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AN EMPIRICAL REVIEW OF THE PAYCHECK PROTECTION PROGRAM

HEARING

BEFORE THE

SUBCOMMITTEE ON OVERSIGHT, INVESTIGATIONS, AND REGULATIONS

OF THE

COMMITTEE ON SMALL BUSINESS
UNITED STATES
HOUSE OF REPRESENTATIVES

ONE HUNDRED SEVENTEENTH CONGRESS

SECOND SESSION

HEARING HELD
MARCH 16, 2022

Small Business Committee Document Number 117–050
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AN EMPIRICAL REVIEW OF THE PAYCHECK PROTECTION PROGRAM

WEDNESDAY, MARCH 16, 2022

HOUSE OF REPRESENTATIVES,
COMMITTEE ON SMALL BUSINESS,
SUBCOMMITTEE ON OVERSIGHT,
INVESTIGATIONS, AND REGULATIONS,
Washington, DC.

The Subcommittee met, pursuant to call, at 10:00 a.m., in Room 2360, Rayburn House Office Building, and via Zoom, Hon. Dean Phillips [chairman of the Subcommittee] presiding.

Present: Representatives Phillips, Velázquez, Davids, Mfume, Houlahan, Craig, Van Duyne, Luetkemeyer, Meuser, and Donalds.

Chairman PHILLIPS. Good morning, everybody. I am going to call the meeting to order. And without objection, the Chair is authorized to declare a recess at any time. And I would like to begin by noting some important requirements for everybody. Standing House and Committee rules will continue to apply during hybrid proceedings. All Members are reminded that they are expected to adhere to these rules, including decorum. House regulations require that Members be visible through a video connection throughout the proceeding. So, please keep your cameras on. Also, please remember to remain muted until you are recognized to minimize background noise.

In the event that a Member encounters technical issues that prevent them from being recognized for their questioning, I will move to the next available Member of the same party. And I will recognize that Member at the next appropriate time slot provided that they have returned to the proceeding.

For those Members and staff physically present in the committee room today, in accordance with the attending physician's most recent guidance, masks are now optional and no longer required. With that, I will make an opening statement.

First, I would be remiss if we didn't recognize the speech that many of us just saw in the visitor center by President Zelenskyy. We are here to talk about small businesses in the United States today. And as we do so, I just ask that we all keep in our heads and our hearts the Ukrainians who are losing not just their businesses and livelihoods, but, indeed, their lives. And we stand united as a committee, as a Congress, and as a country to stand tall in the face of tyranny.

But to the issues at hand. Nearly 2 years ago, the rapid spread of COVID-19 was wreaking havoc on small businesses across our country. As people stayed home to slow the spread of the virus,

business for many small firms essentially grounded to a halt. It was a time of tremendous uncertainty. Small businesses of all shapes and sizes began to wonder how long could we continue to pay our rent, our employees, and make our other expenses met.

Congress recognized the pandemic's threat to small businesses and the overall economy and moved very quickly and in a bipartisan fashion to pass emergency legislation. In late March of 2020, Congress passed the CARES Act on a near unanimous basis. The bill provided over $376 billion in relief for struggling small businesses. Most of this money was allocated to the newly created Paycheck Protection Program, commonly known as PPP.

Under PPP, banks and other private lenders made fully guaranteed and forgivable SBA loans to small businesses impacted by COVID. These loans were intended to allow small firms to continue to pay their employees and to cover other expenses. Since it launched in April of 2020, PPP has delivered almost $800 billion in emergency loans, making it one of the most extensive relief programs in American history.

The Small Business Administration administered more aid during the COVID crisis than it did for all other disasters combined in its 67-year history.

Given the massive scale of PPP and other relief programs, and the speed with which it needed to be stood up, it was inevitable that problems would arise. For example, in the early days of PPP, it became clear that funds were not reaching the most vulnerable small businesses. Instead, larger companies with preexisting relationships with large banks were prioritized in many cases in the smallest businesses' expense.

The initial rollout of PPP also shut out many businesses owned by women and minorities. This Committee worked diligently to address these inequities in the program throughout the pandemic. We fought for set-asides for underserved small business and worked to empower the community lenders that served them. The PPP and Health Care Enhancement Act created set-asides of PPP funds so that entities like CDFIs, CDCs, and SBA Microloan Intermediaries could fairly compete with big banks in the program.

We also passed my bill, in conjunction with Chip Roy, the PPP Flexibility Act, which made PPP loan forgiveness more accessible for firms who needed to spend a greater share of their loan proceeds on non-payroll costs.

And we also passed the Economic Aid Act, which delivered more relief to the hardest hit small businesses through Second Draw loans. These changes proved to be effective in making the program more accessible for small businesses. In later rounds of PPP, the average loan size reached approximately $44,000, a marked improvement over the $199,951 average loan size during the initial round.

Many researchers have analyzed the effectiveness of PPP in saving jobs and reaching small businesses throughout the country. We have a few of those experts with us today. I look forward to hearing more about their research and discussing the insights they have gained into the overall efficacy of PPP and the program updates that Congress has instituted. By looking closely at these findings, we can better prepare ourselves for future crises and help SBA's

non-pandemic loan programs reach more underserved businesses more effectively and more efficiently.

With that, I would like to yield to the Ranking Member, Ms. Van Duyne, for her opening statement.

Ms. VAN DUYNE. Thank you very much, Mr. Chairman, for holding this critically important hearing and your continued partnership on providing proper oversight. In order to respond to the crushing State and local shutdown orders, the federal government stepped in with multiple relief programs. The Paycheck Protection Program was front and center during this emergency period ensuring relief was focused on retaining employees while requiring that dollars flow to American small businesses through the private sector lenders. As we approach the second anniversary of PPE's opening, Members of this Subcommittee and the full Committee are busy examining how this almost $800 billion program performed. And this hearing is a continuation of that discussion.

As of March 6, 2020, 86 percent of all PPP recipients have requested loan forgiveness. In response, the SBA has made forgiveness payments of approximately $700 billion. These are extraordinary dollar amounts and show the program is winding down but the work is not yet finished. The SBA cannot wipe its hands of this program and must stay engaged with this Committee as we continue our oversight responsibilities.

This sentiment also needs to be emphasized to the Department of the Treasury who played a significant role in PPP by onboarding numerous new lenders. And as many new Committee Members have pointed out, Treasury Secretary Yellen is required by law to testify before the full Committee on the implementation of the COVID-19 programs, specifically the PPP. Unfortunately, 325 days past the date, the challenges small businesses face still haven't risen to the level of importance for the Secretary to appear. This cannot stand.

In the State of the Union, the President stated that we are going after the criminals who stole billions in relief money meant for small businesses and millions of Americans. How can we believe that statement if appearing before our Committee is too difficult a step to take? Nevertheless, my colleagues are eager to go after wrongdoers and make necessary changes. And I hope the Treasury Secretary will testify on this matter soon.

This Committee has a host of issues left to examine regarding PPP, including fraudulent behavior. Numerous articles and audits have highlighted trends connecting fraud to certain FinTech lenders. And it is crucial we understand these lenders' roll within the programs, and how they interacted with small businesses, determined eligibility, and if they adequately protected American taxpayer dollars.

Fraud is unacceptable and we must address illegal behavior and ensure we recover improper dollars efficiently. Additionally, we need to learn more about how the SBA conducted PPP loan reviews. For example, if ineligible businesses entered the PPP, I am left to wonder how they were treated under the loan forgiveness process. We must find answers to these essential questions.

Moreover, any PPP conversations should include the lenders on the ground delivering this program. And that is why I am looking

forward to today's discussion with not only the Government Accountability Office, which has provided extensive oversight throughout, but also with a community bank lender who is on the frontline keeping businesses in his community alive. In Text 24, our private lenders helped disburse over 40,000 loans worth well over $4 billion. In the numerous roundtables that I have held with small business owners from around north Texas, besides a tough labor market and skyrocketing energy prices, a common theme is how PPP was a lifesaver during the pandemic. And while American small businesses had been ready to grow their business without government handouts, our work in Congress is to ensure every last relief dollar was appropriately spent and that must continue.

And with that, Mr. Chairman, I look forward to our continued work on this matter, and I want to thank you for holding this hearing. I yield back.

Chairman PHILLIPS. Thank you, Ms. Van Duyne. The gentlewoman yields back. With that, I would like to introduce our only witness on today's first—our best and only witness today on our first panel, Mr. William Shear, the Director of Financial Markets and Community Investment for the U.S. Government Accountability Office. A frequent panelist representing GAO before us, he leads GAO's work in community and economic development, small business, and SBA's COVID-19 response programs. Mr. Shear joined GAO more than 20 years ago and is a dedicated public servant. He has a master's degree in public policy and a PhD in economics, both from the University of Chicago. He also served as an adjunct faculty member in the graduate program in city and regional planning at the University of Pennsylvania. We welcome you back, Mr. Shear, and afford you now 5 minutes for your opening statement.

STATEMENT OF WILLIAM SHEAR, DIRECTOR, FINANCIAL MARKETS AND COMMUNITY INVESTMENT, U.S. GOVERNMENT ACCOUNTABILITY OFFICE

Mr. SHEAR. Thank you. Chairman Phillips, Ranking Member Van Duyne, and Members of the Subcommittee, I am pleased to be here this morning to discuss our work on SBA's Paycheck Projection Program, or PPP for short. While my statements before this Committee on SBA's emergency loan programs in April 2021, and previously in October 2020, focused on program administration, controls, and oversight, and fraud risk management, my statement today is about how PPP changes SBA and Congress made affected the characteristics of participating lenders and program recipients. For this work, we relied on SBA loan level PPP data, as well as county level business statistics and American community survey data from the U.S. Census Bureau.

We analyzed PPP loans over three application periods, April 3 through 16, 2020, April 27 through August 8, 2020, and January 11 through May 31, 2021, which we refer to as Phases I, II, and III, respectively. Over this period, Congress provided commitment authority of about $814 billion. In summary, early lending during Phase I favored larger and rural businesses. Specifically, 42 percent of these early loans went to larger businesses, which we defined as those with 10 to 499 employees. Larger businesses were

more likely to have a preexisting lending relationship with a bank. Businesses in rural areas also received a high share of these early loans relative to their representation among all small businesses.

Traditionally underserved businesses, in particular, businesses owned by self-employed individuals, members of minority groups, women, and veterans faced challenges obtaining loans, prompting Congress and SBA to make a series of changes shortly after the program launched. For example, SBA admitted about 600 new lenders, including non-banks, developed guidance helping self-employed individuals participate in the program, targeted funding to minority-owned businesses in part through community development financial institutions. Through the Paycheck Protection Program and Health Care Enhancement Act passed in April 2020, and the Consolidated Appropriations Act passed in December of 2020, Congress established additional set-asides for businesses that applied through CDFIs and other specialized lenders.

Lending to traditionally underserved businesses increased noticeably after these changes were implemented. By the time PPP closed in June 2021, lending in traditionally underserved counties was proportional to their representation in the overall small business community. While lending to businesses with fewer than 10 employees remained disproportionately low, it increased significantly over the course of the program.

Chairman Phillips and Ranking Member Van Duyne, I would be happy to respond to any questions you or the panel would like to ask.

Chairman PHILLIPS. Thank you, Mr. Shear. I will begin by recognizing myself for 5 minutes.

The GAO found that banks made more than 93 percent of the loans during Phase I, which I recall was the first 2 weeks of the program. Did GAO determine how much of that 93 percent went to existing clients versus new clients of those banks?

Mr. SHEAR. We refer to research by others as far as the tendency——

Chairman PHILLIPS. Mm-hmm.

Mr. SHEAR.—to serve existing clients, but we don't have information that—to answer that question as far as how much of it went to existing versus new clients.

Chairman PHILLIPS. Okay. As you are well aware, we made several changes to the program midway. Some of them included CDFI set-aside, the 14-day exclusivity period for microbusinesses, and beginning in 2021, the loan calculation rule changes for Schedule C filers and others. Of those changes, and perhaps others, which of those were most effective in helping improve access, especially for underserved businesses, in your estimation, of the modifications that we made?

Mr. SHEAR. The modifications that I tend to focus on the most are the inclusion of CDFIs and actions taken to help smaller banks participate. Those are the two that stand out for me. So, I don't want to take anything away from the other inclusion that occurred over the period. But that is what stands out the most to me.

Chairman PHILLIPS. I appreciate it. You know, we know PPP was designed to expediently distribute funds with oversight and fraud protection occurring during the forgiveness phase. In your

view, did Congress find the appropriate balance between expediency and fraud prevention? And what aspects of PPE are worth further research in that respect?

Mr. SHEAR. Our concern from the beginning of the program was the lack, we called it limited controls. So, I will use the words controls and oversight kind of interchangeably——

Chairman PHILLIPS. Okay.

Mr. SHEAR.—and the lack of, really, what we call sound fraud risk management. So, that has been a concern from the beginning. As I have said before this Committee before, that we put the emergency loan programs on GAO's high-risk list because of our concerns of the lack of oversight, the lack of controls in place, the lack of sound fraud risk management, and also, findings from financial statement audits, and just high rates, the inability to estimate improper payments. So, these are all concerns of us. So, it is one that is our focus has been on SBA's administration of the program. So, those are the things that stand out the most for us in terms of we think the oversight of the program has improved over the period from the initial period. But we still have concerns with the oversight element of it. We are still concerned about the lack of comprehensive fraud risk management.

Chairman PHILLIPS. Are there any specific recommendations you might share with us in the Committee relative to some of that oversight and fraud prevention that we could still yet at least call to their attention, or perhaps equally importantly, prepare for in the future?

Mr. SHEAR. The most progress that has been made, we made a recommendation in our first GAO-wide report in June of 2020, to really put controls in place, to really have oversight to protect the integrity of the program. So, it is dealing, you know, kind of broadly with how do you monitor borrowers to make sure they are eligible, that they are the intended beneficiaries, and things of that nature.

On that, there is a master review plan that has gone through different iterations. It was recently updated, but it has largely been intact for the last, I would say, 12 to 14 months. That is one where there has been some progress made in terms of using largely consultants——

Chairman PHILLIPS. Yeah.

Mr. SHEAR.—in terms of automated reviews, manual reviews, to oversee it. So, it is like there has been improvement in that area. We are still looking for some greater movement on that. And the one area that we still are involved in discussion with SBA about is the lack of looking at what is called the self-certification for economic necessity. So, we have that.

On fraud risk management, we are very concerned about it because we made two recommendations in 2021, having to do with fraud risk management to really to do an assessment of fraud risk to follow GAO's best practices for fraud risk management, which include naming a lead entity to do that and of specifying what is called a fraud risk tolerance. So, we have been looking. We have been calling for that and to have an action plan to deal with the fraud issues. It was just in the last few weeks, basically, that SBA has stood up a lead entity to lead fraud risk management.

Chairman PHILLIPS. In the last few weeks, okay.
Mr. SHEAR. Yeah, just in the last——
Chairman PHILLIPS. My time——
Mr. SHEAR.—few weeks.
Chairman PHILLIPS.—is, unfortunately——
Mr. SHEAR. I am sorry.
Chairman PHILLIPS.—my time is well expired.
Mr. SHEAR. I am sorry for the long answer.
Chairman PHILLIPS. But it was important to get that answer. So, thank you.
Mr. SHEAR. But this is a continuing concern of ours.
Chairman PHILLIPS. Okay. Thank you, sir. With that, I yield to our Ranking Member, Ms. Van Duyne, for 5 minutes.
Ms. VAN DUYNE. I appreciate that. And I actually want to continue exactly what you were talking about. So, I feel like you felt you had to truncate that answer. I am really concerned about the lack of fraud risk management what you are talking about with the inability to be able to find some of these fraudulent payments. Can you give us a little bit more detail? I mean, when we say the lead entity, who is that? Are you somewhat confident that they are going to be able to actually do the job of providing that oversight?
Mr. SHEAR. We are at least glad that they named an entity, basically.
Ms. VAN DUYNE. So, who is the entity?
Mr. SHEAR. It is like a fraud risk council within SBA.
Ms. VAN DUYNE. Okay.
Mr. SHEAR. Okay. So, they established a council. So, there is a lead entity with the responsibility and the authority. So, there is an entity that is on paper that kind of corresponds to what we would call a lead entity in charge. They are supposed——
Ms. VAN DUYNE. Up until that point, was there a concern that there was just no accountability within the organization?
Mr. SHEAR. It was like, certainly, there have been extensive looks at fraud, especially by the IG, by the PRAC, and others. There has been a look at it, but the concern is the lack of a dedicated entity, and the idea that fraud risk management involves a very comprehensive and strategic approach. And what didn't happen at the beginning of the program and really hasn't happen yet is to really come up with an action plan.
So, the way I would characterize it through the oversight function, it isn't like SBA's going, you know, is running blind that they don't know, you know, what some of the, you know, as far as what some of the problems are with borrowers that might not be eligible. So, they are not flying blind. But what we are looking for is a more comprehensive approach, a more strategic approach, a more informed approach to really to figure out the patterns of fraud risk—of fraud that is going on and to manage that risk. We recognize in an emergency that there—it is logical to allow some tolerance for fraud in the program. There can be—it recognizes that our fraud risk framework that in response to an emergency——
Ms. VAN DUYNE. But you are going to have to ask the question like, I mean, how much fraud is acceptable? I mean, I think——
Mr. SHEAR. We don't——
Ms. VAN DUYNE.—from our position——

Mr. SHEAR.—have a measure. Neither does——
Ms. VAN DUYNE.—we would say none.
Mr. SHEAR.—neither does SBA. But I know the tendency is to say no fraud is acceptable. And I can say that as a principle, we don't want fraud in any program. But there is the notion that if fraud risk exists, it is just like it might be that strategically that there might be a reason to tolerate, you know, more exposure to potential fraud——
Ms. VAN DUYNE. Well, part of that solution seems——
Mr. SHEAR.—in a program than in a regular program——
Ms. VAN DUYNE. Yeah.
Mr. SHEAR.—considering the emergency situation. It is similar to the situation——
Ms. VAN DUYNE. No, and I am sorry.
Mr. SHEAR. Yeah.
Ms. VAN DUYNE.—but I have very limited time.
Mr. SHEAR. I am sorry.
Ms. VAN DUYNE. I have got like a bunch of questions that I want to ask.
Mr. SHEAR. Okay. Thanks.
Ms. VAN DUYNE. And I appreciate you going on that. But looking at the potential for fraud, have you conducted any analysis on potential fraud between banks and non-bank lenders when it comes to the program? And has your research found out when it comes to oversight controls in place at the SBA, have you been able to root out that fraud? So, is there a difference between banks and non-banks, and where did SBA play a role in that?
Mr. SHEAR. We recognize that there are certain concerns that have been raised about FinTech lenders.
Ms. VAN DUYNE. Correct.
Mr. SHEAR. Our forensic auditors have ongoing work that still is looking into the issue as far as it is largely focused on SBA's practices, but it also considers the different types of lenders. So, we have ongoing work on that. One of the things I would like to emphasize is that it will probably be years until we know how much fraud has occurred in this program. And so, what we point to an awful lot are from real time auditing by the IG community and others——
Ms. VAN DUYNE. Mm-hmm.
Mr. SHEAR.—is that what we look for is how much potential fraud is out there. We observe a high-level——
Ms. VAN DUYNE. Do we have a number for that?
Mr. SHEAR. There are different numbers that have been used that we have cited from the IG and others as far as how much——
Ms. VAN DUYNE. What potential fraud would you estimate is out there right now for this program?
Mr. SHEAR. I would have to go back and——
Ms. VAN DUYNE. Can you give me a range?
Mr. SHEAR. I can't answer it for the record, no. No, because this is one maybe a year ago when I was really discussing fraud risk, I would be better prepared. I——
Ms. VAN DUYNE. But you are saying those numbers are public? Your organization——
Mr. SHEAR. Yeah.

Ms. VAN DUYNE.—SBA has made it public?

Mr. SHEAR. We have reported multiple times. We refer to the IG report——

Ms. VAN DUYNE. But you don't know what the latest numbers are at all?

Mr. SHEAR. No. I don't have the latest numbers in front of me. I could go ahead——

Ms. VAN DUYNE. Do you know what the difference between what is acceptable? What you are claiming would be acceptable compared to what we are looking at right now?

Mr. SHEAR. We have no standard for acceptable. But what we are saying that for SBA managing fraud risk it is reasonable to think about how much risk are we willing to take.

Ms. VAN DUYNE. I am just wondering what the delta is.

Mr. SHEAR. Yeah.

Ms. VAN DUYNE. But I am out of time.

Mr. SHEAR. Yeah, okay.

Ms. VAN DUYNE. Thank you, sir.

Chairman PHILLIPS. The gentlelady's time has expired. Perhaps we can come to a second round too. With that, I am pleased to recognize the Chairwoman of the Small Business Committee, the gentlelady from New York, Ms. Velázquez, for 5 minutes.

Ms. VELÁZQUEZ. Thank you, Mr. Chairman. Thank you, Mr. Shear, for being here today. I am happy to see GAO validates my initial assertion that more sophisticated firms that had better access and those without preexisting relationships couldn't get loans approved no matter how hard. First, they were not able to even have contact with those banks. And then if they did, those loans were not approved. So, your report suggests that program changes made by Congress and SBA helped to increase access for the intended businesses and counties. So, my question to you is, would empowering CDFIs and MDIs and getting them more involved with SBA lending help address gaps in the business lending market identified during PPP?

Mr. SHEAR. You are asking a really good question. And it is very clear, as you said, that the changes made by the Congress and the SBA have led to greater access for especially underserved borrowers. So, it is greatly improved in this program. And I want to go back to what I said about maybe some tolerance for fraud, as far as, as a strategy is that the considerations involved in an emergency loan program and knowing how devastating the pandemic, the effects have been on small businesses, especially the most vulnerable and the smallest small businesses that might not have access to capital. It is a different consideration when you start bringing in more lenders and targeting assistance. I think it is a more complicated story if you are talking about let's just say during normal times, let's just say the 7A program as far as there are certain questions like we have followed the Office of Credit Risk Management very closely over the years. There are certain other considerations that come into effect.

Ms. VELÁZQUEZ. And I know that——

Mr. SHEAR. Yeah.

Ms. VELÁZQUEZ.—our first consideration must be to be safe stewards of taxpayers' money, right? The fact is we haven't seen

fraud committed by CDFIs and MDIs. So, that could be another report or investigation that could be. But the report mentioned potential fraud in the COVID relief programs. And while FinTech lenders were essential in helping small businesses access PPP loans, research has shown FinTech originated PPP loans are more likely to be associated with fraud. To balance the interests of safeguarding taxpayers' dollars while improving the reach of SBA lending programs, how cautiously should we proceed with non-bank lenders accessing SBA guaranteed lending?

Mr. SHEAR. My answer for an emergency program like PPP is that you especially have the underserved businesses that were really adversely affected and particularly businesses owned by members of minority groups.

Ms. VELAZQUEZ. Mm-hmm.

Mr. SHEAR. And there might be—it might make more sense that the FinTech lenders have algorithms that are, you know, considered color blind, things of that nature. They have served that segment of the market more heavily than some of the other lenders have. So, the consideration of pandemic, I think, is different.

I will just state the consideration I think if you are talking about the 7A program and during normal times, is to focus on the Office of Credit Risk Management. And we have seen improvements in that program over the years. We have certainly evaluated it many times from its creation. And there have been improvements in their program. I think the focus should be on the ability of that office to oversee the new lenders.

Ms. VELAZQUEZ. Okay. Thank you. Many view the PPE as a stress test of the small business lending market. And GAO's research and testimony from other panelists show where the gaps in the program are—were. Do you agree that PPP was a stress test of the small business lending market and that we should be learning lessons based on where the gaps are shown to be?

Mr. SHEAR. There are certainly lessons learned. One is that our next enclosure on PPP in our April report will get into lessons learned for let's just say future emergencies.

Ms. VELAZQUEZ. All right.

Mr. SHEAR. But there is also certain—it casts a light on who is served by whom in a more general way. So, I think it is something we should all be mindful of.

Ms. VELAZQUEZ. Thank you. I yield back, Mr. Chairman.

Chairman PHILLIPS. The gentlelady yields back. And I am pleased to recognize the Ranking Member of the Small Business Committee, the gentleman from Missouri, Mr. Luetkemeyer, for 5 minutes.

Mr. LUETKEMEYER. Thank you, Mr. Chairman. And I want to follow-up on your opening remarks with regards to the powerful speech and video that we saw this morning from President Zelenskyy. I agree that it is a very unnerving situation. This is not a video game that is going on. This is a real-life situation with people living and dying and being hurt because of war. I mean, you take it very seriously, and I hope the administration does just that. That was a sincere request this morning and I hope they take it sincerely and act on it accordingly.

With that, thank you for bringing this topic to us this morning. Mr. Shear, welcome again. I always enjoy your discussions with us. A lot of the things I was going to talk about have been discussed already. But I want to talk about a little bit with regards to the IG report that talked about some of the controls that they were requesting to be put in place. And as I was talking with them and actually off the record and on the record here in Committee a couple of times, they were—I asked them, you know, well, you have identified fraud. You identified problems within the SBA's administration of these programs. Which by the way it is a Treasury program. SBA is administering it. Let's get that straight. Make sure we understand that. And throughout the discussion, I kept asking the question, so, you are giving them processes, and protocols, and new procedures, are the leaders of the SBA, are they implementing those? And the answer was, yes. And so, I said, well, what is the problem, then? And they said, oh, the staff is not implementing it. The staff is not living up to the—and operating within those procedures. Did you find that same thing that staff didn't seem to be willing to comply with the processes and procedures that were put in place?

Mr. SHEAR. We haven't seen evidence of that. But we haven't, you know, focused that closely as far as the processes followed by the employees. But what we have focused on have been the different, you know, automated checks, manual checks, and the like. And so, that is what we——

Mr. LUETKEMEYER. Well——

Mr. SHEAR.—focused on.

Mr. LUETKEMEYER.—you sort of alluded to something a minute ago with respect to the reaction of SBA to your suggestions saying that they, in essence, and I don't want to put words in your mouth here, but basically you said they didn't take some of your suggestions seriously. They didn't act on them. They didn't put everything in place that you suggested. You know, it taking a long time for them to actually implement some of these things. So, do you think they take your recommendations and the IG seriously? Because it has taken until now and you just said a minute ago that just 2 weeks ago they started to implement some of these things. I mean, it looks to me like we are really not taking anything seriously from the folks who could actually be helping them clean up their mess.

Mr. SHEAR. The things that stand out for us and it becomes part of discussions that I and my colleagues have had with SBA and that the Comptroller General has had with the administrator, which is the designation of the high-risk designation. And we are concerned that it has taken so long to set up an entity to manage fraud risk. It is very late in the game to be doing that. And so, that stands out. And there is also concerns that has come out of the financial statement audits from the last 2 years that there are concerns about the accounting and the internal controls pointed out by that. And those really stand out for us as something that we wish that action would have been taken more quickly in both areas.

Mr. LUETKEMEYER. Well, your statement there, sir, I thank you for it, is that it has taken 2 years to get something done. I mean, it would appear to me, I mean, if I am managing the agency,

you know, it may take, you know, 6 months to a year to get some new changes in place, get people used to the new processes, but 2 years? It looks to me like they are just saying no thank you. We are going to work on this in our own time. Either that or they are so overwhelmed with the process and all of the work they are having to do that they can't get to it. Is that a possibility?

Mr. SHEAR. You bring up a very real possibility. And one of the things that I would point out is that you do have this master review plan in place as far as oversight. But it is a little bit more of a reactive policy. They learn from what they see from, you know, from the focus of that master review plan and we are really looking for something more strategic to address these issues.

Mr. LUETKEMEYER. Well, I hope instead of learning——

Mr. SHEAR. And that has——

Mr. LUETKEMEYER.—from what they——

Mr. SHEAR. That has——

Mr. LUETKEMEYER. Okay.

Mr. SHEAR. That has taken a long time.

Mr. LUETKEMEYER. Instead of learning from what they see, I hope they listen to what you say.

Mr. SHEAR. Okay.

Mr. LUETKEMEYER. Because it would certainly be helpful to them. I have just got a couple seconds left and I just wanted to make one more comment with regards to FinTechs. I agree with Chairman Velázquez that this is a concern. It appears that that is where most of the fraud was in the PPP program. Idle programs are whole another animal. But it does appear that from the statistics we saw, that the FinTech folks were actually not very good at protecting the integrity of the program. Would you agree with that statement?

Mr. SHEAR. I don't think there is enough information available to draw that conclusion. So, maybe we are just——

Mr. LUETKEMEYER. You don't have——

Mr. SHEAR.—we are cautious.

Mr. LUETKEMEYER. You don't have any idea that the losses were so significant compared to the banks and credit unions in this instance because they have a know your customer rule in place that the FinTechs don't? That it didn't protect the ability of the banks and those folks to do their job right versus the FinTechs?

Mr. SHEAR. Let me just make the observation at a very simple level. We looked at lending over three periods of time and there were certainly evidence of significant potential fraud in the program in all three phases, and——

Mr. LUETKEMEYER. But you haven't quantified it yet.

Mr. SHEAR. We haven't quantified it and, again, I will go back to the statement——

Chairman PHILLIPS. The gentleman's time——

Mr. LUETKEMEYER. Are you——

Chairman PHILLIPS.—has expired.

Mr. LUETKEMEYER. Are you keeping——

Mr. SHEAR. We don't know——

Chairman PHILLIPS. Mr. Shear, we have to wrap this up.

Mr. SHEAR.—how much fraud. We don't know how much—we will not know for a while how much fraud has occurred in the program.

Mr. LUETKEMEYER. I think it is very important that we quantify that. And I thank you for your testimony and I thank the Chairman for his indulgence. Thank you.

Chairman PHILLIPS. The gentleman's time has expired. Now, I am pleased to recognize the Vice Chair of the Committee and the Chairman of the Subcommittee on Contracting and Infrastructure, the gentleman from Maryland, Mr. Mfume, for 5 minutes.

Mr. MFUME. Thank you very much, Mr. Chairman. I want to thank you and the Ranking Member for convening what I consider to be a crucial hearing. Mr. Shear, thank you for being with us this morning. As we all know, if I can deliberately be redundant, the Paycheck Protection Program supported small businesses across our nation during the pandemic by allocating, as we know, $800 billion to cover payroll and operational costs. And it was such an incredible program that it lifted businesses that were in the most need and kept them afloat. So, you can understand why there is so much concern here about fraud and fraud assessment and how do we not do the same thing again.

I believe, however, that to truly invest in a program like this, we have to be compliant to our oversight and our fiduciary responsibilities as a committee, and not only applaud the success, but to also point out failures where we see them. And the driving force behind the program was paychecks for employees. It was very simple. Yes, we care about every aspect of business and operations, but the program was designed to protect employees. So, as you might imagine, some of us have been hearing stories that just go against the grain.

Mr. Shear, there is a hotel in my district, the Merriweather Lakeshore Hotel that received a PPP loan for almost $1.1 million on April 10 of 2020. On April 15, 5 days later, the Merriweather Lakeshore Hotel fired 100 of its employees and then closed to the public. According to PPP regulations, the hotel, correct me if I am wrong, was required to spend 60 percent of its loan on payroll costs. Yet it remained closed from that point during the entire period after that. And then based on information provided to me, the hotel refused later, a year later, to hire 98 of the 100 people that it had let go who had been out of work for all of that time. So, I am just trying to get some sense about this notion of give you money, take money. Give you money under one claim, and then under that same claim, in this case, 100 people are let go a few days later.

So, could you tell me whether your research as shown whether this industry, the hotel industry, or other industries that have received cumulatively billions of dollars through this program, have also failed to return workers back to jobs after receiving the money to protect the paychecks of those workers.

Mr. SHEAR. Our work hasn't drilled down into the very important issue that you raise. What our work has identified is the idea that this is a program out of the starting gate that relied heavily on borrower self-certifications. So, I can't speak to the hotel, even though I will mention I live in your district in Baltimore. But I know what hotel you are talking about.

Mr. MFUME. God bless you. You are a great American.

Mr. SHEAR. Okay. Thank you. But I will say that I can't comment on the one hotel or any specific industry. But we are concerned how much the program has relied on self-certifications and this is why we have followed so closely the oversight that has been put in place to examine whether borrowers are complying with the requirements of the program and whether the borrowers are, in fact, eligible for the program. So that is where our focus has been.

Mr. MFUME. Well, I hope now that you have this example based on the information that has been provided to me, that someone at GAO will look into this. I know you are not the Inspector General, but all of us are going to get instances where we have these strange, strange kind of situations where people receive money, they fire people, and then they close down, and then the loan is ultimately forgiven, as this one was a year later. I would appreciate it if you could look into that and if you could let myself and, of course, the Committee know of your response.

Mr. SHEAR. Okay. I would be glad like as far as questions you want to put in our questions for the record. We normally don't comment on one entity, but we will see what we can do in response to your question. So, I thank you.

Mr. MFUME. Thank you. And I hope you will take it as a constituent request. Back to you.

Mr. SHEAR. Okay.

Mr. MFUME. Thank you, Mr. Chair.

Chairman PHILLIPS. The gentleman yields back. And now I recognize the Ranking Member of the Subcommittee on Economic Growth, Tax, and Capital Access, the gentleman from Pennsylvania, Mr. Meuser, for 5 minutes.

Mr. MEUSER. Thank you, Mr. Chairman. Thanks to the Ranking Member. Thank you, Mr. Shear. Before I get started, I just want to go on record quoting our Chairwoman Velázquez last year when she stated how unfortunately Treasury Secretary Yellen has declined to appear before us in complete disregard for the law, which requires her to do so. That was last May that that comment was stated and Secretary Yellen has still failed to appear. Ranking Member Leutkemeyer has mentioned it many times in most meetings. It is just quite irresponsible and it runs counter to the law. So, it is kind of hard for us to, you know, you know, explain that, and it is not our job to explain it. I think maybe the Secretary could explain it when and if she appears here.

But moving along. So, PPP did a tremendous amount of good. There is no question. It was a lifeline to thousands of businesses throughout my district and elsewhere. The Treasury Department at the time was very accessible. We were on the phone with then Secretary Mnuchin often, you know, getting it going. Many of us spent countless hours, 12, 13, 14 hours a day probably in the first 2 weeks of its inception dealing with banks, dealing with businesses, and helping it through.

So, but the bad news is the level of fraud. Now, the PPP, the numbers that I have and I don't know, Mr. Shear, you can—it is about $4 to $5 billion that is estimated, in fraud in the PPP out of—what was the total, $840 billion? Something of that nature. So, you know, $4 billion is a lot of money to say the least. But the

problem lies in the EIDL. And the EIDL has, I believe the total EIDL was in the neighborhood of $260 billion and yet, nearly $80 billion in fraud. Now, we all know that the PPP was done in cooperation with the SBA and local banks, primarily local community banks. The EIDL done straight through SBA. So, clearly, the know the customer, right, KTC, is quite imperative for a program to have any integrity, right? I mean, that is almost like the simplest of answers, simplest of solutions. So, I am certainly hoping the GAO and moving forward the SBA that we recognize this and do what we can do to, you know, that we do things in such partnership with the KTC ideas being followed.

So, I will just ask you this. As you are working on integrity and quality and such, are you, from the GAO standpoint, is the SBA implementing for loans and forgiveness programs right now more on the quality end of things, such as in systems? Or are they hiring people? What, Mr. Shear, is being done to fortify the process as well as bring a higher level of scrutiny to the integrity of the overall system, as well as assure our forgiveness program is being done in a manner that those who deserve forgiveness are receiving? What are we investing in? What are we—how are we improving?

Mr. SHEAR. Yes. I will refer to we have reported, you know, on these GAO-wide reports, we have had quite a few and a lot of enclosures on the PPP program. We had a standalone report last summer, in addition to the one I am testifying on today, having to do with controls. And so, the—what I will point to for PPP, in particular, is we—oh, we also had a standalone report on SBA's use of supplemental appropriations to help support the emergency loan programs. So, we know that there is heavy reliance on contractors as part of the oversight. So, we know that Guidehouse is very much front and center in terms of, among other things, automated controls. We know that Deloitte is very heavily involved. We know Goldschmidt is very heavily involved. And it is a mix of the automated reviews, the manual reviews, and the overall checks for kind of like the quality of that system.

So, that is what we observe as where there has been a oversight structure that has been in place for some period of time.

Mr. MEUSER. I know that. Do you agree that the system with the PPP in cooperation with community banks proved far more effective and efficient than a straight EIDL loan through the SBA?

Mr. SHEAR. With EIDL——

Chairman PHILLIPS. A quick answer, sir. Our time has expired.

Mr. SHEAR. Yeah, with EIDL, it is—there is another set of circumstances and there is another set of contractors that are involved with it. But I will go back to just my observation that we don't really know, we won't know for a long time how much fraud has occurred in both programs. And I would want to point to the oversight structure——

Chairman PHILLIPS. Okay. Thank you. Thank you, Mr. Shear.

Mr. SHEAR. I would want to point to the oversight structure for both.

Chairman PHILLIPS. All right. Thank you. The gentleman's time has expired. I am going to give an award to the first among us who stays within his or her 5 minutes, myself included. With that, I am pleased to recognize the Chairwoman of the Sub-

committee on Economic Growth, Tax, and Capital Access, the gentlelady from Kansas, Ms. Davids, for 5 minutes.

Ms. DAVIDS. Thank you, Chairman and to the Ranking Member for holding this hearing today. You know, the Paycheck Protection Program was absolutely an essential lifeline to small businesses across the country during the height of the pandemic. And small businesses in the Kansas 3rd received over 2,000 PPP loans totaling somewhere around $820 million. And that critical funding really helped small firms in the 3rd District that I represent maintain their rent and payroll while they learned how to operate and adjust to extraordinary challenges that the pandemic presented. Unfortunately, we did see that, you know, larger banks overlooked the smallest businesses, those owned by minority or veteran and women-owned businesses while they were originating the PPP loans.

And, you know, in fact, in your testimony, or maybe in response to one of the questions, you mentioned, Mr. Shear, that the community-based lenders like CDFIs were instrumental and that that was a key piece of the modifications that we made. I am curious, Mr. Shear, what factors, from your point of view, led community-based lenders to being so much better at reaching those businesses?

Mr. SHEAR. Thank you for the question. I think that you look at the missions of entities such as the CDFIs and you can see that they have a focus on what is often called the underserved community of small businesses. So, I would point to that. As far as the smaller community banks, you know, I would say that especially when you look at rural areas, I think that the smaller community banks really played a role. So, here I am not talking about specialized lenders, per se, but I think that a lot of it is that what is the—what is kind of like the mission of——

Ms. DAVIDS. Mm-hmm.

Mr. SHEAR.—the various entities. With banks, you have a little bit more. And I am not saying this to criticize banks, but you have a situation where serving your customers it is a huge incentive to serve your customers. And that sometimes can lead to serving customers that are your existing customers that and aren't as focused on those customers, those small businesses that might be underserved.

Ms. DAVIDS. So, are we seeing, now that, you know, the PPP is closed to new applicants, but we are seeing applications coming in for the forgiveness portion of these programs, of this new program, and I am curious if you are seeing, again, a similar kind of gap as it relates to the traditionally underserved or disadvantaged business entities.

Mr. SHEAR. We did some analysis around just like we did for in, you know, that is in my statement today, for loans that were made, looked at the forgiveness process. And what the biggest thing that has come out of that is the very large percentage of forgiveness applications that have been approved. And so, nothing—we didn't report on it. We don't plan to report on it, but I will just state that nothing really stood out in terms of whether the forgiveness process itself and to say was in some way could be called detrimental to any particular group.

Ms. DAVIDS. Okay. Well, I appreciate your taking the time to testify before our Committee today. And, Mr. Chair, I yield back.

Chairman PHILLIPS. The gentlelady yields back. And now, I recognize the gentleman from Florida, Mr. Donalds, for 5 minutes.

Mr. DONALDS. Thank you, Mr. Chairman. Mr. Shear, according to the PRAC Small Business Administration Paycheck Protection Program Phase III Fraud Controls Report in January of 2021, the SBA OIG reported that nearly 55,000 PPP loans worth about $7 billion went to potentially ineligible businesses or fraudulent recipients. The report goes on to say that 100 percent of the case—in 100 percent of the cases the PRAC reviewed included one or more false statements on the PPP loan application that would have made the applicant ineligible. The PRAC has said that the SBA could have used IRS data to determine improper payments prior to disbursement. That opportunity to conduct pre-disbursement checks is no longer available. Have you considered the use of available commercial data like business information such as payroll, utility, or rent information to conduct reviews or audits of PPP loans?

Mr. SHEAR. Our forensic auditors who really take the lead and have worked with us very closely on the fraud issues certainly use what we often call data analytics in the use of different datasets, including it might be from the Postal Service, the Do Not Pay list out of Treasury, and various other types of databases that are available to examine those issues. And certainly, the PRAC and the SBA IG have been very involved in those types of examinations. At GAO, it is really our forensic audits group that we work with closely have taken a close look and continue to take a close look at certain patterns that are present that might suggest fraud or certainly, where the flag goes up that there could be potential fraud.

Mr. DONALDS. Okay. All right. So, looking forward, would you recommend that any future relief programs similar to PPP or other pandemic programs leverage available third-party data for verification purposes to prevent fraud, abuse, mismanagement, and also to reduce the need of costly after-the-fact remediation or enforcement?

Mr. SHEAR. Absolutely.

Mr. DONALDS. Mm-hmm.

Mr. SHEAR. The whole role of data analytics of examining and coming up with a structure and in this case, it would have been great to come up with a comprehensive approach using different data sources to ensure the integrity of the program, but really to ensure that the fraudsters don't get it. The shift now has been more toward because of the passage of time, is, you know, when I was before this Committee last year, our emphasis was on preventative controls, and that is exactly what you are talking about. Preventative controls are great. Now, we are in a situation, meaning the IG community, SBA, and others where you are trying to chase down fraudsters. And that is a much more costly kind of approach to the fraud issue than putting in preventative controls to begin with.

Mr. DONALDS. Thank you, Mr. Chair. One final statement just more for, you know, our colleagues here on the Committee. When it comes to, in my view, when it comes to the role of CDFIs versus traditional commercial banks versus community banks, one of the

things we have to always remember is that CDFIs have a specific mission that has been granted, frankly, by us. Commercial banks and even credit unions that used to have a specific mission, they have obviously had mission creep in their original mission. But the community banking industry and the national commercial banking industry and even the super regionals, one of the issues that they do face is the regulatory burden that has been unleased on their industry by us here in Congress.

And so, if they have to deal with significantly higher regulatory burdens, specifically in the community banking space, which is why the community banking space has decreased substantially over the last decade in the United States, that is the reason why so many of our smaller businesses struggle with access to capital. And that is why you have new industries like FinTech who are coming up to fill that space. That is in direct response to the regulatory environment that has been unleashed in banking since the passage of Dodd-Frank back in 2009.

So, I think it is important for the Members as we look at what has happened during the pandemic and access to capital issues, that we understand it is the regulatory environment that has fed industries like FinTech and these other opportunities to flourish. I yield back, under time, by the way, Mr. Chairman.

Chairman PHILLIPS. Duly recognized, Mr. Donalds, as Mr. Mfume also, and also Ms. Davids gets an award. Seeing no other questions, Mr. Shear, we want to thank you for your time and your dedication to this very important work. So, we now excuse you and we will just take a few moments to set up our next panel. Thank you.

Mr. SHEAR. Okay. Thank you very much.

Chairman PHILLIPS. All right. We want to welcome our witnesses on our second panel today. I will take a minute to introduce each of you before your testimony.

Our first witness on panel two, Dr. Robert Fairlie, Professor of Economics at the University of California, Santa Cruz. Professor Fairlie has testified before Congress numerous times on policy issues related to small businesses and we are thrilled to have him before us again today. Professor Fairlie's most recent work focuses on third and final round of PPP, which ran during the first half of 2021 and successfully targeted program funds to underserved businesses. We look forward to hearing about this important research and the implications it has on SBA's non Covid business loan programs.

We welcome you, Professor Fairlie.

Our second witness is Dr. Manju Puri. Professor Puri is the J.B.—oh, I never know how to say—Fuqua—sorry—Fuqua Professor of Finance at Duke University's Fuqua School of Business in Durham, North Carolina. She and her co-authors' research looks specifically at the intermediary supply effects of using banks as the primary delivery mechanism for PPP loans and how it contributed to the prioritization of big businesses early in the program. Professor Puri has also served as a senior advisor for the FDIC center for financial research.

We welcome you, Professor Puri.

Our third witness is Dr. Iryna Demko. Dr. Demko is a research associate at the Center for Economic Development at the Maxine Goodman Levine College of Urban Affairs at Cleveland State University where she specializes in economic impact studies. In addition to reviewing PPP loan data, Dr. Demko and her research team also conducted a series of interviews with PPP borrowers of all sizes in Northeast Ohio. We look forward to hearing how the PPP loan data you observed tracks with the anecdotal evidence that you received.

We welcome you, Dr. Demko.

And now I would like to yield to the Ranking Member, Ms. Van Duyne, to introduce our final witness.

Ms. VAN DUYNE. Thank you, Mr. Chairman.

Our next witness is Robert Barnes. Mr. Barnes is the president and chief executive officer of PriorityOne Bank in Magee, Mississippi. PriorityOne Bank is a community bank with over a dozen locations throughout Mississippi and Mr. Barnes is testifying on behalf of the Independent Community Bankers of America, also known as ICBA.

Mr. Barnes has a long history of serving Mississippi businesses and communities as he started at the bank nearly 40 years ago. During this time he has held numerous positions and has had leadership roles. He is currently on the board of the Mississippi Bankers Association and is the Chairman of ICBA's legislative issues committee. Additionally, he holds membership on numerous economic, health, and education boards.

Mr. Barnes also served on the governor's pandemic economic response team, known as Restart Mississippi.

Mr. Barnes, welcome to the Committee. Your experience and background as a community banker will be invaluable as we have this conversation today.

I yield back.

Chairman PHILLIPS. Thank you, Ms. Van Duyne.

Professor Fairlie, you are now recognized for 5 minutes for you opening statement.

