basically, you can look at a normal returns around these announcements. I know that's some annual reports would require negative information, some reports would require no new information and some others would require positive information. But I would just look at the distribution here relative to the average month.

And I think I would like to recommend here a study by Cornelia DeNuen which I think you can use their methodology to build a normal returns. Okay. So I'm done here but I want to say again that this was a great paper. I learned a ton from it. It's a very, very useful paper for policymakers and I recommend everyone to read it. Thank you.

MR. COFFIN: Thanks, Ivan. That was very helpful. Christine, do you want to take a few moments? We have about eight minutes. Do you want to take a few moments to reply to any of that or do you want to –

MS. CUNY: I mean I'll just say, you know, thank you, Ivan, because those were all really helpful suggestions and they're all things that we should do. So that's kind of exactly the kind of feedback we were looking for so thank you.

MR. COFFIN: That's great. And then a couple of other questions just coming in. And this maybe related to Ivan's point about dealers versus customers. Although, I think maybe this could – did you look at all at the timing from an underwriting? From a new issue?

So secondary market trading tends to drop off pretty abruptly after a new issue comes to the market. And so, is some of this disclosure from official statements? Or is it all CAFRs? And is there any way to say how much of it might just be a new issue being digested by the market?

MS. CUNY: Yeah, I imagine my coauthors will want to chime in here. But this is all secondary trading. So we've excluded the new issue period here.

MR. WATTS: Yeah, and I think this points to a little bit of a bonds point kind of like pre-trend as well, and we should probably show it. Like if you just look at figures of bond age, it just plummets essentially. So there is downward secular tends.

So the fact you see a spike in general, it's kind of like it's biasing against it. But I think to the question, one thing we want to do and we just haven't had time is kind of

maybe there is additional trading around new issues kind of in the secondary issues where there's reallocations. And I think that that's interesting to know and something that we'll certainly want to kind of pull into the paper at some point.

MR. COFFIN: So the very notion of underwriting is the dealer taking bonds down into their inventory and providing liquidity. And sometimes, it can – I mean you have seen the charts before. The drop off – I mean everything from that point on becomes secondary trading, right?

And even though it's coming out the dealer's inventory because they've moved from their underwriting book to their trading book. And then they're eventually just kind of passing it off to their customers. So it might be – I don't mean to unpack this person's question too much, but it might be good, A, to look at the distance from the underwriting. Timing from an underwriting. And is the from a CAFRs or an offering AFRs that you're measuring from?

And then in terms of – I'm sorry. I'm just trying to understand the question as I read it here. In terms of least timely filings. Does a least timely filings have negative new surprises? So kind of the most random which would then lead to more trading and increases in yields?

MS. CUNY: Yeah. So yeah, that's a good question too. So at the moment the disclosures are unsigned. So we haven't really found a way to figure out what's negative. What percent is negative news because it's hard to know, you know, what did people expect when the disclosure came out, right?

It's not like they're like forecasts or something that we can compare to. So it's possibly. It could be that the later filings tend to have more negative news, but at the moment we haven't been able to identify that in the data.

MR. COFFIN: Thank you. And there's another question. I think this came

up, but I'll give you an opportunity just in case I'm getting it wrong. Any differences in the responses depending on whether the financial statements are audited or not? And I think that was one of Ivan's questions.

MS. CUNY: It was, yeah. So we did look at that actually. And we have not found any difference between the audited and the unaudited. But we also haven't split that by timeliness. So that might be something that we should do as well because the audited will come out later than the, you know, the unaudited.

MR. COFFIN: Excellent. Okay. Well, we're right at I think against our time. I think we have a couple of more minutes, but I think that's all the questions that came in. I really enjoyed that. It would just be an interesting – I love those kind of reports so it's just very interesting for all of us. So thank you very much. And thanks to both sets of authors and the discussants. I think that was a good combination of two papers on a similar pattern. So I'll turn it back over to our host, David. And thank you for including me everybody. Great discussion so far today.

MR. WESSEL: And, Tim, thank you for doing such a great job of monitoring. Christine and Dan, I just want to say how reassuring it is that all these disclosures make some difference. I was thinking about how depressing it would be if you had found the opposite. All these people putting out these reports which nobody reads, which I sometimes fear is the case.

So we're going to take break. And here's the deal going forward. We have two breakout sessions. Very informal scheduled for 1:45. The Zoom links are on the event page. And if you have trouble finding them or anything, you can send me an email, dwessel@brookings.edu.

One is going to talk about the state and local sector in general. And Bergstresser from Brandeis will moderate that talking about the topics that we've raised

earlier. And the other one to be moderated by Steven Winstein now of Alphaledger who is going to focus more on what's going on in the munibond market specifically.

So I invite you all to join us at 1:45 for those informal sessions because they're on Zoom everybody will get a chance to speak. And I just want to say a word of thanks to Stephanie Sensula (phonetic) and Howin Chin (phonetic) of the Hutchinson Center staff. Did a great job of organize this. And also, Meghan Waring (phonetic) of the Economic Studies event staff. So we appreciate all your help. See you at 1:45.

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I, Carleton J. Anderson, III do hereby certify that the forgoing electronic file when originally transmitted was reduced to text at my direction; that said transcript is a true record of the proceedings therein referenced; that I am neither counsel for, related to, nor employed by any of the parties to the action in which these proceedings were taken; and, furthermore, that I am neither a relative or employee of any attorney or counsel employed by the parties hereto, nor financially or otherwise interested in the outcome of this action.

Carleton J. Anderson, III

(Signature and Seal on File)

Notary Public in and for the Commonwealth of Virginia

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