STATEMENTS OF ROBERT W. FAIRLIE, PROFESSOR OF ECONOMICS, UNIVERSITY OF CALIFORNIA, SANTA CRUZ; DR. MANJU PURI, J.B. FUQUA PROFESSOR OF FINANCE, DUKE UNIVERSITY FUQUA SCHOOL OF BUSINESS; IRYNA DEMKO, RESEARCH ASSOCIATE AT THE CENTER FOR ECONOMIC DEVELOPMENT, MAXINE GOODMAN LEVIN COLLEGE OF URBAN AFFAIRS, CLEVELAND STATE UNIVERSITY; ROBERT BARNES, PRESIDENT AND CHIEF EXECUTIVE OFFICER, PRIORITYONE BANK

STATEMENT OF ROBERT W. FAIRLIE

Mr. FAIRLIE. I thank you. Thank you, Chairman Phillips, Ranking Member Van Duyne, and Members of the committee. It is an honor to testify before you on the Paycheck Protection Program.

I am a professor of economics at the University of California, Santa Cruz, and I have studied entrepreneurship, racial inequality, and small business policy for over 25 years. I have been asked to

discuss the findings from my research on small businesses in the pandemic and the allocation of PPP funds to communities of color.

The economic impacts of the pandemic have been especially severe for small businesses, workers in minority communities. In my research early in the pandemic, I found that the number of active business owners in the U.S. plummeted by 22 percent from February 2020 to April of 2020. African American businesses were hit the hardest, experiencing a 41 percent drop in business activity. LatinX business owner activity fell by 32 percent, and the Asian business owner activity dropped by 26 percent. Job losses were all much higher for workers of color. Black unemployment hit a peak of 17 percent and LatinX unemployment hit a peak of 18 percent.

Anticipating these potential losses, one of the stated goals of the CARES Act was to prioritize serving underserved markets and businesses owned by socially and economically disadvantaged individuals. In the beginning of the pandemic, however, minority businesses and communities were generally delayed in obtaining financial assistance through the PPP. Research of mine and others found that the first round of the PPP went disproportionately less to minority communities. In the second round of PPP funding Fintech lenders were more involved in making loans and disbursement to minority businesses and communities improved.

A few months after the program ended in the summer of 2020 Covid cases began to rise rapidly and social distancing restrictions returned. Given these concerns, the PPP restarted in January 2021 with a strong emphasis on helping eligible borrowers in underserved and disadvantaged communities. A head-start for applications through CDFIs, a 2 week exclusion period for applications from very small businesses were introduced. Access to loans was emphasized for sole proprietors and independent contractors that didn't have employees.

From January to February—or, sorry, from January to May 2021 6.7 million loans totaling $278 billion were provided. But did these funds in the rebooted program get disbursed to minority communities as intended or did the program struggle with equitable loan disbursement.

So what we did is we analyzed the 12 million loans proved through all 3 rounds of the PPP. We basically had five main findings. First, we find evidence of the strong positive relationship between PPP loans and the minority share of the population in the third round. We analyzed this relationship using several different measures and found consistent evidence that minority communities received loans.

Second, in contrast to this finding, we found a negative relationship for the first round in 2020 and a less positive relationship for the second round in 2020.

Third, we found a stronger positive relationship between minority share for loans in first draw of loans than second draw of loans in 2021. This is important because it might capture persistence in racial inequities from the first round, because a small business can only obtain a second draw loan if that business indeed received a first loan draw in the earlier round in 2020.

Fourth, we found that PPP loans also went to self-employed business owners without employees in minority communities.

Fifth, many more banks and financial institutions were involved in the third round, including Fintechs and CDFIs, which helped spread funds to small businesses in underserved markets.

To conclude then, the rebooted program in 2021 appears to have been disbursed to communities of color as intended. Although it is too early to tell what the long-term effects are from the third round of funds for small businesses in the country, there is no doubt that access to capital poses one of the most important barriers for small businesses. This is especially true for small business owners of color. Half of black families in the U.S. have less than $14,000 in total wealth, half of LatinX families have less than $32,000 in total wealth, whereas the median level of wealth among white families is $187,000.

Black owned businesses also start with substantially less capital than white owned businesses and these disparities continue over time.

I believe that two things could help us move forward. First, we need to continue to provide access to capital for struggling businesses. One method to do this is to increase the range of financial institutions both geographically and by type. Increasing involvement of a wider range of financial institutions appears to have helped improve access to loans to communities of color.

Second, we need more awareness and action on increasing the diversity of suppliers and producers. Consumers often value knowing where their purchases of goods and services help disadvantaged businesses and workers, but consumers and firms need information to make these choices.

Additionally, governments and businesses can increase diversity in their suppliers, all of which will help provide a steadier stream of revenues to disadvantaged and small businesses. This in turn will help with the access to capital issues.

Thank you for the opportunity to present the findings from my research on this topic. I look forward to hearing your comments and questions.

Chairman PHILLIPS. Thank you, Professor Fairlie.

And now I recognize Professor Puri for 5 minutes for your opening statement.

STATEMENT OF MANJU PURI

Ms. PURI. Subcommittee Chair Phillips, Ranking Member Van Duyne, and Members of the Subcommittee, thank you for inviting me to testify in front of you today.

I am Manju Puri, the J.B. Fuqua Professor at the Fuqua School of Business, Duke University. I have over 25 years of research experience examining financial institutions and bank relationships. I will be drawing on my research today on PPP.

When Covid hit, small businesses were particularly vulnerable. Small businesses typically have cash on hand that only lasts for a month without revenue and in fact less than a quarter of them can survive even two months without revenue. They are the engine of growth, accounting for 61 million jobs, so clearly it is important to support them and to so quickly.

So the question is, what lessons do we learn about the speedy delivery of financial support in times of crisis from PPP? Let us start

with banks as the delivery channel in PPP. Now, banks seem like a natural and obvious way to distribute funds. They have large networks, they are all over the country, they are in every nook and corner. Most small businesses have accounts with banks. But does using banks as the delivery channel shape the supply of PPP? It is important to look at the funding prioritization of banks.

When PPP was originally announced there was a scramble for funding. There were lines outside the doors of banks. The entire initial allocation of $349 billion was exhausted in a few days, by April 17, 2020. And then after a pause of ten days, it started again on April 27 with the second allocation of $320 billion.

So looking at who gets PPP early, before April 20, 2020, gives us a rare and clean window as to the prioritization allocation priorities of banks across clients. In particular, we distinguished between large and small banks, how they treat large and small firms, whether they treat them differently, and what is the role of bank relationships.

Now, arguably, big and small banks have different business models, right. The value added by big banks is access to one stop shopping, networks, et cetera, which are perhaps more relevant for large firms. On the other hand, small banks specialize in relationship-oriented lending, as suggested by the 2018 FDIC small business lending survey.

I would like to briefly give you the following findings based on three data sets and a very large new data set on UCC filings of bank relationships.

One, small banks deliver PPP funding more promptly. Two, if you are a firm with a bank relationship, you get PPP early. Now, this is especially true if you have a relationship with a small bank. Three, all banks in general prioritize large firms, however, the crowding out effect of small banks is fully eliminated and even reversed when firms have relationships with small banks. This suggests that the small firm-small bank relationship is special and it should be leveraged in future and other funding initiatives.

Now, a second set of lessons concerns funding hesitancy. PPP funding is remarkably cheap. When it was announced, firms that took PPP saw a stock price reaction positive 1 percent, yet several firms returned PPP and when they returned it they again saw a positive stock price reaction, actually of 3 percent—three times. Why so? Our research suggests that the market values the fact that these firms returned PPP, that is frees from the uncertainty of the threat of a government investigation, especially when there is uncertainty about the scope and the timing.

So let me close by summarizing the key takeaway. The main point is intermediaries matter when you are delivering government funding. In PPP funding is delivered sooner by small banks and when there are banking relationships, especially with small firms. The crowding out of small firms is less when small firms have small bank relationships.

A second lesson is that just as there are clear norms and ex ante eligibility of PPP, there should also be clear guidance on ex post investigation to help remove funding hesitancy.

But perhaps the most important lessons is about intermediaries. In designing financing programs for small firms, policy makers

should recognize and leverage the specialness of small bank-small firm relationships.

Thank you and I would be happy to field any questions.

Chairman PHILLIPS. Thank you, Dr. Puri.

And now I recognize Dr. Demko for 5 minutes for your opening statement.

STATEMENT OF IRYNA DEMKO

Ms. DEMKO. Thank you for the invitation to testify at the hearing titled "An Empirical Review of the Paycheck Protection Program". It is an honor for me to present before you and answer questions.

I am a research associate at the Center for Economic Development in the Maxine Goodman Levine College of Urban Affairs at Cleveland State University. I am also from Ukraine and my family is in Ukraine right now.

I have focused my research on the access of minority, Hispanic, and female owned businesses to PPP loans. In 2020, these businesses received smaller PPP loans than their business counterparts of the same size. For example, Hispanic owned business with less than four employees received 5 percent smaller loans compared to non-Hispanic owned business of the same size, or $828 less.

Minority owned businesses received 11 percent less per employee than white owned business, or $1,000 less.

Larger companies displayed increased discrepancies in loan amounts. On average, female owned businesses with less than four employees received 17 percent smaller loans than male owned businesses of the same size. And female owned businesses with 20 to 500 employees received 22 percent smaller loans than male owned businesses of the same size.

I conducted over 20 interviews with a variety of PPP loan recipients. The sample consisted of businesses in Northeast Ohio where nearly 40 percent of previously employed residents filed for unemployment as the pandemic started. I interviewed small businesses that received PPP loans from about $20,000 to over $2 million. The sample included female owned, male owned, minority owned, and white owned businesses. Every respondent expressed appreciation for the assistance provided by the government in the form of PPP loans. And the majority stated that the loan helped them retain employees. In general, businesses that received smaller loan amounts reported more difficulty with the loan application process, filing multiple loan applications with multiple banks and pursuing more unique funding sources, such as Fintechs. Respondents cited the reason for this difficulty stemming from the size of their business.

For example, a business owner complained, I couldn't get anyone's attention or response because I am a small business.

Some respondents stated that lenders could have been incentivized to work with businesses of diverse ownership and size.

Beyond the difficulty in finding a lender, many recipients of smaller PPP loans expressed frustration over loan amount limits and permitted uses. Many interview respondents didn't realize that rent, mortgage, and utility payments could be included in the re-

quested PPP amount. As a result, they missed out on the opportunity to receive higher loan amounts.

Most businesses do not have experience in doing their financial. They had a steep learning curve to understand how to apply for the learn. For us it was all foreign language, said one PPP recipient. This highlights the importance of communication strategies and free technical assistance to guarantee the success of a public policy.

From a policy perspective, if the goal is to target ethnic disparities and support inclusion in federal aid for entrepreneurs, then the program cannot be one size fits all. In 2021 SBA set aside a 2 week exclusive application period for smaller businesses with fewer than 20 employees. While a few small businesses interviewed in Northeast Ohio did mention that exclusive application period was a valuable change, others felt that it was not long enough.

Interview findings didn't confirm biases by lenders or the SBA against minority or female owned applicants. Businesses that received unequal treatment from PPP lenders not based on the demographic of their ownership, but when their business was smaller. These findings have important implications because previous literature found that minority owned firms are substantially smaller than white owned firms.

Research compared in male and female business owners also found women operating smaller business in terms of annual turnover and employment size. As such female and minority owned businesses tend to fall under business the case of businesses that may have applied for smaller PPP loans.

I am looking forward to your questions. Thank you.

Chairman PHILLIPS. Thank you, doctor. And just to say once again, all of us, this country, this Committee, this Congress, have you and your family in our hearts and all of Ukraine. And we know how difficult it is to be with us today and we are grateful that you are here.

Thank you.

Ms. DEMKO. Thank you.

Chairman PHILLIPS. And with that, I now recognize Mr. Barnes for 5 minutes for your opening statement.

STATEMENT OF ROBERT BARNES

Mr. BARNES. Thank you, Chairman Phillips, Ranking Member Van Duyne, and Members of the Subcommittee.

I am Robbie Barnes, president and CEO of PriorityOne Bank in Magee, Mississippi. I testify today on behalf of the Independent Community Bankers of America and want to thank you for this opportunity.

PriorityOne Bank is a $900 million community bank with 230 employees and 15 branches in 5 counties. Our markets are rural, suburban, and urban. We are also a community development financial institution, serving a predominantly low to moderate income market.

The paycheck protection program was a natural fit for the business model of community banks. We are small business lending specialists with local knowledge and deep roots in the communities that we serve. My bank's PPP lending is typical of most community banks. We made a total of over 1,200 loans for roughly $40 million.

Our average loan amount was $32,500 and our smallest loan was for only $350. PriorityOne Bank's long history as an SBA 7A lender helped us to navigate sometimes challenging SBA channels on behalf of our borrowers.

My written statement includes stories that illustrate the impact of the PPP. One of those stories is of a minority owned nail salon in our community that received first and second round funding for a total of less than $12,000. Though this borrower did not initially qualify for a second-round loan, we analyzed her cash flows and determined that her 40 percent revenue drop was pandemic related, which qualified her for additional funding. That business survived the pandemic and was able to remain open. This is just one of any number of examples I could offer. All the community banks have similar stories and results.

Community banks made nearly 60 percent of PPP loans, supported nearly 50 million jobs. What is more, community banks made nearly 72 percent of the PPP loans to minority owned small businesses and 81 percent of PPP loans to women small businesses.

I am proud that my industry stepped up to support the survival of these diverse businesses at a time of crisis. The challenges of the program are well known to this Committee. The task far exceeded the scale and technological capacity of anything the SBA had previously undertaken. However, the agency was dedicated to making the program work and continued to adapt and improve.

The forgiveness phase of the program brought a separate set of challenges, but our upfront process and strong relationship with most of our borrowers made forgiveness on the back end relatively straightforward. We did not make loans that we were not confident would qualify for forgiveness. Ninety percent of our PPP loans have been forgiven and we fully expect the remaining ones to be forgiven as well. We have experienced no cases of fraud or default.

As you consider the lessons of the PPP in designing future SBA lending programs, I would emphasize the critical role played by community banks. SBA programs work best in partnership with experienced on the ground community bank lenders who are committed to the borrower's success. There is a strong network of community banks, CDFIs, and other lenders in every market in the country to meet demand for small business borrowers. The SBA on its own simply does not have the resources or the know how to effectively reach thousands of small business borrowers.

What is more, community banks offer our borrowers a long-term relationship that goes well beyond the initial loan. It includes practical real world business counseling, mentoring, and networking opportunities. This is our core value proposition and it is one that is especially important for startups. The SBA simply cannot replace this kind of relationship lending.

Further, the involvement of banks is critical to reducing fraud. Community bankers know their customers, they know the difference between a legitimate business and a shell business set up to perpetrate a fraud because they meet with business owners, visit their businesses, and see their operations. With an on the ground presence, the SBA cannot assist borrowers first-hand. The distance from the borrower makes direct lending vulnerable to fraud.

Community banks must not be sidelined in the critical task of creating access to capital. We are committed to working with this Committee and the SBA to ensure the 7A program is reaching the smallest borrowers.

Thank you again for convening today's hearing and for the opportunity to offer a community bank perspective on the paycheck protection program and other SBA programs.

I'm happy to answer any questions you may have.

Thank you.

Chairman PHILLIPS. Thank you, Mr. Barnes. And to all of our witnesses, we appreciate all that you have shared with us and for being with us today.

I am going to begin by recognizing myself for 5 minutes and direct my first question to you, Mr. Barnes.

You just stated that PriorityOne Bank has experienced zero cases of fraud in over 1,200 loans to the PPP program. So assuming that would be true for most of the banks in PPP due to their preexisting relationships with most of their borrowers, shouldn't the government be focused more now on investigating non bank originated PPP loans where fraud is certainly more likely to have occurred in your estimation?

Mr. BARNES. In my estimation I think that the community banks do have an advantage, if you will, because of our relationships with our customers and existing borrowers. However, we did serve customers—or I guess non-customers, those that applied for us that were not currently customers of our bank. But as alluded to earlier in this hearing, we have a know your customer policy we have to abide by. And we live and we work with and we see these businesses, you know, day in and day out. So it is very easy for us to determine legitimate businesses from those that may not be.

I can't speak for those lenders who may have made loans in communities or markets outside of where they operate and how that might have affected fraud and—because as I said in my earlier opening remarks, we didn't experience any fraud. And I think that you can probably assume that most of the community banks also had the same experience.

Chairman PHILLIPS. Thank you, sir.

Dr. Demko, you repeatedly heard about the need for a centralized application portal to standardize the information that small firms had to submit that would help lenders from becoming overwhelmed with processing applications, especially for smaller loan amounts.

As you know, the private sector has largely abandoned this segment of the market because the fixed lending costs often outweigh the potential returns for lenders.

So do you believe that these findings support the creation of a targeted direct loan product from SBA to better reach those overlooked by the banks?

Ms. DEMKO. I think that centralized application portal may help businesses with access to the loans. And it is not just that, it is also free technical assistance with the applications, because many of applicants didn't know what to do with the application. And I think that exclusive application period may help as well.

Chairman PHILLIPS. Any other methods that you think can be considered to better reach smaller underserved firms?

Ms. DEMKO. So when we look at the distribution of minority owned and female owned businesses, among 1 million minority owned businesses, 64 percent, they employ less than 4 employees. And among 1.2 million of female owned businesses, 65 percent employ 4 or less employees. So I think that exclusive—if we want to reach small businesses, exclusive application periods may really help.

Chairman PHILLIPS. Okay. I appreciate it.

Dr. Puri, I know your findings stopped short of including CDFIs, but do you think that would be valuable to consider for other researchers? Especially given their greater likelihood of having had relationships beforehand?

Ms. PURI. What our research suggests is that relationships are important, and not just any kind of relationships. It is small firm-small bank relationships. And I think any way that you leverage this can only be helpful, right. And so, so more broadly, whether it is community banks or other small banks or vehicles to do it, I think that would be helpful.

Chairman PHILLIPS. Okay. I appreciate that.

You know, I am going to yield the reset of my time and now recognize the Ranking Member of the Committee, Ms. Van Duyne, for 5 minutes.

Ms. VAN DUYNE. Thank you very much, Mr. Chairman.

Mr. Barnes, before we get into the PPP discussion, I just want to ask you about the economic reality that we have on the ground today. You have got small businesses, I am sure, coming to you. What are they telling you about what they are facing right now with inflation, rising gas prices, the labor market? Can you just help me explain what small businesses are coming to you with today?

Mr. BARNES. Surely, Ms. Van Duyne.

You know, businesses are still experiencing a lot of issues right now they are having to deal with—of course, inflation being one. One of the big issues that we are experiencing in the markets that we serve is the fact that—is getting employees back to work. You know, they are just—at this point in time they are still understaffed, still looking for qualified employees to come back in and help their business. Inflation has not helped at all, of course, and that puts a tax on the small businesses. It is not a governmental tax, but it is certainly a tax that they are still having to absorb.

So there is still—small businesses are still struggling out there. And of course we are relationship lenders, as all community banks are. We work with our customers extremely closely, our borrowers. We communicate with them on a regular basis and we stay in close touch with them. And it is a difficult time. You know, Covid has knocked our businesses back down two or three times. When you think you get up, all of a sudden another wave comes and you are knocked back down.

But hopefully we are toward the end of this and we will see some improvement as we move forward.

Ms. VAN DUYNE. I appreciate that answer.

And I agree with your statements on direct lending. From a fraud and efficiency perspective, private sector lenders have consistently out performed—I think you have heard that form all of our witnesses today—while also safeguarding taxpayer dollars. But from your perspective, what does history tell us about the government getting involved in direct lending? And at the end of the day, did the programs better assist small businesses as compared to the private sector driven 7A loan program?

Mr. BARNES. You know, based on my experience, and I have been a lender for a number of years and have—been an SBA lender and done a number of 7A loans as well as 504 loans, and I think the partnership between banks and SBA is a good partnership. The government getting involved in direct lending I think has proven that it does not work. Borrowers in general don't have a high level of trust, to be honest with you, in dealing directly with a governmental entity. I don't think they are going to be able to reach those borrowers. It is a complex process to go through when you are dealing with SBA. It is just the facts of the matter. We as bankers understand that, we learned the process, we can navigate that and help our customers be able to obtain the funding that they need through that process. But from a direct lending standpoint, I am afraid you are going to alienate a lot of customers that may otherwise be able to be served through a banking relationship and a guaranteed loan process by going with the direct lending.

Ms. VAN DUYNE. And thank you for that.

You know, I also appreciate you talking about just kind of the excessive regulations that we see being faced by a lot of the small businesses today. You know, we are trying to get a bill passed that would actually address exactly that.

So when it comes to access to capital, I believe there should be always—have a conversation on how these regulations are affecting small lenders. So, for example, we see that the CFPB is in the process of promulgating rules for Section 1071.

can you share the community bank's perspective on this rule making?

Mr. BARNES. Certainly, I will be more than happy to.

Rule 1071, as you know, was mandated under the Dodd-Frank Act and is something CFB has no option but to implement. However, as currently presented and proposed, the rule goes beyond what is mandated in Dodd-Frank as far as collection of data. And basically what the rule is is a HMDA type rule for small business lending. But what is being required right now—or presented or proposed by CFPB, goes beyond those requirements, is going to expose I think our borrowers to potential concerns about their right to financial privacy. It is going to put information out available to the public that is going to be information that could be detrimental to them from a competitive standpoint. And our borrowers are hugely concerned about that. We have been hearing from a number of them about this and we don't have a choice but to comply with it, obviously. But I think that it could force some of these borrowers to seek other options as opposed to the banking system because of the fact that they are concerned about the information that is going to be collected and their invasion of privacy.

Ms. VAN DUYNE. I appreciate your testimony here today. I think it is something that we really need to look at and make sure that we are advising, because SBA's job is really to be able to support and advocate for small businesses. And if we are adding additional regulations and additional hurdles to being able to move on in your business, I think that is doing a detriment and the exact opposite of what we should be doing.

So thank you very much for your testimony here today, and all the witnesses.

And I yield back.

Chairman PHILLIPS. Seeing no other Members asking questions, we are going to do one more quick round. I have one question for Dr. Fairlie.

And, Doctor, I recognize—recall that you came here last year and provided testimony and I want to welcome you back to the Small Business Committee.

Perhaps you could just take a moment and share how your current report builds off of last year's.

Mr. FAIRLIE. Yes. So previously I reported on what was happening to small business owners. So some of the numbers that I briefly mentioned, you know, one of the most troubling was the 41 percent drop in black business owner activity.

And so I have been studying the pandemic and studying small businesses over the pandemic. And that kind of evolved over time into really being interested in what was happening with the policy solution, so the PPP program. And so since then I have been studying what has happened over those three rounds.

You know, seeing that kind of first round and studying it carefully and seeing that a lot of minority communities were not receiving those funds, and then going to the most recent study in the 2021 program and seeing that it made a big difference. There was a huge shift in terms of what we found in terms of that relationship with minority communities. So it was kind of a positive sign that the changes in the program really made so much of a difference.

Chairman PHILLIPS. Thank you, sir.

Mr. Barnes, your testimony mentions ICBA's support for SBA's 504 program, which, as you know, is experiencing significantly increased demand that caused a brief lending pause at the end of the last fiscal year.

So how disruptive is it for a vital lending program like that to be under the annual threat of a shutdown due to increased demand?

Mr. BARNES. In my experience, it is hugely disruptive. And I want to thank Congress for continuing that program and providing additional funding to allow it to continue. I have actually been in situations personally where I was the lender of a 504 loan and the funds ran out before the 504 loan was funded. And we had to wait—the customer had to wait on their business loan for almost 4 months before they could get any funding for it. You can imagine that 4 months, if they had been operational, they would have been employing people, obviously generating income, and paying taxes on that income. And it would have been a commerce for the communities it served. But it is hugely disruptive when you have got

a deadline you are coming up against, you have got a finite amount of funds that you can draw from and there are more than enough of borrowers out there looking for those funds.

So thank you again for the additional funding and additional time.

Chairman PHILLIPS. Yeah, just to follow up on that, sir. Unlike the 7A program, 504 still lacks a provision that allows SBA to adjust the funding level without needing Congressional approval. So without such a provision the program is under constant threat of a shutdown if the pace of lending exceeds the expected levels.

So, in your estimation, sir, should the 504 also have what we might call a shock absorbing mechanism, as 7A?

Mr. BARNES. In my opinion I think that would be a great idea. Like I said, it would allow us to be able to serve borrowers when they need to be served and not have a disruption to their business model going forward.

Chairman PHILLIPS. Thank you, sir.

I am going to yield back the remainder of my time and recognize the Ranking Member, Ms. Van Duyne, for 5 minutes.

Ms. VAN DUYNE. Thank you.

I just have one quick question, Mr. Barnes. You stated that we did not make loans that we were not confident would qualify for forgiveness because we did not want to saddle anyone with unintended debt. And this struck me as significantly important in contrast with perhaps how some of the other non relationship lenders might have treated customers.

So can you talk to the Committee a little bit more about this statement and how you operated under this program?

Mr. BARNES. Certainly. I will be happy to.

In every case when a borrower came to use for a PPP loan, we walked them through the process. We asked them for information to basically be convinced that they were eligible for the PPP loan and also that it would stand up through the forgiveness application. We many times worked with their accountant or financial advisor that they may have been working with through their business together, information. So we wanted to make absolutely sure that we didn't put a customer in a situation where we were trying to help and all of a sudden we have made it worse because they have now another loan that they have to pay, and they were already struggling to pay the initial loan that they have on their business.

So I think it is just relationship banking. I mean that is what we do every day. We have a relationship with that customer, we work with them, we try to make sure that we improve their situation, we don't harm them by putting them in a worse situation. And our lenders are—you know, understand that, they are very good at that. We had lenders here that worked 24 hours a day, you know, 7 days a week trying to kind of build an airplane while we were in flight, to get this program up and going and started. And it was very, very frustrating, but I think in the end our main objective was to help as many customers and as many businesses in the communities that we served as we possibly could.

Ms. VAN DUYNE. I think you just proved again that there is no—you know, there is no questioning that people on the ground who know their community, who are working in the community

with actual real people completely outweigh the D.C. bureaucrats in being able to be efficient and effective and help in the community.

So thank you very much for your testimony today.

I yield back.

Chairman PHILLIPS. The gentlelady yields back.

And with that, I want to thank all of our witnesses again for joining us today. Your research analyzing PPP is a vital tool for all of us on this Committee as we work to make SBA programs reach the smallest of small businesses throughout the country. And it is heartening to see that the changes Congress did institute had a profound effect on entrepreneurs that were initially shut out of PPP.

It is also vital that we take the lessons learned from the PPP program and apply them to current and future SBA programs.

Making these programs more accessible and equitable will ensure that more entrepreneurs can pursue their dreams and that all small businesses have a chance not just to survive, but to thrive.

I also want to note that the passage and implementation of PPP was an acknowledgment of Congress' responsibility to help small businesses during the COVID-19 pandemic. For the hardest hit small businesses and disproportionately impacted industries, including restaurants, live events, and fitness, the fight is still far from over. We have to once again acknowledge our responsibility to maintaining the strength of our small business ecosystem and I would argue pass additional targeted relief to ensure that our nation's most resilient small businesses do not close their doors after surviving 2 years of this terrible pandemic.

I urge the inclusion of such relief in any supplemental COVID-19 bill that comes before this Congress.

With that, and without objection, Members have 5 legislative days to submit statements and supporting materials for the record.

And if there are no further business to come before the Committee, without objection, we are now adjourned.

Thank you, everybody.

[Whereupon, at 11:42 p.m., the subcommittee was adjourned.]

APPENDIX

United States Government Accountability Office

Testimony before the Subcommittee on Oversight, Investigations, and Regulations, Committee on Small Business, House of Representatives

For Release on Delivery
Expected at 10:00 a.m. ET
Wednesday, March 16, 2022

PAYCHECK PROTECTION PROGRAM

Program Changes Increased Lending to Smaller and Underserved Businesses

Statement of William B. Shear, Director, Financial Markets and Community Investment

GAO-22-105788

GAO Highlights

Highlights of GAO-22-105788, a testimony before the Subcommittee on Oversight, Investigations, and Regulations, Committee on Small Business, House of Representatives

March 16, 2022

PAYCHECK PROTECTION PROGRAM

Program Changes Increased Lending to Smaller and Underserved Businesses

Why GAO Did This Study

The COVID-19 pandemic resulted in significant turmoil in the U.S. economy, leading to temporary and permanent business closures and high unemployment. In response, in March 2020, Congress established PPP under the CARES Act and ultimately provided commitment authority of approximately $814 billion for the program over three phases. When initial program funding ran out in 14 days, concerns quickly surfaced that certain businesses were unable to access the program, prompting a series of changes by Congress and SBA.

This testimony addresses (1) which small businesses received early PPP loans and (2) how program changes affected small business participation in PPP. It is based on GAO's September 2021 report on PPP (GAO-21-601). For that report, GAO analyzed loan-level PPP data from SBA and county-level data from the U.S. Census Bureau.

View GAO-22-105788. For more information, contact William B. Shear at (202) 512-8678 or shearw@gao.gov.

What GAO Found

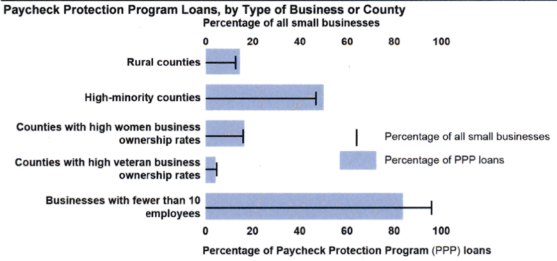
The Paycheck Protection Program (PPP) supported small businesses through forgivable loans for payroll and other eligible costs. Early lending favored larger and rural businesses, according to GAO's analysis of Small Business Administration (SBA) data. Specifically, 42 percent of early loans (approved April 3–16, 2020) went to larger businesses (10 to 499 employees), although these businesses accounted for only 4 percent of all U.S. small businesses. Larger businesses were more likely to have a preexisting lending relationship with a bank. Businesses in rural areas also received a high share of early loans despite being traditionally underserved.

Other traditionally underserved businesses—in particular, businesses owned by self-employed individuals, minorities, women, and veterans—faced challenges obtaining loans, prompting Congress and SBA to make a series of changes shortly after the program launched. For example:

- SBA admitted about 600 new lenders, including nonbanks (generally, lending institutions that do not accept deposits).
- SBA developed guidance helping self-employed individuals participate in the program.
- SBA targeted funding to minority-owned businesses in part through Community Development Financial Institutions.

Lending to traditionally underserved businesses increased noticeably after these changes were implemented. By the time PPP closed in June 2021, lending in traditionally underserved counties was proportional to their representation in the overall small business community (see figure). While lending to businesses with fewer than 10 employees remained disproportionately low, it increased significantly over the course of the program.

Paycheck Protection Program Loans, by Type of Business or County



Source: GAO analysis of Small Business Administration and Census Bureau data. | GAO-22-105788

Chairman Phillips, Ranking Member Van Duyne, and Members of the Subcommittee:

I am pleased to be here today to discuss our work on the Small Business Administration's (SBA) Paycheck Protection Program (PPP). Congress passed the CARES Act in March 2020 in response to the Coronavirus Disease 2019 (COVID-19) pandemic.[1] The CARES Act provided more than $2 trillion in emergency assistance and health care response for individuals, families, and businesses affected by COVID-19. Stay-at-home orders, social distancing requirements, and reduced consumer demand early in the pandemic caused both temporary and permanent business closures, particularly among small businesses. Congress included PPP in the CARES Act, making $349 billion available to support small businesses affected by the pandemic and to keep small business workers employed.[2]

Administered by SBA through a network of participating lenders, PPP provided forgivable loans to small businesses for payroll and certain other eligible costs. To provide relief quickly, lenders began approving loans 7 days after the CARES Act was enacted. When the program's initial round of funding ran out in 14 days, policymakers and small business organizations raised concerns that the smallest businesses and those owned by minorities, women, and veterans had difficulty accessing the program. In response, Congress made program changes, renewed the program twice, and provided approximately an additional $465 billion to meet continued demand.

In September 2021, we issued a report on trends in small business and lender participation in PPP.[3] My statement today is based on that report and addresses (1) which small businesses received early PPP loans and (2) how program changes affected small business participation in PPP. For the September 2021 report, we analyzed loan-level PPP data from

[1]Pub. L. No. 116-136, 134 Stat. 281 (2020).

[2]PPP was one of the programs Congress created, expanded, or funded under the CARES Act to support workers and small businesses in the economic downturn. Congress also eased borrowing requirements for the Economic Injury Disaster Loan program and created and provided appropriations for Economic Injury Disaster Loan advances. In addition, the CARES Act created three federally funded temporary unemployment insurance programs that expanded benefit eligibility and enhanced benefits.

[3]GAO, *Paycheck Protection Program: Program Changes Increased Lending to the Smallest Businesses and in Underserved Locations*, GAO-21-601 (Washington, D.C.: Sept. 21, 2021).

SBA and county-level data from the U.S. Census Bureau (Census) and surveyed a generalizable sample of PPP lenders, stratified by lender type and size. We also reviewed legislation, interim final rules, agency guidance, and relevant literature, as well as interviewing SBA officials.

More detailed information on our objectives, scope, and methodology for that work can be found in the issued report. We conducted the work on which this statement is based in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Background

The CARES Act, signed into law by the President on March 27, 2020, established PPP under section 7(a) of the Small Business Act to provide forgivable loans to small businesses and nonprofit organizations, referred to collectively as "small businesses."[4] Under the law, qualifying businesses could obtain loans equal to the lesser of 2.5 months of average total monthly payments for payroll costs or $10 million, and were required to self-certify their need for the loan.[5]

Congress provided commitment authority of about $814 billion to PPP in three phases (see table 1).

[4]SBA administers the 7(a) guaranteed loan program, which provides small businesses access to capital that they would not be able to access in the competitive market. In fiscal year 2019, SBA approved $23 billion in loans through the 7(a) program.

[5]In general, qualifying small businesses included those with 500 or fewer employees or that met SBA's industry-based size standard. As set forth in the CARES Act, borrowers had to certify in good faith that (1) current economic uncertainty made the loan request necessary to support the applicant's ongoing operations and (2) funds would be used to retain workers and maintain payroll or make payments for other covered expenses. Pub. L. No. 116-136, § 1102(a)(1)(B), 134 Stat. 281, 291 (2020) (codified at 15 U.S.C. § 636(a)(36)(G)(i)(I),(II)). To streamline the process, SBA required minimal review from lenders—such as confirming receipt of borrower certifications and supporting payroll documentation.

Table 1: Paycheck Protection Program (PPP) Phases

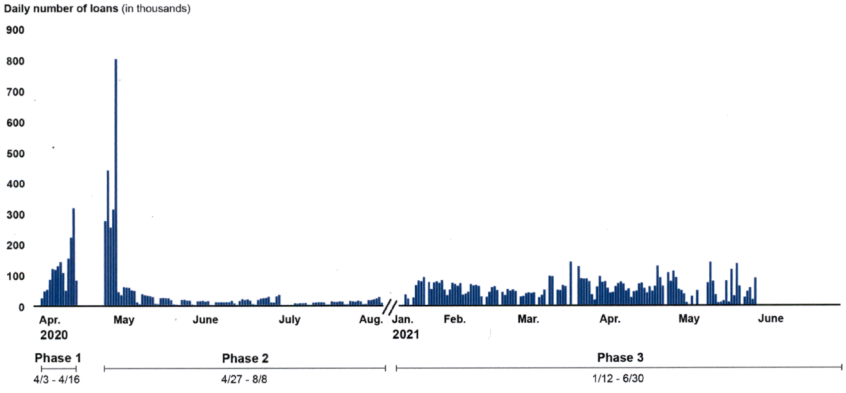
Phase	Legislation	Date enacted	Commitment authority provided	Application period
1	CARES Act	March 27, 2020	$349 billion	April 3, 2020–April 16, 2020
2	Paycheck Protection Program and Health Care Enhancement Act	April 24, 2020	$310 billion	April 27, 2020–August 8, 2020
3	Consolidated Appropriations Act, 2021	December 27, 2020	$147.45 billion	January 11, 2021–May 31, 2021[a]
	American Rescue Plan Act of 2021	March 11, 2021	$7.25 billion	

Source: GAO analysis of relevant laws. | GAO-22-105788

[a]The PPP Extension Act of 2021 extended the application period for Phase 3 from March 31, 2021, to May 31, 2021, and allowed the Small Business Administration until June 30, 2021, to process those applications. On May 4, 2021, the PPP general fund was exhausted and closed to new applications, except those processed by a community financial institution lender.

Early demand for PPP loans was high. Daily lending volume—that is, the number of loans approved per day—was highest from April 3 through May 1, 2020, when 31 percent of all PPP loans were approved (see fig. 1).

Figure 1: Paycheck Protection Program Lending Volume by Approval Date, April 2020–June 2021



Source: GAO analysis of Small Business Administration data. | GAO-22-105788

The CARES Act authorized SBA to use lenders already approved to participate in the 7(a) program and permitted SBA and the Department of the Treasury to approve new lenders to issue PPP loans, provided they met certain requirements.[6] Participating lenders included depository institutions (for example, banks and credit unions) and nondepository institutions (for example, nonbanks).[7] For the purposes of this statement, we refer to depository institutions as "banks" and characterize them by size:

- large banks: total assets of $10 billion or more
- medium banks: total assets from $1 billion to $10 billion
- small banks: total assets of less than $1 billion

Further, some lenders are designated Community Development Financial Institutions (CDFI) and Minority Depository Institutions (MDI). CFDIs and MDIs target loans to businesses and individuals in traditionally underserved areas with the goal of expanding economic opportunity. CDFIs include both banks and nonbanks, while MDIs include only banks.

As PPP was initially implemented, small businesses or nonprofit organizations were generally eligible for PPP loans if they had 500 or fewer employees.[8] Businesses that may not have paid employees (sole

[6]Pub. L. No. 116-136, § 1102(a), 134 Stat. 281, 290 (2020) (codified at 15 U.S.C. § 636(a)(36)(F)(iii)). In an interim final rule published April 2, 2020, SBA announced that any federally insured depository institution, credit union, or farm credit institution in good standing with its regulator would automatically qualify to participate in PPP upon submission of SBA's PPP Lender Agreement. 85 Fed. Reg. 20,811, 20,815 (Apr. 15, 2020). SBA and the Department of the Treasury were jointly responsible for approving lenders new to SBA to issue PPP loans. According to SBA officials, SBA approved new federally regulated lenders, and only new non-federally regulated and insured lenders required joint SBA and Treasury approval.

[7]In general, nonbanks provide lending services but do not accept deposits. Nonbanks include SBA Small Business Lending Companies, SBA Microlenders, SBA Certified Development Companies, state-regulated financial companies, Business and Industrial Development Corporations, and Farm Credit System lenders.

[8]Under the CARES Act, eligible borrowers included (1) businesses that are small under SBA's size standards (either the industry size standard or the alternative size standard); (2) any business, 501(c)(3) nonprofit organization, 501(c)(19) veterans organization, or tribal business concern with 500 or fewer employees or that meets the applicable SBA industry size standard if more than 500; (3) any business in the accommodations and food services sector that has more than one physical location and employs not more than 500 employees per physical location; and (4) sole proprietors, independent contractors, and eligible self-employed individuals.

proprietors, independent contractors, self-employed individuals, qualified joint ventures, and single-member limited liability companies) were eligible for a PPP loan. For the purposes of this statement, we refer to these business types collectively as "self-employed individuals."

Finally, the CARES Act included a Sense of the Senate statement noting the Senate's preference that SBA should issue guidance to lenders to ensure that processing and disbursement of loans prioritized businesses in underserved and rural markets, including veterans and members of the military community, small business concerns owned and controlled by socially and economically disadvantaged individuals, women, and businesses in operation for less than 2 years.[9] For the purposes of this statement, we use "traditionally underserved businesses and counties" more broadly to refer to very small businesses; those owned by minorities, women, or veterans; or those located in rural counties or counties with high minority populations.[10]

Larger and Rural Businesses Received Early Loans

Larger businesses. Larger businesses—small businesses with 10 to 499 employees—received a higher share of loans in Phase 1 relative to their share of all small businesses. Specifically, 42 percent of loans in Phase 1 went to these larger businesses, despite their accounting for only 4 percent of all small businesses in the U.S. The share of loans to these businesses decreased over time, suggesting that much of their demand for loans was met early in the program.[11] Further, because the loan amount for each recipient business was based on average payroll, larger

[9]Pub. L. No. 116-136, § 1102(a), 134 Stat. 281, 293 (2020) (codified at 15 U.S.C. § 636(a)(36)(P)(iv)).

[10]In our analyses, we used businesses with fewer than 10 employees and those owned by self-employed individuals to represent very small businesses. To represent minority-, women-, and veteran-owned businesses, we used counties with high shares of minority residents and high shares of women- and veteran-owned businesses.

[11]As we reported in September 2020, during Phases 1–2, a larger share of loans over $2 million were canceled compared to smaller loans following reports that publicly traded companies had received loans and SBA's subsequent guidance clarifying the economic necessity requirements. As a result, the demand for larger loans may have diminished over time because of increased scrutiny from the public, Treasury, and SBA. See GAO, *COVID-19: Federal Efforts Could Be Strengthened by Timely and Concerted Actions*, GAO-20-701 (Washington D.C.: Sept. 21, 2020).

businesses generally received larger loans, likely precipitating the exhaustion of Phase 1 funding after just 2 weeks.[12]

Research on small business lending and PPP suggests businesses with preexisting relationships with banks were able to access PPP earlier than businesses without such relationships. For example, one study on PPP found that among businesses that applied for PPP loans from banks, approval rates were generally higher for businesses with a preexisting relationship with a bank.[13] Also, larger businesses were more likely to have these relationships than the smallest businesses.[14] Other research found that the smallest businesses were less aware of PPP and less likely to apply early in the program.[15] If they did apply, the smallest businesses applied later, faced longer processing times, and were less likely to have their applications approved, which may also partly explain why early lending skewed toward larger businesses during Phase 1.

Businesses in rural areas. While rural counties are traditionally underserved, businesses in rural counties obtained a higher number of loans per small business in Phase 1 than businesses in metro counties

[12]The average (median) loan size for recipient businesses with fewer than 10 employees was $21,697 ($18,115), compared to $296,292 ($146,000) for recipient businesses with 10 to 499 employees.

[13]Alexander W. Bartik et al., "The Targeting and Impact of Paycheck Protection Program Loans to Small Businesses" (working paper 27623, National Bureau of Economic Research, July 2020). Additionally, as we found in a July 2021 report, because lenders were required to apply relevant Bank Secrecy Act program requirements, they had to collect additional information from PPP loan applicants with which they did not have a preexisting relationship. Because preexisting clients required the lender to conduct less due diligence, their applications could be processed more quickly. The Bank Secrecy Act requires banks and other financial institutions to take precautions against money laundering and other illicit financial activities by conducting due diligence activities and informing Treasury of suspicious activity by their customers. See GAO, *Paycheck Protection Program: SBA Added Program Safeguards, but Additional Actions Are Needed*, GAO-21-577 (Washington, D.C.: July 29, 2021).

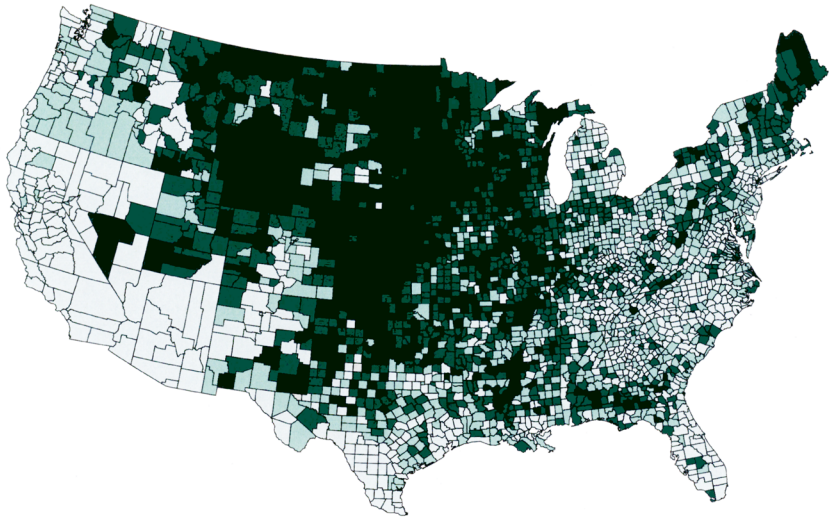
[14]According to the Federal Reserve Banks' 2020 Small Business Credit Survey, larger businesses (those with annual revenue greater than $1 million) were more likely to have existing banking relationships. See Federal Reserve Banks of Atlanta, Boston, Chicago, Cleveland, Dallas, Kansas City, Minneapolis, New York, Philadelphia, Richmond, St. Louis, and San Francisco, *Small Business Credit Survey: 2020 Report on Employer Firms* (New York, NY: 2020).

[15]Christopher Neilson, John Eric Humphries, and Gabriel Ulyssea, "Information Frictions and Access to the Paycheck Protection Program" (working paper 27624, National Bureau of Economic Research, July 2020).

(see fig. 2).[16] Specifically, 13 percent of small businesses are located in rural counties, but 19 percent of all Phase 1 loans went to businesses in these counties.

[16]We used data from the Department of Agriculture's Economic Research Service to classify counties as "metro" if they have one or more high-density urban areas with 50,000 or more residents or are outlying counties that are economically tied to these central counties, as measured by the share of workers commuting on a daily basis to the central counties. Rural counties are outside the boundaries of metro areas and have no cities with 50,000 or more residents.

Figure 2: Paycheck Protection Program Loans per Small Business in Phase 1, by County



Number of Paycheck Protection Program loans per small business

- 0.046 or fewer
- 0.047 to 0.068
- 0.069 to 0.094
- 0.095 or more
- Not available

Source: GAO analysis of Small Business Administration and Census Bureau data. | GAO-22-105788

Note: This analysis excludes loans that were approved and subsequently canceled. Generally, Phase 1 data include loans approved from April 3 through April 16, 2020.

Businesses in rural counties also received loans earlier on average than businesses in metro areas. Specifically, in the period from April 3 through May 1, 2020, when loan volume was at its highest, loans were approved

an average of 3 days earlier for businesses in rural areas than loans for businesses in metro areas. Businesses in rural counties received a high share of Phase 1 loans potentially because many of their loans were approved by small banks, which approved loans earlier than large banks. For example, of all loans approved by small banks from April 3 through May 1, 2020, 59 percent were approved before initial funding ran out on April 16, 2020. Conversely, of all loans approved by large banks from April 3 through May 1, 2020, only 34 percent were approved before initial funding ran out. In total, 44 percent of loans approved by small banks went to businesses in rural areas compared to 6 percent of loans approved by large banks.

Although large banks made more loans than all other lender types in Phase 1, researchers found they underperformed compared to small banks—with underperformance defined as having made a smaller share of PPP loans relative to their share of non-PPP small business loans.[17] Further, bank performance affected whether PPP borrowers were able to access loans before funding ran out at the end of Phase 1. Specifically, only 25 percent of all PPP borrowers located in areas with underperforming banks (regardless of size) obtained PPP approval prior to the end of Phase 1. By contrast, approximately 42 percent of all PPP borrowers in areas with banks that overperformed (or made more PPP loans than their share of other small business loans) had access to funds in Phase 1.

Small banks may have been more experienced with small business lending, and therefore better equipped to process PPP applications than other lenders, according to researchers and our analysis. For example, research from the Federal Deposit Insurance Corporation found that community banks (which are generally smaller banks) held a high share of small business loans before the COVID-19 pandemic.[18] It also found that community banks' participation in PPP was proportionately larger than their size in the banking industry, meaning that community banks made a larger share of PPP loans than other types of loans. Further,

[17]João Granja et al., "Did the Paycheck Protection Program Hit the Target?" (working paper 27095, National Bureau of Economic Research, November 2020).

[18]Margaret Hanrahan and Angela Hilton, "The Importance of Community Banks in Paycheck Protection Program Lending," *FDIC Quarterly*, vol. 14, no. 4 (2020). For the purposes of this research, community banks include banks with assets less than $1 billion, banks that primarily engage in basic banking activities rather than specialty activities, and banks that operate within a limited geographic scope.

based on results from our survey of PPP lenders, small banks approved the highest percentage of PPP applications on average (approximately 96 percent), compared to an estimated 93 percent for large and medium banks and an estimated 86 percent for CDFIs and MDIs.[19]

Program Changes, Including Lender Pool Expansion, Increased Lending to Traditionally Underserved Businesses and Counties

Congress and SBA Implemented Changes Shortly after PPP Launched to Increase Lending to Underserved Borrowers

Following concerns raised by small business associations that some traditionally underserved businesses faced challenges accessing loans in Phase 1, Congress and SBA modified PPP to increase participation among certain businesses, such as self-employed individuals, women-owned businesses, and businesses in minority counties. Many of these changes were implemented shortly after the start of the program and included increasing the number of lenders, targeting funding to certain businesses, and expanding program eligibility (see table 2).

[19]We surveyed a generalizable sample of 1,383 PPP lenders, stratified by lender type and size, to obtain their perspectives on the program. The survey closed on April 15, 2021, and we received 781 responses. We obtained a weighted response rate of 57.3 percent. The 95 percent confidence intervals for these estimates are (95, 97) for small banks, (91, 94) for medium and large banks, and (84, 89) for CDFIs and MDIs.

Table 2: Key Paycheck Protection Program Changes, by Program Phase

Phase	Legislation or program guidance	Date	Description of change
1	Technical event	April 8, 2020	The Small Business Administration (SBA) released the nonbank lender application form allowing new nonbank lenders to participate in the Paycheck Protection Program (PPP).
2	Interim final rule	April 20, 2020	SBA provided instructions for self-employed individuals filing a Form 1040 Schedule C to apply by calculating the loan amount based on the business's net profit from 2019.
	Guidance	April 23, 2020	SBA issued clarifying guidance stating that public companies with access to capital markets would be unlikely to have made a certification of need for a PPP loan in good faith, and allowed companies 2 weeks to return loan funds if they applied for the loan prior to issuance of the guidance.
	Interim final rule	April 30, 2020	SBA adjusted portfolio requirements for Community Development Financial Institutions (CDFI), majority minority-, women-, or veteran/military-owned financial institutions, and certain other nonbank lenders, which allowed smaller lenders to participate in PPP.
	Technical event	May 28, 2020	SBA established a $10 billion set-aside for businesses that applied through CDFIs to target lending to minority-owned businesses and underserved communities.[a]
3	Consolidated Appropriations Act, 2021	December 27, 2020	Congress allowed some businesses to receive a second loan and targeted eligibility for second loans to businesses that met certain criteria, including having 300 or fewer employees and documenting revenue losses in 2020.
	Guidance	January 11, 2021	SBA dedicated the first few days of Phase 3 to processing loans made through community financial institutions, which include CDFIs, Minority Depository Institutions, Certified Development Companies, and Microloan Intermediaries.
	Guidance	February 22, 2021	SBA established a 14-day loan application period exclusively for businesses or nonprofits with fewer than 20 employees.
	Interim final rule	March 4, 2021	SBA revised the maximum loan amount calculation for self-employed individuals filing a Form 1040 Schedule C based on either gross income or net profit, which allowed for larger loans.

Source: GAO analysis of SBA guidance and relevant laws. | GAO-22-105788

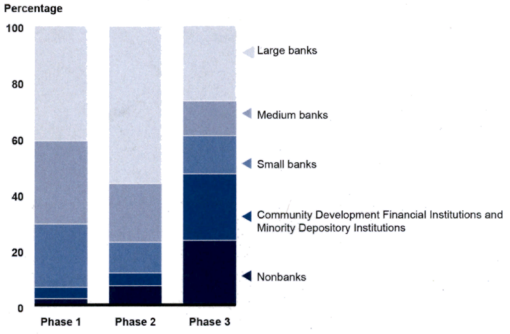
Note: Phase 1 includes the application period from April 3 through April 16, 2020; Phase 2 from April 27 through August 8, 2020; and Phase 3 from January 11 through May 31, 2021.

[a]Congress established additional set-asides throughout the course of the program. These included a total $60 billion set-aside for businesses that applied through community financial institutions, certain small insured depository institutions, and certain small credit unions established under the Paycheck Protection Program and Health Care Enhancement Act, as well as $15 billion for lending by community financial institutions and $35 billion to new PPP borrowers established under the Consolidated Appropriations Act, 2021.

To increase lending to traditionally underserved businesses and counties, Congress and SBA modified PPP to allow for greater participation by financial institutions that lend to traditionally underserved businesses.

Nonbanks, CDFIs, and MDIs each made a greater percentage of PPP loans in Phases 2 and 3 than they did in Phase 1 (see fig. 3). Specifically, the percentage of loans made by nonbanks increased significantly, from 3 percent of loans in Phase 1 to 23 percent of loans in Phase 3. In addition, the percentage of loans made by CDFIs and MDIs rose from 4 percent of loans in Phase 1 to 24 percent of loans in Phase 3. Further, beginning in Phase 2, SBA approved 623 new lenders to make PPP loans, increasing the total number of lenders from 4,837 to 5,460. CDFIs, MDIs, and nonbanks made 97 percent of the nearly 1.5 million loans issued by new lenders in the last two phases of the program.

Figure 3: Percentage of Paycheck Protection Program Loans, by Lender Type and Program Phase



Source: GAO analysis of Small Business Administration (SBA) data. | GAO-22-105788

Note: For this analysis, all depository lenders are categorized as "banks," including banks, credit unions, and savings and loan associations. Large banks are those with at least $10 billion in assets, medium banks are those with $1 to $10 billion, and small banks are those with less than $1 billion, based on publicly available call reports. All nondepository lenders are categorized as "nonbanks," including SBA Small Business Lending Companies, SBA Certified Development Companies, SBA Microlenders, Business and Industrial Development Corporations, Farm Credit System lenders, and state-regulated financial companies. This analysis excludes loans that were approved and subsequently canceled. Generally, Phase 1 data include loans approved from April 3 through April 16, 2020, Phase 2 data include loans approved from April 27 through August 8, 2020, and Phase 3 data include loans approved from January 12 through June 30, 2021.

Available data suggest the changes SBA and Congress made to increase lending to traditionally underserved businesses helped these businesses better access PPP. Nonbanks, CDFIs, and MDIs made a higher

proportion of loans to traditionally underserved businesses and counties than other types of lenders, particularly small banks. For example, self-employed individuals received 85 percent of nonbanks' loans but only 47 percent of loans overall, which suggests that nonbank lenders' increased participation over time could have helped increase lending to these borrowers. In addition, 21 percent of loans made by CDFIs or MDIs and 23 percent of loans made by nonbanks went to businesses in counties with large shares of women-owned businesses, compared to 4 percent of loans made by small banks.[20] Similarly, 64 percent of loans made by nonbanks and 69 percent of loans made by CDFIs and MDIs went to businesses in high-minority counties, compared to 22 percent of loans made by small banks.[21]

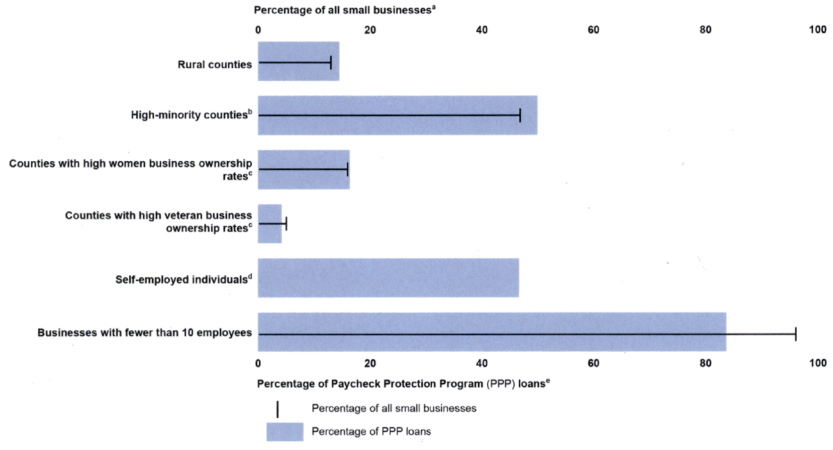
By Program Close, Lending to Traditionally Underserved Businesses and Counties Was Comparable to Their Share of Small Businesses

By the end of Phase 3, PPP lending to businesses in traditionally underserved counties was proportionate to their representation in the overall small business community, in part because of the changes Congress and SBA made to the program (see fig. 4). For example, while loans to businesses in rural counties were high from the start of the program, loans to businesses in high-minority counties and counties with large shares of women-owned businesses reached proportionate levels by the end of Phase 3. However, while lending to businesses with fewer than 10 employees increased significantly over time, it remained disproportionately low by the end of Phase 3.

[20]By comparison, 19 percent of loans made by large banks and 10 percent of loans made by medium banks went to businesses in counties with large shares of women-owned businesses.

[21]Fifty-four percent of loans made by large banks and 36 percent of loans made by medium banks went to businesses in counties with high minority populations.

Figure 4: Percentage of Paycheck Protection Program Loans Relative to the Share of Small Businesses, by Type of Business or County



Source: GAO analysis of Small Business Administration and Census Bureau data. | GAO-22-105788

[a]We define all small businesses as employer businesses with fewer than 500 employees and all non-employer businesses based on 2017 data from Census's Statistics of U.S. Businesses and Non-Employer Statistics.

[b]High-minority counties include counties with a share of minority residents greater than the national share based on Census's American Community Survey.

[c]Counties with large shares of women- and veteran-owned businesses include counties in which the share of business ownership is higher than the national share at the 95 percent confidence level, based on Census's Annual Business Survey.

[d]Self-employed individuals include independent contractors, sole proprietorships, qualified joint ventures, and single-member limited liability companies. Data were not available to calculate the percentage of all small businesses that were self-employed individuals.

[e]This analysis excludes loans that were approved and subsequently canceled. For counties, loans that could not be matched to Census data were excluded.

Businesses in rural areas. As previously described, businesses in rural counties were the only traditionally underserved group that received a higher share of Phase 1 loans (19 percent) than their share of small businesses nationwide (13 percent). By the program's end, 15 percent of all loans were to businesses in rural counties.

Businesses in high-minority counties. Small businesses in high-minority counties received a relatively low share of loans in Phase 1 (36 percent), but their share increased over time (50 percent in Phase 2).[22] By the program's end, 50 percent of loans went to businesses in these counties, exceeding their share of small businesses (47 percent). This trend corresponds with a general increase in the number and types of lenders in the program after Phase 1 and program changes to target funds to lenders that lend in traditionally underserved counties in Phases 2 and 3. For example, in Phase 2, SBA established a $10 billion set-aside for businesses that applied through CDFIs, seeking to target lending to minority-owned businesses and traditionally underserved counties.

Loans to minority-owned businesses may also have been low in Phase 1 because these businesses lacked preexisting relationships with banks, particularly small banks. According to the Federal Reserve Banks' 2019 Small Business Credit Survey, prior to the pandemic, Black and Hispanic business owners were more likely to seek financing from large banks and online lenders than from small banks.[23] The 2020 update to the survey found this trend continued during Phases 1 and 2: regardless of where businesses applied for PPP loans, those that had a relationship with a bank were more likely to apply for PPP loans than those that did not.[24] The survey also demonstrated that minority-owned businesses were less likely to have a relationship with a bank. Our survey of PPP lenders found CDFIs and MDIs were more likely than other types of lenders to report

[22]For this analysis, we define high-minority counties as counties where the percentage of minority residents was higher than the national share of 27.5 percent. Because SBA does not have complete data on the race of business owners who obtained PPP loans, we used Census's American Community Survey to measure the percentage of loans in each phase that went to businesses in high-minority counties, or counties with a share of minority residents above the national share. We used county-level 2015–2019 5-year estimates, the most recently available data at the time of our review.

[23]Federal Reserve Bank of Atlanta, *Small Business Credit Survey: 2019 Report on Minority-Owned Firms* (New York, NY: 2019). The 2018 survey was conducted in the third and fourth quarters of 2018 and generated 6,614 responses from employer firms with information on the race or ethnicity of a firm's owner(s).

[24]Federal Reserve Banks of Atlanta, Boston, Chicago, Cleveland, Dallas, Kansas City, Minneapolis, New York, Philadelphia, Richmond, St. Louis, and San Francisco, *Small Business Credit Survey: 2021 Report on Firms Owned by People of Color* (New York, NY: 2021).

that they accepted applications from borrowers with whom they had no prior relationship.[25]

Women-owned businesses. The share of loans to businesses in counties with a large share of women-owned businesses also increased, from 9 percent in Phase 1 to 18 percent in Phase 2.[26] By the program's end, 16 percent of loans went to businesses in these counties, equaling their share of small businesses. These increases corresponded with the increase in the number and types of lenders after Phase 1 and program changes to target funding to traditionally underserved businesses and communities in Phases 2 and 3. In addition, approximately 90 percent of women business owners are self-employed individuals, according to Census data.[27] As a result, program changes aimed at increasing participation among self-employed individuals likely also contributed to the increase in lending to counties with large shares of women-owned businesses.

Veteran-owned businesses. The share of loans to business in counties with a large share of veteran-owned businesses was generally consistent over time. Overall, counties with large shares of veteran-owned businesses accounted for 4 percent of loans and 5 percent of small businesses.

Self-employed individuals and businesses with fewer than 10 employees. While the share of loans to self-employed individuals was low in Phase 1, program changes helped increase their share substantially in later phases of the program, from 9 percent of all loans in

[25]Ninety percent of CDFI/MDIs reported accepting PPP applications from businesses with whom they had no prior relationship, compared to 73 percent of large banks. The 95 percent confidence intervals for these estimates are (83, 95) for CDFI/MDIs and (67, 79) for large banks.

[26]Because SBA does not have complete data on the gender of business owners who obtained PPP loans, we used estimates from Census's Annual Business Survey to assess the extent to which businesses in counties with large shares of women-owned businesses were able to access PPP. For the purposes of this analysis, we examined lending in counties with shares of women-owned businesses that were higher than the national estimate. We refer to these counties as having a "large share" of women-owned businesses. Based on data from the 2017 Annual Business Survey, approximately 20 percent of all businesses were women-owned.

[27]U.S. Census Bureau, *Number of Women-Owned Employer Firms Increased 0.6% From 2017 to 2018* (Washington, D.C.: Mar. 29, 2021).

Phase 1 to 86 percent in Phase 3.[28] This increase corresponded with SBA issuing guidance for self-employed individuals to apply for loans and increasing the number and types of lenders in the program at the end of Phase 1, and allowing for larger loan amounts for self-employed individuals in Phase 3.

Similarly, the share of loans to businesses with fewer than 10 employees increased across all three phases. However, the share of loans to these businesses remained below their share of small businesses overall, despite program changes to increase their participation over time. These businesses received 84 percent of all loans, but represent 96 percent of all small businesses. By comparison, businesses with 10 to 499 employees received 16 percent of all loans, despite accounting for just 4 percent of all small businesses.

The proportionately low program participation for self-employed individuals and businesses with fewer than 10 employees could be, in part, because they were able to obtain other forms of assistance. For example, in July 2021, we reported that businesses with fewer than 10 employees accounted for 86 percent of approved applications in the Economic Injury Disaster Loan program—an SBA-administered program that provided $230 billion in loans and advances to small businesses and nonprofits between March 2020 and May 2021.[29] Further, many self-employed individuals may have been eligible for unemployment insurance.[30]

In conclusion, our analysis suggests that program changes made by Congress and SBA helped increase lending to traditionally underserved businesses and counties.

[28]Census's Statistics on U.S. Businesses does not include data on business ownership type that are comparable to SBA's data on PPP recipients. As a result, we were not able to provide information on the share of self-employed individuals relative to all small businesses in the U.S.

[29]See GAO, *Economic Injury Disaster Loan Program: Additional Actions Needed to Improve Communication with Applicants and Address Fraud Risk*, GAO-21-589 (Washington, D.C.: July 30, 2021).

[30]SBA has noted that a self-employed individual's participation in PPP may affect eligibility for unemployment compensation.

Chairman Phillips, Ranking Member Van Duyne, and Members of the Subcommittee, this concludes my prepared statement. I would be pleased to respond to any questions that you may have at this time.

GAO Contact and Staff Acknowledgments

If you or your staff have any questions about this testimony, please contact William B. Shear, Director, Financial Markets and Community Investment, at (202) 512-8678 or shearw@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this statement. GAO staff who made key contributions to this testimony are Cory Marzullo (Assistant Director), Christopher Forys (Analyst in Charge), Jennifer Schwartz, and Jena Sinkfield.

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The $800 billion Paycheck Protection Program and the Impacts of COVID-19 on Small Businesses in the United States

Hearing: "An Empirical Review of the Paycheck Protection Program"

U.S. House of Representatives Committee on Small Business,
Subcommittee on Oversight, Investigations, and Regulations

March 16, 2022

Testimony by:

Robert W. Fairlie
Professor of Economics
University of California, Santa Cruz

Thank you Chair Velázquez, Ranking member Luetkemeyer, Subcommittee Chair Phillips, and members of the Committee. It is an honor to testify before you on the Paycheck Protection Program. I am a Professor of Economics at the University of California, Santa Cruz and have studied entrepreneurship, racial inequality and small business policy for over 25 years. I have been asked to discuss the findings from my research on small businesses in the pandemic and the allocation of PPP funds to communities of color.

The economic impacts of the pandemic have been especially severe for small businesses, workers, and minority communities. In my research, I found that the number of active business owners in the U.S. plummeted by 3.3 million or 22 percent from February 2020 to April 2020 (Figure 1).[1] African-American businesses were hit the hardest experiencing a 41 percent drop in business activity (Figure 2). Latinx business owner activity fell by 32 percent, and Asian business owner activity dropped by 26 percent. Job losses were also much higher for workers of color. Black unemployment hit a peak of 17 percent and Latinx unemployment hit a peak of 18 percent in the first full month of the pandemic.[2]

Anticipating these potential losses, one of the stated goals in the $2.2 trillion CARES Act of March 2020 was to prioritize serving "underserved markets" and businesses owned by "socially and economically disadvantaged individuals" (U.S. Congress 2020). In the beginning of the pandemic, however, minority businesses and communities were generally delayed in obtaining financial assistance through the Paycheck Protection Program (PPP). Research of mine and others found that the first round of the PPP went disproportionately less to minority communities.[3]

In the second round of PPP funding, fintech lenders were more involved in making loans, and disbursement to minority businesses and communities improved.[4]

A few months after the program ended in summer 2020, COVID cases began to rise rapidly and social-distancing restrictions returned. Given these concerns the PPP restarted in January 2021 with a strong emphasis on helping eligible borrowers in underserved and disadvantaged communities. A head start for applications through CDFIs and a two-week exclusion period for applications from very small businesses were introduced. Access to loans was emphasized for sole proprietors and independent contractors without employees.

From January to May 2021, 6.7 million loans totaling $278 billion were provided. But, did these funds in the rebooted program get disbursed to minority communities as intended or did the program struggle with equitable loan disbursement? Analyzing the 12 million loans provided through all three rounds of the PPP, our research provides five main findings:

First, we find evidence of a strong positive relationship between PPP loans and the minority share of the population in the third round (Figures 3 and 4). We analyzed this relationship using

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[1] See Fairlie (2020).
[2] See Couch, Fairlie, and Xu (2020).
[3] See Grotto et al. 2020 and Fairlie and Fossen 2021 for example. See Fairlie and Fossen (2021) for an analysis of disbursement of Economic Injury Disaster Loan Program (EIDL) funds to minority communities.
[4] See Grotto et al. (2020) and Fei and Yang, (2021) for example.

several different measures and found consistent evidence that minority communities received loans.

Second, in contrast to this finding, we found a negative relationship for the first round in 2020 and a less positive relationship found for the second round in 2020 (Figures 5 and 6).

Third, we find a stronger positive relationship between minority share and loans for first draw loans than second draw loans in 2021 (Figure 3 vs. Figure 4). This might capture persistence in racial inequities from the first round. A small business can only obtain a second draw loan if that business received a first draw loan in 2020.

Fourth, we find that PPP loans also went to self-employed business owners without employees in minority communities (Figures 7 and 8).

Fifth, many more banks and financial institutions were involved in the third round, including fintechs and CDFIs, which helped spread funds to small businesses in underserved markets.

To conclude, the rebooted program in 2021 appears to have been disbursed to communities of color as intended.

Although it is too early to tell what the long-term effects are from the third round of funds for small businesses in the country, there is no doubt that access to capital poses one of the most important barriers for small businesses. This is especially true for small business owners of color.

Half of Black families have less than $14,000 in total wealth.[5] Half of Latinx families have less than $32,000 in total wealth. Whereas, the median level of wealth among white families is $187,000. Black-owned businesses start with substantially less capital than white-owned businesses and these disparities continue over time.[6]

I believe that two things could help us move forward.[7]

1. First, we need to continue to provide access to capital for struggling businesses. One method is to do this is to increase the range of financial institutions both geographically and by type. Increasing involvement of a wider range of financial institutions appears to have helped improve access to communities of color.

2. Second, we need more awareness and action on increasing the diversity of suppliers and producers. Consumers often value knowing whether their purchases of goods and services help disadvantaged businesses and their workers. But, consumers and firms need information to make

[5] See U.S. Census Bureau (2022).
[6] See Fairlie, Robb and Robinson (2022) and Fairlie and Robb (2008) for example.
[7] Another recommendation is that the federal government should collect more data on race in relief efforts. Demographic information was only partially and unevenly collected when providing PPP funds, and there was much criticism for this omission. The information is crucial for future research on equity issues. Additionally, collection of information on applications for loans that were denied would useful to further study equity issues.

these choices. Additionally, governments and businesses can increase diversity in their suppliers. All of which will help provide a steadier stream of revenues to disadvantaged small businesses.

Thank you for the opportunity to present the findings from my research on this topic. I look forward to hearing your comments and questions.

Robert Fairlie

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Figure 1
Number of Active Business Owners in the United States (January 2000 - April 2020)

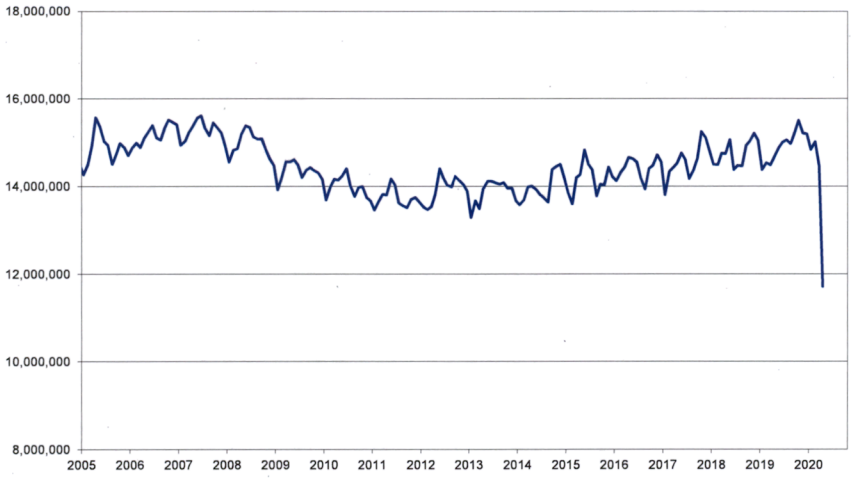


Figure 2: Losses in the Number of Active Business Owners before and after COVID-19 Restrictions (February to April 2020)

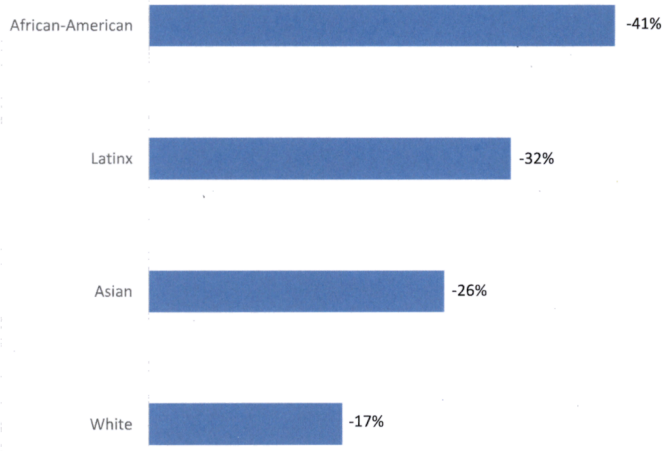
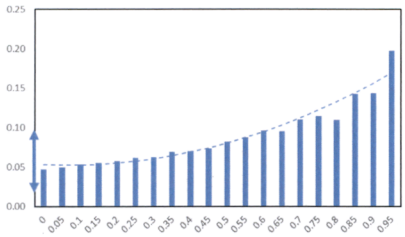
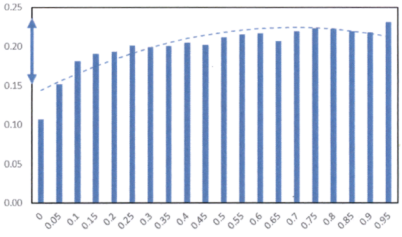


Figure 3: PPP Number of Loans to Employer Businesses per Employer Business in Zip Code by Minority Share in 2021

Panel A: First Draw



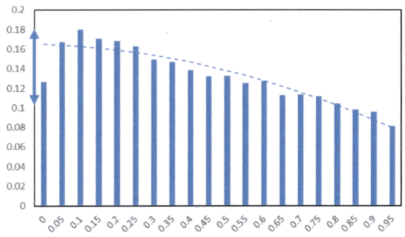
Panel B: Second Draw



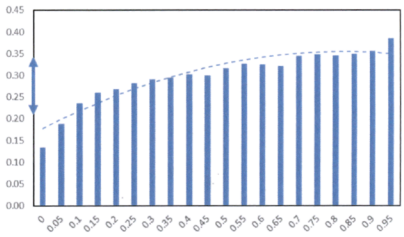
Notes: Mean numbers of first and second draw PPP loans to employer businesses in 2021 (Round 3) per employer business in zip codes by minority share of the population, weighted by population. The dashed lines are from quadratic regressions at the county level. The double arrow on the Y-axis indicates the median ± ½ standard deviation.

Figure 4: PPP Number of Loans to Employer Businesses per Employer Business in Zip Code by Minority Share in 2020

Panel A: First Round



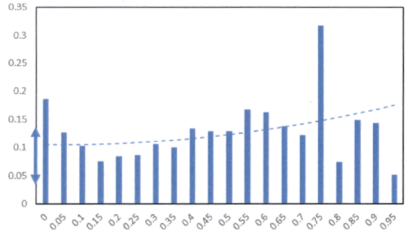
Panel B: Second Round



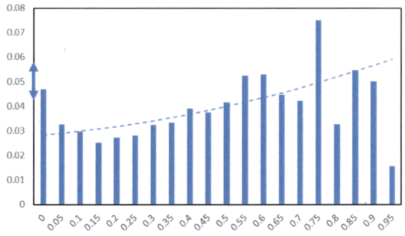
Notes: Mean numbers of PPP loans to employer businesses in 2020 (Rounds 1 and 2) per employer business in zip codes by minority share of the population, weighted by population. The dashed lines are from quadratic regressions at the county level. The double arrow on the Y-axis indicates the median ± ½ standard deviation.

Figure 5: PPP Number of Loans to Nonemployer Businesses per Nonemployer Business in County by Minority Share in 2021

Panel A: First Draw



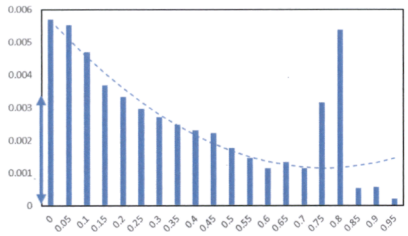
Panel B: Second Draw



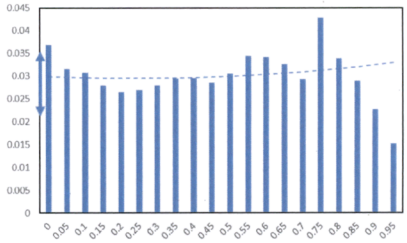
Notes: Mean numbers of first and second draw PPP loans to nonemployer businesses in 2021 (Round 3) per nonemployer business (owner job) in counties by minority share of the population, weighted by population. The dashed lines are from quadratic regressions at the county level. The double arrow on the Y-axis indicates the median ± ½ standard deviation. Excluding agricultural businesses.

Figure 6: PPP Number of Loans to Nonemployer Businesses per Nonemployer Business in County by Minority Share in 2020

Panel A: First Round



Panel B: Second Round



Notes: Mean numbers of PPP loans to nonemployer businesses in 2020 (Rounds 1 and 2) per nonemployer business (owner job) in counties by minority share of the population, weighted by population. The dashed lines are from quadratic regressions at the county level. The double arrow on the Y-axis indicates the median ± ½ standard deviation.

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THE 2021 PAYCHECK PROTECTION PROGRAM REBOOT: LOAN DISBURSEMENT TO EMPLOYER AND NONEMPLOYER BUSINESSES IN MINORITY COMMUNITIES

Robert W. Fairlie
Frank Fossen

Working Paper 29732
http://www.nber.org/papers/w29732

NATIONAL BUREAU OF ECONOMIC RESEARCH
1050 Massachusetts Avenue
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The 2021 Paycheck Protection Program Reboot: Loan Disbursement to Employer and Nonemployer Businesses in Minority Communities
Robert W. Fairlie and Frank Fossen
NBER Working Paper No. 29732
February 2022
JEL No. J15,L26

ABSTRACT

Was the $278 billion reboot of the $800 billion Paycheck Protection Program (PPP) in early 2021 disbursed equitably to minority communities? This paper provides the first analysis of how PPP funds were disbursed to minority communities in the third and final round of the program, which was specifically targeted to underserved and disadvantaged communities. Using administrative microdata on the universe of PPP loans, we find a strong positive relationship between PPP flows, as measured by the number of loans per employer business or loan amounts per employee, and the minority share of the population or businesses in the third round. In contrast, the relationship was negative in the first round of 2020 and less positive in the second round of 2020. We find a stronger positive relationship between minority share and loan numbers or amounts to employer businesses for first draw loans than second draw loans in 2021 (capturing some persistence in inequities). The patterns are similar for loan numbers and amounts to nonemployer businesses but with a strong positive relationship with minority share for both first draw and second draw loans. The rebooted PPP that ran from January to May 2021 appears to have been disbursed to minority communities as intended.

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1. Introduction

The economic impacts of the pandemic have been especially severe for small businesses, workers, and communities of color (Couch et al. 2020; Cowan 2020; Fairlie 2020; Montenovo et al. 2020). Anticipating these potential losses, one of the stated goals in the $2.2 trillion CARES Act passed into law on March 27, 2020 was to prioritize serving "underserved markets" and businesses owned by "socially and economically disadvantaged individuals" (U.S. Congress 2020). In the beginning of the pandemic, however, minority businesses and communities were generally delayed in obtaining financial assistance through a key component of the CARES Act, the Paycheck Protection Program (PPP) (Grotto, et al. 2020). The initial Paycheck Protection Program (PPP) was designed to provide loans to small businesses to keep them afloat and retain their employees. Loan amounts were intended to equal 2.5 months of average payroll costs, and could be forgiven if the business retained its employees on the payroll. The first round of the PPP provided $342 billion through 1.7 million loans with disproportionately less going to minority communities (Grotto et al. 2020; Fairlie and Fossen 2021).

As the pandemic continued and the negative economic impacts became increasingly clear, Congress appropriated additional funds and the PPP started up again on April 27, 2020. In this second round of PPP funding, as shown in Table 1, fintech lenders such as Cross River Bank, Customers Bank, BSD Capital, Kabbage, Itria Ventures, Celtic Bank and WebBank were more involved in making loans, and disbursement to minority businesses and communities improved (Grotto et al. 2020; Fei and Yang, 2021).[1] The second round which ran until August 8, 2020 provided $189 billion through 2.6 million loans to small businesses.

[1] See Fairlie and Fossen (2021) for an analysis of disbursement of Economic Injury Disaster Loan Program (EIDL) funds to minority communities. The EIDL program, which is also administered by the SBA, is designed to provide either loans or advances to small businesses that are losing revenues and sales due to COVID-19. Nearly 3.6 EIDL

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A few months after the PPP ended in summer 2020, COVID cases began to rise rapidly and social-distancing restrictions returned. New COVID cases rose from 1.2 million in September 2020 to 6.4 million in December 2020 and 6.1 million in January 2021 (Centers for Disease Control and Prevention 2021). Given these concerns the PPP restarted in January 2021 with a strong emphasis on helping eligible borrowers in underserved and disadvantaged communities. To promote access for smaller lenders and their customers, the SBA restricted the program which included a head start for applications through Community Development Financial Institutions (CDFI) before more broadly opening up the program, and a two-week exclusivity application period for businesses with fewer than 20 employees in February 2021. Part of the funds were set aside for low- or moderate-income businesses, and some exclusionary restrictions were eliminated (U.S. Small Business Administration 2021). Another major change was that the PPP opened up to allow small businesses that continued to struggle in the pandemic to obtain a second loan. During this third round of the PPP from January to May 2021, a total of $278 billion through 6.7 million loans was provided of which $209 billion and 2.9 million loans were second draw loans. At this stage of the pandemic, PPP loans were focused more on sole proprietors, self-employed individuals, and independent contractors without employees than employer businesses with an emphasis on helping to preserve the owner's job.

Did PPP funds in the rebooted program in 2021 get disproportionately disbursed to minority communities as intended or did the program struggle with equitable loan disbursement? How did the disbursement of second draw loans compare to first loan draws? Demand for second draw loans is likely to be higher in disadvantaged communities as small business continued to struggle, and major structural changes to the program are likely to have increased the supply of

loans for $200 billion and nearly 5.8 million EIDL advances for $20 billion were provided to small businesses in 2020.

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loans to those same communities, but second draw loan receipt is conditional on receiving a loan in one of the first two rounds. Did disbursement to minority communities differ between loans to small businesses with employees and loans to businesses without employees (nonemployers), which were increasingly targeted in 2021? Equitable disbursement of employer business loans has implications for community impacts on not only owners but also jobs and broader economic activity, while equitable loans to nonemployer businesses also has important implications for the owner. Finally, how does first loan disbursement across minority communities in the third round compare with disbursement in the earlier first loan draw rounds in the pandemic? This paper provides the first exploration of these important unanswered questions. We use administrative microdata covering the universe of PPP loans to small businesses. We also use newly available information on first vs second draw loans and newly available information on exact loan amounts for larger loans.

Our analysis reveals a strong positive relationship between PPP flows, as measured by the number of loans per employer business or loan amounts per employee, and the minority share of the population or businesses in the third round. We find a stronger positive relationship between minority share and loan numbers or amounts to employer businesses for first draw loans than second draw loans in 2021 (capturing some persistence in inequities). The patterns are similar for loan numbers and amounts to nonemployer businesses but with a strong positive relationship with minority share for both first draw and second draw loans. In contrast to these findings, we find a negative relationship in the first round of 2020 and a less positive relationship in the second round of 2020 for both employer and nonemployer businesses. The rebooted PPP that ran from January to May 2021 and provided $278 billion in funds to small businesses appears to have been disbursed to minority communities as intended.

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2. Data

We use loan-level PPP microdata provided by the U.S. Small Business Administration (SBA). The PPP data cover the universe of loans provided through the program, which was from April 3, 2020 to June 30, 2021. Over the entire program, 11.8 million loans were approved for a total of $800 billion.

The loan microdata include information on the amount of the loan. In the first release of data for larger loans, only ranges were reported ($150,000-350,000, $350,000-1 million, $1-2 million, $2-5 million, and $5-10 million). But, this restriction was later lifted and exact loan amounts are now available for all PPP loans. Exact addresses, including the zip code, and even the name of the business is provided for all PPP loans. The data also include information on industry, business type, jobs retained self-reported by the business, and name of the lender. The top lender providing PPP loans was Prestamos, a nonprofit CDFI which was especially active in 2021 (see Table 1).

Information on the race, ethnicity, gender and veteran status of the owner is incomplete. Some versions of the application form include questions to optionally self-report demographic information on the owners[2] while others[3] relied on banks to report the information. The result is that 70 percent of loans provide neither race nor ethnicity information, and those that have information are heavily correlated with zip code and owner characteristics indicating that missingness is likely to be non-random.[4] Recently, a couple of alternative approaches have been

[2] https://www.sba.gov/sites/default/files/2021-03/BorrowerApplication2483ARPrevisions%20%28final%203-18-21%29-508.pdf.
[3] https://www.sba.gov/sites/default/files/2020-07/PPP-Borrower-Application-Form-508.pdf.
[4] Noting these concerns Atkins, Cook and Seamans (2021) use different comparison groups with and without missing race information and find that Black-owned businesses received loans that were approximately 50 percent lower than white-owned businesses after controlling for other factors. Darity and Garcia (2022) find evidence of benefits from not reporting race by black-owned businesses on the PPP loan applications.

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taken to identify the race of the business owner on the loan. Howell et al. (2021), for example, predict a business owner's race and ethnicity using information such as the owner's name and location. Owner names are obtained from business registrations in collaboration with a data analytics firm. A random forest model trained by using the subset of PPP loans with owner's race information is used to improve prediction accuracy. They note that the assigned race should be viewed as being highly correlated with self-reported race and that it contains important socioeconomic content, consistent with previous research showing discrimination against job applicants with "African American-sounding" names. Fei and Yang (2021) focus on PPP recipients in the Food Services and Drinking Places sector for which they can find a Yelp listing. They proxy for minority-owned businesses based on the food type from yelp.com. Chernenko and Scharfstein (2021) merge race and ethnicity information for owners of restaurants in Florida from voter registration data.

We distinguish between loans to employer businesses and loans to nonemployer businesses. The distinction is relevant because the percent of PPP loans going to independent contractors, self-employment individuals and sole proprietors with no employees increased substantially in 2021. We classify all self-employed individuals and independent contractors as nonemployer businesses as well as sole proprietorships that report only one person working in the business.[5] All other businesses are classified as employer businesses. We exclude nonprofit businesses (2.3 percent) and businesses with a nonclassifiable industry (0.7 percent) throughout our analysis.

To normalize the number of PPP loans to employer businesses by zip code we calculate loans per employer business. We use data from County Business Patterns (CBP) on business

[5] A very small number of sole proprietorships report zero persons, we also classify these as nonemployer businesses.

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establishments with employees. The data are provided by the U.S. Census Bureau at the zip code level as well as other geographical levels. The CBP data on employer establishments do not include counts of farms and nonprofits. We acquire farm data by zip code from the U.S. Department of Agriculture's National Agricultural Statistics Service (NASS).

To normalize loan amounts to employer businesses we calculate average loan amounts per business employee in each zip code. CBP data also includes employment levels for employer business establishments down to the zip code level. The normalization adjusts for loan amount differences due to differences in employment size by location. However, no information on the number of employees from agricultural businesses is available, so we exclude these businesses from the analysis of loan amounts.

Data on the number of nonemployer businesses are unavailable at the zip code level, we therefore analyze loans to nonemployer businesses at the county level. To normalize the number of PPP loans and loan amounts to nonemployer businesses we use the 2018 Nonemployer Statistics (NES) provided by the U.S. Census Bureau. A caveat with this normalization is that the available Census data include all business entities that have annual receipts of at least $1,000, file IRS tax forms for sole proprietorships (Form 1040, Schedule C), partnerships (Form 1065), or corporations (the Form 1120 series), and have no paid employees. These data include all consultants, side businesses, hobby businesses, part-time contract or gig work, and other small-scale business activity as long as it produces $1,000 or more in annual revenues which are generally ineligible for PPP loans. Based on this very inclusive definition there are roughly 26.8 million nonemployer business entities in the United States.

We compare these measures of loan receipt and loan amounts to data from the Census of Population on the minority share of the population across communities. We measure minority

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share of the population by zip code for employer businesses and by county for nonemployer businesses. In addition to analyzing the relationship between PPP loan receipt per employer business by the minority share of the population we examine the relationship by minority share of employer businesses. We use data from the Annual Business Survey (ABS) on employer businesses at the county level to calculate the minority share of employer businesses in each location. We exclude PPP loans to agricultural businesses here due to a lack of data on the minority status of farmers. Data from the ABS are not available at the zip code level.

Table 2 provides mean values for the main variables of interest, weighted by population in the zip code or county. Across counties, the number of PPP loans to nonemployer businesses per nonemployer business increased substantially from the first round in early 2020 to the third round in 2021 (first draw loans). The weighted average loan amount to nonemployer businesses per nonemployer business (unconditional on receiving a loan) also increased dramatically over this period. In contrast, the number of PPP loans to employer businesses per employer business in zip codes and the unconditional PPP loan amount to employer businesses per employee in zip codes decreased from the first round to the third round. Consistent with second draw loans in Round 3 originating with businesses receiving loans in Rounds 1 or 2, loan numbers and amounts were higher for employer businesses for second draw loans than first draw loans but lower for nonemployer businesses. The minority share of the population across zip codes or counties has a weighted mean of 0.389 and the minority share of employer businesses has a lower weighted mean of 0.180 reflecting substantially lower business ownership rates among minorities.

The distribution of PPP loan amounts appears in Table 3, separately for employer and nonemployer businesses.[6] For employer businesses loans in the first round in early 2020 were

[6] Appendix Table A1 reports the combined distribution of all PPP loans.

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generally substantially larger than in later rounds consistent with large banks providing loans to their experienced small business clients in the first round (Table 1). The pattern across rounds is different for nonemployer businesses. For nonemployer businesses, median loans were largest in the third round in 2021 when the PPP was rebooted with a different emphasis.

3. Results

In this section we analyze how PPP loan receipt was distributed across minority communities. We present results for employer businesses first and then turn to nonemployer businesses, in each case analyzing both loan numbers and loan amounts per business in the zip code or county. We always start with the most recent data for the third round in 2021, which has not been analyzed before, and then compare with results for the first two rounds in 2020.

The following column charts show mean normalized numbers of loans or loan amounts in zip codes or counties in bins of minority shares of 5 percentage points, weighted by the population in the zip code or county.[7] The figures also include plotted weighted quadratic regression curves to help show the relationship. The double arrow on each Y-axis indicates the range of half a standard deviation from the median across zip codes or counties to provide a sense of relative scale of the relationships.

Before discussing the results, two important points are noted. First, we do not report confidence intervals (i.e. "whiskers") because we use the universe of PPP loans and administrative data based on the Census Business Register. Second, we focus on the raw relationship between PPP loan receipt and minority share of the population without controlling for other factors because we are trying to capture the influences of these neighborhood characteristics. For example, if

[7] Unweighted charts show the same patterns and are available from the authors on request.

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minority communities have higher poverty rates and that is correlated with receipt of PPP loans then we want to include that in our measurement (not control for it). Even if the driver of loan receipt is income it is reflected in race and that is what we are trying to capture.

3.1 Employer Businesses

We begin with PPP loan receipt per employer business by minority share of the population at the zip code level. Figure 1 displays the relationship in the third round of the PPP in 2021 for the first draw of a PPP loan (Panel A) and the second draw for businesses that had received a PPP loan before (Panel B). Loan receipt per business can be interpreted as the percentage of employer businesses receiving PPP loans in each zip code, but it is important to note that not all employer businesses qualify for loans nor necessarily want loans, and thus we do not expect the measure to ever reach 1. Both figures exhibit a positive relationship between loan receipt per employer business and the minority share of the population across zip codes in the United States.[8] For first draw loans, moving from the first quartile in minority share of the population (16 percent minority) to the third quartile (59 percent minority), loan receipt increases from 0.055 to 0.088 PPP loans to employer businesses per employer business in the zip code. Figure 2 shows that there was already a positive, but weaker relationship in round 2 (Panel B). However, the first round shows the opposite pattern (Panel A): There is a strong negative relationship between loan receipt and minority population share. Moving from the first quartile to the third quartile in minority share is associated with a decrease from 0.17 to 0.13 PPP loans per employer business.

[8] In all regressions shown in figures in this paper as dashed lines, the coefficients of the linear and squared terms of the minority share are jointly significantly different from zero at the 95% confidence level. This also holds when we run unweighted regressions.

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The disbursement of PPP funds across communities by minority share might differ when measured by loan amounts instead of number of loans. Figure 3 display average loan amounts to employer businesses per business employee by minority share in the population at the zip code level in the third round (first and second draw). Loan amounts per employee can be interpreted as the unconditional average PPP loan amount per employee in a zip code but not all employer businesses qualify and not all employees qualify for loans, and thus we do not expect the measure to reach the maximum amount per employee. We find an upward relationship of PPP loan amounts per employee with minority share for first draw loans and a flat association for second draw loans. For first draw loans, moving from the first to the third quartile in minority share is associated with an increase from $349 to $775 in average loan amount per employee. Figure 4 shows that there was already a positive, but less pronounced relationship in the second round, but a negative relationship in the first round, similar to what we found for loan numbers.

The minority share of businesses in a community may be different from the minority share of the population. Therefore, we turn to analyzing the relationship between PPP loans per employer business and the minority share of businesses in counties. The relationship for the third PPP round (first and second draw) is displayed in Figure 5 and for the first two rounds in Figure 6. We combine counties with minority shares of businesses equal to or larger than 45% into one column because the number of counties in 5% bins with higher minority shares of businesses drops below 5. Similar to our findings using the minority share of the population, we find positive relationships between loan receipt and minority business share in the third round in 2021 (first and second draw) as well as the second round in 2020, but a negative relationship in the first round 2020.

3.2 Nonemployer Businesses

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The 2021 reboot of the PPP (third round) emphasized supporting sole proprietorships, self-employed individuals and independent contractors with no employees. Therefore, we separately analyze nonemployer businesses next (at the county level due to data availability). Figure 7 reveals that the number of PPP loans to nonemployer businesses per nonemployer business in the county has a strong positive relationship with minority share of the population, both for the first and second draw. Different from what we find for employer businesses the positive relationship is also very strong for second draw loans, which might reflect more continuing struggles to find work among minority independent contractors and small sole proprietors in the pandemic in comparison to minority-owned stores, restaurants and other employer businesses. The column for the 75-80% bin of minority share of the population is an outlier. There are 20 counties in this bin, but the weighted average is dominated by Hinds County, Mississippi, which is by far the most populous county in this bin with 240,000 inhabitants. In general, bins in the right half of the county-level charts only contain comparably small numbers of counties (minimum 5), so conclusions should be drawn from the dashed weighted regression curves rather than from individual columns at the right side of the chart.

Figure 8 shows that the association between nonemployer loans per nonemployer business in the county was essentially flat in the second round, but clearly negative in the first round. This pattern of results is similar to what we found for employer businesses.[9] The PPP evolved over time not just for employer businesses but also for much smaller nonemployer businesses. The column corresponding to the 80%-85% of the minority share is again an outlier: its 19 counties are dominated by Honolulu, Hawaii, which is by far the most populous county in this bin.

[9] Tables A1 and A2 in the Appendix combine employer and nonemployer businesses and present the total number of loans to all businesses per business at the county level. The pattern of relationships with minority share in the different rounds of the PPP is the same.

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Finally, we analyze PPP loan amounts to nonemployer businesses per nonemployer business in the county. In this case, we view the owner's job as the sole worker for normalization, and as noted above the use of all nonemployer business entities in the county is likely to be over inclusive. The results appear in Figures 9 and 10. We find a similar pattern: The relationship between loan amounts to nonemployer businesses with minority share is strongly positive in 2021 (first and second draw), weaker positive in the second round in 2020, and strongly negative in the first round in 2020.

4. Discussion

As COVID-19 cases began to rise sharply in the fall of 2020, the PPP was rebooted, and rebooted with an emphasis on helping eligible borrowers in underserved and disadvantaged communities. The program ran from January 2021 to May 2021 handing out 6.7 million loans for a total of $278 billion. Analyzing administrative microdata on the universe of PPP loans for this third and final round, we find substantial evidence that the program disbursed funds to minority communities in 2021. The relationship between loan receipt or amounts and minority share of the population is generally strong and positive across all measures used. The various cuts of the data reveal interesting and important findings. The positive relationship is stronger for first loan draws than for second loan draws for employer businesses. For both first and second draw loans, demand for PPP loans is likely to be higher in disadvantaged communities as small business continued to struggle, and the major structural changes to the program are likely to have increased the supply of loans to those same communities. But, eligibility for a second draw loan depended on receipt of a loan in 2020 when relatively fewer businesses in communities with higher minority shares

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were served. The lack of a strong positive relationship in second draw loans generates some concerns over the persistence of inequities in the program from the early stages of the PPP rollout.

The shift in PPP loan provision from employer businesses to nonemployer businesses in 2021 and differences between the two types of businesses are important. Equitable disbursement of employer business loans has implications for community impacts on not only owners but also jobs and broader economic activity but equitable loans to nonemployer businesses also have important implications for the owner. We find strong positive relationships between loan receipt or amounts and minority share for first draw loans to both types of businesses, but concerning second draw loans, there is a strong positive relationship only for nonemployer businesses. Overall, our findings suggest that PPP funds in the third round in 2021 were distributed, as intended, to minority owners of businesses of all sizes and their employees.

There is a clear evolution of PPP funding to minority communities across subsequent rounds of the PPP from a negative relationship in the first round in 2020 to the strong positive relationship in the rebooted program (i.e. third round) in 2021. Why did the slope of the relationship change over time? Applying for PPP loans very early in the pandemic favored having long established relationships with banks which minority businesses were less likely to have (Mills et al. 2020). Minority-owned businesses also tend to be smaller than non-minority-owned businesses (U.S. Census Bureau 2016; Fairlie and Robb 2008), and smaller businesses often took longer to complete required paperwork due to a lack of resources and experience.[10] Importantly, fintech lenders became increasingly involved over time, and these lenders often served minority businesses (Liu and Parilla 2020, Fei and Yang 2021, Howell et al., 2021). For example, BSD

[10] A large share of early funds flowed through smaller community banks which were often in rural areas because these banks were nimbler at accessing the aid (Grotto et al. 2020). In the second round larger banks with more urban and racially diverse customer bases caught up.

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Capital and Itria Ventures were almost absent in the first round in 2020 but moved up to the top 10 lenders by number of PPP loans in 2021 (Table 1). In 2021, the SBA also explicitly promoted involvement of Community Development Financial Institutions (CDFIs), for example by providing a head start for applications through CDFIs at the beginning of the third round in January 2021. The non-profit CDFI Prestamos started at rank 4274 of lenders by PPP loans in the first round in 2020, moved up to rank 325 in the second round and became the number one lender in the third round and thereby also overall (Table 1). Prestamos especially targeted Latinx business owners. Provisions such as the 14-day exclusivity application period for businesses with fewer than 20 employees in February 2021 may also have helped to bring PPP loans to disadvantaged small businesses. More research is needed to assess the relative importance of these potential explanations for the change in the disbursement of PPP loans to minority communities over time. It is also unclear how severe the short-term and long-term consequences of the delay in receiving loans were for minority businesses and communities.

Our analysis of administrative data on PPP loans suggests a few additional areas for further research. First, the patterns that we find for loan receipt by minority share of communities are mostly consistent with recent studies that use proxies for business owner race and ethnicity such as Yelp listed restaurants, and names and locations (e.g. Fei and Yang 2021; Howell et al. 2021). More research linking data with information on the race and ethnicity of owners to loan data would be useful. Second, the PPP loan microdata could add additional information such as which application form was used, which would allow a cleaner separation of owner jobs from employees. The SBA could also provide information on their distinctions by bank type used in their reports which would be useful for analyzing the data more carefully by type (e.g. fintechs, traditional banks, or CDFIs). Third, using linked longitudinal data it would be interesting to examine which

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businesses and circumstances led to second draw loans in 2021. Many minority businesses might have been reluctant to apply for PPP loans because of uncertainty over future revenues due to entering the pandemic in a weakened position (Mills and Battisto 2020). More research is needed on the dynamics of PPP receipt over the three rounds of funding.

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Tables

Table 1: Main PPP Lenders

	All Rounds					Round 1 (2020)			Round 2 (2020)			Round 3, 1st Draw			Round 3, 2nd Draw		
Lender Name	Loans Number	Loans %	Amt. Mil. $	Amt. %	Rank	Loans %	Amt. %	Rank	Loans %	Amt. %	Rank	Loans %	Amt. %	Rank	Loans %	Amt. %	Rank
Prestamos	495,468	4.37	76,957	1.04	1	0.00	0.00	4274	0.03	0.01	325	12.88	11.47	1	0.66	0.17	27
Cross River Bank	472,780	4.17	124,865	1.68	2	0.86	0.33	12	5.28	2.76	4	5.45	6.13	5	2.99	1.27	6
Capital Plus Financial	463,563	4.09	74,178	1.00	3	0.00	0.00	NA	0.00	0.00	NA	10.92	10.35	2	2.13	0.41	9
Bank of America	462,981	4.08	321,076	4.33	4	0.58	1.18	24	9.37	10.87	1	0.36	0.80	22	4.68	4.08	2
Harvest Small Bus. Fin.	432,778	3.82	85,318	1.15	5	0.01	0.03	2000	0.15	0.58	65	7.76	7.33	3	5.02	1.36	1
JPMorgan Chase Bank	414,413	3.65	392,196	5.29	6	1.66	3.87	6	7.04	8.70	2	0.95	1.83	11	4.32	5.35	3
Benworth Capital	331,258	2.92	45,607	0.61	7	0.00	0.00	NA	0.02	0.01	516	7.15	5.84	4	2.36	0.41	8
Customers Bank	284,436	2.51	69,500	0.94	8	0.07	0.12	219	2.00	1.17	9	3.56	3.24	9	3.06	1.19	5
Fountainhead SBF	272,561	2.40	41,183	0.56	9	0.00	0.01	2390	0.08	0.18	125	5.18	3.95	6	2.79	0.62	7
Wells Fargo Bank	266,601	2.35	127,974	1.73	10	0.06	0.03	251	5.44	5.08	3	0.82	1.10	13	1.98	1.34	10
BSD Capital	249,089	2.20	47,913	0.65	11	0.00	0.00	2536	0.10	0.09	96	4.27	4.54	7	3.12	0.86	4
Kabbage	178,128	1.57	32,498	0.44	12	0.00	0.00	NA	4.84	1.62	5	0.00	0.00	NA	0.66	0.13	28
Itria Ventures	176,747	1.56	48,850	0.66	13	0.00	0.00	NA	0.09	0.07	113	3.58	3.98	8	1.48	1.11	13
U.S. Bank	167,288	1.48	99,863	1.35	14	1.12	0.73	10	2.56	2.61	7	0.58	0.78	15	1.57	1.27	12
Celtic Bank	164,423	1.45	43,788	0.59	15	0.07	0.04	243	4.36	1.96	6	0.00	0.00	NA	0.71	0.33	25
TD Bank	128,541	1.13	109,735	1.48	16	1.62	1.74	7	1.75	1.35	10	0.25	0.43	29	1.30	1.56	14
WebBank	117,481	1.04	30,903	0.42	17	0.24	0.06	64	2.15	1.03	8	0.46	0.36	17	0.92	0.39	20
Truist Bank	111,747	0.99	147,686	1.99	18	1.89	2.75	3	1.42	1.81	11	0.24	0.41	30	0.96	1.54	19
Readycap Lending	110,794	0.98	48,910	0.66	19	2.22	0.85	1	0.00	0.01	2132	1.16	1.42	10	1.20	0.74	15
PNC Bank	109,859	0.97	156,177	2.11	20	1.27	2.73	9	1.42	1.96	12	0.37	0.63	21	1.07	1.79	16

Notes: The ranks refer to the number of loans made in each round. Only the 20 lenders providing the largest numbers of loans overall are shown. PPP loans to nonprofit businesses and businesses with nonclassifiable industry are excluded.

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Table 2: Descriptive Statistics at the Local Level

	Round 1 (2020)		Round 2 (2020)		Round 3 (2021) 1st Draw		Round 3 (2021), 2nd Draw	
	Mean	N	Mean	N	Mean	N	Mean	N
PPP number of loans to employer businesses per employer business in zip code	0.143	31952	0.279	31952	0.077	31952	0.193	31952
PPP unconditional average loan amount to employer businesses per employee in zip code	2406	30356	1669	30356	257	30356	1659	30356
PPP number of loans to nonemployer businesses per nonemployer business in county	0.0027	3137	0.0298	3137	0.1178	3137	0.0367	3137
PPP unconditional average loan amount to nonemployer businesses per nonemployer business in county	39	3137	327	3137	1660	3137	506	3137
PPP number of loans to all businesses per business in county	0.043	3137	0.089	3137	0.100	3137	0.076	3137
Minority share of the population (zip code)	0.389	32670	0.389	32670	0.389	32670	0.389	32670
Minority share of the population (county)	0.389	3142	0.389	3142	0.389	3142	0.389	3142
Min. share of employer businesses (county)	0.180	1031	0.180	1031	0.180	1031	0.180	1031

Notes: Means are weighted by population. The PPP average loan amount to employer businesses per employee and the minority share of employer businesses exclude agricultural businesses.

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Table 3: Distribution of PPP Loan Amounts to Employer and Nonemployer Businesses

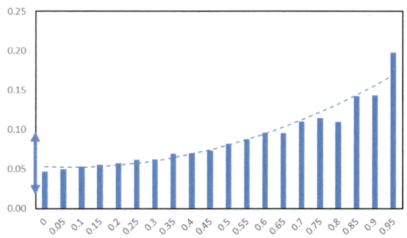
	Round 1 (2020)	Round 2 (2020)	Round 3 (2021)	
			1st Draw	2nd Draw
PPP Loan Amounts to Employer Businesses:				
Mean	200,511	70,263	33,289	102,133
Std. dev.	518,568	239,892	162,035	210,260
1st quartile	25,000	11,100	7,386	17,710
Median	61,200	23,008	16,036	37,813
3rd quartile	161,100	57,500	21,285	95,020
Number of loans	1,465,974	2,492,018	598,387	1,810,632
PPP Loan Amounts to Nonemployer Businesses:				
Mean	14,400	11,194	14,186	13,736
Std. dev.	45,099	14,603	7,325	8,513
1st quartile	5,800	4,100	7,082	6,426
Median	10,500	8,723	17,708	14,747
3rd quartile	20,000	18,500	20,832	20,833
Number of loans	67,241	804,083	3,095,717	1,006,372

Notes: PPP loans to nonprofit businesses and businesses with nonclassifiable industry are excluded.

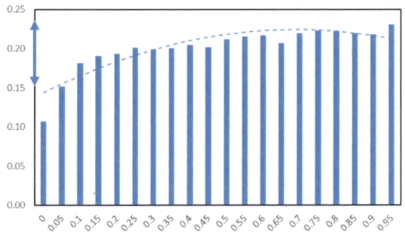
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Figure 1: PPP Number of Loans to Employer Businesses per Employer Business in Zip Code by Minority Share in 2021

Panel A: First Draw



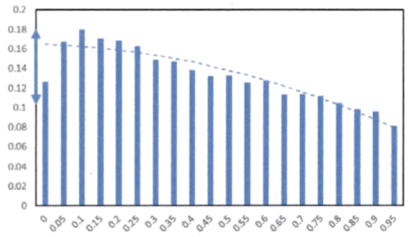
Panel B: Second Draw



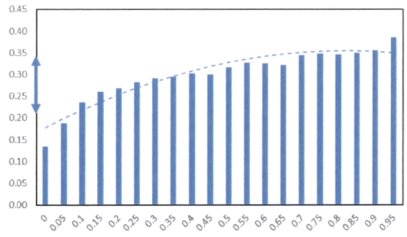
Notes: Mean numbers of first and second draw PPP loans to employer businesses in 2021 (Round 3) per employer business in zip codes by minority share of the population, weighted by population. The dashed lines are from quadratic regressions at the county level. The double arrow on the Y-axis indicates the median ± ½ standard deviation.

Figure 2: PPP Number of Loans to Employer Businesses per Employer Business in Zip Code by Minority Share in 2020

Panel A: First Round



Panel B: Second Round

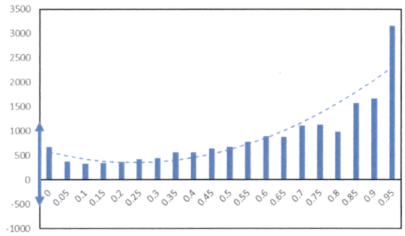


Notes: Mean numbers of PPP loans to employer businesses in 2020 (Rounds 1 and 2) per employer business in zip codes by minority share of the population, weighted by population. The dashed lines are from quadratic regressions at the county level. The double arrow on the Y-axis indicates the median ± ½ standard deviation.

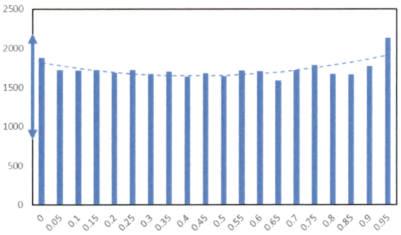
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Figure 3: PPP Loan Amounts to Employer Businesses per Employee in Zip Code by Minority Share in 2021

Panel A: First Draw



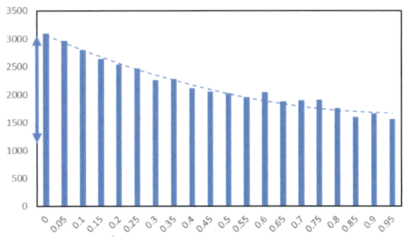
Panel B: Second Draw



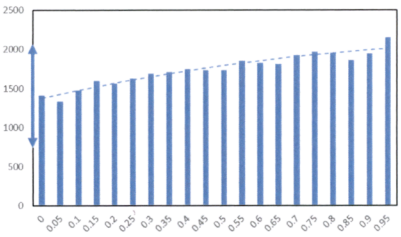
Notes: Unconditional mean amounts of first and second draw PPP loans to employer businesses in 2021 (Round 3) per employee in zip codes by minority share of the population, weighted by population. The dashed lines are from quadratic regressions at the county level. The double arrow on the Y-axis indicates the median ± ½ standard deviation. Excluding agricultural businesses.

Figure 4: PPP Loan Amounts to Employer Businesses per Employee in Zip Code by Minority Share in 2020

Panel A: First Round



Panel B: Second Round

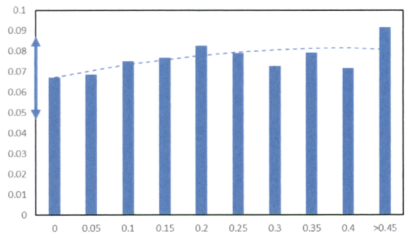


Notes: Unconditional mean amounts of PPP loans to employer businesses in 2020 (Rounds 1 and 2) per employee in zip codes by minority share of the population, weighted by population. The dashed lines are from quadratic regressions at the county level. The double arrow on the Y-axis indicates the median ± ½ standard deviation. Excluding agricultural businesses.

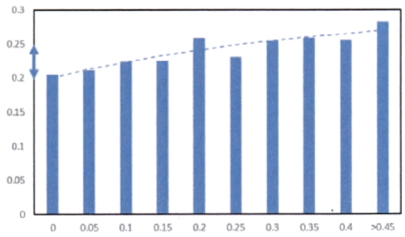
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Figure 5: PPP Number of Loans to Employer Businesses per Employer Business in County by Minority Share of Businesses in 2021

Panel A: First Draw



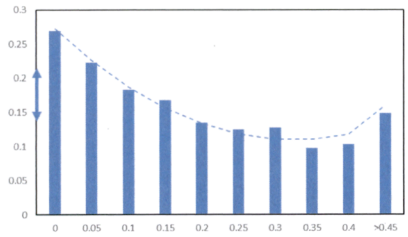
Panel B: Second Draw



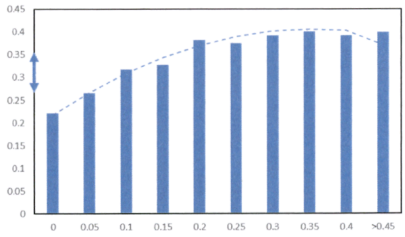
Notes: Mean numbers of first and second draw PPP loans to employer businesses in 2021 (Round 3) per employer business in counties by minority share of businesses, weighted by population. The dashed lines are from quadratic regressions at the county level. The double arrow on the Y-axis indicates the median ± ½ standard deviation.

Figure 6: PPP Number of Loans to Employer Businesses per Employer Business in County by Minority Share of Businesses in 2020

Panel A: First Round



Panel B: Second Round

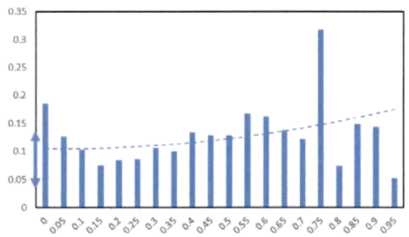


Notes: Mean numbers of PPP loans to employer businesses in 2020 (Rounds 1 and 2) per employer business in counties by minority share of businesses, weighted by population. The dashed lines are from quadratic regressions at the county level. The double arrow on the Y-axis indicates the median ± ½ standard deviation.

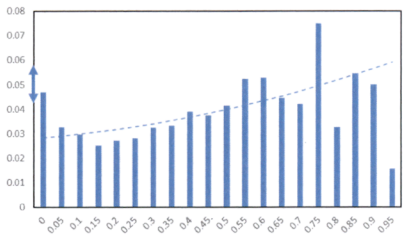
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Figure 7: PPP Number of Loans to Nonemployer Businesses per Nonemployer Business in County by Minority Share in 2021

Panel A: First Draw



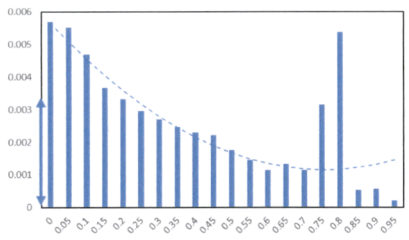
Panel B: Second Draw



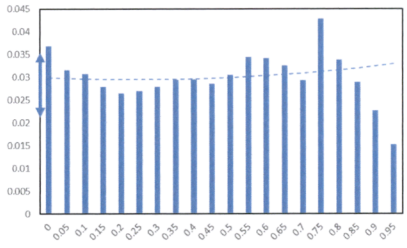
Notes: Mean numbers of first and second draw PPP loans to nonemployer businesses in 2021 (Round 3) per nonemployer business (owner job) in counties by minority share of the population, weighted by population. The dashed lines are from quadratic regressions at the county level. The double arrow on the Y-axis indicates the median ± ½ standard deviation. Excluding agricultural businesses.

Figure 8: PPP Number of Loans to Nonemployer Businesses per Nonemployer Business in County by Minority Share in 2020

Panel A: First Round



Panel B: Second Round

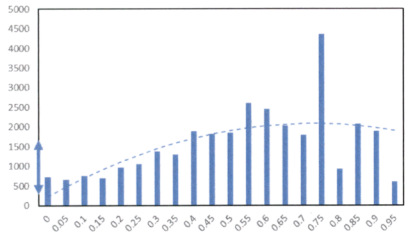


Notes: Mean numbers of PPP loans to nonemployer businesses in 2020 (Rounds 1 and 2) per nonemployer business (owner job) in counties by minority share of the population, weighted by population. The dashed lines are from quadratic regressions at the county level. The double arrow on the Y-axis indicates the median ± ½ standard deviation.

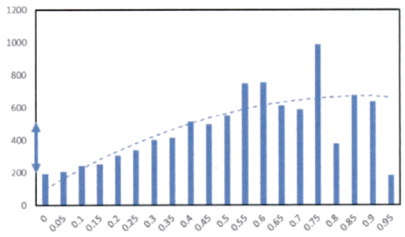
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Figure 9: PPP Loan Amounts to Nonemployer Businesses per Nonemployer Business in County by Minority Share in 2021

Panel A: First Draw



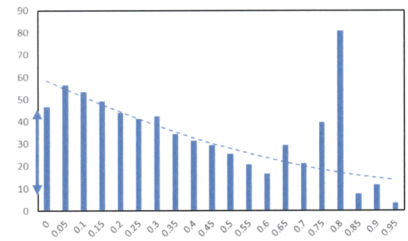
Panel B: Second Draw



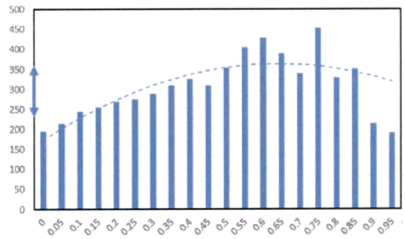
Notes: Unconditional mean amounts of first and second draw PPP loans to nonemployer businesses in 2021 (Round 3) per nonemployer business (owner job) in counties by minority share of the population, weighted by population. The dashed lines are from quadratic regressions at the county level. The double arrow on the Y-axis indicates the median ± ½ standard deviation. Excluding agricultural businesses.

Figure 10: PPP Loan Amounts to Nonemployer Businesses per Nonemployer Business in County by Minority Share in 2020

Panel A: First Round



Panel B: Second Round



Notes: Unconditional mean amounts of PPP loans to nonemployer businesses in 2020 (Rounds 1 and 2) per nonemployer business (owner job) in counties by minority share of the population, weighted by population. The dashed lines are from quadratic regressions at the county level. The double arrow on the Y-axis indicates the median ± ½ standard deviation. Excluding agricultural businesses.

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Appendix

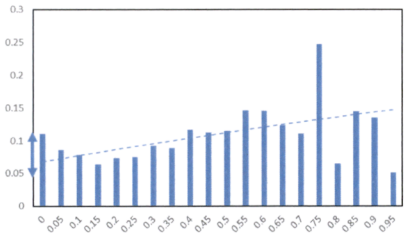
Table A1: Distribution of PPP Loan Amounts to All Businesses

	Round 1 (2020)	Round 2 (2020)	Round 3 (2021)	
			1st Draw	2nd Draw
Mean	192,349	55,853	17,280	70,553
Std. dev.	508,587	210,249	65,935	173,884
1st quartile	21,870	8,292	7,141	11,666
Median	56,600	19,300	17,500	20,833
3rd quartile	152,500	41,668	20,832	55,252
Number of loans	1,533,215	3,296,101	3,694,104	2,817,004

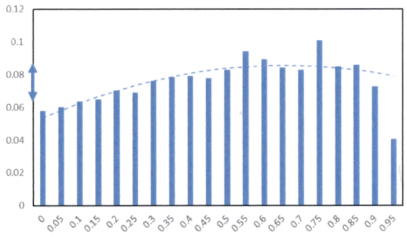
Notes: PPP loans to nonprofit businesses and businesses with nonclassifiable industry are excluded.

Figure A1: PPP Number of Loans to All Businesses per Business in County by Minority Share in 2021

Panel A: First Draw



Panel B: Second Draw

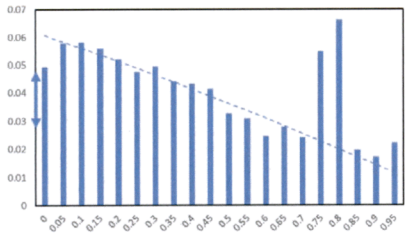


Notes: Mean numbers of first and second draw PPP loans to all businesses in 2021 (Round 3) per business in counties by minority share of the population, weighted by population. The dashed lines are from quadratic regressions at the county level. The double arrow on the Y-axis indicates the median ± ½ standard deviation.

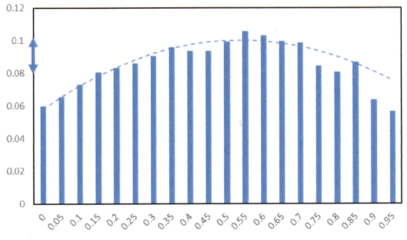
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Figure A2: PPP Number of Loans to All Businesses per Business in County by Minority Share in 2020

Panel A: First Round



Panel B: Second Round



Notes: Mean numbers of PPP loans to all businesses in 2020 (Rounds 1 and 2) per business in counties by minority share of the population, weighted by population. The dashed lines are from quadratic regressions at the county level. The double arrow on the Y-axis indicates the median ± ½ standard deviation.

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Small Bank Financing and Funding Hesitancy in a Crisis: Evidence from the Paycheck Protection Program

Tetyana Balyuk, Nagpurnanand Prabhala, and Manju Puri*

September 7, 2021

ABSTRACT

We study the delivery of subsidized financing to small firms through the Paycheck Protection Program (PPP). Smaller firms are less likely to gain early PPP access, an effect attenuated in small banks and firms with prior lending relationships. Their more even treatment offers a new rationale, beyond traditional soft information arguments, for why small businesses pair with small banks. We also detect a "funding hesitancy" in PPP uptake by small businesses, partly reflecting their wariness of the extensive, subjective government powers to investigate PPP recipients. We discuss the implications of the results for research and policies on small business financing.

Keywords: Bank Relationships, Covid-19, Coronavirus, Paycheck Protection Program, PPP, SBA, Small Business Lending

JEL classification: G32, G38, H81, E61

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1. Introduction

The Covid-19 pandemic has been a black swan event. It has resulted in the loss of over 3.5 million lives. It has also severely impacted livelihoods due to a widespread, speedy, and deep economic contraction. For instance, U.S. GDP contracted by a third and unemployment jumped from 4% to 15% within a quarter. Small businesses have been hit particularly hard (Chetty, Friedman, Hendren, and Stepner, 2020). Moreover, they are key sources of employment and growth, so helping them has been a policy priority.[1]

Fiscal stimulus has been the key instrument for helping small businesses. In the U.S., its centerpiece is the $669 billion Paycheck Protection Program (PPP), which provides extraordinarily inexpensive financing for small firms. Loans are disbursed through a simple application process. Proceeds used in eligible ways are forgiven while the rest converts to a 5-year 1% loan – attractive terms for *any* firm. Not surprisingly, small businesses rushed to get PPP funding. The initial PPP funding of $349 billion was quickly exhausted. The program closed, reopening after 10 days after a fresh appropriation of $320 billion.

We exploit the fact that the initial days of the PPP were a large-scale shock for both the banks used to pipe PPP funding and the small businesses the PPP targets. We study two related issues. To motivate the first question, observe that banks were overwhelmed in the initial PPP stages, both due to the aggregate shortage of PPP funds and the surge in applications for this inexpensive funding. Banks were forced to prioritize clients. This setting provides a rare - and clear - window into banks' allocation priorities when facing resource constraints - a subject of importance, given that crisis tend to recur, and banks periodically face resource constraints. Our particular focus is on the differences between small and big banks.

We find that there are significant differences between how big and small banks prioritize small clients: big banks are more likely to prioritize larger clients early. We show that this effect is attenuated and sometimes reversed for small banks, who extend more even treatment to their smaller clients.[2] We further investigate this pattern using a large database of UCC filings to identify bank-firm lending relationships. We find that such relationships also help firms gain early PPP access. We find little evidence that relationships with big banks help more – if anything, small bank relationships help firms get early PPP access, especially with

[1] Small businesses account for 60.6 million jobs, or 47.1% of the total U.S. employment in 2020. See "2020 Small Business Profile at https://cdn.advocacy.sba.gov/wp-content/uploads/2020/06/04144224/2020-Small-Business-Economic-Profile-US.pdf.

[2] For anecdotal evidence of "concierge treatment," see, e.g., "Banks Gave Richest Clients 'Concierge Treatment' for Pandemic Aid," The New York Times, April 22, 2020 at https://www.nytimes.com/2020/04/22/business/sba-loans-ppp-coronavirus.html. Our study presents formal evidence and shows its variation across big and small banks, an issue that has attracted less attention.

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small bank lenders. The more even treatment of small firms vis-a-vis large firms by small banks offers a new rationale for why small businesses tend to borrow from small banks. This rationale is different from and adds to the more traditional explanations based on soft information, which, as we discuss later, has little role in PPP lending.

The second part of our analysis focuses on the small businesses targeted by the PPP. As these small firms are highly constrained even in normal times, they should welcome the PPP, which delivers inexpensive funding, does so promptly, and as we show later, has positive valuation effects. However, we find a "funding hesitancy" among PPP recipients, most starkly manifest in the decisions of several firms to return PPP funds without using them and the *positive* valuation effects associated with PPP return. Further empirical tests suggest that funding hesitancy is partly due to wariness of government powers to investigate PPP recipients, in turn likely due to subjectivity in its standards and scope as well as the absence of safe harbors. We discuss the policy implications of these results for the design of government aid programs.

We construct four datasets. The first is the December 2020 SBA PPP data release comprising 5.2 million PPP borrowers. The second dataset includes publicly listed PPP borrowers identified through algorithmic searches of 8-K and 10-K filings. The public PPP sample has two sets of benefits. One, we have firm-specific information for controls and return data to compute program valuation effects. As importantly, this sample lets us identify PPP returners and address issues relating to funding hesitancy. The SBA PPP dataset does not identify returners. In both samples, we define early borrowers as those approved for PPP before April 17, 2020, the initial program PPP closure date.

The third and fourth datasets identify bank relationships. Our initial source is the DealScan database, which, however has limited coverage of small firms. The other dataset comprises Uniform Commercial Code (UCC) security interest filings of banks through December 2020. These data include 32.5 million observations and significantly expand the coverage of small firm bank relationships (Gopal and Schnabl, 2020).

We turn to the results on early access. From the viewpoint of demand for PPP by firms, smaller firms should access PPP funds sooner if they are more constrained, weaker, and less resilient to the Covid-19 shock. However, we find that *larger* firms tend to gain early PPP access. For example, in the public PPP sample, early borrowers are larger, with mean (median) book value of assets of $120.3 ($39.2) million compared to $99.8 ($23.3) million for late borrowers. We find similar results when we use the PPP loan amount as a size proxy, in the SBA PPP sample, and in regressions with controls. Large borrower prioritization is a robust feature of the data.

We next analyze the variation in large firm PPP access across small and big banks. We

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define big banks as the top 10 banks according to asset size. Other banks are small.Big banks tend to grant early access for larger firms, an effect attenuated in small banks. For example, in big banks, early PPP borrowers are 2-3 times larger than late borrowers: the mean (median) book values equal $144.2 ($55.11) million versus $61.36 ($18.7) million, respectively. For small banks, the early and late borrowers are closer in size with mean (median) book values of $82.4 ($36.4) million and $86.7 ($26.9) million, respectively. Regressions with controls confirm the results for the public and the SBA PPP samples.

We turn to the role of prior bank relationships. Identifying relationships is straightforward in the DealScan data and for public firms using COMPUSTAT identifiers. The process is less simple with the UCC filings and for the SBA PPP dataset as the linking identifiers are firm and bank names. Besides variations in spelling, we must contend with bank mergers in mapping the legacy UCC bank names to those in the PPP data. We use fuzzy matching followed by extensive manual interventions to cross-walk the 33 million observations in the UCC dataset with the 5.2 million observations in the SBA PPP dataset.

We find that bank relationships, particularly with small banks, matter. Firms applying for PPP with small banks tend to gain early access but a prior small bank relationship has its own beneficial effect. For example, firms that have no UCC or DealScan relationship, early PPP borrowers are twice as large as late borrowers, with median (mean) book values of $64 ($35) million versus $38 ($15) million, respectively; these figures are $248 ($161) million and $151 ($69) million for firms with big bank relationships. The patterns reverse sharply when borrowers have small bank relationships. Here, early firms are *smaller* than the later firms: $119 ($43) million versus $178 ($94) million, respectively. Thus, a prior small bank relationship helps mitigate the pattern of greater early access to PPP for larger firms. The results carry over to the larger SBA PPP sample.

The results have interesting implications for banking research. A distinct pattern in the data is that small firms tend to pair with small banks. This is seen in the Federal Reserve's Survey of the Terms of Bank Lending to Businesses (STBL), small business lending data in Call Reports, and most recently in the 2018 FDIC Survey of Small Business Lending. Related research includes Berger, Saunders, Scalise, and Udell (1998) and Berger, Miller, Petersen, Rajan, and Stein (2005). Stein (2002) provides a theory for small bank – small firm pairing. He argues that soft information, which is critical in small business lending, is hard to transmit up bank hierarchies typical of large banks. Thus, in small business lending, it is optimal to colocate decision making and information gathering, as in small banks.

Our PPP evidence offers an alternative explanation for why small businesses tend to bank with small banks. In the initial PPP period, a surge in PPP demand coupled with aggregate shortage of PPP funding forced banks to prioritize clients. We find that in this period,

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small banks tend to be more responsive to small businesses. The finding suggests that in big banks, small businesses experience a "small fish in big pond" effect that is mitigated in smaller banks for whom small business lending is a mainstay of their lending portfolio. This explanation does not rely on soft information considerations, which has little role here given government guarantees of PPP loans as we discuss in detail later.

The second issue we study concerns PPP uptake. As motivation, we note that the firms targeted by PPP, small businesses, face severe financial constraints even in normal times (Petersen and Rajan, 1994; Whited and Wu, 2006; Hadlock and Pierce, 2010; Banerjee and Duflo, 2014). PPP should be welcome news for such firms. It is immediately available and it is extraordinarily inexpensive, with costs range from -100% (with full forgiveness) to a maximum of 1%. Moreover, markets reward firms that take PPP. Average uptake valuation effects exceed 1% and the treatment effects are positive after econometric adjustments for heterogeneity in pandemic period returns and partial anticipation of PPP uptake.

Yet, we find some reluctance by firms to take PPP funds, which we call "funding hesitancy." Perhaps the sharpest evidence of hesitancy is our finding that over 100 public firms that get PPP funds simply return the funds without using them. Moreover, while one might expect returning cheap funding should decrease share prices, reflecting lost financing subsidies, returners experience *positive* valuation effects averaging 3%. Markets appear to reward firms that return PPP!

What might explain this aversion to PPP funding? Direct costs of PPP funds are clearly implausible as these funds are far cheaper than alternatives from banks or the market. The direct costs from PPP restrictions (e.g., on layoffs) are also implausible. For firms that find it difficult to comply, the worst case scenario is that PPP forgiveness is lost and PPP becomes a 1% loan, still far less expensive than alternatives. Perhaps then, rather than direct costs, there are some indirect costs that prompt PPP return. What could their nature be?

A significant indirect cost of PPP comes from the threat of ex-post government investigations of PPP recipients. Three features make these costs salient. One, investigation windows are very long – at least 6 years from PPP disbursement. Two, the standards for initiating investigations, their scope, and the process are highly subjective, leaving a lot of discretion in government hands.[3] Finally, the program provides no safe harbors that shield PPP recipients from ex-post investigations. Given this lack of clarity and the fungibility of funds, it is easy to attribute *any* use of funds to PPP funding, making recipients fodder for sensationalist media coverage.[4] Should these ambiguities concerning investigations mat-

[3] An example of the ambiguity is the need to certify that "[PPP is] ... necessary taking into account current activity... and access to other sources of liquidity in a manner not significantly detrimental to the business." These are clearly subjective standards.

[4] Consider the story in Washington Post on September 26, 2020 "Publicly traded firms paid dividends,

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ter to firms? Research certainly suggests so: Simply being an investigation target triggers shareholder wealth losses. Capital raising in its shadow is difficult and, moreover, senior executives and directors face negative consequences in the labor market.[5]

We conduct tests to assess to explore these indirect costs. One set of tests looks at the decision to return PPP, using the public PPP sample in which returners are identified. If larger loans are more likely to be investigated by the government, PPP returns should be more likely for larger loans. Relatedly, SBA rules indicate that PPP loans exceeding $2 million and outstanding after May 18, 2020 are subject to audit. Two implications fall out of this observation. One, PPP returns may be more likely above the $2 million cutoff, which we can examine for the public PPP sample. Two, loan application probabilities should exhibit a discontinuity around $2 million. This test can be done for the larger SBA sample. A further implication is that the discontinuity should be asymmetric before and after May 18, 2020, when the $2 million cutoff became salient. The results broadly support the view that government investigation threats are at least partially responsible for funding hesitancy.

The rest of the paper is organized as follows. Section 2 discusses background information and relevant literature. Section 3 describes the datasets used in the study. Section 4 analyzes early PPP access. Sections 5 and 6 discuss the uptake of PPP, relevant treatment effects estimation, and funding hesitancy. Section 7 concludes.

2. Background

2.1. The PPP Program Architecture

Figure 1 gives the timeline leading up to the passage of the $669 Paycheck Protection Program (PPP). This original "CARES" Act included a $349 appropriation for PPP. It was proposed on January 24, 2020, passed by the legislature on March 25, 2020 and March 26, 2020, and signed into law by the U.S. President on March 27, 2020. The initial PPP allocation of $349 billion was exhausted quickly by April 16, 2020, when the program stopped accepting new applications. The PPP resumed accepting applications on April 27, 2020 after an additional $320 billion appropriation under the Paycheck Protection Program and Health Care Enhancement Act of 2020 signed on April 24, 2020.

The next significant milestone was May 18, 2020. As announced in late April–early May, firms returning PPP before this date would not be subject to audit. The next milestone was

bought their own stock after receiving PPP loans to pay employees" at `https://www.washingtonpost.com/business/2020/09/24/dividends-buybacks-ppp-loans`.

[5] Jarrell and Peltzman (1985), Alexander (1999), Haslem, Hutton, and Smith (2017), Karpoff, Lee, and Martin (2008), Fich and Shivdasani (2007), Murphy, Shrieves, and Tibbs (2009), Lin and Paravisini (2011).

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June 2, 2020, when the PPP Flexibility Act (PPPFA) was passed, which altered program rules significantly. 96% of PPP proceeds were disbursed prior to this date within a relatively homogenous regulatory regime. Our sample focuses on this period. The program expired on August 8, 2020. It disbursed $525 billion to 5.21 million borrowers.

Application Process: The PPP is a forgivable, collateral-free loan program administered through the Small Business Administration (SBA), a federal agency that guarantees the PPP loans. Borrowers apply through an approved financial institution, provide documentation relating to eligible expenses such as payroll and allowed overhead, and make necessary representations and certifications. After SBA approval, funds are disbursed by the banks.

Eligibility: Eligible borrowers are small firms as defined in the CARES Act. Standards include a principal place of residence in the U.S., being in operation before February 15, 2020, having fewer than 500 employees, or other standards, e.g., as under Small Business Act, 15 U.S.C 632. PPP eligibility is not conditioned on the credit risk of borrowers.

Amount and Terms: The maximum PPP loan is $10 million per eligible entity. Forgiveness applies to amounts spent as per the program rules. The principal not forgiven turns into a loan with a 5-year maturity if made on or after June 5, 2020 and a 2-year maturity otherwise unless both the lender and borrower agree to a 5-year term.

Spending PPP funds: The PPP incentivizes early spending of proceeds. Banks must make loans within 10 days of approval. Forgiveness applies to eligible payroll spent within time periods laid out in the Act, initially 8 weeks and extended later to 24 weeks under the June 2, 2020 PPPFA. Forgiveness is reduced if there are layoffs.

Certification: Borrowers receiving PPP funds must certify that "... the current economic uncertainty makes the loan necessary to support ongoing operations" and as per PPP Rule 31 issued on June 25, 2020 "... taking into account ... their ability to access other sources of liquidity" in a manner that is not significantly detrimental to the business.

Lender Responsibilities and Fees: Lenders submit applications on behalf of borrowers and fund the loans. The rules are quite explicit that lenders should rely on borrower certifications and representations to submit applications. Thus, the traditional soft information production role of banks is moot under PPP. Moreover, fraud becomes a concern only when banks undertake willful actions to actively create and abet it. Lender fees equal 5% for loans up to $350,000, 3% for loans between $350,000 and $2,000,000, and 1% for loans of at least $2,000,000. An April 17, 2020 ruling lets lenders sell PPP loans.

Powers to Investigate: The SBA retains the right to review all loans for eligibility. It clarified that loans over $2 million would be audited but smaller loans may not be. If a firm is found ineligible in an audit, it needs to return principal plus interest and is subject to any other remedies that the SBA may seek. Firms that repay PPP loans in full by May 7, 2020

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– later extended to May 18, 2020 – are not subject to investigations. These and related rules were clarified by the SBA at different times and attracted attention. While the clarifications help clarify SBA rules, the absence of formal safe harbors and the repeated pronouncements on the topic can raise the investigative threat more salient for PPP recipients.

2.2. Related Covid-19 Research

The Covid-19 pandemic has attracted a vast literature. For a curated collection of several hundred Covid Economics papers, see the website maintained by Center for Economic Policy and Research.[6] An extended review of the banking research related to Covid-19 is in Berger and Demirguc-Kunt (2021). We briefly review some of the work relevant to our study.

Several studies examine the impact of Covid-19 on firm outcomes. Granja, Makridis, Yannelis, and Zwick (2020) show in an ongoing real time analysis that the PPP has had limited impact on labor market outcomes. Kim (2020) argues that the impact is greater if one accounts for lender constraints. Cororaton and Rosen (2020) analyze the characteristics of 424 public PPP applicants, and in later versions, follow our approach and verify a subset of our results on PPP announcement and returns in Sections 5 and 6. Li and Strahan (2020) show that the PPP supply alleviates Covid-related unemployment shocks, using an identification strategy at a geographic level based on the structure of the local banking sector. Bartik, Cullen, Glaeser, Luca, Stanton, and Sunderam (2020) and Bartlett and Morse (2020) find positive impacts on very small businesses. While assessing PPP impact is not our main focus, we provide some evidence based on stock market data.

Theoretical work on PPP funding includes Hanson, Stein, Sunderam, and Zwick (2020), who discuss the government as a venture capitalist of last resort. Other literature addresses financing concerns and stock market patterns in the pandemic. Acharya and Steffen (2020) and Acharya, Engle, and Steffen (2020) highlight a Covid period "dash for cash." Over 95% of our sample includes unrated firms, who do not display this dash for cash. The role of FinTech lenders in PPP supply is addressed by Erel and Liebersohn (2020). The unusual nature of Covid-19 period stock returns is the focus of Acharya et al. (2020), Fahlenbrach, Rageth, and Stulz (2020), Baker, Bloom, Davis, Kost, Sammon, and Viratyosin (2020). We account for this issue in estimating valuation effects.

Relevant to our work on funding hesitancy is the literature on the penalties suffered by firms due to government investigations of their conduct. Prominent examples include Jarrell and Peltzman (1985), who study FTC investigations into false or misleading advertising and Alexander (1999) who analyzes penalties in a range of violations in government contracts.

[6] See https://cepr.org/content/covid-economics-vetted-and-real-time-papers-0.

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See Haslem et al. (2017) for a recent review of this line of research. The implications of such investigations for firms, their managers, and directors are the subject of Karpoff et al. (2008), Fich and Shivdasani (2007)), Murphy et al. (2009), and Slutzky (2020). Of special interest is Armour, Mayer, and Polo (2017). Using UK data from 2001 to 2011, it finds that stock market penalties are 9 times the actual fines imposed on companies for violations. The threat of government investigations thus goes beyond possible fines, which can explain firms' aversion to such investigations and the positive valuation effects from its release.

3. Data

We use multiple datasets for our study. One is the SBA PPP release in December 2020, which covers 5,156,850 PPP recipients. Borrowers and lenders are identified by their names as recorded in the PPP application. Our second and third datasets identify bank-firm relationships. We start with the DealScan database. However, given its limited coverage of smaller and private firms, we turn to the data on bank relationships identified via security interest filings under the Uniform Commercial Code (UCC). See Gopal and Schnabl (2020). We obtain a version of the UCC data updated to December 2020.

The UCC data provider also matched PPP recipients to its proprietary dataset on all small firms. This list includes 1,469,167 PPP recipients. We call this intersection the "SBA PPP" dataset. This dataset is useful in tests involving bank relationships. It seems to be a more conservative choice for the overall universe of firms used for assessing bank relationship effects. That said, the results are similar with the overall SBA PPP dataset, so the ultimate choice on what to present and what to keep for robustness is immaterial.

The next dataset includes publicly listed PPP recipients. We obtain this dataset by hand-collecting data from firms' SEC filings – rather than the SBA PPP release – for three reasons. One, the SBA PPP release does not cover or identify PPP returners. Thus, the funding hesitancy tests are infeasible with the SBA release. Two, the tests on stock market effects require dates on which the markets learn of PPP uptake or return, which are available in the SEC filings. Finally, we have balance sheet and income statement data for public firms, which are not available in the private PPP recipient dataset released by the SBA.

3.1. SBA PPP Dataset

The SBA has three releases of PPP borrowers between June and December 2020. The earlier releases did not identify exact loan amounts. The December 2020 release does so. We use it in our tests. Inspecting the sample reveals that there a very large number of very

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small loans; we test and verify that our results are not artifacts of these observations. The SBA provides data on recipient types, which could be corporations (29.1%), limited liability companies (28.2%), sole proprietorships (15.9%), Subchapter S corporations (13.6%), non-profit organizations (3.5%), and other business types (9.8%). We exclude 99,460 financial firms and REITs. We identify and focus on the subsample of 1,498,552 firms that are incorporated as corporations. This makes the sample homogeneous and eliminates biases from the late entry of some firms (e.g., non-employers, proprietarships) that became eligible later. Including them would mechanically show that small firms have late PPP access.

Table 1 reports the overall statistics for this sample (Panel A). It shows that the SBA overall disbursed $523 billion in PPP funding to 5.2 million borrowers, about 78.2% of the PPP appropriation of $669 billion.[7] Of this, $320 billion (61%) is disbursed to 1.6 million (31%) of the borrowers during the initial rush period from April 3, 2020 to April 16, 2020. Thus, the initial PPP disbursements are to larger borrowers.

3.2. Public PPP Applicants

We download all company 8-K, 10-K, and 10-Q filings with the Securities and Exchange Commission (SEC) filed between April 1, 2020 and September 30, 2020. To identify PPP recipients, we employ a combination of computer code and a manual procedure. The code searches for keywords such as "PPP," "Paycheck Protection," and "CARES" in the filings. We read through the candidate documents to identify PPP recipients and collect other data such as loan amounts and filing dates and cross-verify some through news releases. We follow the same procedure for firms that returned PPP loans. 48.2% of companies report their PPP loans in 8-Ks followed by 40.1% in 10-Qs. Most 8-K filers (63.6%) report PPP loans under "Item 1.01: Entry into a Material Definitive Agreement."[8]

Our initial sample includes 1,233 PPP loans provided to 1,020 public PPP borrowers (Table 2). After matching to COMPUSTAT, excluding financial firms and firms that apply after the PPPFA, the usable sample for most cross-sectional tests is about 682 public PPP borrowers. Many (75.2%) of these firms have nominal share prices of less than $5. As stock returns for these firms may be unreliable, especially at high frequency, we interact return-based explanatory variables (e.g., volatility) with a penny stock dummy variable.[9]

[7] The often cited official number, $525 billion, differs due to variations across SBA releases.

[8] About 21.5% of firms use "Item 2.03: Creation of a Direct Financial Obligation or an Obligation under an Off-Balance Sheet Arrangement of a Registrant." Other items include "Item 8.01: Other Events" (7.2%), "Item 9.01: Financial Statements and Exhibits" (3.9%), "Item 2.02: Results of Operations and Financial Condition" (2.3%), and "Item 7.01: Regulation FD Disclosure" (1.3%). In 10-Q's and 10-K's, disclosures are mostly in the "Subsequent Events" section (52.8%).

[9] As due diligence, we try to match our public data set to the SBA PPP release. We match 72% of the firms

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To assess the locus of public PPP applicants within the universe of listed small firms, we construct a pool of small firms who did not apply for PPP funds. These are COMPUSTAT firms with fewer than 500 disclosed employees as of the fiscal 2019 or the prior year if missing, excluding financials or SPACs. The final non-applicant sample includes 1,452 small firms in COMPUSTAT that did not apply for PPP.[10] Financial characteristics are from COMPUSTAT and returns are based on adjusted stock prices downloaded from Yahoo! Finance. Credit ratings data are from Standard & Poor's or Mergent and distance-to-default data are from NUS RMI Credit Research Initiative. We match PPP borrowers and their subsidiaries to DealScan and UCC. The data on subsidiaries are from Nexis Uni.

3.3. Identifying Firms Returning PPP Funds

We identify 123 public PPP borrowers that return PPP funds without using them. 58.1% of these firms disclose returns in 8-Ks and 34.4% do so in 10-Qs. In most cases, the information pertaining to PPP loan repayments is contained in "Item 9.01: Financial Statements and Exhibits" of 8-K reports (48.9% of 8-K filings).[11] In 10-Q reports, PPP loan repayments are most frequently in the "Subsequent Events" section (59.6%) and otherwise spread across various other portions dealing with liquidity, debt, and related issues. Excluding financials and those without financial data or stock prices slightly reduces the sample to 117 firms.

3.4. Bank Relationship Data

DealScan is a common source for data on bank-firm relationships in academic research (e.g., Drucker and Puri, 2005). We supplement DealScan data with data from filings of banks taking collateral interests under the Uniform Commercial Code (UCC) rules, which potentially offer better coverage of smaller firms (Gopal and Schnabl, 2020) that tend to take PPP loans. We obtain the data as of December 2020.

We find about 270,000 lenders in the UCC data. We identify bank lenders as those with a non-missing DUNS number and a name that includes "bank," its common derivatives (e.g., "bankcorp"), abbreviations (e.g., "bnk," "bk"), and related misspellings (e.g., "bnak"). We

by name and 92.5% after using fuzzy matching algorithms. The small residual likely reflects name variations due to issues such as borrowings recorded by parents versus subsidiaries or franchiser versus franchisees. Our results are not sensitive to dropping the unmatched firms.

[10] Alternative specifications such as excluding companies that operate in an industry with 2-digit NAICS equal to 72 give similar results.

[11] Others include "Item 2.02: Results of Operations and Financial Condition" (21.3%), "Item 8.01: Other Events" (9.6%), "Item 1.02: Termination of a Material Definitive Agreement" (8.5%), "Item 1.01: Entry into a Material Definitive Agreement" (5.3%), "Item 2.03: Creation of a Direct Financial Obligation or an Obligation under an Off-Balance Sheet Arrangement of a Registrant" (5.3%), and "Item 7.01: Regulation FD Disclosure" (1.1%).

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identify big banks using bank names, again filtering for variations and misspellings in names, and correct for mergers using a manual process. We then assign these classifications to UCC lenders with missing DUNS numbers using lender name. We define a firm as having a prior bank relationship if the UCC filing date is recorded in the 5 years before December 31, 2019, well before the PPP.

We also obtain from the UCC data provider the subsample of PPP recipients they could match with the universe of all firms their data hold. We could reliably match the names with the SBA PPP data. We call this dataset the UCC–SBA PPP data. Panel B of Table 1 reports the statistics for this sample. The sample covers 1.5 million borrowers (28.5% of the SBA PPP data) that obtained $298 billion in PPP loan proceeds (57.1% of the SBA PPP data). Restricting the data to corporations results in 617,749 observations, of which we eliminate 29,449 financial firms. After filtering for whether the PPP loan occurs before PPPFA, the UCC–SBA data contains 560,829 observations.

We next match the UCC bank relationship data with the public PPP dataset using the company names. The match involves 1,021 current names, approximately 1,131 former names, and over 7,300 subsidiary names of public PPP borrowers in our dataset. We find valid matches for 231 pre-PPPFA public borrowers in DealScan, 301 public borrowers in UCC, and 405 in the union. Thus, using UCC data appears to significantly expand coverage of banking relationships even in the public PPP sample. To further understand the coverage of DealScan and UCC, we examine characteristics of firms matched to both datasets, as well as of those that remain unmatched (Internet Appendix, Table IA.1). The data show that DealScan-matched firms are larger, so bringing in the UCC data incorporates many more smaller firms.

4. Early Applicants and Lender Effects

Our first analysis examines which firms gain early PPP access. From the viewpoint of firm demand, smaller and weaker firms are more distressed and constrained and they should want to access PPP funds earlier. Option to wait arguments produce similar results. Because forgiveness eligibility requires use of proceeds quickly, companies may be better off waiting for demand to recover, when PPP proceeds would be more productive. However, this option is viable only for stronger and less constrained firms, so relatively smaller and weaker firms should demand PPP proceeds sooner.

Intermediary supply effects produce the opposite predictions. Bank capacity was strained by the initial surge in PPP demand, compounding which was an aggregate shortage of PPP funds. These forces forced lenders to prioritize the clients they would push for early access.

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Intermediaries had two types of incentives. One, larger and better quality firms produce greater revenues from banking relationships. Additionally, PPP fees increase in loan size while processing costs are relatively fixed, pushing banks to prioritize larger loans.[12]

The upshot is that if intermediary supply effects matter, we should find that larger firms (and loans) should be more likely to gain early access. If lender priorities vary across small and big banks, the probability of early access for larger firms should vary by bank size. Our tests are organized along these lines.

4.1. Size and Early PPP Access

We start by examining early access for public PPP recipients. Figure 2 shows the time series patterns in PPP applications. We see an initial wave before April 17, 2020, part of the early surge that depleted the initial PPP corpus of $349 billion. The next wave begins on April 27, 2020 after the PPP reopens. A brief pause occurs around May 8, 2020, the initial no-fault deadline to return funds. Loans resume thereafter and gradually taper off.

Table 3, Panel A reports data for the final sample of the 447 early and 235 late public PPP borrowers. The PPP loan amounts are greater for early applicants with mean (median) of $2.671 ($1.482) million compared to $1.982 ($0.723) million for later applicants. Larger loans are prioritized sooner, consistent with intermediary supply effects shaping the delivery of PPP funds. We note similar patterns in the larger SBA PPP dataset in Table 3, Panel B and in Figure 3, which depicts the results visually. We also see a decline in the density just above a loan amount of $2 million in PPP Round 2, consistent with investigation aversion of firms.

Table 3 also reports data on a number of financial characteristics of early versus late public PPP recipients. Early applicants are larger whether size is measured in terms of book value of assets, the market value of assets, sales, or employee counts. Early applicants also exhibit traits of better quality firms, as they are less likely to have negative book value, are more likely to pay dividends, and have greater current ratios. Once again, the findings are less consistent with firms' demand driving early access. The multivariate regressions reported in Table 4 show similar patterns.[13] Firm size is positive and significant in all specifications.

It is possible that larger firms gain early access because they can better handle PPP paperwork. Here, the evidence *within* public PPP firms is relevant. While it is plausible that small private businesses such as tiny corner stores find the PPP paperwork daunting,

[12] Larger loans are more profitable *within* buckets but there is some non-monotonicity at certain points where fees decline. For instance, simple computations show that a PPP loan of $580,000 produces less fees than one of $350,000 – although neither generates more fees than a $5 million loan.

[13] The coefficients in linear probability models are interpretable as marginal effects.

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this is less plausible for publicly listed firms, who file far more complex documents to comply with periodic disclosure and audit requirements. The results for public firms indicate that intermediary supply effects shape PPP funds delivery and more generally that intermediary supply effects matter (see also Cherry, Jiang, Matvos, Piskorski, and Seru, 2021).

4.2. Size and Early PPP Access: Small versus Big Banks

We next examine whether large firm prioritization varies across small and big banks. Differences in prioritization – or the lack thereof – can speak to the client priorities of small versus big banks. The hypothesis that such prioritization can exist come from the view that the value added by big banks is access to one-stop shopping and networks, which are more relevant to larger firms. Small banks specialize in relationship-oriented lending. Recent evidence that emphasizes this viewpoint is the 2018 FDIC Small Business Lending Survey.[14] In the PPP setting, the loans are SBA guaranteed. Further, the rules are quite explicit that lenders should rely on borrower certifications and representations to submit applications. Hence soft information held by banks about borrower credit quality, one reason for housing small firm relationships in small banks (Stein, 2002) is not a consideration. Do we still see a big bank tilt towards larger firms?

Our tests need a definition of a "big bank." Our classification is based on whether a bank belongs to the top 10 banks by asset size in the U.S. The classification produces reasonable variation in bank type. The big-10 banks provide $480 million in PPP funding in our public PPP sample while $1.1 billion comes from smaller (non-big-10) lenders. The smaller banks provide $802.2 million (or 71.5%) in funding in PPP Round 1 and $280.3 million (63.6%) in funding in PPP Round 2. Relatedly, small banks seem more likely to offer early PPP access compared to big banks, a pattern seen across many specifications, suggesting that they are quicker to serve small businesses in times of need compared to big banks.

Table 5 reports the firm and loan size data for early versus late PPP borrowers cross-classified by bank type. Panel A shows that there are significant differences in both size measures between the two PPP rounds for big banks. For big banks, average early and late loan sizes are $3.4 million and $1.8 million, respectively, versus $2.5 million and $2.2 million for small banks. The early-late differences are muted for small banks. The mean asset size of big-10 bank clients is $144.2 million for early PPP borrowers versus $61.4 million for late PPP borrowers. For the smaller banks, the early-late size differences are muted and even reversed using this metric for size.

[14] See `https://www.fdic.gov/bank/historical/sbls/full-survey.pdf`. Other work on relationship banking includes Petersen and Rajan (1994); Berger and Udell (1995), Drucker and Puri (2005) and Bharath, Dahiya, Saunders, and Srinivasan (2007).

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We present visual evidence of the size distributions for big and small banks. A leftward shift in the density of PPP customers in the later period would indicate a propensity to shift smaller clients later. Figure 4 depicts the densities of firm size for small and big banks for the early and late periods. We observe a more significant shift in the density for big banks. For big banks, the Kolmogorov-Smirnov D-statistic testing for the equality of cumulative distribution functions between early and late PPP borrowers is 0.3272 (p-value = 0.001). The differences are significant. For small banks, the statistic halves to 0.1527 ($p = 0.085$). We see similar patterns when looking at loan (rather than firm) size in Figure 5.

Regression results are in Table 6. We interact the natural logarithm (log) of firm assets with a bank size indicator in Panel A and log loan size in Panel B. The interaction coefficients are negative, indicating that small banks mitigate the impact of early access for large firms. Internet Appendix Table IA.2 shows that multinomial logit estimates show similar results. Small banks mitigate the propensity for large firms to get early PPP funding.

4.3. Bank Relationships

We consider the role played by bank relationships in large borrower prioritization in PPP. The bank relationship dummy variable is best interpreted as an indicator for firms that have economically meaningful bank relationships captured in the DealScan or UCC databases.

Let us start with all firms that have a recorded bank relationship with *big* banks. Early PPP access firms at big banks have a slightly greater mean book value, $247.6 million compared to $151.1 million for late borrowers (Table 5, Panel B). The differences are not significant. The results for PPP loan amount in Panel B are similar. Directionally, large firms go sooner but the size differences are not significant. We have one piece of evidence that relationships help alleviate earlier PPP access for large firms.

In contrast, Table 5, Panel C shows a strikingly different pattern for firms with no recorded bank relationship: early and late access firms provided with PPP funds by big banks have mean size of $80.0 million and $33.6 million, respectively. The difference is significant ($p = 0.003$). We find similar patterns for no-relationship borrowers at small banks, with mean firm size of $64.3 million and $37.7 million, for early and late PPP borrowers, respectively. The results on PPP loan amount in Panel C are similar. The sharp contrast between the no-relationship and relationship samples indicate that prior relationships help mitigate early access for large borrowers. Figure 6 and 7 show supporting evidence in graphs. The distributions of the book value of assets tilt less towards larger firms receiving PPP early when firms have prior bank relationships. The patterns are somewhat clearer in Figure 8, which plots histograms rather than densities of the probability of early PPP access.

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We turn to regressions for the econometric evidence. Examine Columns 3–4 of Table 6 first, which pertain to firms with a prior bank relationship. As in Columns 1–2, the coefficients of the two size measures, firm assets (Panel A) and PPP loan amount (Panel B) in Columns 3–4 are positive but the size coefficient is significant in only one of four specifications. The more interesting evidence is based on the size-*small* bank interaction term. Here, the interaction coefficient is negative and significant. Thus, within firms with a prior banking relationship, a small bank relationship helps small firms gain early PPP access.

Let us now examine the no-relationship sample in columns 5–6 of Table 6. Large firms tend to go early, as indicated by the significant and positive size coefficient. The coefficients for the size-small bank interaction term in Columns 5–6 are now economically small and three of four coefficients are insignificant. That is, early PPP access for large firms is no longer reversed. Thus, the "concierge" treatment of larger firms is predominantly when firms do not have prior banking relationships, but it is mitigated when PPP applicants have prior banking relationships with small banks. The results are robust to using multinomial logit models (Internet Appendix, Tables IA.3 and IA.4).

4.4. The SBA PPP Dataset

We round off the analysis of relationships with evidence from the SBA PPP dataset. We note that financial characteristics such as book value are unavailable in the sample, so we use loan amount as a proxy for size. A second issue is the presence of a very large number of tiny firms. A concern this raises that they have undue influence on the results. We note this point and will present analysis attentive to this issue. The main question again is whether large firms gain early access and whether there is an attenuating effect for small banks.

It is convenient to present the visual evidence using histograms based on SBA-defined bins. We first check whether unconditionally, large firms get early access in this sample. They do. See Figure 9 for the UCC–SBA PPP sample, which, we recollect, is the universe of PPP borrowers matching with the master database of all firms maintained by the UCC database provider.[15] The next question is whether the large firm preferences vary across big and small banks. Figure 10 shows that for small banks, the histogram is relatively flat for loan amounts above the smallest bin of \$0–\$150,000 – and decreases for large loan sizes. However, the histogram slopes upward for the big banks. Thus, even in the SBA PPP sample, big, but not small banks, appear to prioritize big firms for early access.[16] Panels C through F report the data classified by bank relationships. We do not find it easy to tell any

[15] The results for the full SBA sample in Internet Appendix Figure IA.1 are similar.

[16] The results are robust to shrinking small bank capacity in a manner that creates equivalence between the proportion of PPP clients that big and small banks serve early. There results are available upon request.

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differences between big and small banks in the figures. We turn to the statistical evidence.

For the basic descriptive statistics, we revert to Panel B, Table 3. We have 274,764 early and 286,065 late PPP applicants in the UCC–SBA sample. Size is again positively correlated with early access. For example, in this sample, the mean (median) PPP loan size for early applicants is $277,680 ($109,913), whereas it is $128,396 ($49,877) for late applicants. .The results are similar if we use the number of jobs supported by the PPP, which we tread here with caution given press reports that there may be errors in jobs reporting.[17]

We turn to regressions in Table 7 using a structure parallel to that in Table 6. Early access is the dependent variable. Of interest are the coefficients for PPP loan amount and its interaction with the big-small bank indicator. Controls in the SBA PPP dataset include granular NAICS-6 industry and zip code level geography fixed effects, the fields made available in the release.

The results have an interesting feature that we address after discussing the main results. In all specifications in Table 7, the coefficient for the size is positive. Thus, size is positively related to early access and consistent with intermediary supply effects shaping PPP supply. Turn to specifications (2) and (3) in Table 7. Specification (2) shows that the coefficient for the size-small bank interactive term is negative. This is the by-now familiar result that small banks help undo the large firm prioritization, now obtained for the broad PPP sample. In the no-relationship sample, the coefficient is now *positive* and significant. Thus, absent prior banking relationships, small banks preference larger loan amounts even more. The results based on multinomial logit models are qualitatively similar (Internet Appendix, Table IA.5).

An interesting feature of the results in Table 7 is the *positive* coefficient for the small bank-firm size interaction in specification (1) that does not condition on bank relationships. This sign, which indicates that small banks prioritize large firms *more* than big banks, is exactly the opposite of what we find for the public sample in Table 6. In a statistical sense, any sign is possible because the overall specification should average the positive and negative coefficients in specifications (2) and (3). However, the economics are interesting and reflect the point made in opening this section: the preponderant presence of very tiny firms. We investigate this issue formally.

In the aggregate PPP dataset, loans in the lowest SBA bins of below $150,000 and between $0 and $350,000 account for 69.7% and 86.1% of the observations, respectively. There is a very large number of tiny "microloans" in the SBA data set. To what extent do they drive the results, especially the positive firm size-small bank interaction coefficient in the first

[17] E.g., see "Faulty data collection raises questions about Trump's claims on PPP program," Washington Post, July 14, 2020 at https://www.washingtonpost.com/business/2020/07/14/ppp-job-claims-sba. Note also that the SBA reporting may vary because of PPP requirements (e.g., foreign employees) or because not all firm's affiliates are able to apply.

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specification in Table 7? As one test, we redo the regressions replacing loan amounts with bin indicators based on SBA loan buckets. We find that the anomalous positive interaction term is *only* in the smallest bucket. Another approach drawn from the asset pricing literature is to report "value weighted" results based on weighted least squares that assigns greater weights for larger loans. The coefficient for the size-small bank interaction reverses from 0.0262 to −0.0410 (p-value <0.001), the familiar result that small banks help undo the prioritization of large firms for early PPP access. These results are available upon request.[18]

Finally, we examine whether, within the universe of bank relationships, applying through relationship banks helps early access. Table 8 reports the evidence. Specification (1) shows the baseline result. The coefficient for applying through a relationship bank is positive, so applying through a relationship bank enables early access. Specification (2) examines the role of a prior *small* bank relationship. Once again, having a small bank relationship appears to help with early PPP access. Finally, in specification (3), we interact the small bank relationship with applying through a relationship bank. The positive sign indicates that the effects of applying through a relationship bank are more pronounced when the bank is small and the borrower has a prior relationship with the small bank.

To summarize the results, the PPP is an interesting natural experiment in which banks face a sudden and unexpected shock in which they must prioritize their clients. Given government guarantees of PPP loan repayment, traditional soft information considerations are not relevant in this setting. Larger clients appear to gain beneficial access to PPP funds sooner, an effect that is attenuated in small banks. The more even treatment of small clients is perhaps one reason why small firms bank with small banks, as banking with larger banks could lead the small firms into facing a "small fish in a big pond" effect. The relative prioritization of small businesses offers a different rationale for why small firms domicile their bank relationships with small banks worthy of more attention by academicians and regulators alike.

5. PPP Uptake

Besides the intermediaries involved in piping PPP supply to borrowers, a second force that drives PPP uptake comes from the concerns of small firms that are the program's targets. We open with an analysis of PPP uptake and show that it has positive average valuation effects, a metric of the program treatment effects. We then uncover a curious PPP

[18] The results are consistent with the view that small banks push small firms when the stake is meaningful, perhaps because of the greater option value from better chances of firms surviving and becoming economically consequential in the longer term.

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"funding hesitancy," characterize related valuation effects, and explore the possible sources of this hesitancy exploiting the structural features of the program. This analysis focuses on public PPP recipients, as we observe the event of PPP return only for this sample. Control firms are small non-applicants identified in Section 3.

5.1. Characteristics of PPP Applicants

To understand PPP uptake, we begin by describing the types of listed firms that apply for PPP. Table 9 shows that the median (mean) PPP loan amount equals \$1.1 (\$2.4) million, representing 4.41% (7.30%) of the book value of assets and 3.52% (10.98%) of the market value of equity, respectively. The median (mean) ratio of the loan amount to cash and equivalents winsorized at 100% equals 26.9% (43.2%). Thus, PPP loans are economically meaningful relative to the liquidity on hand for our sample firms.

5.1.1. Industry

The SBA uses NAICS industry classifications in its lending operations. We drop firms with NAICS-2 equal to 99, special purpose acquisition firms, 79 PPP applicants from the financial sector, combining those with fewer than 20 PPP applicants into one bucket.[19] Figure 11, Panel A shows that the percentage of applicants varies substantially across sectors, ranging from lows of 4% to 5% in NAICS-2 = 22 and 48 to upwards of 50% in NAICS-2 = 33, 49, 54, and 56. The probability peaks at 70% for NAICS-2 = 72, the "accommodation and food services" sector that includes chain restaurants such as Denny's and Shake Shack relying on franchising as a business model. We include these firms in the main analysis, but excluding them does not alter our main conclusions.

For the regressions, we construct a suite of industry fixed effects with two considerations in mind. One, we attempt to construct industry variables of economic interest. The second is the familiar practical consideration, creating industry clusters that are populated sufficiently to result in estimable regressions. Internet Appendix Section IA.B describes the four industry clusters and shows that they capture substantial variation in application probabilities (see Figure 11, Panel B).

5.1.2. Financial Characteristics of PPP Applicants

Table 9 reports characteristics of PPP loan applicants as well as those of control non-applicants. The p-values are based on Wilcoxon rank-sum tests as many variables are skewed.

[19]The consolidated sectors have 67 firms from NAICS-2 = 11, 23, 44, 45, 52, 61, 71, and 81.

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Panel A of Table 9 shows that PPP applicants are small. The mean (median) market value of equity of applicants, $110.9 million ($35.9 million), places the firms in the smallest Fama-French size decile. Applicants are smaller than non-applicants, whose mean (median) market value equals $484.7 million ($118.7 million). Other size metrics such as book value, sales, and the number of employees show the same pattern.[20]

PPP applicants appear to have less liquidity and less financing access relative to the small firm pool. Their cash and current ratios are lower and are highly unlikely to have credit ratings, which signals credit access (Faulkender and Petersen, 2006). Over 70% of the PPP applicants fall into the top quartile of constrained firms according to the Whited and Wu (2006) (WW) or the Hadlock and Pierce (2010) (SA) financial constraints indexes. PPP applicants also have greater distress risk. Applicants have low interest coverage ratios: more than three-quarters of them cannot cover interest 2.5 times, a benchmark for large investment grade companies. Over 68% of PPP applicants have Altman (1968) Z-scores below 1.81, a benchmark for high default risk. PPP applicants have lower distance to default (Bharath and Shumway, 2008; Duan, Wang, et al., 2012), lower nominal share prices, and 75.2% of them are penny stocks, an indicator of mortality.[21]

We note that the patterns are prior to the pandemic – and not caused by it. Thus, PPP applicants are smaller, weaker, more constrained, and have less liquidity than typical small firms *before* the pandemic. Moreover, these firms do not seem to have done better in the pandemic. Figure 12 shows that PPP applicants have lower average cumulative buy-and-hold abnormal returns (BHARs) from January 1, 2020 to March 23, 2020, the day before the passage of the CARES Act. Applicants do not do better in terms of returns from February 3, 2020 to March 23, 2020, the Covid period defined in Fahlenbrach et al. (2020) or in returns on March 24, 2020, when there was news on the imminent passage of the CARES Act.

Table 10 reports estimates of several regressions that explain the characteristics of PPP applicants relative to control firms. The return variables are interacted with a penny stock dummy variable to account for noise in price data in the latter. The regression results indicate that applicants are smaller, older, slower growing, and have less liquidity. The data paint a clear picture of the types of firms that apply for PPP. The applicants are typical of small firms in some respects and where there are differences, the PPP applicants appear to be weaker: smaller, less liquid, more constrained, and with greater distress risk. Additional tables employing indicators of constraints and distress, not reported here, give similar results.

[20] We note here that the results are conservative. The COMPUSTAT-disclosed number of employees for PPP firms is sometimes more than 500. For example, PPP eligibility for hotels is based on employees in an establishment, but COMPUSTAT reports the total employment count.

[21] See Seguin and Smoller (1997) and the SEC guidance on penny stocks, available at `https://www.sec.gov/fast-answers/answerspennyhtm.html`, which argues that these stocks are risky.

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5.2. PPP Application Announcement Effects

We next examine the stock market valuation effects related to PPP. Figure 13 shows CARs (cumulative abnormal returns) for [-5, 5] where [0] denotes the filing date. The average CAR is over 4% in the time interval [-5, 1], much of it in [-2, 1]. From Panel B, the results are similar for both market adjusted or market model abnormal returns.

Table 11 uses a narrow [-1, +1] window around the filing date to estimate PPP uptake valuation effects. The estimates regress daily abnormal returns (using market-adjusted or market model returns) from January 1, 2020 until the event date plus one day. The independent variables of interest are the three dummy variables representing the filing date plus or minus one day. Using a regression sample *within* the pandemic period addresses the point in prior research that pandemic period returns are unusual. We include firm fixed effects, which absorb firm-level heterogeneity within the pandemic period. Finally, we account for the possible bunching of PPP applications in waves (Figure 2) by clustering standard errors by calendar dates.

We report three estimates, one for all PPP applicants, another one for those reporting PPP in 8-Ks, and finally, a sample that excludes penny stocks. For the full sample, Panel A of Table 11 shows that the PPP abnormal returns are about 1.1% and accrue on day [-1]. The estimates increase to about 1.6% for firms announcing PPP through 8-Ks. This increase is not surprising given that 10-Qs or 10-Ks contain other information and are thus less precise in picking up PPP information. See also Heitz, Narayanamoorthy, and Zekhnini (2020). Excluding penny stocks produces somewhat greater coefficients with no material impact on standard errors (Panel C). The announcement effects are somewhat greater for the subset of larger applicants. Overall, there is little evidence that taking PPP harms shareholders. In fact, PPP uptake appears to increase share prices.

5.3. Partial Anticipation and Treatment Effects

We discuss unadjusted treatment effects first. Using announcement effects and the pre-announcement value of PPP applicants, we find that the average change in the dollar market value of a PPP applicant is $1.57 million (after 1% winsorization to account for outliers). Across all the 555 PPP borrowers for which we have the relevant data, the total change in value is $871.61 million. As the total PPP loan amount for these firms equals $1.590 billion, the PPP bang for the buck equals $871.61 million ÷ $1.590 billion = 0.548. The 417 penny stocks in our sample take $937.94 million in PPP loans and experience an increase in market value of $342.44 million, giving a bang for the buck of just 0.365. The non-penny stocks, the stronger firms, gain $522.95 million and take $651.84 million, giving a bang for the buck of

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about 0.802. Thus, the bang for the PPP buck is greater for the larger and stronger firms.

We adjust for partial anticipation next. Valuation changes on the event date are less than the actual event effect if an event is partially anticipated, as anticipations bake potential treatment effects into the pre-announcement share prices. We adjust for anticipation by scaling up the announcement returns by a factor related to the probability of PPP application (Acharya, 1988; Eckbo, Maksimovic, and Williams, 1990; Prabhala, 1997).

Suppose q_f is the probability assessed by the market that firm f applies for a PPP loan. Let the benefit of the PPP be B. On the date the market learns that firm f has applied for PPP funds, the change in its value, say D, equals $(1 - q_f)\, B$. Thus, the actual benefit B equals $\frac{D}{1-q_f}$ and the aggregate across all firms is $\sum_f \frac{D}{1-q_f}$, where $0 \leq q_f \leq 1$. We obtain estimates of q_f, the ex-ante probability of applying for PPP, from Table 10.

For the 533 PPP borrowers with the relevant data, the anticipation-corrected treatment effect of the PPP program equals \$1.411 billion, 91.2% of the aggregate PPP loan amount of \$1.548 billion. The bang for the buck is thus 0.912.[22] For penny stocks, the bang for the buck is 0.817, reflecting gains of \$742.20 million versus loan amounts of \$908.27 million. For non-penny stocks, it is 1.046, with shareholder gains and PPP loan amounts of \$669.08 million and \$639.40 million. As before, the larger, stronger PPP applicants produce a greater bang for the PPP buck.

5.4. Economics of the Estimates

How useful are the stock market data in understanding the PPP program impact? While impact assessment is not our focus, we comment briefly on this issue. In our view, the stock market valuation effects are useful as we have reasonably accurate times (news release dates) when share prices impound the PPP impact. On the other hand, share prices may not be the primary impact metric, which may be outcomes such as jobs or wages. But shareholder value is not entirely without use. The PPP was designed to keep enterprises running and is more impactful when business owners experience its positive effects. Additionally, the number of public PPP firms is small. Thus, any analysis of share prices, however accurately they pin down impact, does not subsume the need for alternative impact assessment studies. Our study simply adds one more data point and a different lens for this assessment.

Some other points are worth mentioning in this context. The PPP is announced alongside other aid packages as part of the \$2 trillion CARES Act bill. The other pieces of the bill – and other local pandemic and economic mitigation measures – can be confounders in

[22] We note that one large borrower, AutoNation, takes \$77 million in PPP loans and has about 10 times the amount as shareholder gain. We thus winsorize changes in value at the 1^{st} and 99^{th} percentiles to ensure that outliers like AutoNation do not drive the average treatment effects.

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interpreting PPP effects. Our experiment design mitigates such concerns. In our study, stock prices reflect impact on event dates, which are staggered across firms and spaced away from the CARES Act announcement. Moreover, the totality of the CARES package is perhaps reflected in (and thus contaminates) the aggregate stock market return but the market return is stripped out when we compute abnormal returns.[23]

A final point is related to real-time economic tracking, a focus of the economics literature particularly in the wake of the pandemic (see Chetty et al., 2020), but also in other areas such as nowcasting macroeconomic data. The stock market responses are in fact a real-time assessment of the program effects that incorporate information known to market about the PPP application and its assessment of PPP effects. We do not advocate extrapolating our estimates of treatment effects to the entire $525 billion as the non-public firms have simply no analog in the public space, e.g., private schools or not-for-profit organizations. In our view, the takeaway is that even in public firms, the valuation effects are positive but the bang for the buck is small and concentrates in the larger and stronger subset of firms.

6. Funding Hesitancy

We turn to tests of funding hesitancy. As discussed in Section 1, several firms that obtained PPP loans returned the funds within a short period of time before using the funds. We characterize the decision to return PPP funding, examine related valuation effects, and assess evidence for the role played by government investigation threats in the decision to return PPP funds.

6.1. Returners versus Retainers

Table 12 reports the characteristics of 117 public firms that returned PPP loans – henceforth "returners." Alongside, we report the characteristics of the 565 public PPP recipients firms that did not return PPP funds – henceforth "retainers." The mean (median) loan amount for PPP returners equals $4.43 ($3.33) million compared to $2.02 ($0.96) million for retainers. Firms that return PPP money have applied for larger loan amounts. As we will see shortly, returners also appear to be larger by other metrics and somewhat financially stronger.

The mean (median) book value of assets for the returners equals $288.4 ($86.0) million compared to $71.4 ($27.7) million for the retainers. Table 12 shows that the difference is

[23]The broad market-wide effects of PPP are perhaps best reflected in the market's positive reaction (+9.38%) to the PPP on March 24, 2020, but this is not the impact of PPP alone as the program is embedded in the larger CARES package.

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significant. We see similar differences in other size characteristics including market capitalization, sales, and the number of employees. Returners are less likely to have negative book value, have higher Tobin's Q but lower sales growth, and are more likely to pay dividends (24.3% versus 12.4% for retainers). Returners have better liquidity with higher current ratios, cash balances, and are more likely to be rated (6.0% versus 1.9% for retainers) although access to public debt is overall low, as typical for small firms. Returners are also less financially constrained per the Whited-Wu and the Hadlock-Pierce SA indexes, have greater distances to default, higher Altman Z scores, and are less likely to be penny stocks compared to retainers. Returners are clearly stronger than retainers.

We also examine industry patterns (Figure 14). Around 22.5% of health sector firms return PPP funds compared to 15.1% of non-health firms. In contrast, only 10.7% of high-tech firms return PPP funds compared to 18.4% of firms in non-high-tech industries. While both industries faced better prospects in the pandemic, the health firms have greater regulatory interactions, which may explain why these firms are less likely to keep PPP funds and face the prospect of a negative investigation. Only 11.4% of the firms in industries impacted by Covid return PPP funds compared to 18.3% in non-Covid industries. Likewise, only 12.5% of machinery industry firms return PPP funds compared to 17.3% of firms that are not in the machinery sector. Thus, firms with greater demand for funds and those more prone to distress from illiquidity are less likely to return funds.

We do not find evidence that returners benefit less from PPP stimulus (Figure 15 and Table 12). The mean (median) stimulus day return of PPP returners equals 7.0% (6.5%) compared to 5.2% (3.6%) for retainers. The data show that the Covid period returns and the PPP loan announcement effects are similar for the two samples. Returners have a higher PPP application bang for the buck than do the retainers. Little in these patterns suggests that firms that return PPP funds are the ones that have benefitted less from PPP.

6.2. Regression Evidence

Table 13 reports estimates of regressions that model the decision to return PPP loans. In the sample are 543 PPP firms with sufficient data. The role of firm size is notable. Large firms are more likely to return PPP funds. A one standard deviation increase in the natural logarithm of assets increases the probability of returning the PPP loan by at least 9.05 pp, or by 52.74% relative to the unconditional mean. This result also holds for firms with at least $50 million in market capitalization. Penny stock firms are less likely to return PPP funds. As discussed earlier, research (e.g., Seguin and Smoller, 1997) suggests that penny stocks face greater failure hazard, and given their classification as speculative investments,

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face greater hurdles in capital raising. We find that these firms are more likely to retain PPP funds.

Specification 3 includes stock return data. We find that firms with *better* Covid period returns tend to return PPP funds. In Internet Appendix Tables IA.6 and IA.7, we find that less constrained and low bankruptcy firms are more likely to return PPP funds. Collectively, these findings add to the basic point that returners are more likely to be the better quality applicants for PPP – even before the pandemic – concentrating PPP uptake among the weaker firms.

6.3. PPP Return Announcement Effects

We display the cumulative abnormal returns (CARs) associated with PPP return starting from date $t = -5$, where $t = 0$ denotes the filing date of the disclosing 8-K. Figure 16 shows that the announcement effects are positive for both the market-adjusted and the market model abnormal returns. In Figure 17, we find that PPP return dates spike in early May 2020, when the SBA clarified that firms returning funds early would not be audited.

Table 14 reports the estimates of a fixed effects regression of the abnormal return on date dummy variables that are non-zero in [-1, +1] where [0] is the filing date. The sample includes returns in [-60, +1]. We cluster standard errors by calendar date. The announcement effect is about +3% regardless of the specification.[24] We consider treatment effects akin to those for announcement effects. The average change in value is $11.74 million, with the total of $1.256 billion across all 107 borrowers for which we can compute this statistic.[25] The amount of the loan returned is $538.87 million, producing a bang for the buck estimate of about 2. If we add the loan amount returned, $538.87 million, to the dollar announcement effect, essentially assuming that the loan amount was a wealth transfer, wealth effect of returning PPP is $1.795 billion.

As before, we can correct announcement effects for partial anticipation by scaling them for the portion impounded in the pre-announcement share price, which is $(1 - q)$ where q is the probability that the funds are returned. Doing so using the probability model estimated in Table 13 shows that anticipation-corrected net gain is $2.148 billion across 105 PPP returners. Returning $530.64 million should have resulted in losses of $530.64 million to the returners but instead this turns into a gain of $2.148 million, or about 10.5% of firm value (before PPP return announcement).

[24] The results are robust to excluding a small number of firms (about a half-dozen) who indicate in their 8-K disclosures that their performance has improved.

[25] We winsorize changes in value at the 1^{st} and 99^{th} percentiles to account for outliers such as AutoNation.

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6.4. *More Evidence on Indirect Costs of PPP*

The fact that firms return PPP although it is bargain financing – and that markets react positively to it – suggests that there are indirect costs of taking PPP. The release from these costs is realized when PPP is returned and is valued by markets. We next consider tests that can speak to the nature of these costs, specifically those arising out of government investigation. Before these tests, we consider some other explanations for PPP return.

One possibility is that returners have alternative sources of funds. Equity financing is one possible source but equity issuance traditionally sends a negative signal to the market. A better candidate is bank lending, whose announcements trigger positive announcement effects (James, 1987; Lummer and McConnell, 1989; Billett, Flannery, and Garfinkel, 1995; Chen, Ho, and Liu, 2019). This interpretation, if correct, reinforces our point concerning indirect costs. If firms prefer more expensive bank capital over far cheaper PPP funding, it suggests that they see positive value in being subject to scrutiny by private capital providers but the same scrutiny by the government has negative value.

Another explanation is signaling. According to this hypothesis, firms return PPP funds to signal improvements in firm fundamentals otherwise unobserved by the market. We have reservations about this explanation. One issue is that the $2 million discontinuity, which we will turn to shortly, is not relevant for signaling. Another is the evidence on announcement effects by firm size. Signaling should be stronger when less anticipated, that is, for smaller and worse-quality firms. We do not find this in the data. We leave more tests of signaling for future work, not necessarily mutually exclusive from the ones we examine.

6.4.1. *Loan Amount and PPP Return*

If government investigations are more likely for large PPP loans, the probability of returning PPP funds should increase in PPP loan size. We note that audit pronouncements were released at various points of time in late April to May.[26] Thus, investigation concerns are less likely to have informed *applications* that occurred before but could drive the decision to return PPP.

Figure 18 shows that the probability of returning PPP funds is greater for larger loan amounts. We confirm the positive relation between PPP loan return and loan size in regression analysis in Table 15 (Column 1). We find that a one standard deviation increase in the

[26] E.g., see "Joint Statement by Secretary Steven T. Mnuchin and Administrator Jovita Carranza on the Review Procedure for Paycheck Protection Program Loans," SBA, April 28, 2020 at https://www.sba.gov/article/2020/apr/28/joint-statement-secretary-steven-t-mnuchin-administrator-jovita-carranza-review-procedure-paycheck and "PPP Changes Trip Up Small Businesses," Wall Street Journal, May 12, 2020 at https://www.wsj.com/articles/paycheck-protection-program-changes-trip-up-small-businesses-11589288403.

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natural logarithm of PPP loan amount increases the probability of returning the loan by 10.36 pp, or by 60.37% relative to the unconditional mean. We examine other tests next.

6.4.2. $2 Million Discontinuity: PPP Return

A second test concerns a $2 million loan amount threshold for loan audits. The interim final rule issued by SBA in the Federal Register on June 1, 2020 says that all loans are subject to audit. However, both the Treasury and the SBA have indicated that firms with loans less than $2 million will be presumed to have applied in good faith.[27] If this is relevant, firms just above the $2 million threshold experience more threats relating to PPP investigation than those below.

We first examine univariate statistics around the $2 million threshold. The sample odds of returning PPP funds are 9% for loan amounts of $1.5–$2 million but more than double to 24% for loan amounts between $2–$2.5 million (Figure 18). Relatedly, 9.50% of the 442 firms with loan amounts less than $2 million returned PPP funds, while 31.2% of the 237 firms with loan amounts more than $2 million did so. The discontinuity in PPP return probability is clearly visible in Figure 19 that superposes the histogram for applying for PPP on the histogram for returning PPP. The discontinuity in PPP returns is quite stark here.

We turn to discontinuity designs around the $2 million loan amount threshold. One issue in this type of analysis is statistical power. Regression discontinuity designs fit high order polynomials to the running treatment variable and then check for discontinuities. Our public PPP sample is relatively small to filter out the non-linear curvatures present under a hypothetical null, with the additional difficulty of having a 1/0 outcome variable for returns and in local designs that use even smaller subsamples centered around the $2 million threshold. We choose to include all observations in a global design. This approach brings in more observations but ones that are more distant from the threshold are possibly less informative of considerations around the $2 million threshold. We have no easy answer to this tradeoff but present the evidence for what it is worth and turn to other evidence in larger samples thereafter.

Table 15 gives the regression results. The coefficient for the threshold indicator is the marginal effect of borrowing above the discontinuity threshold beyond the effect of PPP loan size. In the baseline model, this threshold indicator coefficient is positive and significant. The probability of returning the loan increases by 8.85% when firms borrow $2 million and above (Column 2). The coefficient remains positive but with reduced significance when we

[27] E.g., see "SBA Clarifies Certification Requirements Today For Paycheck Protection Program Borrowers," Forbes, May 13, 2020 at https://www.forbes.com/sites/juliejason/2020/05/13/sba-clarifies-certification-requirements-today-for--paycheck-protection-program-borrowers.

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incorporate the full set of controls (Column 3).

6.4.3. $2 Million Discontinuity: Loan Application

We exploit another PPP design feature that creates a different type of discontinuity around the $2 million cutoff but speaks to the government investigation concerns in the larger SBA PPP sample. The SBA announced that PPP funds returned before May 18, 2020 would be presumed to have been made in good faith and thus not subject to audit.[28] Thus, if investigation threats are of concern, we should see that PPP *applications* after May 18, 2020 should tail off just above the $2 million threshold relative to just below.[29]

Figure 20 shows the histogram for SBA loan application amounts before and after May 18, 2020. A discontinuity appears in the PPP application density just above the $2 million cutoff after the PPP return deadline. Before May 18, 2020, applications for loan amounts between $1.5–$2.5 million comprise 66.56% of applications for $1.5–$2 million. After May 18, 2020, 90.48% of all applications for loan amounts between $1.5–$2.5 million are applications for $1.5–$2 million. This result suggests that investigation aversion is a part of the PPP funding hesitancy we find. The threat of audit appears to have deterred some firms from applying for PPP – or pushed them to apply for amounts below $2 million.[30]

6.4.4. Indicative UK Evidence

We next consider some evidence from the UK. Here, the government program to aid businesses in the wake of Covid took the form of a business rates relief program, equivalent to relief on property taxes. This program also saw "PPP-like" returns of funds. An important difference is that in contrast to the U.S., firms in the U.K. returned government aid due to public pressure that was not accompanied by any explicit or implicit threat of government investigation.[31] Thus, share price responses to returns should be free of concerns about government investigations and reflect, e.g., losses from access to Covid-19 related relief.

We gather data on U.K. business rates relief returners from press reports. The subset we identified from press reports includes large retailers: Tesco, Sainsbury's, Morrison's, Asda,

[28] E.g., see "PPP Loan Rules Relaxed By SBA For Loans Under $2,000,000 – Uncertainty Still Abounds For Many," Forbes, May 14, 2020 at https://www.forbes.com/sites/alangassman/2020/05/14/ppp-loan-rules-relaxed-by-sba-for-loans-under-2000000uncertainty-still-abounds-for-many.

[29] The before-after design mitigates fee discontinuity related explanations – the fees did not change but the application behavior did. Relatedly, we don't see a discontinuity for the $350,000 loan amount cutoff that also presents a fee discontinuity.

[30] The public sample is rather small for a before-after May 18, 2020 design. However, Figure 3 shows a decline in the density of PPP applications by public firms above the $2 million cutoff in PPP Round 2.

[31] See, e.g., *£1.8Bn-Plus in Covid Rates Relief to Be Handed Back as B&M Joins List*, The Guardian, December 3, 2020 and *B&Q Owner Kingfisher to Repay £130M of Covid Business Rates Relief*, The Guardian, December 7, 2020.

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B&M, Pets at Home, and Whole Foods. The announcement effects for the subset with returns is *negative*, and range from -2.05% to -11.08%. One interesting case is that of the retailer Marks and Spencer, which announced that it would not shy away from the business rates relief. Upon this announcement, the firm experienced +9.02% abnormal return. The UK evidence suggests that returning subsidies unrelated to scrutiny avoidance results in negative announcement effects. In the U.S., we see positive announcement effects when firms return subsidized funding, supporting the investigation-avoidance interpretation of our U.S. PPP return results. As additional evidence, Internet Appendix Section IA.C gives extracts from company reports showing concerns about scrutiny motivating PPP returns.

7. Conclusion

The Paycheck Protection Program (PPP), a fiscal stimulus program in the U.S., aims to help small businesses suffering from the economic fallout of the Covid-19 pandemic. At $669 billion in fiscal commitments, the PPP is a significant portion of the $2 trillion CARES Act package intended to help the country through the deep, sudden, and widespread economic contraction and job losses from the Covid-19 pandemic.

The PPP is a significant shock in the supply of financing to small businesses. It provides extraordinarily cheap financing to small businesses that are highly constrained even in normal times. We use this shock to examine two questions. One is about using financial intermediaries to pipe the funding supply, which highlights the supply decisions of small and big banks under situations of extreme constraints. The other concerns the "funding hesitancy," or the apparent reluctance on the part of small businesses to receive government funding.

The first question concerns PPP funding delivery through the banking system. Banks are the dominant types of financial institutions in most countries and have widespread branch networks with extensive reach. Thus, they are logical entities to use to deliver funding to important sectors.[32] The need to get credit to important sectors is especially relevant in difficult times. But banks have their own incentives which can shape the delivery system. Our findings suggest that there are intermediary supply effects, that is, bank financial intermediaries shape the supply of PPP financing. Our evidence suggests that larger firms are likely to gain early access but the pro-large firm effects are attenuated in small banks and when firms have prior banking relationships.

[32] For example, in Germany, a bank-based system, German banks tried to develop the German VC market (Da Rin, Hellmann, and Puri, 2013). In India, banks are given quotas for priority sector lending, in the hope of getting credit to underserved, critical sectors and jumpstarting their growth (Banerjee and Duflo, 2014).

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The finding is interesting in light of the large literature in banking suggesting that small firms benefit from pairing up with small banks. The literature lends empirical support to this proposition, and theoretical justification. Stein (2002) lays out a theory that explains this matching based on soft information. A number of papers have examined Stein (2002)'s theory, using different experiment designs, starting with Berger et al. (2005) who finds supportive evidence of small banks being better able to collect and act on soft information than large banks. But the literature has not converged on other additional reasons for small firm-small bank pairing. Our evidence suggests a new rationale for small firm-small bank pairing through evidence in which there is a large shock but credit risk – thus private information and soft information – is not at play given repayment guarantees.

We find that absent relationships both small and large banks prioritize large firms. This is consistent with underlying incentives since, if capacity constraints bind so that banks can process only a fixed amount of loan applications, banks make more fees by processing larger loans. Interestingly however, this prioritization flips when prior banking relationships are taken into account. Small banks prioritize small firms with prior bank relationships but we do not see similar prioritization by large banks. In times of shock and capacity constraints, small banks are more likely to prioritize small firm relationships. Given that PPP loans are guaranteed by the government, and there is no private or soft information involved our results suggest a new rationale for the benefits of pairing of small firms with small banks.

With its extraordinarily inexpensive financing terms, the PPP is also a very positive shock in financing supply to small businesses. Taking PPP has positive announcement effects, consistent with beneficial program impact for our small universe of public firms. Nevertheless, we detect a "funding hesitancy," some reluctance on the part of firms to take up PPP. Perhaps the most stark evidence of this hesitancy is that several public firms that bring up the bottom in terms of financial constraints indexes, manage to qualify for, apply for, and take PPP funds – yet return the money without using it as the program unfolds and the threat of government investigation begins to loom large. Interestingly, returning the PPP funds results in positive announcement effects, indicating that both firms – by revealed preference, giving up cheap funding – and markets value the release from PPP.

The findings suggest that taking PPP funds imposes significant indirect costs on participants. The costs appear to be related to the possibility of ex-post investigations of PPP recipients. Of concern are the subjectivity in the audit process, the broad powers of the government to seek remedies, and especially an openly adversarial stance towards public firms articulated in its pronouncements. It does not seem surprising that firms choose to turn away from PPP funding. Firms that are stronger before the pandemic tend to do so, concentrating PPP funds among the financially weaker applicants. From a policy viewpoint,

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our findings suggest that when taxpayer funding is involved, policymakers should focus on both objective standards for program eligibility and also specify with similar objectivity the conduct of the ex-post audits concerning funds use. For instance, delineating safe harbors to circumscribe litigation, a standard practice in securities law since the 1930s, may be an appropriate tool in designing government aid programs.

Understanding the intermediary supply effects, market responses to PPP funding, and funding hesitancy can help design better policies for small businesses. We hope that our findings also shed light on and help move forward research on the nature of firm-bank relationships, especially for small firms and small banks.

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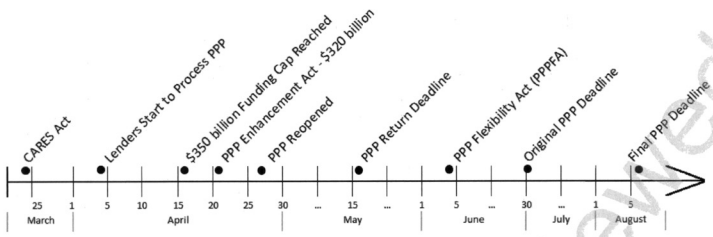


Figure 1. PPP timeline. This figure illustrates the timeline and key milestones of the Paycheck Protection Program (PPP).

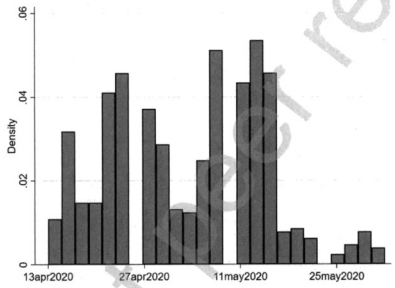


Figure 2. Density of PPP loan grant announcement dates. This figure plots the density of announcement dates for PPP loan grant announcements by public PPP borrowers.

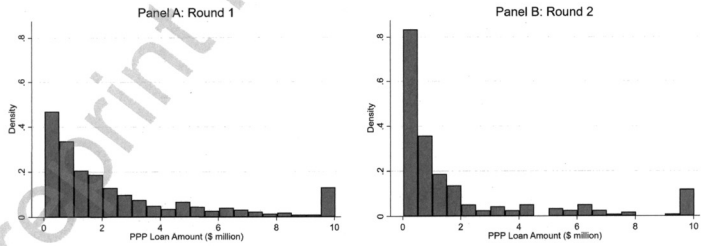


Figure 3. PPP loan size by PPP Round. This figure plots the density of PPP loan size for PPP Round 1 (before April 17, 2020) versus PPP Round 2 (after April 26, 2020) for public PPP borrowers. We set PPP loan size to $10M for loans above $10M, for the ease of exposition.

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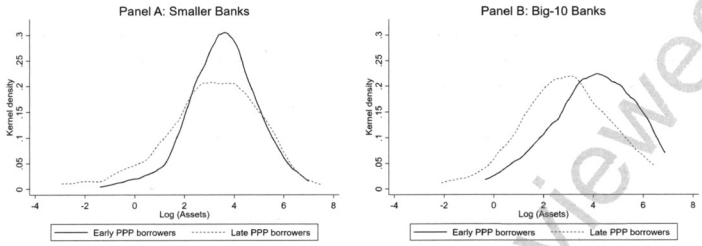


Figure 4. Early PPP access and firm assets: small versus big banks. This figure plots kernel densities of the natural logarithm of firm's assets for early versus late public PPP borrowers. Panel A reports the results for smaller (non-big-10) banks. Panel B reports the results for big-10 banks. *Log (Assets)* is winsorized at the 1^{st} and the 99^{th} percentiles.

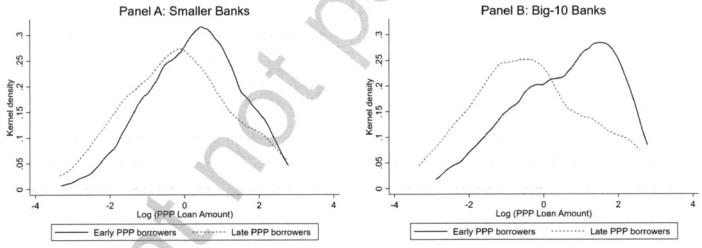


Figure 5. Early PPP access and PPP loan size: small versus big banks. This figure plots kernel densities of the natural logarithm of PPP loan amount for early versus late public PPP borrowers. Panel A reports the results for smaller (non-big-10) banks. Panel B reports the results for big-10 banks. *Log (PPP Loan Amount)* is winsorized at the 1^{st} and the 99^{th} percentiles.

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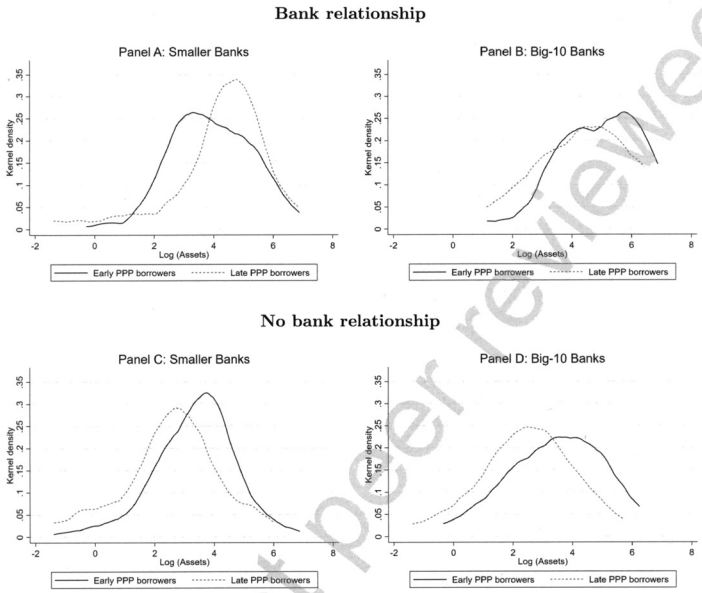


Figure 6. Early PPP access and firm assets by prior bank relationship. This figure plots kernel densities of the natural logarithm of firm's assets for early versus late public PPP borrowers, for firms with and without prior bank relationships (i.e., before the PPP). Panel A reports the results for smaller (non-big-10) banks and firms with bank relationships. Panel B reports the results for big-10 banks and firms with bank relationships. Panel C reports the results for smaller (non-big-10) banks and firms without bank relationships. Panel D reports the results for big-10 banks and firms without bank relationships. *Log (Assets)* is winsorized at the 1^{st} and the 99^{th} percentiles.

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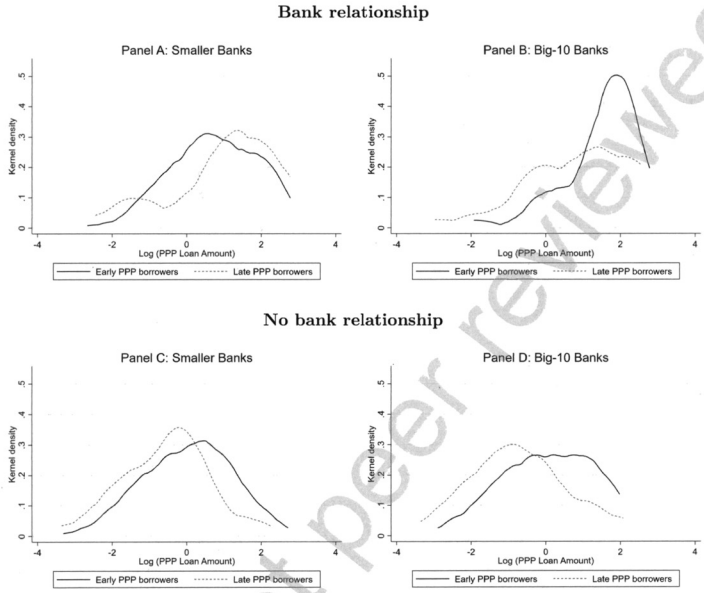


Figure 7. Early PPP access and PPP loan size by prior bank relationship. This figure plots kernel densities of the natural logarithm of PPP loan amount for early versus late public PPP borrowers, for firms with and without prior bank relationships (i.e., before the PPP). Panel A reports the results for smaller (non-big-10) banks and firms with bank relationships. Panel B reports the results for big-10 banks and firms with bank relationships. Panel C reports the results for smaller (non-big-10) banks and firms without bank relationships. Panel D reports the results for big-10 banks and firms without bank relationships. *Log (PPP Loan Amount)* is winsorized at the 1^{st} and the 99^{th} percentiles.

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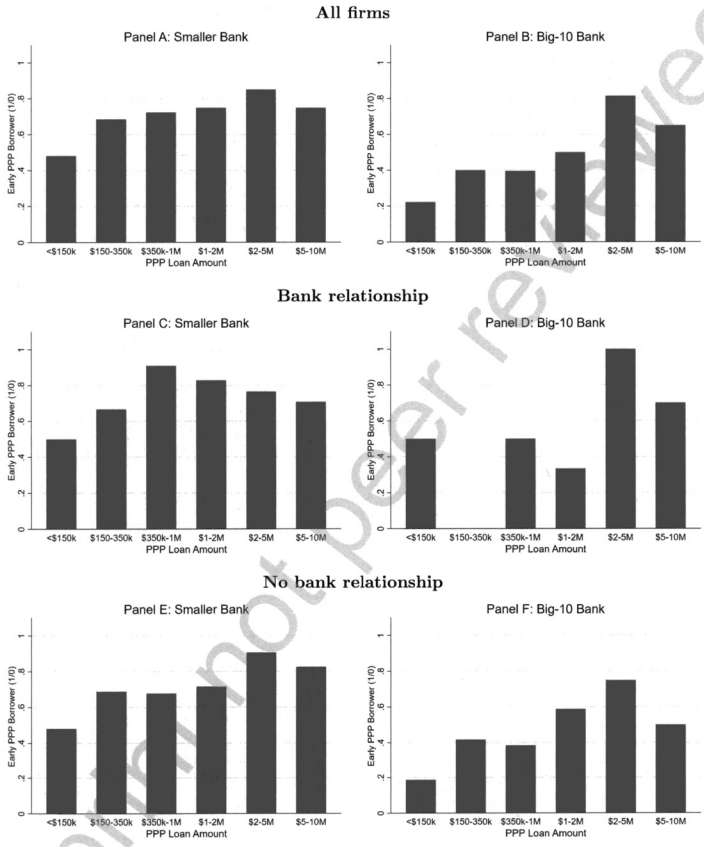


Figure 8. Probability of early PPP borrowing and PPP loan size by prior bank relationship. This figure plots the probability of borrowing early (i.e., in PPP Round 1) versus borrowing late (i.e., in PPP Round 2) for public PPP borrowers, by PPP loan size bin. Panel A reports the results for smaller (non-big-10) banks. Panel B reports the results for big-10 banks. Panel C reports the results for smaller (non-big-10) banks and firms with bank relationships. Panel D reports the results for big-10 banks and firms with bank relationships. Panel E reports the results for big-10 banks and firms without bank relationships. Panel F reports the results for smaller (non-big-10) banks and firms without bank relationships.

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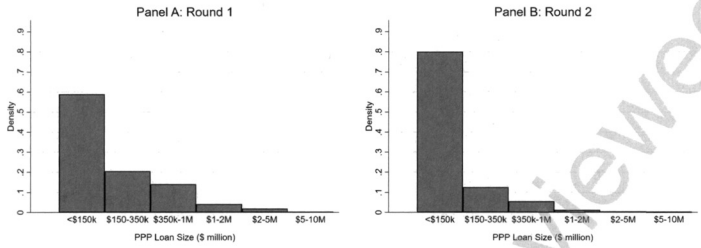


Figure 9. PPP loan size by PPP Round: SBA PPP data. This figure plots the density of PPP loan size for PPP Round 1 (before April 17, 2020) versus PPP Round 2 (after April 26, 2020). The sample is based on UCC–SBA PPP data and includes all PPP borrowers that are non-financial corporations. The results are similar if we include other types of businesses.

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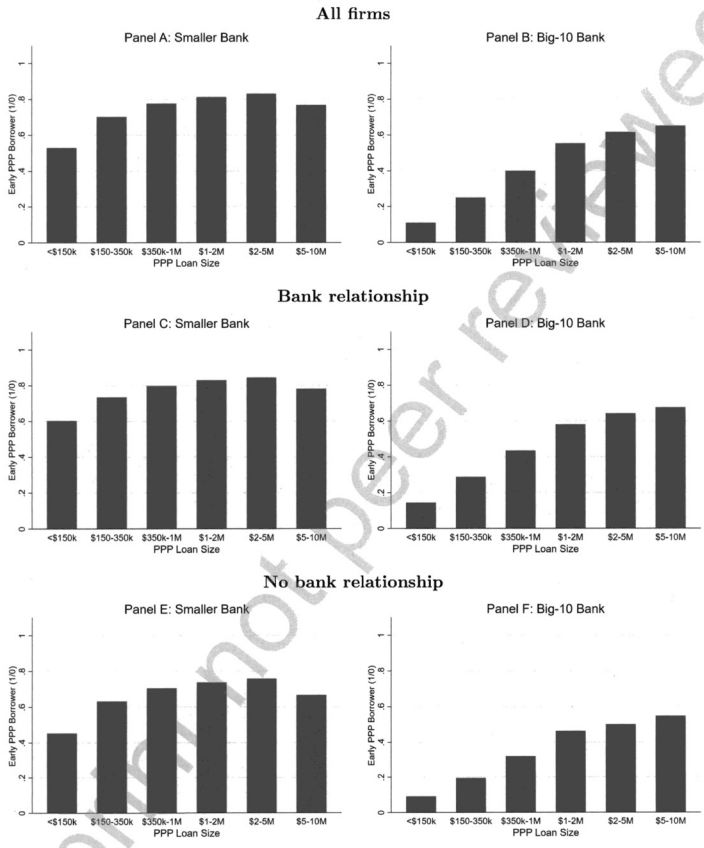


Figure 10. Probability of early PPP borrowing by prior bank relationship: SBA PPP data. This figure plots the probability of borrowing early (i.e., in PPP Round 1) versus borrowing late (i.e., in PPP Round 2) for PPP borrowers from the UCC–SBA PPP data, which we restrict to non-financial corporations, for comparability, by PPP loan size bin. Panel A reports the results for smaller (non-big-10) banks, with this category including non-bank lenders. Excluding non-bank lenders does not affect the results. Panel B reports the results for big-10 banks. Panel C reports the results for smaller (non-big-10) banks and firms with bank relationships. Panel D reports the results for big-10 banks and firms with bank relationships. Panel E reports the results for smaller (non-big-10) banks and firms without bank relationships. Panel F reports the results for big-10 banks and firms without bank relationships.

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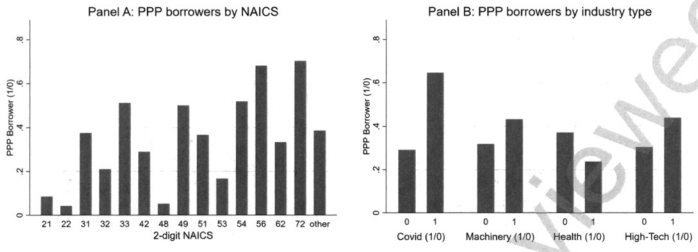


Figure 11. Public PPP borrowers by industry. This figure plots the share of PPP-eligible U.S. public companies that were granted a PPP loan, by NAICS (Panel A) and industry type (Panel B). We measure industry using 2-digit NAICS as follows: 21 = Mining, Quarrying, and Oil and Gas Extraction; 22 = Utilities; 31–33 = Manufacturing; 42 = Wholesale Trade; 48 = Transportation and Warehousing; 51 = Information; 53 = Real Estate and Rental and Leasing; 54 = Professional, Scientific, and Technical Services; 56 = Administrative and Support and Waste Management and Remediation Services; 62 = Health Care and Social Assistance; 71 = Arts, Entertainment, and Recreation; 72 = Accommodation and Food Services; and other = Other (except Public Administration).

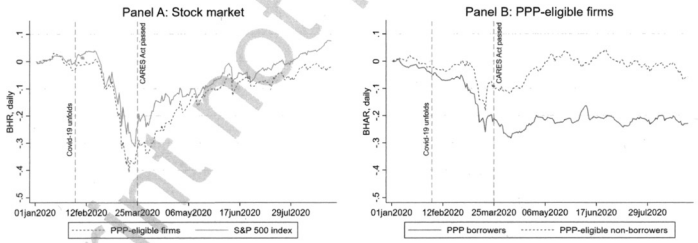


Figure 12. Evolution of PPP borrower returns: PPP applicants and control firms. This figure plots daily buy-and-hold average returns (BHRs) for PPP-eligible small public firms versus the S&P 500 index (Panel A) and buy-and-hold average abnormal returns (BHARs) for PPP borrowers versus PPP-eligible non-borrowers (Panel B), from January to August 2020. We define the abnormal return as the stock return over the S&P 500 return. We exclude penny stocks, which we define as stocks with an average share price of less than $5 in December 2019, because of illiquidity. BHAR is set to zero for the first trading day of the year, which is January 2, 2020.

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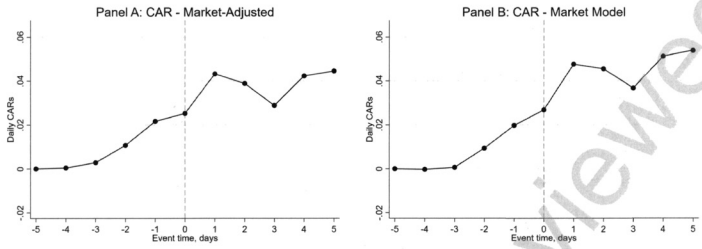


Figure 13. Cumulative abnormal returns (CARs) around PPP loan grant announcement dates. This figure plots daily CARs for PPP loan grant announcements. The abnormal return in Panel A is the stock return minus the S&P 500 return, where the abnormal return is set to zero for Day -5. The abnormal return in Panel B is calculated using the market model based on S&P 500 return, where the abnormal return is set to zero for Day -5. We exclude penny stocks, which we define as stocks with an average share price of less than $5 in December 2019.

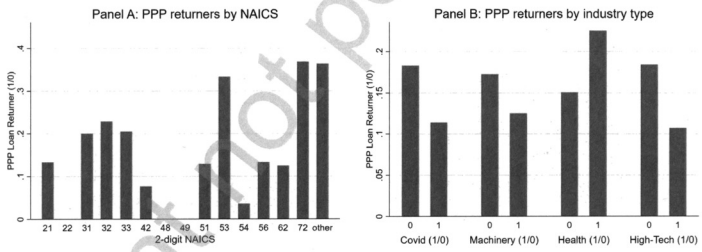


Figure 14. Firms that return PPP loans by industry. This figure plots the share of PPP borrowers that returned the PPP loans to the SBA, by NAICS (Panel A) and industry type (Panel B). See Fig. 11 for NAICS definitions.

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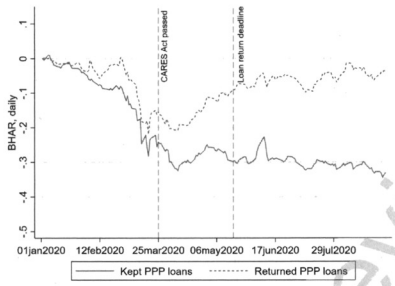


Figure 15. Evolution of PPP borrower stock returns: PPP returners and retainers. This figure plots daily buy-and-hold average abnormal returns (BHARs) for PPP returners versus retainers from January to August 2020, where the abnormal return is the stock return over the S&P 500 return. We exclude penny stocks, which we define as stocks with an average share price of less than $5 in December 2019, because of illiquidity. BHAR is set to zero for the first trading day of the year, which is January 2, 2020.

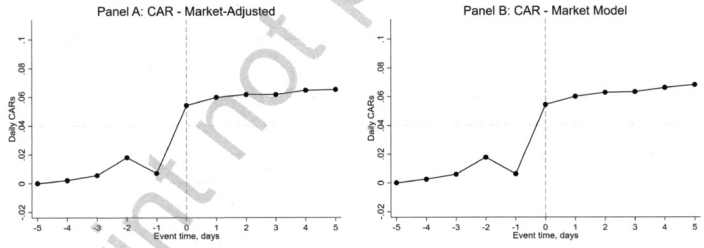


Figure 16. Cumulative abnormal returns (CARs) around PPP loan return announcement dates. This figure plots daily CARs for PPP loan return announcements. The abnormal return in Panel A is the stock return minus the S&P 500 return, where the abnormal return is set to zero for Day -5. The abnormal return in Panel B is calculated using the market model based on S&P 500 return, where the abnormal return is set to zero for Day -5. We exclude penny stocks, which we define as stocks with an average share price of less than $5 in December 2019.

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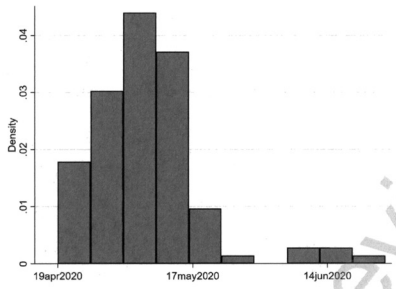


Figure 17. Density of PPP loan return announcement dates. This figure plots the density of announcement dates for returning PPP loans. We omit two announcement dates in August 2020, for the ease of exposition.

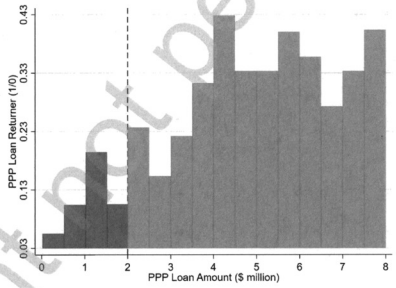


Figure 18. PPP loan return probability by loan size. This figure plots the probability of U.S. public borrowers returning PPP loans to the SBA, by PPP loan size bin. The vertical line is the loan amount of $2 million. We set PPP loan size equal to $8M for loans above $8M, for the ease of exposition.

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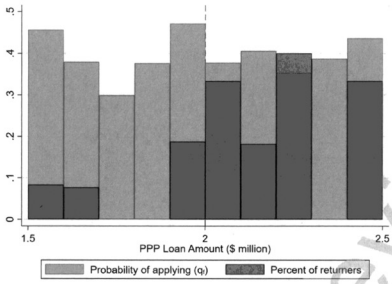


Figure 19. PPP loan return probability around the $2M loan size cutoff. This figure plots the probability of U.S. public borrowers returning PPP loans to the SBA, in the vicinity of the $2M loan size cutoff, above which the loans are subject to audit. We also plot the application probability of these firms around the cutoff. The vertical line is the loan amount of $2 million.

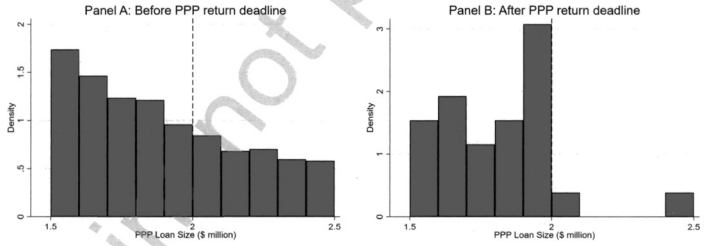


Figure 20. PPP applications around the $2M loan size cutoff: SBA PPP data. This figure plots densities of the PPP loan amount in the vicinity of the $2M loan size cutoff, above which the loans are subject to audit. The graph is based on the UCC–SBA PPP data, which we restrict to non-financial corporations, for comparability. Panel A reports the results for the period before the PPP loan return deadline on May 18, 2020. Panel B reports the results for the period after the PPP loan return deadline. The vertical line is the loan amount of $2 million.

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Table 1
Full SBA PPP sample and UCC–SBA PPP sample

This table summarizes the number and the amount of PPP loans to all PPP recipients, by recipient type. Panel A reports statistics for the SBA's PPP data release in December 2020. Panel B reports statistics for the UCC–SBA PPP data.

	Number	Amount ($B)	Median	Mean
Recipient Type	(1)	(2)	(3)	(4)
Panel A: Full SBA data				
Corporation	1,498,552	207.97	41,120	138,782
LLC	1,455,353	135.25	25,000	92,935
Subchapter S	701,332	98.06	40,000	139,825
Non-Profit Organization	178,533	36.85	41,600	206,393
Sole Proprietorship	817,826	16.94	11,400	20,719
LLP	36,448	6.07	46,904	166,446
Independent Contractor	144,472	1.64	8,976	11,383
Other	324,334	20.16	15,200	62,153
Total	5,156,850	522.95	22,880	101,409
Panel B: UCC–SBA data				
Corporation	617,749	130.25	69,000	210,843
LLC	406,595	66.41	47,777	163,326
Subchapter S	247,101	60.19	80,352	243,565
Non-Profit Organization	45,705	22.90	152,500	501,119
Sole Proprietorship	84,297	4.22	20,000	50,066
LLP	14,509	3.68	76,500	253,362
Independent Contractor	2,692	0.08	13,945	30,415
Other	50,519	10.62	47,881	210,242
Total	1,469,167	298.34	59,920	203,070

Table 2
Public PPP borrower sample

Column (1) reports the number of observations at each stage of PPP borrower sample construction. Column (2) reports the respective numbers for firms that subsequently returned PPP loans to SBA.

	All PPP Borrowers	PPP Loan Returners
	(1)	(2)
1. Initial PPP borrower sample	739	123
2. Exclusions based on economic considerations:	57	6
Reason 1: Financial firm	57	6
Reason 2: Special purpose acquisition company (SPAC)	0	0
3. Final sample, including:	682	117
Matched to Compustat	586	113
Matched to Yahoo! Finance	663	117
Matched to SBA's PPP loan disclosures (Jul, Aug, or Dec)	538	17
Matched to Lender RSSD IDs (e.g., FDIC, FFIEC, NCUA)	623	92
Matched to DealScan & UCC	405	82
4. PPP announcements, including:	682	117
PPP announcements from 8-K filings	439	68
PPP announcements from 10-Qs, 10-Ks, and other sources	243	49
5. PPP borrowing disclosed after PPPFA	258	8

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Table 3
Public and private PPP borrowers by PPP round

Columns (1) to (3) report the mean, median, and standard deviation of several financial characteristics of firms that obtained PPP loans in PPP Round 1. Columns (4) to (6) report the same statistics for firms that obtained PPP loans in PPP Round 2. Column (7) reports the number of observations and Column (8) reports p-values from a Wilcoxon rank sum test comparing early borrowers with late borrowers. In the case of discrete variables, the statistics are proportions and the p-values are for tests of the difference in proportions. Variables are defined in Internet Appendix Section IA.D. Continuous variables are winsorized at the 1^{st} and the 99^{th} percentiles.

	Early PPP borrowers			Late PPP borrowers			Difference tests	
	Mean	Median	SD	Mean	Median	SD	N	p-value
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Public PPP borrower sample								
Firm size								
PPP Loan Amount ($ million)	2.671	1.482	3.084	1.982	0.723	3.098	679	0.000
Book Value of Assets ($ million)	120.3	39.2	520.2	99.8	23.3	367.7	569	0.000
Market Cap ($ million)	115.4	41.6	282.6	101.4	24.6	297.1	561	0.000
Sales ($ million)	77.8	25.8	160.9	86.8	11.1	229.8	569	0.000
# Employees ('000)	0.254	0.109	0.380	0.217	0.061	0.359	561	0.000
Other financial characteristics								
Firm Age (years)	15.694	12.000	12.958	15.315	10.500	13.104	569	0.199
Book Equity <0 (1/0)	17.7%	—	—	32.1%	—	—	568	0.000
Tobin's Q	1.773	1.201	2.181	1.516	0.972	2.188	569	0.001
Sales Growth	0.617	0.032	3.484	0.468	0.002	2.536	511	0.571
Dividend Payer (1/0)	15.3%	—	—	13.6%	—	—	569	0.172
Current Ratio	2.651	1.876	2.872	2.551	1.407	4.150	568	0.002
Cash/Non-Cash Assets	1.086	0.237	3.353	1.086	0.215	2.730	569	0.587
Free Cash Flow/Assets	0.144	0.032	0.872	0.327	0.047	2.106	477	0.235
Financial constraints								
Has Credit Rating (1/0)	2.7%	—	—	2.6%	—	—	682	0.531
WW Index $\geq$ p75 (1/0)	72.4%	—	—	71.0%	—	—	406	0.857
SA Index $\geq$ p75 (1/0)	76.1%	—	—	79.5%	—	—	527	0.641
Leverage and distress								
Zero Debt (1/0)	8.6%	—	—	9.2%	—	—	569	0.410
Market Leverage	0.234	0.165	0.224	0.303	0.212	0.295	512	0.297
Interest Coverage <1.5 (1/0)	77.3%	—	—	80.1%	—	—	436	0.725
Altman Z-score <1.81 (1/0)	67.8%	—	—	71.2%	—	—	479	0.616
Distance-to-Default	2.743	2.368	2.075	2.534	1.960	2.030	409	0.087
Penny Stock (1/0)	72.4%	—	—	81.1%	—	—	561	0.222
Stock returns								
Covid Period Return	-0.322	-0.388	0.383	-0.309	-0.387	0.379	638	0.800
Stimulus Day Return	0.059	0.049	0.109	0.047	0.030	0.127	644	0.022
Panel B: Full SBA PPP sample and UCC-SBA PPP sample								
Full SBA data								
PPP Loan Size ($ million)	0.209	0.080	0.349	0.084	0.032	0.183	1,297,214	0.000
# Jobs ('000)	0.040	0.018	0.062	0.018	0.008	0.036	1,211,239	0.000
UCC-SBA data								
PPP Loan Size ($ million)	0.278	0.110	0.452	0.128	0.050	0.269	560,829	0.000
# Jobs ('000)	0.050	0.022	0.077	0.024	0.010	0.048	526,684	0.000

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Table 4
Early PPP borrower propensity

This table reports the results from a linear regression in which the dependent variable is an indicator for public company receiving a PPP loan before April 17, 2020 when the PPP funds ran out and independent variables are company characteristics. Continuous variables are winsorized at the 1^{st} and the 99^{th} percentiles. Standard errors are clustered at the industry level, defined as 2-digit NAICS, where we combine industries with few PPP-eligible companies into one bucket. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively. t-statistics are presented in parentheses.

	Dependent variable = Early PPP Borrower (1/0)		
	(1)	(2)	(3)
Log (Assets)	0.0338**	0.0325**	0.0370**
	(2.48)	(2.20)	(2.74)
Log (Age)	0.00373	0.00412	0.00353
	(0.12)	(0.13)	(0.11)
Book Equity <0 (1/0)	-0.141***	-0.132**	-0.127**
	(-3.05)	(-2.73)	(-2.54)
Tobin's Q	-0.00162	-0.000765	0.00448
	(-0.08)	(-0.04)	(0.24)
Current Ratio	-0.00537	-0.00510	-0.00611
	(-1.00)	(-0.93)	(-1.14)
Cash/Non-Cash Assets	0.00417	0.00385	0.00429
	(1.51)	(1.38)	(1.57)
Penny Stock (1/0)	-0.0414	-0.0432	-0.0115
	(-0.71)	(-0.73)	(-0.21)
Covid Industry (1/0)		0.00389	0.0112
		(0.06)	(0.14)
Machinery Industry (1/0)		0.140*	0.152*
		(1.80)	(2.07)
Health Industry (1/0)		-0.00694	-0.0196
		(-0.19)	(-0.49)
High-Tech Industry (1/0)		-0.0494	-0.0513
		(-1.11)	(-1.22)
Covid Period Return			-0.161
			(-1.61)
Covid Period Return × Penny Stock (1/0)			0.191*
			(2.08)
Stimulus Day Return			-0.590
			(-1.49)
Stimulus Day Return × Penny Stock (1/0)			0.570
			(1.59)
# obs.	543	543	535
Adjusted R^2	0.0321	0.0291	0.0256

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Table 5
Early versus late PPP access, small versus big banks, and bank relationships

This table compares the size of early versus late PPP borrowers that obtained a PPP loan through one of big-10 banks (*Big-10 Bank*) versus other banks (*Smaller Bank*). Panel A reports the results for all firms. Panel B reports the results for firms with prior bank relationships. Panel C reports the results for firms without prior bank relationships. We classify the following banks as big-10 banks: JPMorgan Chase Bank, Wells Fargo Bank, Bank of America, Citibank, U.S. Bank, Truist Bank, PNC Bank, Bank of New York, State Street Corporation, and TD Bank. Columns (1) to (2) report means and medians of the size variable for firms that obtained PPP loans in PPP Round 1 (i.e., early PPP borrowers). Columns (3) to (4) report the respective means and medians for PPP Round 2 (i.e., late PPP borrowers). Column (5) reports the number of observations and Column (6) reports p-values from a Wilcoxon rank sum test comparing early borrowers with late borrowers. Continuous variables are winsorized at the 1^{st} and the 99^{th} percentiles.

	Early PPP borrowers		Late PPP borrowers		Difference tests	
	mean	median	mean	median	N	p-value
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: All firms						
Smaller banks						
Book Value of Assets	82.402	36.385	86.682	26.979	372	0.093
PPP Loan Amount	2.468	1.404	2.216	0.862	440	0.004
Big-10 banks						
Book Value of Assets	144.158	55.110	61.366	18.625	153	0.000
PPP Loan Amount	3.428	2.220	1.848	0.588	179	0.000
Panel B: Bank relationship						
Smaller banks						
Book Value of Assets	118.763	43.079	178.308	94.652	125	0.119
PPP Loan Amount	3.577	2.124	5.267	3.558	137	0.138
Big-10 banks						
Book Value of Assets	247.562	161.465	151.072	68.755	48	0.158
PPP Loan Amount	6.069	5.533	4.428	1.639	53	0.150
Panel C: No bank relationship						
Smaller banks						
Book Value of Assets	64.317	34.813	37.709	14.878	247	0.000
PPP Loan Amount	1.932	1.054	1.091	0.681	303	0.000
Big-10 banks						
Book Value of Assets	80.047	37.745	33.638	11.947	105	0.003
PPP Loan Amount	1.880	1.087	1.127	0.464	126	0.001

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Table 6
Early PPP access, lender effects, and bank relationships

This table reports the results from a linear regression in which the dependent variable is an indicator for an early public PPP borrower. An early borrower is a company receiving a PPP loan before April 17, 2020. The size variable is *Book Value of Assets* in Panel A and *PPP Loan Amount* in Panel B. *Smaller Bank (1/0)* is a dummy for PPP lender being a non-big-10 bank. We classify the following banks as big-10 banks: JPMorgan Chase Bank, Wells Fargo Bank, Bank of America, Citibank, U.S. Bank, Truist Bank, PNC Bank, Bank of New York, State Street Corporation, and TD Bank. Continuous variables are winsorized at the 1^{st} and the 99^{th} percentiles. Standard errors are clustered at the industry level, defined as 2-digit NAICS, where we combine industries with few PPP-eligible companies into one bucket. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively. t-statistics are presented in parentheses. Constants are omitted for brevity. Continuous variables are winsorized at the 1^{st} and the 99^{th} percentiles.

	Dependent variable = Early PPP Borrower (1/0)					
	All firms		Bank relationship		No bank relationship	
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Firm size						
Log (Assets) × Smaller Bank (1/0)	-0.0547**	-0.0583**	-0.0960*	-0.120**	-0.0224*	-0.0209
	(-2.22)	(-2.63)	(-2.07)	(-2.38)	(-1.80)	(-1.65)
Log (Assets)	0.0875***	0.0692***	0.0752**	0.0540	0.0880***	0.0795***
	(5.22)	(3.94)	(2.51)	(1.18)	(7.52)	(4.15)
Smaller Bank (1/0)	0.421***	0.429***	0.538**	0.651**	0.338***	0.319***
	(4.10)	(4.70)	(2.68)	(2.61)	(4.25)	(4.57)
Firm Characteristics	No	Yes	No	Yes	No	Yes
Penny Stock Dummy	No	Yes	No	Yes	No	Yes
Industry Dummies	No	Yes	No	Yes	No	Yes
Returns Controls	No	Yes	No	Yes	No	Yes
# obs.	525	493	173	167	352	326
Adjusted R^2	0.0884	0.0705	0.0131	0.0415	0.132	0.0941
Panel B: PPP loan size						
Log (PPP Loan Size) × Smaller Bank (1/0)	-0.00813	-0.0297*	-0.0438	-0.103**	0.0231	0.0126
	(-0.38)	(-1.77)	(-0.80)	(-2.98)	(1.39)	(0.55)
Log (PPP Loan Size)	0.0664**	0.0602**	0.0360	0.0518	0.0750***	0.0763***
	(2.54)	(2.43)	(0.68)	(0.92)	(3.22)	(3.02)
Smaller Bank (1/0)	0.260**	0.333***	0.303	0.581**	0.199**	0.221**
	(2.58)	(4.22)	(1.16)	(2.87)	(2.66)	(2.90)
Firm Characteristics	No	Yes	No	Yes	No	Yes
Penny Stock Dummy	No	Yes	No	Yes	No	Yes
Industry Dummies	No	Yes	No	Yes	No	Yes
Returns Controls	No	Yes	No	Yes	No	Yes
# obs.	525	493	173	167	352	326
Adjusted R^2	0.0760	0.0672	0.00146	0.0408	0.127	0.0956

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Table 7
Early PPP access and bank relationships:
SBA PPP data

This table reports the results from a linear regression in which the dependent variable is an indicator for an early PPP borrower. The sample is the UCC–SBA PPP dataset. An early borrower is a company receiving a PPP loan before April 17, 2020. Column 1 estimated the regression based on all firms in the dataset. Columns 2 (3) use the subsample of firms with (without) a bank relationship before the PPP. A firm has a bank relationship if it is recorded as having a security interest filing under UCC between 2015 and 2019. *Log (PPP Loan Size)* is the natural logarithm of the PPP loan size from the SBA PPP data, which we restrict to non-financial corporations, for comparability. *Smaller Bank (1/0)* is a dummy for PPP lender being a non-big-10 bank. We classify the following banks as big-10 banks: JPMorgan Chase Bank, Wells Fargo Bank, Bank of America, Citibank, U.S. Bank, Truist Bank, PNC Bank, Bank of New York, State Street Corporation, and TD Bank. Continuous variables are winsorized at the 1^{st} and the 99^{th} percentiles. Standard errors are clustered at the industry level, defined as 2-digit NAICS, where we combine industries with few PPP-eligible companies into one bucket. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively. t-statistics are presented in parentheses. Constants are omitted for brevity. Continuous variables are winsorized at the 1^{st} and the 99^{th} percentiles.

	Dependent variable = Early PPP Borrower (1/0)		
	All firms	Bank relationship	No bank relationship
	(1)	(2)	(3)
Log (PPP Loan Size) × Smaller Bank (1/0)	0.0262***	-0.00510	0.0488***
	(6.73)	(-1.58)	(12.85)
Log (PPP Loan Size)	0.0784***	0.0976***	0.0543***
	(22.10)	(33.60)	(12.99)
Smaller Bank (1/0)	0.357***	0.303***	0.403***
	(34.71)	(39.89)	(37.63)
NAICS-6 FEs	Yes	Yes	Yes
ZIP-5 FEs	Yes	Yes	Yes
# obs.	549,390	298,842	244,967
Adjusted R^2	0.284	0.254	0.266

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Table 8
Early PPP access and Applying Through Relationship Bank
SBA PPP data

This table reports the results from linear regression in which the dependent variable is an indicator for an early PPP borrower. The sample includes all firms in the UCC–SBA PPP data that have a bank relationships before the PPP. A firm has a bank relationship if it is recorded as having a security interest filing under UCC between 2015 and 2019. An early borrower is a company receiving a PPP loan before April 17, 2020. *Relationship Bank PPP* is a dummy variable for whether the firm applies through its relationship bank. *Small Bank Relationship* is a dummy variable for whether the firm had a relationship with a small bank. We classify the following banks as big-10 banks: JPMorgan Chase Bank, Wells Fargo Bank, Bank of America, Citibank, U.S. Bank, Truist Bank, PNC Bank, Bank of New York, State Street Corporation, and TD Bank. Standard errors are clustered at the industry level, defined as 2-digit NAICS, where we combine industries with few PPP-eligible companies into one bucket. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively. t-statistics are presented in parentheses. Constants are omitted for brevity. Continuous variables are winsorized at the 1^{st} and the 99^{th} percentiles.

	Dependent variable = Early PPP Borrower (1/0)		
	(1)	(2)	(3)
Relationship Bank PPP (1/0)	0.0950***		-0.102***
	(17.38)		(-13.97)
Small Bank Relationship (1/0)		0.213***	0.0971***
		(32.29)	(16.14)
Relationship Bank PPP (1/0) × Small Bank Relationship (1/0)			0.242***
			(47.74)
NAICS-6 FEs	Yes	Yes	Yes
ZIP-5 FEs	Yes	Yes	Yes
# obs.	298,842	298,842	298,842
Adjusted R^2	0.150	0.169	0.186

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Table 9
Publicly listed PPP applicants and control firms

Columns (1) to (3) report the mean, median, and standard deviation of several financial characteristics of firms that applied for PPP loans. Columns (4) to (6) report the same statistics for the control group of firms with fewer than 500 employees reported in COMPUSTAT that did not apply for the PPP. Column (7) reports the number of observations and Column (8) reports p-values from a Wilcoxon rank sum test comparing applicants with non-applicants. In the case of discrete variables, the statistics are proportions and the p-values are for tests of the difference in proportions. Continuous variables are winsorized at the 1^{st} and the 99^{th} percentiles.

	PPP borrowers (N=682)			Non-applicants (N=1,452)			Difference tests	
	Mean	Median	SD	Mean	Median	SD	N	p-value
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Firm size								
PPP Loan Amount ($ million)	2.434	1.139	3.104	—	—	—	679	—
Book Value of Assets ($ million)	113.7	34.8	476.0	526.3	84.7	1,503.0	2,021	0.000
Market Cap ($ million)	110.9	35.9	287.1	487.8	118.7	951.6	1,947	0.000
Sales ($ million)	80.7	22.9	185.8	120.8	13.0	299.2	2,021	0.000
# Employees ('000)	0.242	0.090	0.373	0.116	0.059	0.132	2,013	0.000
Other financial characteristics								
Firm Age (years)	15.571	12.000	12.995	9.873	7.000	9.740	2,021	0.000
Book Equity <0 (1/0)	22.4%	—	—	15.9%	—	—	2,019	0.000
Tobin's Q	1.690	1.140	2.185	2.592	1.333	3.875	2,021	0.000
Sales Growth	0.570	0.024	3.216	0.672	0.037	3.176	1,545	0.845
Dividend Payer (1/0)	14.8%	—	—	14.3%	—	—	2,021	0.546
Current Ratio	2.619	1.692	3.337	5.017	2.451	7.207	2,004	0.000
Cash/Non-Cash Assets	1.086	0.233	3.162	3.501	0.400	7.733	2,007	0.000
Free Cash Flow/Assets	0.203	0.033	1.392	0.392	0.011	2.750	1,682	0.000
Financial constraints								
Has Credit Rating (1/0)	2.6%	—	—	5.7%	—	—	2,134	0.000
WW Index ≥ p75 (1/0)	71.9%	—	—	46.5%	—	—	1,262	0.000
SA Index ≥ p75 (1/0)	77.2%	—	—	72.7%	—	—	1,872	0.248
Leverage and distress								
Zero Debt (1/0)	8.8%	—	—	15.5%	—	—	2,018	0.000
Market Leverage	0.256	0.178	0.251	0.228	0.100	0.270	1,682	0.000
Interest Coverage <1.5 (1/0)	78.2%	—	—	76.8%	—	—	1,457	0.749
Altman Z-score <1.81 (1/0)	68.9%	—	—	61.0%	—	—	1,623	0.030
Distance-to-Default	2.685	2.254	2.062	3.713	3.137	2.486	961	0.000
Penny Stock (1/0)	75.2%	—	—	59.5%	—	—	1,948	0.000
Stock returns								
Covid Period Return	-0.318	-0.387	0.381	-0.327	-0.361	0.310	2,028	0.136
Stimulus Day Return	0.055	0.042	0.116	0.058	0.049	0.103	2,042	0.078

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Table 10
PPP borrowing propensity

This table reports the results from a linear probability (OLS) model where the dependent variable is an indicator for public company receiving a PPP loan and independent variables are company characteristics. Continuous variables are winsorized at the 1^{st} and the 99^{th} percentiles. Standard errors are clustered at the industry level, defined as 2-digit NAICS, where we combine industries with few PPP-eligible companies into one bucket. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively. t-statistics are presented in parentheses.

	Dependent variable = PPP Borrower (1/0)		
	(1)	(2)	(3)
Log (Assets)	-0.0350***	-0.0268***	-0.0255**
	(-3.81)	(-4.10)	(-2.86)
Log (Age)	0.0635***	0.0639***	0.0646**
	(3.45)	(3.09)	(2.88)
Book Equity <0 (1/0)	-0.0602	-0.0606	-0.0635
	(-1.53)	(-1.45)	(-1.48)
Tobin's Q	-0.0134***	-0.0126***	-0.0128***
	(-4.70)	(-4.19)	(-3.74)
Current Ratio	-0.00725***	-0.00642***	-0.00622***
	(-3.78)	(-3.37)	(-3.28)
Cash/Non-Cash Assets	-0.00558***	-0.00578***	-0.00556**
	(-3.67)	(-3.05)	(-2.77)
Penny Stock (1/0)	0.00162	0.0114	0.0728
	(0.03)	(0.30)	(1.66)
Covid Industry (1/0)		0.331**	0.334**
		(2.82)	(2.88)
Machinery Industry (1/0)		0.127	0.134
		(1.07)	(1.03)
Health Industry (1/0)		0.0510	0.0502
		(0.46)	(0.44)
High-Tech Industry (1/0)		0.134	0.144
		(1.13)	(1.23)
Covid Period Return			-0.129
			(-1.56)
Covid Period Return × Penny Stock (1/0)			0.157*
			(2.06)
Stimulus Day Return			0.158
			(0.39)
Stimulus Day Return × Penny Stock (1/0)			0.124
			(0.33)
# obs.	1,797	1,797	1,762
Adjusted R^2	0.0798	0.111	0.114

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Table 11
PPP loan grant announcement effects

This table reports the results from a event study analysis where the dependent variable is the company's stock return measured as stock return minus S&P 500 return (Panel A) or abnormal stock return calculated using the market model based on S&P 500 return (Panel B). The key independent variable *Day* is an indicator for the treading day relative to the PPP loan grant announcement date, *Day 0* (e.g., 8-K filing, press release). The time period is from Day -60 to Day +1. The estimation window for the market model is Day -270 to Day -61. The day count excludes non-trading days (e.g., weekends, holidays). Continuous variables are winsorized at the 1^{st} and the 99^{th} percentiles. Standard errors are clustered at the trading day level. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively. t-statistics are presented in parentheses.

	Panel A: Market-adjusted			Panel B: Market model		
	Day -1	Day 0	Day +1	Day -1	Day 0	Day +1
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: All observations						
Across firms						
Abnormal return	0.0112**	0.00307	0.00194	0.0114***	0.00533	0.00530
t-statistic	(2.43)	(0.64)	(0.39)	(2.88)	(1.15)	(1.28)
Within firms						
Abnormal return	0.0112**	0.00309	0.00195	0.0114***	0.00534	0.00531
t-statistic	(2.42)	(0.63)	(0.38)	(2.88)	(1.12)	(1.28)
Panel B: Only 8-K filings						
Across firms						
Abnormal return	0.0159***	0.00431	0.00676	0.0157***	0.00652	0.00850
t-statistic	(3.68)	(0.74)	(1.26)	(3.97)	(1.14)	(1.66)
Within firms						
Abnormal return	0.0159***	0.00435	0.00680	0.0158***	0.00656	0.00853*
t-statistic	(3.70)	(0.74)	(1.28)	(3.98)	(1.13)	(1.70)
Panel C: Only 8-K filings & non-penny stocks						
Across firms						
Abnormal return	0.0175***	0.00741	0.0106	0.0165***	0.0108	0.0122
t-statistic	(3.22)	(0.97)	(1.43)	(2.88)	(1.25)	(1.61)
Within firms						
Abnormal return	0.0175***	0.00742	0.0106	0.0165***	0.0108	0.0122
t-statistic	(3.23)	(0.98)	(1.39)	(2.95)	(1.24)	(1.57)

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Table 12
Public PPP returners versus retainers

Columns (1) to (3) report the mean, median, and standard deviation of several financial characteristics of firms that returned PPP loans to SBA. Columns (4) to (6) report the same statistics for firms that retained PPP loans. Column (7) reports the number of observations and Column (8) reports p-values from a Wilcoxon rank sum test comparing returners with retainers. In the case of discrete variables, the statistics are proportions and the p-values are for tests of the difference in proportions. Continuous variables are winsorized at the 1^{st} and the 99^{th} percentiles.

	Returned PPP loan (N=117)			Retained PPP loan (N=565)			Difference tests	
	Mean	Median	SD	Mean	Median	SD	N	p-value
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Firm size								
PPP Loan Amount ($ million)	4.430	3.330	4.105	2.023	0.956	2.681	679	0.000
Book Value of Assets ($ million)	288.4	86.0	1,032.0	71.4	27.7	126.7	569	0.000
Market Cap ($ million)	276.1	118.0	565.1	71.0	28.2	133.0	561	0.000
Sales ($ million)	159.1	49.6	321.5	61.7	19.2	127.2	569	0.000
# Employees ('000)	0.390	0.215	0.467	0.206	0.077	0.337	561	0.000
Other financial characteristics								
Firm Age (years)	17.441	13.000	14.627	15.118	11.000	12.544	569	0.327
Book Equity <0 (1/0)	11.7%	—	—	24.9%	—	—	568	0.000
Tobin's Q	2.085	1.432	2.693	1.594	1.063	2.035	569	0.000
Sales Growth	0.464	0.070	2.695	0.597	0.011	3.337	511	0.018
Dividend Payer (1/0)	24.3%	—	—	12.4%	—	—	569	0.000
Current Ratio	3.845	2.548	4.814	2.321	1.504	2.793	568	0.000
Cash/Non-Cash Assets	1.131	0.405	2.050	1.075	0.211	3.379	569	0.003
Free Cash Flow/Assets	0.137	0.017	1.115	0.218	0.043	1.449	477	0.152
Financial constraints								
Has Credit Rating (1/0)	6.0%	—	—	1.9%	—	—	682	0.000
WW Index ≥ p75 (1/0)	51.3%	—	—	76.7%	—	—	406	0.001
SA Index ≥ p75 (1/0)	62.7%	—	—	80.7%	—	—	527	0.015
Leverage and distress								
Zero Debt (1/0)	12.6%	—	—	7.9%	—	—	569	0.000
Market Leverage	0.187	0.118	0.199	0.272	0.199	0.259	512	0.003
Interest Coverage <1.5 (1/0)	61.5%	—	—	81.8%	—	—	436	0.014
Altman Z-score <1.81 (1/0)	48.3%	—	—	73.6%	—	—	479	0.000
Distance-to-Default	3.807	3.043	2.349	2.336	1.953	1.834	409	0.000
Penny Stock (1/0)	53.2%	—	—	80.5%	—	—	561	0.000
Stock returns								
Covid Period Return	-0.332	-0.384	0.362	-0.315	-0.388	0.386	638	0.823
Stimulus Day Return	0.070	0.065	0.091	0.052	0.036	0.120	644	0.020
PPP Grant Abnormal Return	0.031	0.017	0.108	0.021	0.001	0.127	646	0.151

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Table 13
PPP loan return propensity

This table reports the results from a linear probability (OLS) model where the dependent variable is an indicator for public company returning a PPP loan to the SBA and independent variables are company characteristics. Continuous variables are winsorized at the 1^{st} and the 99^{th} percentiles. Standard errors are clustered at the industry level, defined as 2-digit NAICS, where we combine industries with few PPP-eligible companies into one bucket. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively. t-statistics are presented in parentheses.

	Dependent variable = PPP Loan Returner (1/0)		
	(1)	(2)	(3)
Log (Assets)	0.0560***	0.0540***	0.0563***
	(4.44)	(4.36)	(3.99)
Log (Age)	-0.00962	-0.00134	-0.00225
	(-0.78)	(-0.10)	(-0.18)
Book Equity <0 (1/0)	0.0311	0.0226	0.0206
	(0.56)	(0.45)	(0.45)
Tobin's Q	0.0121***	0.00826**	0.00696*
	(3.68)	(2.47)	(1.83)
Current Ratio	0.0168***	0.0158***	0.0163***
	(3.50)	(3.11)	(3.25)
Cash/Non-Cash Assets	0.000876	-0.000548	0.000252
	(0.21)	(-0.12)	(0.05)
Penny Stock (1/0)	-0.112**	-0.122**	-0.214*
	(-2.22)	(-2.74)	(-2.09)
Covid Industry (1/0)		-0.0309	-0.0318
		(-1.35)	(-1.24)
Machinery Industry (1/0)		-0.0695**	-0.0813**
		(-2.56)	(-2.38)
Health Industry (1/0)		0.0814**	0.0836**
		(2.30)	(2.65)
High-Tech Industry (1/0)		-0.0367	-0.0362
		(-1.48)	(-1.25)
Covid Period Return			0.297**
			(2.65)
Covid Period Return × Penny Stock (1/0)			-0.239
			(-1.70)
Stimulus Day Return			0.140
			(0.44)
Stimulus Day Return × Penny Stock (1/0)			-0.157
			(-0.60)
PPP Grant Abnormal Return			0.158
			(0.36)
PPP Grant Abnormal Return × Penny Stock (1/0)			0.0424
			(0.08)
# obs.	543	543	535
Adjusted R^2	0.110	0.116	0.118

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Table 14
PPP loan return announcement effects

This table reports the results from a event study analysis where the dependent variable is the company's stock return measured as stock return minus S&P 500 return (Panel A) or abnormal stock return calculated using the market model based on S&P 500 return (Panel B). The key independent variable *Day* is an indicator for the treading day relative to the PPP loan return announcement date, *Day 0* (e.g., 8-K filing, press release). The time period is from Day -60 to Day 1. The estimation window for the market model is Day -270 to Day -61. The day count excludes non-trading days (e.g., weekends, holidays). Continuous variables are winsorized at the 1^{st} and the 99^{th} percentiles. Standard errors are clustered at the trading day level. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively. *t*-statistics are presented in parentheses.

	Panel A: Market-adjusted			Panel B: Market model		
	Day -1	Day 0	Day +1	Day -1	Day 0	Day +1
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: All observations						
Across firms						
Abnormal return	-0.00662	0.0256***	0.00395	-0.00742	0.0263***	0.00409
t-statistic	(-1.08)	(3.23)	(0.56)	(-1.15)	(3.23)	(0.56)
Within firms						
Abnormal return	-0.00659	0.0256***	0.00386	-0.00740	0.0263***	0.00410
t-statistic	(-1.05)	(3.32)	(0.54)	(-1.12)	(3.35)	(0.56)
Panel B: Only 8-K filings						
Across firms						
Abnormal return	-0.00983	0.0294***	0.00273	-0.0116	0.0308***	0.00162
t-statistic	(-1.29)	(2.97)	(0.34)	(-1.46)	(3.04)	(0.18)
Within firms						
Abnormal return	-0.00983	0.0294***	0.00273	-0.0116	0.0308***	0.00162
t-statistic	(-1.25)	(3.12)	(0.33)	(-1.42)	(3.22)	(0.18)
Panel C: Only 8-K filings & non-penny stocks						
Across firms						
Abnormal return	-0.0108	0.0281***	0.00455	-0.0132	0.0300***	0.00384
t-statistic	(-1.35)	(2.67)	(0.35)	(-1.48)	(2.68)	(0.28)
Within firms						
Abnormal return	-0.0108	0.0281***	0.00455	-0.0132	0.0300***	0.00384
t-statistic	(-1.28)	(2.72)	(0.35)	(-1.43)	(2.71)	(0.29)

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Table 15
PPP loan return, loan size, and $2M loan size cutoff

This table reports the results from a linear probability (OLS) model where the dependent variable is an indicator for public company returning a PPP loan to the SBA and independent variables are the natural logarithm of PPP loan amount, an indicator for loan amount above $2 million, and company characteristics. Continuous variables are winsorized at the 1^{st} and the 99^{th} percentiles. Standard errors are clustered at the industry level, defined as 2-digit NAICS, where we combine industries with few PPP-eligible companies into one bucket. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively. t-statistics are presented in parentheses.

	Dependent variable = PPP Loan Returner (1/0)		
	(1)	(2)	(3)
Log (PPP Loan Amount)	0.0751***	0.0489**	0.0449
	(7.22)	(2.74)	(1.63)
Above $2M (1/0)		0.0885*	0.00473
		(1.82)	(0.08)
Log (PPP Loan Amount)^2			0.0208**
			(2.76)
Firm Characteristics	No	No	Yes
Penny Stock Dummy	No	No	Yes
Industry Dummies	No	No	Yes
Returns Controls	No	No	Yes
# obs.	568	568	534
Adjusted R^2	0.0600	0.0628	0.127

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Internet Appendix to "Small Bank Financing and Funding Hesitancy in a Crisis: Evidence from the Paycheck Protection Program"

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Section IA.A: Supplementary Graphs and Tables

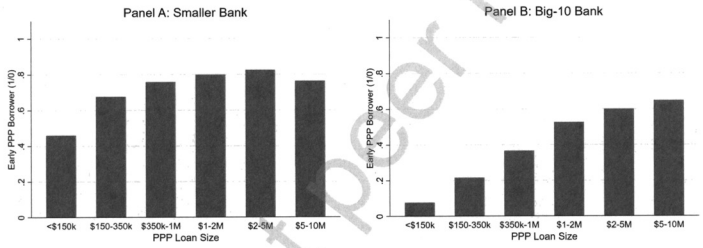


Figure IA.1. Probability of early PPP borrowing: small versus big banks – Full SBA data. This figure plots the probability of borrowing early (i.e., in PPP Round 1) versus borrowing late (i.e., in PPP Round 2) for PPP borrowers from the SBA's PPP data release in December 2020, which we restrict to non-financial corporations, for comparability, by PPP loan size bin. Panel A reports the results for smaller (non-big-10) banks, with this category including non-bank lenders. Excluding non-bank lenders does not affect the results. Panel B reports the results for big-10 banks.

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Table IA.1
Matching statistics: DealScan and UCC

Columns (1) to (3) report the mean, median, and standard deviation of several financial characteristics of firms that we were able to match to DealScan. Columns (4) to (6) report the same statistics for firms that we were able to match to UCC and Columns (7) to (9) report the same statistics for unmatched firms. In the case of discrete variables, the statistics are proportions. Continuous variables are winsorized at the 1^{st} and the 99^{th} percentiles.

	Matched to DealScan (N=231)			Matched to UCC (N=301)			Unmatched (N=277)		
	Mean	Median	SD	Mean	Median	SD	Mean	Median	SD
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Panel A: Firm size									
PPP Loan Amount ($ million)	4.106	2.651	3.834	3.278	1.900	3.527	1.233	0.564	1.844
Book Value of Assets ($ million)	154.5	62.1	209.7	116.0	48.9	182.8	45.8	17.6	78.1
Market Cap ($ million)	119.1	41.9	206.1	126.1	39.7	220.9	65.4	31.5	98.6
Sales ($ million)	136.8	65.4	183.9	103.8	34.5	170.5	29.5	6.2	82.4
# Employees ('000)	0.629	0.230	1.178	0.456	0.150	0.977	0.097	0.042	0.159
Panel B: Other financial characteristics									
Firm Age (years)	22.846	23.000	13.631	16.936	13.000	13.791	10.681	7.500	10.105
Book Equity <0 (1/0)	15.0%	—	—	20.7%	—	—	27.6%	—	—
Tobin's Q	1.252	1.066	1.204	1.614	1.128	1.847	1.847	1.177	2.311
Sales Growth	0.154	-0.011	1.710	0.316	0.026	1.779	1.289	0.036	5.477
Dividend Payer (1/0)	22.0%	—	—	14.2%	—	—	10.0%	—	—
Current Ratio	2.330	1.683	2.078	2.381	1.662	2.279	2.761	1.712	3.134
Cash/Non-Cash Assets	0.484	0.104	1.555	0.833	0.163	2.161	1.360	0.383	2.338
Free Cash Flow/Assets	0.098	0.029	0.442	0.099	0.033	0.608	0.259	0.040	1.086
Panel C: Financial constraints									
Has Credit Rating (1/0)	7.4%	—	—	5.0%	—	—	0.4%	—	—
WW Index $\geq$ p75 (1/0)	60.5%	—	—	66.5%	—	—	79.7%	—	—
SA Index $\geq$ p75 (1/0)	51.8%	—	—	70.5%	—	—	93.5%	—	—
Panel D: Leverage and distress									
Zero Debt (1/0)	9.3%	—	—	7.5%	—	—	10.0%	—	—
Market Leverage	0.326	0.278	0.264	0.304	0.245	0.267	0.186	0.100	0.227
Interest Coverage <1.5 (1/0)	67.6%	—	—	77.1%	—	—	86.4%	—	—
Altman Z-score <1.81 (1/0)	56.4%	—	—	66.4%	—	—	78.3%	—	—
Distance-to-Default	2.676	2.370	1.840	2.632	2.305	2.019	2.703	2.054	1.963
Penny Stock (1/0)	65.4%	—	—	72.7%	—	—	83.9%	—	—
Panel E: Stock returns									
Covid Period Return	-0.331	-0.408	0.408	-0.326	-0.398	0.391	-0.280	-0.371	0.466
Stimulus Day Return	0.066	0.052	0.110	0.066	0.057	0.121	0.044	0.016	0.131
PPP Grant Abnormal Return	0.016	0.002	0.108	0.022	0.006	0.122	0.028	0.004	0.135

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Table IA.2
Early PPP access and lender effects

This table reports the results from a multinomial logit model for public PPP recipients where the dependent variable is a categorical variable for the intersection between a bank type (big-10 bank versus smaller bank) and borrower type (early versus late PPP borrower). The independent variable is firm size (Panel A) and the PPP loan size (Panel B). The dependent variable *Bank Type–Borrower Type Category (Y)* takes the value of 3 for smaller (non-big-10) bank and early PPP borrower, 2 for smaller bank and late PPP borrower, 1 for big-10 bank and early PPP borrower, and 0 for big-10 bank and late PPP borrower. We classify the following banks as big-10 banks: JPMorgan Chase Bank, Wells Fargo Bank, Bank of America, Citibank, U.S. Bank, Truist Bank, PNC Bank, Bank of New York, State Street Corporation, and TD Bank. An early borrower is a public company receiving a PPP loan before April 17, 2020. Continuous variables are winsorized at the 1^{st} and the 99^{th} percentiles. Standard errors are clustered at the industry level, defined as 2-digit NAICS, where we combine industries with few PPP-eligible companies into one bucket. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively. z-statistics are presented in parentheses. Constants are omitted for brevity.

	Dependent variable = Bank Type–Borrower Type Category (Y)			
	Predictor	Coefficient	Relative risk ratio	z-statistic
	(1)	(2)	(3)	(4)
	Panel A: Firm size			
Y = 3: Smaller Bank–Early PPP Borrower	Log (Assets)	-0.196***	0.82	(-3.08)
Y = 2: Smaller Bank–Late PPP Borrower	Log (Assets)	-0.364***	0.69	(-5.63)
Y = 1: Big-10 Bank–Early PPP Borrower	[Base outcome]	—	—	—
Y = 0: Big-10 Bank–Late PPP Borrower	Log (Assets)	-0.448***	0.64	(-4.37)
# obs.	525			
Pseudo-R^2	0.0185			
Log-likelihood	-615.6			
	Panel B: PPP loan size			
Y = 3: Smaller Bank–Early PPP Borrower	Log (PPP Loan Amount)	-0.233**	0.79	(-2.41)
Y = 2: Smaller Bank–Late PPP Borrower	Log (PPP Loan Amount)	-0.412***	0.66	(-3.10)
Y = 1: Big-10 Bank–Early PPP Borrower	[Base outcome]	—	—	—
Y = 0: Big-10 Bank–Late PPP Borrower	Log (PPP Loan Amount)	-0.554***	0.57	(-3.75)
# obs.	525			
Pseudo-R^2	0.0172			
Log-likelihood	-616.5			

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Table IA.3
Early PPP access and lender effects
Bank relationship

This table reports the results from a multinomial logit model for public PPP recipients where the dependent variable is a categorical variable for the intersection between a bank type (big-10 bank versus smaller bank) and borrower type (early versus late PPP borrower), for a subsample of publicly listed firms with prior bank relationships (i.e., before the PPP). The independent variable is firm size (Panel A) and the PPP loan size (Panel B). The dependent variable *Bank Type–Borrower Type Category (Y)* takes the value of 3 for smaller (non-big-10) bank and early PPP borrower, 2 for smaller bank and late PPP borrower, 1 for big-10 bank and early PPP borrower, and 0 for big-10 bank and late PPP borrower. We classify the following banks as big-10 banks: JPMorgan Chase Bank, Wells Fargo Bank, Bank of America, Citibank, U.S. Bank, Truist Bank, PNC Bank, Bank of New York, State Street Corporation, and TD Bank. An early borrower is a public company receiving a PPP loan before April 17, 2020. Continuous variables are winsorized at the 1^{st} and the 99^{th} percentiles. Standard errors are clustered at the industry level, defined as 2-digit NAICS, where we combine industries with few PPP-eligible companies into one bucket. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively. z-statistics are presented in parentheses. Constants are omitted for brevity.

	Dependent variable = Bank Type–Borrower Type Category (Y)			
	Predictor	Coefficient	Relative risk ratio	z-statistic
	(1)	(2)	(3)	(4)
Panel A: Firm size				
Y = 3: Smaller Bank–Early PPP Borrower	Log (Assets)	-0.497***	0.61	(-3.07)
Y = 2: Smaller Bank–Late PPP Borrower	Log (Assets)	-0.384**	0.68	(-1.99)
Y = 1: Big-10 Bank–Early PPP Borrower	[Base outcome]	—	—	—
Y = 0: Big-10 Bank–Late PPP Borrower	Log (Assets)	-0.364**	0.69	(-2.20)
# obs.	173			
Pseudo-R^2	0.0253			
Log-likelihood	-198.2			
Panel B: PPP loan size				
Y = 3: Smaller Bank–Early PPP Borrower	Log (PPP Loan Amount)	-0.750***	0.47	(-4.36)
Y = 2: Smaller Bank–Late PPP Borrower	Log (PPP Loan Amount)	-0.588***	0.56	(-2.98)
Y = 1: Big-10 Bank–Early PPP Borrower	[Base outcome]	—	—	—
Y = 0: Big-10 Bank–Late PPP Borrower	Log (PPP Loan Amount)	-0.500**	0.61	(-2.23)
# obs.	173			
Pseudo-R^2	0.0328			
Log-likelihood	-196.7			

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Table IA.4
Early PPP access and lender effects
No bank relationship

This table reports the results from a multinomial logit model for public PPP recipients where the dependent variable is a categorical variable for the intersection between a bank type (big-10 bank versus smaller bank) and borrower type (early versus late PPP borrower), for a subsample of publicly listed firms without prior bank relationships (i.e., before the PPP). The independent variable is firm size (Panel A) and the PPP loan size (Panel B). The dependent variable *Bank Type–Borrower Type Category (Y)* takes the value of 3 for smaller (non-big-10) bank and early PPP borrower, 2 for smaller bank and late PPP borrower, 1 for big-10 bank and early PPP borrower, and 0 for big-10 bank and late PPP borrower. We classify the following banks as big-10 banks: JPMorgan Chase Bank, Wells Fargo Bank, Bank of America, Citibank, U.S. Bank, Truist Bank, PNC Bank, Bank of New York, State Street Corporation, and TD Bank. An early borrower is a public company receiving a PPP loan before April 17, 2020. Continuous variables are winsorized at the 1^{st} and the 99^{th} percentiles. Standard errors are clustered at the industry level, defined as 2-digit NAICS, where we combine industries with few PPP-eligible companies into one bucket. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively. z-statistics are presented in parentheses. Constants are omitted for brevity.

	Dependent variable = Bank Type–Borrower Type Category (Y)			
	Predictor	Coefficient	Relative risk ratio	z-statistic
	(1)	(2)	(3)	(4)
	Panel A: Firm size			
Y = 3: Smaller Bank–Early PPP Borrower	Log (Assets)	-0.0409	0.96	(-0.52)
Y = 2: Smaller Bank–Late PPP Borrower	Log (Assets)	-0.393***	0.68	(-4.79)
Y = 1: Big-10 Bank–Early PPP Borrower	[Base outcome]	—	—	—
Y = 0: Big-10 Bank–Late PPP Borrower	Log (Assets)	-0.425***	0.65	(-6.47)
# obs.	352			
Pseudo-R^2	0.0289			
Log-likelihood	-409.6			
	Panel B: PPP loan size			
Y = 3: Smaller Bank–Early PPP Borrower	Log (PPP Loan Amount)	-0.00414	1.00	(-0.08)
Y = 2: Smaller Bank–Late PPP Borrower	Log (PPP Loan Amount)	-0.428***	0.65	(-6.21)
Y = 1: Big-10 Bank–Early PPP Borrower	[Base outcome]	—	—	—
Y = 0: Big-10 Bank–Late PPP Borrower	Log (PPP Loan Amount)	-0.526***	0.59	(-3.80)
# obs.	352			
Pseudo-R^2	0.0273			
Log-likelihood	-410.3			

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Table IA.5
Early PPP access, lender effects, and bank relationships: SBA PPP data

This table reports the results from a multinomial logit model based on SBA PPP data and UCC–SBA PPP data where the dependent variable is a categorical variable for the intersection between a bank type (big-10 bank versus smaller bank) and borrower type (early versus late PPP borrower). The independent variable *Log (PPP Loan Size)* is the natural logarithm of the PPP loan size from the SBA's PPP data release in December 2020, which we restrict to non-financial corporations, for comparability. The dependent variable *Bank Type–Borrower Type Category (Y)* takes the value of 3 for smaller (non-big-10) bank and early PPP borrower, 2 for smaller bank and late PPP borrower, 1 for big-10 bank and early PPP borrower, and 0 for big-10 bank and late PPP borrower. We classify the following banks as big-10 banks: JPMorgan Chase Bank, Wells Fargo Bank, Bank of America, Citibank, U.S. Bank, Truist Bank, PNC Bank, Bank of New York, State Street Corporation, and TD Bank. An early borrower is a public company receiving a PPP loan before April 17, 2020. Continuous variables are winsorized at the 1^{st} and the 99^{th} percentiles. Standard errors are clustered at the industry level, defined as 2-digit NAICS, where we combine industries with few PPP-eligible companies into one bucket. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively. z-statistics are presented in parentheses. Constants are omitted for brevity.

	Dependent variable = Bank Type–Borrower Type Category (Y)			
	Predictor	Coefficient	Relative risk ratio	z-statistic
	(1)	(2)	(3)	(4)
	Panel A: All firms			
Y = 3: Smaller Bank–Early PPP Borrower	Log (PPP Loan Size)	-0.167***	0.85	(-7.77)
Y = 2: Smaller Bank–Late PPP Borrower	Log (PPP Loan Size)	-0.601***	0.55	(-19.03)
Y = 1: Big-10 Bank–Early PPP Borrower	[Base outcome]	—	—	—
Y = 0: Big-10 Bank–Late PPP Borrower	Log (PPP Loan Size)	-0.635***	0.53	(-27.00)
# obs.	554,422			
Pseudo-R^2	0.0390			
Log-likelihood	-626379			
	Panel B: Bank relationship			
Y = 3: Smaller Bank–Early PPP Borrower	Log (PPP Loan Size)	-0.256***	0.77	(-7.89)
Y = 2: Smaller Bank–Late PPP Borrower	Log (PPP Loan Size)	-0.634***	0.53	(-16.21)
Y = 1: Big-10 Bank–Early PPP Borrower	[Base outcome]	—	—	—
Y = 0: Big-10 Bank–Late PPP Borrower	Log (PPP Loan Size)	-0.600***	0.55	(-38.48)
# obs.	301,552			
Pseudo-R^2	0.0294			
Log-likelihood	-323917			
	Panel C: No bank relationship			
Y = 3: Smaller Bank–Early PPP Borrower	Log (PPP Loan Size)	-0.103***	0.90	(-4.33)
Y = 2: Smaller Bank–Late PPP Borrower	Log (PPP Loan Size)	-0.515***	0.60	(-14.52)
Y = 1: Big-10 Bank–Early PPP Borrower	[Base outcome]	—	—	—
Y = 0: Big-10 Bank–Late PPP Borrower	Log (PPP Loan Size)	-0.549***	0.58	(-24.88)
# obs.	252,870			
Pseudo-R^2	0.0284			
Log-likelihood	-296605			

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Table IA.6
Financial constraints, solvency, and PPP loan return

This table reports the results from a linear probability (OLS) model where the dependent variable is an indicator for public company returning a PPP loan to the SBA and independent variables are financial constraints and solvency indexes. Continuous variables are winsorized at the 1^{st} and the 99^{th} percentiles. Standard errors are clustered at the industry level, defined as 2-digit NAICS, where we combine industries with few PPP-eligible companies into one bucket. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively. t-statistics are presented in parentheses.

	Dependent variable = PPP Loan Returner (1/0)								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
WW Index $\geq$ p75 (1/0)	-0.142*** (-3.72)	-0.138*** (-3.85)	-0.137*** (-3.38)						
SA Index $\geq$ p75 (1/0)				-0.111*** (-3.27)	-0.123*** (-3.31)	-0.113** (-2.71)			
Altman Z-score <1.81 (1/0)							-0.097*** (-3.42)	-0.109*** (-3.29)	-0.111*** (-3.46)
Penny Stock Dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry Dummies	—	Yes	Yes	—	Yes	Yes	—	Yes	Yes
Returns Controls	—	—	Yes	—	—	Yes	—	—	Yes
# obs.	400	400	394	519	519	511	479	479	472
Adjusted R^2	0.0716	0.0920	0.0910	0.0587	0.0754	0.0753	0.0720	0.0934	0.0962

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Table IA.7
PPP loan return propensity and distance to default

This table reports the results from a linear probability (OLS) model where the dependent variable is an indicator for public company returning a PPP loan to the SBA and independent variables are *Distance-to-Default* and other company characteristics. Continuous variables are winsorized at the 1^{st} and the 99^{th} percentiles. Standard errors are clustered at the industry level, defined as 2-digit NAICS, where we combine industries with few PPP-eligible companies into one bucket. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively. t-statistics are presented in parentheses.

	Dependent variable = PPP Loan Returner (1/0)		
	(1)	(2)	(3)
Distance-to-Default	0.0549***	0.0617***	0.0633***
	(4.93)	(4.62)	(4.79)
Log (Assets)	0.0872***	0.0901***	0.0970***
	(4.21)	(3.66)	(3.48)
Log (Age)	-0.0270	-0.0150	-0.0199
	(-1.71)	(-1.00)	(-1.25)
Book Equity <0 (1/0)	0.0331	0.0104	0.0286
	(0.46)	(0.21)	(0.50)
Tobin's Q	0.00776	0.00141	0.00313
	(0.49)	(0.11)	(0.31)
Current Ratio	0.00669	0.00361	0.00287
	(1.32)	(0.73)	(0.62)
Cash/Non-Cash Assets	0.00239	-0.00107	-0.000491
	(0.20)	(-0.09)	(-0.05)
Penny Stock (1/0)	-0.00524	-0.0101	-0.0893
	(-0.10)	(-0.19)	(-0.73)
Covid Industry (1/0)		-0.0362	-0.0408
		(-0.99)	(-0.99)
Machinery Industry (1/0)		-0.0896**	-0.0908
		(-2.26)	(-1.76)
Health Industry (1/0)		0.153***	0.132***
		(3.03)	(3.41)
High-Tech Industry (1/0)		-0.0211	-0.0186
		(-0.67)	(-0.48)
Covid Period Return			0.169
			(1.13)
Covid Period Return × Penny Stock (1/0)			-0.0802
			(-0.41)
Stimulus Day Return			-0.713**
			(-2.71)
Stimulus Day Return × Penny Stock (1/0)			0.615*
			(1.98)
PPP Grant Abnormal Return			0.645
			(1.28)
PPP Grant Abnormal Return × Penny Stock (1/0)			-0.697
			(-1.06)
# obs.	383	383	382
Adjusted R^2	0.140	0.162	0.166

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Section IA.B: Industry Clusters for Estimating Application Probability

We create the following four industry clusters for estimating application probability:

- *Covid Impacted Industries:* These firms are in industries negatively impacted by Covid-19 pandemic (Fahlenbrach et al. (2020)) and may be more likely to apply for PPP funding.
- *Health Sector:* We identify these as firms in Fama-French 49 industries 11, 12, and 13, respectively. Firms in these sector may experience growth opportunities that increase funding demand. On the other hand, availability of private capital may deter PPP application as it raises the probability of a negative finding of ineligibility. This may be a concern for these firms as many are supervised by government agencies and apply for government grants.
- *High Tech Sector:* We identify these as firms with Fama-French-49 industry codes of 35, 36, or 37. The firms may see growth opportunities from changes in work habits that result in greater demand for technology. They may also be better able to function remotely than (say) a meatpacking plant. These factors may push the firms to seek PPP funding.
- *Machinery Sector:* This includes "heavy industry" firms with Fama-French-49 industry code = 21 (usually NAICS-2 = 33). These firms have more rigidity on the real side and may thus have greater demand for short-term liquidity.

Figure 11, Panel B shows that our industry clusters pick up significant variation in PPP application patterns. 64.8% of the 176 firms in Covid-19 industries apply for PPP, about double the full-sample application probability of 31.96%. In the machinery sector, 16 out of 37 firms (43.2%) apply, again higher than the baseline odds. The application probability is lower in the health sector, where 191 out of 805 firms apply for PPP loans (23.7%). We find that 112 out of 255 high tech firms (43.9%) apply for PPP funding, again higher than the baseline of around 39%.

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Section IA.C: Evidence of PPP Scrutiny Concerns

Quotes from EDGAR filings

- Albert Bourla, Pfizer CEO: "Pfizer made it a point to not accept government funding. ... to liberate our scientists from any bureaucracy that could come from accepting money."
- Adamis Pharmaceuticals 8-K filing: "... Such audit or review could result in the diversion of management's time and attention and legal and reputational costs."
- Nature's Sunshine Products 8-K filing: "... civil, criminal, and administrative penalties ... adverse publicity, damage to reputation ... consume significant financial and management resources."

PPP Loan Necessity Questionnaire (Form #3509)

Subjective questions, assessment based on "... totality of circumstances."[1]

- *... Has Borrower voluntarily ceased, reduced, or altered its operations? [Why? in 1000 characters or less]*
- *Did Borrower begin any new capital improvement projects not due to COVID-19? [Comments in 1000 characters or less]*
- *Has borrower paid dividends, prepaid debt, paid any employees $250K, was 20% owned by public companies ... ?*

[1] See, e.g., *New Uncertainty About the Uncertainty Certifiction: SBA's Draft Questionnaires for PPP Loans Over $2 Million*, Daily Tax Report, November 4, 2020.

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Section IA.D: Definitions of Variables

Variable	Definition	Source	Formula
PPP borrowing			
Early PPP Borrower (1/0)	Dummy for early PPP borrower versus late borrower, defined based on SBA approval date, loan grant date, or contract date (in that order)	EDGAR, SBA	=1 if approved or borrowed before April 27, 2020, 0 o/w
PPP Borrower (1/0)	Dummy for PPP borrower versus public PPP-eligible non-borrower	EDGAR	=1 if borrower, 0 o/w
PPP Loan Returner (1/0)	Dummy for PPP loan returner versus PPP loan retainer	EDGAR	=1 if loan returned, 0 o/w
PPP Loan Amount ($ million)	Aggregate PPP loan amount per EDGAR filer, measured in $ million	EDGAR	=ppp_size
PPP Loan Size ($ million)	PPP loan amount per SBA PPP recipient, measured in $ million	SBA PPP data (Dec)	=loanamount
Above $2M (1/0)	Dummy for PPP loan size of $2 million or above	EDGAR	=(ppp_size≥2)
Big-10 Bank (1/0)	Dummy for PPP lender being a big-10 bank, that is, JPMorgan Chase Bank, Wells Fargo Bank, Bank of America, Citibank, U.S. Bank, Truist Bank, PNC Bank, Bank of New York, State Street Corporation, or TD Bank	Call reports	=1 if big_bank=1, 0 o/w
Smaller Bank (1/0)	Dummy for PPP lender being a non-big-10 bank; see Big-10 Bank (1/0)	Call reports	=1 if big_bank=0, 0 o/w
Bank Type–Borrower Type Category	Categorical variable for the intersection between a bank type (big-10 bank versus smaller bank) and borrower type (early versus late PPP borrower)	EDGAR, Call reports	= 3 if big_bank=1 & early=1; 2 if big_bank=1 & early=0; 1 if big_bank=0 & early=1; 0 if big_bank=0 & early=0
Bank Relationship (1/0)	Dummy for the firm obtaining a secured loan from a bank in 2015–2019	UCC	=1 if securedpartyname is bank, 0 o/w
Relationship Bank PPP (1/0)	Dummy for the firm obtaining a secured loan from its PPP lender in 2015–2019	UCC	=1 if lender= securedpartyname, 0 o/w
Small Bank Relationship (1/0)	Dummy for the firm obtaining a secured loan from a small (non-big-10) bank in 2015–2019	UCC, Call reports	=1 if securedpartyname!= big_bank, 0 o/w
Firm size			
Book Value of Assets ($ million)	Assets, measured in $ million	Compustat	=at
Market Cap ($ million)	Market Capitalization, measured in $ million	Compustat	=prcc_f*csho
Sales ($ million)	Sales, measured in $ million	Compustat	= sale
# Employees ('000)	Employees, measured in thousand	Compustat	=emp, set to 2018 if N/A
Other financial characteristics			
Firm Age (years)	Years since IPO, capped at 37 years	Compustat	=fyear-min(fyear) if prcc_f!=., 0 if missing
Book Equity <0	Dummy for negative Book Equity defined as in Fama-French: BE = book value of stockholders' equity, plus balance sheet deferred taxes and investment tax credit (if available), minus the book value of preferred stock	Compustat	=(seq OR ceq+pstk OR at-lt, in that order) +(txditc OR txdb+itcb, where each is set to 0 if missing OR 0, in that order) +(pstkrv OR pstkl OR pstk, in that order)
Tobin's Q	Market Value of Assets/Assets	Compustat	=(at+prcc_f*csho-ceq)/at, set to 0 if ceq<0 or if missing
Sales Growth	Year-on-year sales growth	Compustat	=(sale-sale[_n-1])/sale[_n-1]
Dividend Payer (1/0)	Dummy for dividend payer	Compustat	=(dv>0) if dv!=.
Current Ratio	Current Assets/Current Liabilities	Compustat	=act/lct
Cash/Non-Cash Assets	Cash/(Assets-Cash)	Compustat	=che/(at-che), where at is in thousands
Free Cash Flow/Assets	(Operating Cash Flow - Extraordinary Items + Interest Paid - Interest Expense*((Pretax Income - Net Income)/Pretax Income) - CapEx)/Assets	Compustat	=(oancf-xidoc+intpn-xint*((pi-ni)/pi)-capx)/at
Financial constraints			
Has Credit Rating (1/0)	Dummy for company having a long-term S&P credit rating or a Mergent rating for an issue with maturity of at least three years	S&P, Mergent	=1 if rated, 0 o/w

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Variable	Definition		
WW Index ≥ p75 (1/0)	Dummy for WW (Whited and Wu) Index in 4th (upper) quartile of *all* public firms, where WW Index is calculated as -0.737*Ln of Min(Assets,4500) + 0.043*Squared Ln of Min(Assets,4500) – 0.040*Min(Years since IPO,37)	Compustat	=(WW_quart==4) if WW_quart!=., using xtile, where WW=-0.737*log(min(at,4500)) +0.043*(log(min(at,4500)))^2 -0.040*min(age,37)
SA Index ≥ p75 (1/0)	Dummy for SA (Hadlock and Pierce) Index in 4th quartile of *all* public firms, where SA Index is -0.737*Ln of Min(Assets,4500) +0.043*Squared Ln of Min(Assets,4500) -0.040*Min(Years since IPO,37)	Compustat	=(SA_quart==4) if SA_quart!=., using xtile, where SA=-0.737*log(min(at,4500)) +0.043*(log(min(at,4500)))^2 -0.040*min(age,37)
Leverage and distress			
Zero Debt (1/0)	Dummy for zero debt	Compustat	=1 if dlc+dltt=0 or (dltt=. & dlc=0), 0 o/w
Market Leverage	(Short-Term Debt + Long-Term Debt)/(Debt + Market Cap)	Compustat	=(dlc+dltt)/ (dlc+dltt+prcc_f*csho)
Interest Coverage <1.5 (1/0)	Dummy for 1 + Pretax Income/Interest Expense <1.5	Compustat	=((1+pi/xint)<1.5) if (1+pi/xint)!=.
Altman Z-score < 1.81 (1/0)	Dummy for Altman Z-score <1.81, wehere Z-score is calculated as 1.2*Working Capital/Assets + 1.4*Retained Earnings/Assets + 3.3*EBIT/Assets + 0.6*Market Cap/Liabilities + 0.999*Sales/Assets	Compustat	=1 if Z-score <1.81, 0 o/w, where Z-score= 1.2*(act-lct)/at +1.4*re/at +3.3*(pi+xint+dp-dp)/at+.6*prcc_f*csho/lt +.999*sale/at
Distance-to-Default	Distance-to-default from NUS RMI Credit Research Initiative	NUS RMI	= dtd
Penny Stock (1/0)	Dummy for company's stock price below $5 based on (1) closing stock price as of fiscal year-end for cross-sectional tests or (2) average stock price in December 2019 for event study analysis	Compustat	=(prcc_f<5) if prcc_f!=. OR mean(p_adjclose, Dec 2019)<5
Industry composition			
Covid Industry (1/0)	Dummy for Covid-19 Affected Industry	Compustat	=1 if sic corresponds to Covid-19 industry, 0 o/w
Machinery Industry (1/0)	Dummy for Machinery Industry	Compustat	=1 if sic corresponds to FF49==21, 0 o/w
Health Industry (1/0)	Dummy for Health, Pharma, and Biotech Industry	Compustat	=1 if sic corresponds to FF49==11,12,13, 0 o/w
High-Tech industry (1/0)	Dummy for Business Equipment – Computers, Software, and Electronic Equipment Industry	Compustat	=1 if sic corresponds to FF49==35,36,37, 0 o/w
Returns and event study variables			
Buy-and-Hold Abnormal Return	Cumulative return on the stock over the S&P 500 return from January 1, 2020 to August 15, 2020, adjusted for stock splits and dividends	Yahoo! Finance	=cumulative (R_adjclose - S&P 500 R_adjclose)
Covid Period Return	Cumulative stock return from February 2, 2020 to March 23, 2020, adjusted for stock splits and dividends	Yahoo! Finance	=cumulative R_adjclose, Covid period
Stimulus Day Return	Stock return on March 24, 2020, adjusted for stock splits and dividends	Yahoo! Finance	=R_adjclose, Mar 24, 2020
Abnormal Return	Company's (1) market-adjusted return (stock return minus S&P 500 return) or (2) market model return (based on S&P 500), adjusted for stock splits and dividends	Yahoo! Finance	=R_adjclose - S&P 500 R_adjclose OR Abnormal R_adjclose
Day -1 (1/0)	Trading day preceding (1) PPP loan grant announcement day or (2) PPP loan return announcement day, as appropriate	EDGAR	=(evday==-1) OR (evday1==-1)
Day 0 (1/0)	Trading day of (1) PPP loan grant announcement or (2) PPP loan return announcement, as appropriate	EDGAR	=(evday==0) OR (evday1==0)
Day +1 (1/0)	Trading day following (1) PPP loan grant announcement day or (2) PPP loan return announcement day, as appropriate	EDGAR	=(evday==1) OR (evday1==1)

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Opening Statement and Testimony of

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on

"An Empirical Review of the Paycheck Protection Program"

before the

Subcommittee on Oversight, Investigations, and Regulations

Committee on Small Business

U.S. House of Representatives

16 March 2022

Subcommittee Chair Phillips, Ranking Member Van Duyne and Members of the Subcommittee, thank you for inviting me to testify in front of you today. I am Manju Puri, Professor of Finance at Fuqua School of Business, Duke University; Research Associate of the National Bureau of Economic Research; Director, American Finance Association; Vice-President Elect, Western Finance Association; Fellow, Financial Management Association; Senior Fellow, Asian Bureau of Finance and Economics Research; Research Member, European Corporate Governance Institute; Co-Editor, Review of Financial Studies. I speak only for myself today.

I have over 25 years of research experience in the areas of banking and financial institutions. I will be drawing today on my research on the Paycheck Protection Program (PPP). I believe that it is very important to undertake an assessment of the PPP not only for its impact but also for the lessons we can learn it for other government programs for helping small businesses. I am honored to contribute towards this exercise.

Research Questions and Key Insights: Prioritization and Hesitancy

About two years ago, in January 2020, the Covid-19 pandemic began to unfold in the U.S. Besides lives, the pandemic also threatened livelihoods in unprecedented ways. Within one quarter of pandemic onset, the U.S. economy contracted at an annualized rate of 31%. Unemployment witnessed a sudden, startling jump from 4% to 15%.

Small businesses were especially vulnerable to the pandemic's economic effects because they had little room to withstand shocks. Research has shown that the cash held by small businesses lasts only about a month without revenue and that less than a quarter of them could survive 2 months without revenue. Thus, it was not only vital to support small businesses but do so quickly. The failure to act soon could be catastrophic as small businesses account for 60.9 million jobs, or 47.1% of the total employment (2020 SBA Small Business Profile).

The research I will discuss focuses on this very question. What lessons do we learn from the PPP about the speedy delivery of financial support to small businesses in times of crises? My research focuses on the two main actors involved in delivering financial support: the bank intermediaries who deliver funds, and the small businesses targeted by PPP.

I ask two questions. One, do banks delivering PPP funding shape its supply? How? And why? The second question concerns the uptake of PPP funding by small businesses. What concerns do the targeted businesses have about PPP funding? How could policy help address these concerns?

In a nutshell, the research identifies two issues, funding *prioritization* – by the banks who were delivery channel for PPP, and funding *hesitancy* – by small businesses who were the target of these funds.

The Paycheck Protection Program

The PPP is a very large and generous program to aid small businesses. Of the total PPP corpus of $953 billion, $669 billion was appropriated in the initial months between April 3, 2020, and August 8, 2020, the crisis period during which small business needs were acute. In comparison, the SBA's flagship 7(a) program has annual disbursal rates of less than $10 billion. PPP financing was also extraordinarily inexpensive. Proceeds used in eligible ways, e.g., payroll, were fully forgiven while

the remaining converts to a loan at a 1% interest rate. Loans were disbursed through a simple application process. For small businesses, who struggle to get funding even in ordinary times, PPP funding was attractive. It gave the businesses cheap funding and did so quickly.

Research Questions

Our study focuses on two issues that impact the delivery and uptake of PPP financing. The first issue, *prioritization*, concerns which borrowers gain early access to PPP funding. This is our major focus. A second issue, *hesitancy*, concerns the reluctance of the program targets to take the financial support. Both issues matter, and shape PPP delivery and its timing in ways I turn to.

Funding Prioritization: Motivation

Let me start with the first issue, funding prioritization. PPP was mainly delivered through the U.S. banking system. This was logical given the impetus to deliver PPP funding quickly to a broad swathe of small businesses geographically dispersed around the country. Banks have extensive branching networks across the U.S. and most small businesses have bank accounts. As noted above, speed was of essence in delivering PPP funding to small businesses.

Early access was a special problem for two reasons. One was the generosity of PPP funding terms, which resulted in a surge of PPP applications in its early days. The entire initial allocation of $349 billion opened on April 3, 2020, was exhausted within by April 16, 2020. The program briefly stopped accepting applications and reopened with an extra $320 billion on April 27, 2020. A second issue was the sheer processing burden placed on the banking system by millions of small businesses applying for PPP funds.

Examining which firms gained early PPP access during its initial phase before April 17 gives us a rare and clear window into banks' allocation priorities across their clients. Our study zeroes in on this question.[1]

Funding Prioritization: Results

We examine which small businesses are more likely to get early PPP access compared to those getting PPP funds later.

Our particular focus is on the role played by *prior bank relationships*, especially those with *small* banks. We open by showing that larger firms among the small businesses tend to gain early PPP access. However, this effect is completely undone when a small business has a prior bank relationship but only *with a small bank.*

Our results are based on multiple datasets. The first data set is public PPP recipients. This is the sample for which we have the most financial accounting data, but this is also the smallest sample as it requires the small businesses to be listed. The second data set is based on the large SBA PPP

[1] We see an initial wave of PPP loans before April 17, 2020, part of the early surge that depleted the initial PPP corpus of $349 billion. The next wave begins on April 27, 2020, after the PPP reopens and when an additional $320 billion was allocated to PPP. On June 2, 2020, the PPP Flexibility Act was passed which altered program rules significantly. We focus on the period till June 2, 2020. Round 2 expired on August 8, 2020. PPP disbursed a total of $525 billion to 5.21 million borrowers in rounds 1 and 2 of which 96% was in the period we study. We focus on this period since our objective is to study speed and prioritization for small businesses when they most needed it.

dataset released in December 2020, which covers about 5.2 million PPP recipients. Our third dataset identify bank-firm relationships. Getting data on bank relationships for small firms is notoriously difficult. Much of the finance research relies on "Dealscan" data, but this tends to cover only the larger and the listed firms in the small business universe. We thus turn to a different dataset, microdata on bank relationships derived off security interest filings made by banks under the Uniform Commercial Code (UCC).

We start by examining which firms gain early PPP access. From the viewpoint of firm demand, smaller and weaker firms are more distressed and constrained and they should want to access PPP funds earlier. If the delivery channel matters, the findings could be reversed. To motivate these intermediary supply effects, we note that bank capacity was strained by the initial surge in PPP applications, compounding which was an aggregate shortage of PPP funds. These forces forced lenders to prioritize the clients they would push for early access.

Intermediaries had two types of incentives. One, larger and better-quality firms produce greater revenues from banking relationships. Additionally, PPP fees increase in loan size while processing costs are relatively fixed, pushing banks to prioritize larger loans. The upshot is that if intermediary supply effects matter, we should find that larger firms (and loans) should be more likely to gain early access. Other intermediary effects are of particular interest to us. If lender priorities vary across small and big banks, the probability of early access for larger firms should vary by bank size. If bank relationships matter, firms with bank relationships should gain earlier access. Moreover, if bank size *and* prior relationships matter, we should find, for example, that relationships matter more for small businesses that have prior relationships with small banks. This is the structure of our tests.

A robust finding across all datasets is that larger firms are more likely to gain early PPP access. This result also holds in the subsample of firms that have bank relationships. For this sample too we find that size is positively correlated with early access. The mean (median) PPP loan size for early applicants is $277,065 ($100,913) whereas it is $128,396 ($49,877) for late applicants – more than twice the size difference.

An equally interesting and robust finding concerns prioritization across small and large *banks* (not firms). We classify banks as big if they belong to the top 10 banks by asset size in the U.S. The following banks are classified as top 10 banks: JPMorgan Chase Bank, Wells Fargo Bank, Bank of America, Citibank, U.S. Bank, Truist Bank, PNC Bank, Bank of New York, State Street Corporation, and TD Bank.

We next examine whether *large firm prioritization* varies across small and big banks. The two banks could have different effects given the differences in their business models. The value added by big banks is access to one-stop shopping and networks, which are more relevant for larger firms. On the other hand, small banks specialize in relationship-oriented lending. The differences in orientation are supported by evidence such the 2018 FDIC Small Business Lending Survey. While the banking literature has historically emphasized the role of "soft" information in lending, which is perhaps greater in the business models of small banks that are in close proximity to borrowers, this has less of a role in PPP, given that loans are SBA guaranteed. In other words, the prioritization we observe is less plausibly due to differences in "soft information" based lending.

Across all specifications, small banks seem more likely to offer early PPP access compared to big banks. Thus, small banks are quicker to serve small businesses in times of need compared to big banks with a point estimate of between 30.3 and 40.3 percentage points (pp). We also find that prior bank relationships matter. Applying through a relationship bank increases the odds of early access by about 9.50 pp. The nature of the relationship matters. Applying through a small bank increases the odds of early access by more than 20bp.

What about large *firm* prioritization? In formal regression analysis size is positively and significantly related to early access but the relationship depends in interesting ways on whether the firm has a small bank relationship. When the firm has no prior (UCC) bank relationship, the slope coefficient for large size increases by nearly 90% from 0.0543 to 0.103 but this effect is eliminated – and even reversed – in the sample of firms with a bank relationship. Here, smaller firms are not placed behind in the queue for early PPP access: the coefficient for firm size is flat and even shows a small decrease by about 5%.

The finding suggests that in big banks, small businesses experience a "small fish in big pond" effect that is mitigated in smaller banks for whom small business lending is a mainstay of their lending portfolio. The finding supports (and rationalizes) the benefits of housing small business lending within organizational entities that focus on small business lending -- such as small banks – rather gathering small and large business lending into one large pool. The latter arrangement creates incentives for serving the larger clients first, especially in times of resource constraints.

To summarize the results, the PPP is an interesting natural experiment in which banks face a sudden and unexpected shock in which they must prioritize their clients. Given government guarantees of PPP loan repayment, traditional soft information considerations are not relevant in this setting. Larger clients appear to gain beneficial access to PPP funds sooner, an effect that is attenuated in small banks. The more even treatment of small clients is perhaps one reason why small firms bank with small banks, as banking with larger banks could lead the small firms into facing a "small fish in a big pond" effect. The relative prioritization of small businesses offers a different rationale for why small firms domicile their bank relationships with small banks worthy of more attention by academicians and regulators alike.

Funding Hesitancy

Our study also provides a second set of results that have policy implications. The result concerns "hesitancy," or the apparent reluctance of small firms to take PPP funding although it is generous and inexpensive relative to any other alternative reasonably available to the small businesses. We note three results in this relation.

First, we find that markets reward firms that take PPP. Average uptake valuation effects exceed 1% and the treatment effects are positive after econometric adjustments for heterogeneity in pandemic period returns and partial anticipation of PPP uptake. Yet, we find some reluctance by firms to take PPP funds, which we call "funding hesitancy." Perhaps the sharpest evidence of hesitancy is our second finding, that over 100 public firms that get PPP funds simply return the funds without using them. Moreover, while one might expect returning cheap funding should decrease share prices, reflecting lost financing subsidies, returners experience positive valuation effects averaging 3%. This is our third finding. Markets appear to reward firms that return PPP!

While avoiding taking cheap funding should cause loss in market value, we see a gain in market value for firms returning PPP. Clearly, the market sees that firms lose the benefits of cheap PPP funding, but also seems to assess that firms seem to avoid some costs of taking PPP funding. Perhaps then, there are some indirect costs of PPP that prompt PPP return and whose saving is reflected in the increase in valuation when PPP is returned. What could these indirect costs be?

A significant indirect cost of PPP comes from the threat of ex-post government investigations of PPP recipients. Three features make these costs salient. One, investigation windows are very long - at least 6 years from PPP disbursement. Two, the standards for initiating investigations, their scope, and the process are highly subjective, leaving a lot of discretion in government hands. Finally, the program provides no safe harbors that shield PPP recipients from ex-post investigations.

We conduct tests to assess to explore these indirect costs. One set of tests looks at the decision to return PPP, using the public PPP sample in which returners are identified. If larger loans are more likely to be investigated by the government, PPP returns should be more likely for larger loans. Relatedly, SBA rules indicate that PPP loans exceeding $2 million and outstanding after May 18, 2020, are subject to audit. PPP returns should be concentrated around this cutoff. In addition, loan application probabilities should exhibit a discontinuity around $2 million after this cutoff becomes an investigation threshold focus. We find supportive results on all counts. The results broadly support the view that government investigation threats seem to at least partly responsible for funding hesitancy.

From a policy viewpoint, our findings suggest that when taxpayer funding is involved, policymakers should focus on both objective standards for program eligibility and specify with similar objectivity the conduct of the ex-post audits concerning funds use. For instance, delineating safe harbors to circumscribe litigation, a standard practice in securities law since the 1930s, may be an appropriate tool in designing government aid programs.

Lessons learnt

The PPP research suggests that there are clear funding *prioritization* effects in which the financial intermediaries charged to supply PPP funds shape its delivery. A robust finding is that small banks were quicker than their large counterparts to push out PPP funds. A second finding is that relationships matter. Borrowers with prior banking relationships, especially with small banks, are likely to gain early access to PPP funds. Third, we find evidence of size preferencing, i.e., the tendency for larger firms to gain early access. However, interestingly – and this is the crux of the findings – the large-firm preferencing effect vanishes and even slightly reverses for firms that have small bank relationships. These findings reinforce the value of small businesses having relationships, particularly with small banks, in responding to crises. Hence, when designing programs to deliver resources to small firms, policy makers should leverage the specialness of small firm-small bank relationships.

Finally, the results on funding hesitancy suggest the need for policy clarity not only in *ex-ante* eligibility for government funding, but also for policy clarity on the *ex-post* regulatory scrutiny that recipients will be subject to. In particular, it seems useful to provide clear standards that delineate safe harbors for aid recipients.

Research Paper "***Small Bank Financing and Funding Hesitancy in a Crisis: Evidence from the Paycheck Protection Program***" attached as testimony by Professor Manju Puri, J. B. Fuqua Professor of Finance, Fuqua School of Business, Duke University in the hearing on "An Empirical Review of the Paycheck Protection Program."

Testimony before the Subcommittee on Oversight, Investigations, and Regulations, Committee on Small Business, U.S. House of Representatives on 16 March 2022.

Small Bank Financing and Funding Hesitancy in a Crisis: Evidence from the Paycheck Protection Program

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ABSTRACT

We study the delivery of subsidized financing to small firms through the Paycheck Protection Program (PPP). Smaller firms are less likely to gain early PPP access, an effect attenuated in small banks and firms with prior lending relationships. Their more even treatment offers a new rationale, beyond traditional soft information arguments, for why small businesses pair with small banks. We also detect a "funding hesitancy" in PPP uptake by small businesses, partly reflecting their wariness of the extensive, subjective government powers to investigate PPP recipients. We discuss the implications of the results for research and policies on small business financing.

Keywords: Bank Relationships, Covid-19, Coronavirus, Paycheck Protection Program, PPP, SBA, Small Business Lending

JEL classification: G32, G38, H81, E61

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1. Introduction

The Covid-19 pandemic has been a black swan event. It has resulted in the loss of over 3.5 million lives. It has also severely impacted livelihoods due to a widespread, speedy, and deep economic contraction. For instance, U.S. GDP contracted by a third and unemployment jumped from 4% to 15% within a quarter. Small businesses have been hit particularly hard (Chetty, Friedman, Hendren, and Stepner, 2020). Moreover, they are key sources of employment and growth, so helping them has been a policy priority.[1]

Fiscal stimulus has been the key instrument for helping small businesses. In the U.S., its centerpiece is the $669 billion Paycheck Protection Program (PPP), which provides extraordinarily inexpensive financing for small firms. Loans are disbursed through a simple application process. Proceeds used in eligible ways are forgiven while the rest converts to a 5-year 1% loan – attractive terms for *any* firm. Not surprisingly, small businesses rushed to get PPP funding. The initial PPP funding of $349 billion was quickly exhausted. The program closed, reopening after 10 days after a fresh appropriation of $320 billion.

We exploit the fact that the initial days of the PPP were a large-scale shock for both the banks used to pipe PPP funding and the small businesses the PPP targets. We study two related issues. To motivate the first question, observe that banks were overwhelmed in the initial PPP stages, both due to the aggregate shortage of PPP funds and the surge in applications for this inexpensive funding. Banks were forced to prioritize clients. This setting provides a rare - and clear - window into banks' allocation priorities when facing resource constraints - a subject of importance, given that crisis tend to recur, and banks periodically face resource constraints. Our particular focus is on the differences between small and big banks.

We find that there are significant differences between how big and small banks prioritize small clients: big banks are more likely to prioritize larger clients early. We show that this effect is attenuated and sometimes reversed for small banks, who extend more even treatment to their smaller clients.[2] We further investigate this pattern using a large database of UCC filings to identify bank-firm lending relationships. We find that such relationships also help firms gain early PPP access. We find little evidence that relationships with big banks help more – if anything, small bank relationships help firms get early PPP access, especially with

[1] Small businesses account for 60.6 million jobs, or 47.1% of the total U.S. employment in 2020. See "2020 Small Business Profile at https://cdn.advocacy.sba.gov/wp-content/uploads/2020/06/04144224/2020-Small-Business-Economic-Profile-US.pdf.

[2] For anecdotal evidence of "concierge treatment," see, e.g., "Banks Gave Richest Clients 'Concierge Treatment' for Pandemic Aid," The New York Times, April 22, 2020 at https://www.nytimes.com/2020/04/22/business/sba-loans-ppp-coronavirus.html. Our study presents formal evidence and shows its variation across big and small banks, an issue that has attracted less attention.

small bank lenders. The more even treatment of small firms vis-a-vis large firms by small banks offers a new rationale for why small businesses tend to borrow from small banks. This rationale is different from and adds to the more traditional explanations based on soft information, which, as we discuss later, has little role in PPP lending.

The second part of our analysis focuses on the small businesses targeted by the PPP. As these small firms are highly constrained even in normal times, they should welcome the PPP, which delivers inexpensive funding, does so promptly, and as we show later, has positive valuation effects. However, we find a "funding hesitancy" among PPP recipients, most starkly manifest in the decisions of several firms to return PPP funds without using them and the *positive* valuation effects associated with PPP return. Further empirical tests suggest that funding hesitancy is partly due to wariness of government powers to investigate PPP recipients, in turn likely due to subjectivity in its standards and scope as well as the absence of safe harbors. We discuss the policy implications of these results for the design of government aid programs.

We construct four datasets. The first is the December 2020 SBA PPP data release comprising 5.2 million PPP borrowers. The second dataset includes publicly listed PPP borrowers identified through algorithmic searches of 8-K and 10-K filings. The public PPP sample has two sets of benefits. One, we have firm-specific information for controls and return data to compute program valuation effects. As importantly, this sample lets us identify PPP returners and address issues relating to funding hesitancy. The SBA PPP dataset does not identify returners. In both samples, we define early borrowers as those approved for PPP before April 17, 2020, the initial program PPP closure date.

The third and fourth datasets identify bank relationships. Our initial source is the DealScan database, which, however has limited coverage of small firms. The other dataset comprises Uniform Commercial Code (UCC) security interest filings of banks through December 2020. These data include 32.5 million observations and significantly expand the coverage of small firm bank relationships (Gopal and Schnabl, 2020).

We turn to the results on early access. From the viewpoint of demand for PPP by firms, smaller firms should access PPP funds sooner if they are more constrained, weaker, and less resilient to the Covid-19 shock. However, we find that *larger* firms tend to gain early PPP access. For example, in the public PPP sample, early borrowers are larger, with mean (median) book value of assets of $120.3 ($39.2) million compared to $99.8 ($23.3) million for late borrowers. We find similar results when we use the PPP loan amount as a size proxy, in the SBA PPP sample, and in regressions with controls. Large borrower prioritization is a robust feature of the data.

We next analyze the variation in large firm PPP access across small and big banks. We

define big banks as the top 10 banks according to asset size. Other banks are small.Big banks tend to grant early access for larger firms, an effect attenuated in small banks. For example, in big banks, early PPP borrowers are 2-3 times larger than late borrowers: the mean (median) book values equal $144.2 ($55.11) million versus $61.36 ($18.7) million, respectively. For small banks, the early and late borrowers are closer in size with mean (median) book values of $82.4 ($36.4) million and $86.7 ($26.9) million, respectively. Regressions with controls confirm the results for the public and the SBA PPP samples.

We turn to the role of prior bank relationships. Identifying relationships is straightforward in the DealScan data and for public firms using COMPUSTAT identifiers. The process is less simple with the UCC filings and for the SBA PPP dataset as the linking identifiers are firm and bank names. Besides variations in spelling, we must contend with bank mergers in mapping the legacy UCC bank names to those in the PPP data. We use fuzzy matching followed by extensive manual interventions to cross-walk the 33 million observations in the UCC dataset with the 5.2 million observations in the SBA PPP dataset.

We find that bank relationships, particularly with small banks, matter. Firms applying for PPP with small banks tend to gain early access but a prior small bank relationship has its own beneficial effect. For example, firms that have no UCC or DealScan relationship, early PPP borrowers are twice as large as late borrowers, with median (mean) book values of $64 ($35) million versus $38 ($15) million, respectively; these figures are $248 ($161) million and $151 ($69) million for firms with big bank relationships. The patterns reverse sharply when borrowers have small bank relationships. Here, early firms are *smaller* than the later firms: $119 ($43) million versus $178 ($94) million, respectively. Thus, a prior small bank relationship helps mitigate the pattern of greater early access to PPP for larger firms. The results carry over to the larger SBA PPP sample.

The results have interesting implications for banking research. A distinct pattern in the data is that small firms tend to pair with small banks. This is seen in the Federal Reserve's Survey of the Terms of Bank Lending to Businesses (STBL), small business lending data in Call Reports, and most recently in the 2018 FDIC Survey of Small Business Lending. Related research includes Berger, Saunders, Scalise, and Udell (1998) and Berger, Miller, Petersen, Rajan, and Stein (2005). Stein (2002) provides a theory for small bank – small firm pairing. He argues that soft information, which is critical in small business lending, is hard to transmit up bank hierarchies typical of large banks. Thus, in small business lending, it is optimal to colocate decision making and information gathering, as in small banks.

Our PPP evidence offers an alternative explanation for why small businesses tend to bank with small banks. In the initial PPP period, a surge in PPP demand coupled with aggregate shortage of PPP funding forced banks to prioritize clients. We find that in this period,

small banks tend to be more responsive to small businesses. The finding suggests that in big banks, small businesses experience a "small fish in big pond" effect that is mitigated in smaller banks for whom small business lending is a mainstay of their lending portfolio. This explanation does not rely on soft information considerations, which has little role here given government guarantees of PPP loans as we discuss in detail later.

The second issue we study concerns PPP uptake. As motivation, we note that the firms targeted by PPP, small businesses, face severe financial constraints even in normal times (Petersen and Rajan, 1994; Whited and Wu, 2006; Hadlock and Pierce, 2010; Banerjee and Duflo, 2014). PPP should be welcome news for such firms. It is immediately available and it is extraordinarily inexpensive, with costs range from -100% (with full forgiveness) to a maximum of 1%. Moreover, markets reward firms that take PPP. Average uptake valuation effects exceed 1% and the treatment effects are positive after econometric adjustments for heterogeneity in pandemic period returns and partial anticipation of PPP uptake.

Yet, we find some reluctance by firms to take PPP funds, which we call "funding hesitancy." Perhaps the sharpest evidence of hesitancy is our finding that over 100 public firms that get PPP funds simply return the funds without using them. Moreover, while one might expect returning cheap funding should decrease share prices, reflecting lost financing subsidies, returners experience *positive* valuation effects averaging 3%. Markets appear to reward firms that return PPP!

What might explain this aversion to PPP funding? Direct costs of PPP funds are clearly implausible as these funds are far cheaper than alternatives from banks or the market. The direct costs from PPP restrictions (e.g., on layoffs) are also implausible. For firms that find it difficult to comply, the worst case scenario is that PPP forgiveness is lost and PPP becomes a 1% loan, still far less expensive than alternatives. Perhaps then, rather than direct costs, there are some indirect costs that prompt PPP return. What could their nature be?

A significant indirect cost of PPP comes from the threat of ex-post government investigations of PPP recipients. Three features make these costs salient. One, investigation windows are very long – at least 6 years from PPP disbursement. Two, the standards for initiating investigations, their scope, and the process are highly subjective, leaving a lot of discretion in government hands.[3] Finally, the program provides no safe harbors that shield PPP recipients from ex-post investigations. Given this lack of clarity and the fungibility of funds, it is easy to attribute *any* use of funds to PPP funding, making recipients fodder for sensationalist media coverage.[4] Should these ambiguities concerning investigations mat-

[3] An example of the ambiguity is the need to certify that "[PPP is] ... necessary taking into account current activity... and access to other sources of liquidity in a manner not significantly detrimental to the business." These are clearly subjective standards.

[4] Consider the story in Washington Post on September 26, 2020 "Publicly traded firms paid dividends,

ter to firms? Research certainly suggests so: Simply being an investigation target triggers shareholder wealth losses. Capital raising in its shadow is difficult and, moreover, senior executives and directors face negative consequences in the labor market.[5]

We conduct tests to assess to explore these indirect costs. One set of tests looks at the decision to return PPP, using the public PPP sample in which returners are identified. If larger loans are more likely to be investigated by the government, PPP returns should be more likely for larger loans. Relatedly, SBA rules indicate that PPP loans exceeding $2 million and outstanding after May 18, 2020 are subject to audit. Two implications fall out of this observation. One, PPP returns may be more likely above the $2 million cutoff, which we can examine for the public PPP sample. Two, loan application probabilities should exhibit a discontinuity around $2 million. This test can be done for the larger SBA sample. A further implication is that the discontinuity should be asymmetric before and after May 18, 2020, when the $2 million cutoff became salient. The results broadly support the view that government investigation threats are at least partially responsible for funding hesitancy.

The rest of the paper is organized as follows. Section 2 discusses background information and relevant literature. Section 3 describes the datasets used in the study. Section 4 analyzes early PPP access. Sections 5 and 6 discuss the uptake of PPP, relevant treatment effects estimation, and funding hesitancy. Section 7 concludes.

2. Background

2.1. The PPP Program Architecture

Figure 1 gives the timeline leading up to the passage of the $669 Paycheck Protection Program (PPP). This original "CARES" Act included a $349 appropriation for PPP. It was proposed on January 24, 2020, passed by the legislature on March 25, 2020 and March 26, 2020, and signed into law by the U.S. President on March 27, 2020. The initial PPP allocation of $349 billion was exhausted quickly by April 16, 2020, when the program stopped accepting new applications. The PPP resumed accepting applications on April 27, 2020 after an additional $320 billion appropriation under the Paycheck Protection Program and Health Care Enhancement Act of 2020 signed on April 24, 2020.

The next significant milestone was May 18, 2020. As announced in late April–early May, firms returning PPP before this date would not be subject to audit. The next milestone was

bought their own stock after receiving PPP loans to pay employees" at https://www.washingtonpost.com/business/2020/09/24/dividends-buybacks-ppp-loans.

[5]Jarrell and Peltzman (1985), Alexander (1999), Haslem, Hutton, and Smith (2017), Karpoff, Lee, and Martin (2008), Fich and Shivdasani (2007), Murphy, Shrieves, and Tibbs (2009), Lin and Paravisini (2011).

June 2, 2020, when the PPP Flexibility Act (PPPFA) was passed, which altered program rules significantly. 96% of PPP proceeds were disbursed prior to this date within a relatively homogenous regulatory regime. Our sample focuses on this period. The program expired on August 8, 2020. It disbursed $525 billion to 5.21 million borrowers.

Application Process: The PPP is a forgivable, collateral-free loan program administered through the Small Business Administration (SBA), a federal agency that guarantees the PPP loans. Borrowers apply through an approved financial institution, provide documentation relating to eligible expenses such as payroll and allowed overhead, and make necessary representations and certifications. After SBA approval, funds are disbursed by the banks.

Eligibility: Eligible borrowers are small firms as defined in the CARES Act. Standards include a principal place of residence in the U.S., being in operation before February 15, 2020, having fewer than 500 employees, or other standards, e.g., as under Small Business Act, 15 U.S.C 632. PPP eligibility is not conditioned on the credit risk of borrowers.

Amount and Terms: The maximum PPP loan is $10 million per eligible entity. Forgiveness applies to amounts spent as per the program rules. The principal not forgiven turns into a loan with a 5-year maturity if made on or after June 5, 2020 and a 2-year maturity otherwise unless both the lender and borrower agree to a 5-year term.

Spending PPP funds: The PPP incentivizes early spending of proceeds. Banks must make loans within 10 days of approval. Forgiveness applies to eligible payroll spent within time periods laid out in the Act, initially 8 weeks and extended later to 24 weeks under the June 2, 2020 PPPFA. Forgiveness is reduced if there are layoffs.

Certification: Borrowers receiving PPP funds must certify that "... the current economic uncertainty makes the loan necessary to support ongoing operations" and as per PPP Rule 31 issued on June 25, 2020 "... taking into account ... their ability to access other sources of liquidity" in a manner that is not significantly detrimental to the business.

Lender Responsibilities and Fees: Lenders submit applications on behalf of borrowers and fund the loans. The rules are quite explicit that lenders should rely on borrower certifications and representations to submit applications. Thus, the traditional soft information production role of banks is moot under PPP. Moreover, fraud becomes a concern only when banks undertake willful actions to actively create and abet it. Lender fees equal 5% for loans up to $350,000, 3% for loans between $350,000 and $2,000,000, and 1% for loans of at least $2,000,000. An April 17, 2020 ruling lets lenders sell PPP loans.

Powers to Investigate: The SBA retains the right to review all loans for eligibility. It clarified that loans over $2 million would be audited but smaller loans may not be. If a firm is found ineligible in an audit, it needs to return principal plus interest and is subject to any other remedies that the SBA may seek. Firms that repay PPP loans in full by May 7, 2020

– later extended to May 18, 2020 – are not subject to investigations. These and related rules were clarified by the SBA at different times and attracted attention. While the clarifications help clarify SBA rules, the absence of formal safe harbors and the repeated pronouncements on the topic can raise the investigative threat more salient for PPP recipients.

2.2. Related Covid-19 Research

The Covid-19 pandemic has attracted a vast literature. For a curated collection of several hundred Covid Economics papers, see the website maintained by Center for Economic Policy and Research.[6] An extended review of the banking research related to Covid-19 is in Berger and Demirguc-Kunt (2021). We briefly review some of the work relevant to our study.

Several studies examine the impact of Covid-19 on firm outcomes. Granja, Makridis, Yannelis, and Zwick (2020) show in an ongoing real time analysis that the PPP has had limited impact on labor market outcomes. Kim (2020) argues that the impact is greater if one accounts for lender constraints. Cororaton and Rosen (2020) analyze the characteristics of 424 public PPP applicants, and in later versions, follow our approach and verify a subset of our results on PPP announcement and returns in Sections 5 and 6. Li and Strahan (2020) show that the PPP supply alleviates Covid-related unemployment shocks, using an identification strategy at a geographic level based on the structure of the local banking sector. Bartik, Cullen, Glaeser, Luca, Stanton, and Sunderam (2020) and Bartlett and Morse (2020) find positive impacts on very small businesses. While assessing PPP impact is not our main focus, we provide some evidence based on stock market data.

Theoretical work on PPP funding includes Hanson, Stein, Sunderam, and Zwick (2020), who discuss the government as a venture capitalist of last resort. Other literature addresses financing concerns and stock market patterns in the pandemic. Acharya and Steffen (2020) and Acharya, Engle, and Steffen (2020) highlight a Covid period "dash for cash." Over 95% of our sample includes unrated firms, who do not display this dash for cash. The role of FinTech lenders in PPP supply is addressed by Erel and Liebersohn (2020). The unusual nature of Covid-19 period stock returns is the focus of Acharya et al. (2020), Fahlenbrach, Rageth, and Stulz (2020), Baker, Bloom, Davis, Kost, Sammon, and Viratyosin (2020). We account for this issue in estimating valuation effects.

Relevant to our work on funding hesitancy is the literature on the penalties suffered by firms due to government investigations of their conduct. Prominent examples include Jarrell and Peltzman (1985), who study FTC investigations into false or misleading advertising and Alexander (1999) who analyzes penalties in a range of violations in government contracts.

[6] See `https://cepr.org/content/covid-economics-vetted-and-real-time-papers-0`.

See Haslem et al. (2017) for a recent review of this line of research. The implications of such investigations for firms, their managers, and directors are the subject of Karpoff et al. (2008), Fich and Shivdasani (2007)), Murphy et al. (2009), and Slutzky (2020). Of special interest is Armour, Mayer, and Polo (2017). Using UK data from 2001 to 2011, it finds that stock market penalties are 9 times the actual fines imposed on companies for violations. The threat of government investigations thus goes beyond possible fines, which can explain firms' aversion to such investigations and the positive valuation effects from its release.

3. Data

We use multiple datasets for our study. One is the SBA PPP release in December 2020, which covers 5,156,850 PPP recipients. Borrowers and lenders are identified by their names as recorded in the PPP application. Our second and third datasets identify bank-firm relationships. We start with the DealScan database. However, given its limited coverage of smaller and private firms, we turn to the data on bank relationships identified via security interest filings under the Uniform Commercial Code (UCC). See Gopal and Schnabl (2020). We obtain a version of the UCC data updated to December 2020.

The UCC data provider also matched PPP recipients to its proprietary dataset on all small firms. This list includes 1,469,167 PPP recipients. We call this intersection the "SBA PPP" dataset. This dataset is useful in tests involving bank relationships. It seems to be a more conservative choice for the overall universe of firms used for assessing bank relationship effects. That said, the results are similar with the overall SBA PPP dataset, so the ultimate choice on what to present and what to keep for robustness is immaterial.

The next dataset includes publicly listed PPP recipients. We obtain this dataset by hand-collecting data from firms' SEC filings – rather than the SBA PPP release – for three reasons. One, the SBA PPP release does not cover or identify PPP returners. Thus, the funding hesitancy tests are infeasible with the SBA release. Two, the tests on stock market effects require dates on which the markets learn of PPP uptake or return, which are available in the SEC filings. Finally, we have balance sheet and income statement data for public firms, which are not available in the private PPP recipient dataset released by the SBA.

3.1. SBA PPP Dataset

The SBA has three releases of PPP borrowers between June and December 2020. The earlier releases did not identify exact loan amounts. The December 2020 release does so. We use it in our tests. Inspecting the sample reveals that there a very large number of very

small loans; we test and verify that our results are not artifacts of these observations. The SBA provides data on recipient types, which could be corporations (29.1%), limited liability companies (28.2%), sole proprietorships (15.9%), Subchapter S corporations (13.6%), non-profit organizations (3.5%), and other business types (9.8%). We exclude 99,460 financial firms and REITs. We identify and focus on the subsample of 1,498,552 firms that are incorporated as corporations. This makes the sample homogeneous and eliminates biases from the late entry of some firms (e.g., non-employers, proprietarships) that became eligible later. Including them would mechanically show that small firms have late PPP access.

Table 1 reports the overall statistics for this sample (Panel A). It shows that the SBA overall disbursed $523 billion in PPP funding to 5.2 million borrowers, about 78.2% of the PPP appropriation of $669 billion.[7] Of this, $320 billion (61%) is disbursed to 1.6 million (31%) of the borrowers during the initial rush period from April 3, 2020 to April 16, 2020. Thus, the initial PPP disbursements are to larger borrowers.

3.2. Public PPP Applicants

We download all company 8-K, 10-K, and 10-Q filings with the Securities and Exchange Commission (SEC) filed between April 1, 2020 and September 30, 2020. To identify PPP recipients, we employ a combination of computer code and a manual procedure. The code searches for keywords such as "PPP," "Paycheck Protection," and "CARES" in the filings. We read through the candidate documents to identify PPP recipients and collect other data such as loan amounts and filing dates and cross-verify some through news releases. We follow the same procedure for firms that returned PPP loans. 48.2% of companies report their PPP loans in 8-Ks followed by 40.1% in 10-Qs. Most 8-K filers (63.6%) report PPP loans under "Item 1.01: Entry into a Material Definitive Agreement."[8]

Our initial sample includes 1,233 PPP loans provided to 1,020 public PPP borrowers (Table 2). After matching to COMPUSTAT, excluding financial firms and firms that apply after the PPPFA, the usable sample for most cross-sectional tests is about 682 public PPP borrowers. Many (75.2%) of these firms have nominal share prices of less than $5. As stock returns for these firms may be unreliable, especially at high frequency, we interact return-based explanatory variables (e.g., volatility) with a penny stock dummy variable.[9]

[7] The often cited official number, $525 billion, differs due to variations across SBA releases.

[8] About 21.5% of firms use "Item 2.03: Creation of a Direct Financial Obligation or an Obligation under an Off-Balance Sheet Arrangement of a Registrant." Other items include "Item 8.01: Other Events" (7.2%), "Item 9.01: Financial Statements and Exhibits" (3.9%), "Item 2.02: Results of Operations and Financial Condition" (2.3%), and "Item 7.01: Regulation FD Disclosure" (1.3%). In 10-Q's and 10-K's, disclosures are mostly in the "Subsequent Events" section (52.8%).

[9] As due diligence, we try to match our public data set to the SBA PPP release. We match 72% of the firms

To assess the locus of public PPP applicants within the universe of listed small firms, we construct a pool of small firms who did not apply for PPP funds. These are COMPUSTAT firms with fewer than 500 disclosed employees as of the fiscal 2019 or the prior year if missing, excluding financials or SPACs. The final non-applicant sample includes 1,452 small firms in COMPUSTAT that did not apply for PPP.[10] Financial characteristics are from COMPUSTAT and returns are based on adjusted stock prices downloaded from Yahoo! Finance. Credit ratings data are from Standard & Poor's or Mergent and distance-to-default data are from NUS RMI Credit Research Initiative. We match PPP borrowers and their subsidiaries to DealScan and UCC. The data on subsidiaries are from Nexis Uni.

3.3. Identifying Firms Returning PPP Funds

We identify 123 public PPP borrowers that return PPP funds without using them. 58.1% of these firms disclose returns in 8-Ks and 34.4% do so in 10-Qs. In most cases, the information pertaining to PPP loan repayments is contained in "Item 9.01: Financial Statements and Exhibits" of 8-K reports (48.9% of 8-K filings).[11] In 10-Q reports, PPP loan repayments are most frequently in the "Subsequent Events" section (59.6%) and otherwise spread across various other portions dealing with liquidity, debt, and related issues. Excluding financials and those without financial data or stock prices slightly reduces the sample to 117 firms.

3.4. Bank Relationship Data

DealScan is a common source for data on bank-firm relationships in academic research (e.g., Drucker and Puri, 2005). We supplement DealScan data with data from filings of banks taking collateral interests under the Uniform Commercial Code (UCC) rules, which potentially offer better coverage of smaller firms (Gopal and Schnabl, 2020) that tend to take PPP loans. We obtain the data as of December 2020.

We find about 270,000 lenders in the UCC data. We identify bank lenders as those with a non-missing DUNS number and a name that includes "bank," its common derivatives (e.g., "bankcorp"), abbreviations (e.g., "bnk," "bk"), and related misspellings (e.g., "bnak"). We

by name and 92.5% after using fuzzy matching algorithms. The small residual likely reflects name variations due to issues such as borrowings recorded by parents versus subsidiaries or franchiser versus franchisees. Our results are not sensitive to dropping the unmatched firms.

[10] Alternative specifications such as excluding companies that operate in an industry with 2-digit NAICS equal to 72 give similar results.

[11] Others include "Item 2.02: Results of Operations and Financial Condition" (21.3%), "Item 8.01: Other Events" (9.6%), "Item 1.02: Termination of a Material Definitive Agreement" (8.5%), "Item 1.01: Entry into a Material Definitive Agreement" (5.3%), "Item 2.03: Creation of a Direct Financial Obligation or an Obligation under an Off-Balance Sheet Arrangement of a Registrant" (5.3%), and "Item 7.01: Regulation FD Disclosure" (1.1%).

identify big banks using bank names, again filtering for variations and misspellings in names, and correct for mergers using a manual process. We then assign these classifications to UCC lenders with missing DUNS numbers using lender name. We define a firm as having a prior bank relationship if the UCC filing date is recorded in the 5 years before December 31, 2019, well before the PPP.

We also obtain from the UCC data provider the subsample of PPP recipients they could match with the universe of all firms their data hold. We could reliably match the names with the SBA PPP data. We call this dataset the UCC–SBA PPP data. Panel B of Table 1 reports the statistics for this sample. The sample covers 1.5 million borrowers (28.5% of the SBA PPP data) that obtained $298 billion in PPP loan proceeds (57.1% of the SBA PPP data). Restricting the data to corporations results in 617,749 observations, of which we eliminate 29,449 financial firms. After filtering for whether the PPP loan occurs before PPPFA, the UCC–SBA data contains 560,829 observations.

We next match the UCC bank relationship data with the public PPP dataset using the company names. The match involves 1,021 current names, approximately 1,131 former names, and over 7,300 subsidiary names of public PPP borrowers in our dataset. We find valid matches for 231 pre-PPPFA public borrowers in DealScan, 301 public borrowers in UCC, and 405 in the union. Thus, using UCC data appears to significantly expand coverage of banking relationships even in the public PPP sample. To further understand the coverage of DealScan and UCC, we examine characteristics of firms matched to both datasets, as well as of those that remain unmatched (Internet Appendix, Table IA.1). The data show that DealScan-matched firms are larger, so bringing in the UCC data incorporates many more smaller firms.

4. Early Applicants and Lender Effects

Our first analysis examines which firms gain early PPP access. From the viewpoint of firm demand, smaller and weaker firms are more distressed and constrained and they should want to access PPP funds earlier. Option to wait arguments produce similar results. Because forgiveness eligibility requires use of proceeds quickly, companies may be better off waiting for demand to recover, when PPP proceeds would be more productive. However, this option is viable only for stronger and less constrained firms, so relatively smaller and weaker firms should demand PPP proceeds sooner.

Intermediary supply effects produce the opposite predictions. Bank capacity was strained by the initial surge in PPP demand, compounding which was an aggregate shortage of PPP funds. These forces forced lenders to prioritize the clients they would push for early access.

Intermediaries had two types of incentives. One, larger and better quality firms produce greater revenues from banking relationships. Additionally, PPP fees increase in loan size while processing costs are relatively fixed, pushing banks to prioritize larger loans.[12]

The upshot is that if intermediary supply effects matter, we should find that larger firms (and loans) should be more likely to gain early access. If lender priorities vary across small and big banks, the probability of early access for larger firms should vary by bank size. Our tests are organized along these lines.

4.1. Size and Early PPP Access

We start by examining early access for public PPP recipients. Figure 2 shows the time series patterns in PPP applications. We see an initial wave before April 17, 2020, part of the early surge that depleted the initial PPP corpus of $349 billion. The next wave begins on April 27, 2020 after the PPP reopens. A brief pause occurs around May 8, 2020, the initial no-fault deadline to return funds. Loans resume thereafter and gradually taper off.

Table 3, Panel A reports data for the final sample of the 447 early and 235 late public PPP borrowers. The PPP loan amounts are greater for early applicants with mean (median) of $2.671 ($1.482) million compared to $1.982 ($0.723) million for later applicants. Larger loans are prioritized sooner, consistent with intermediary supply effects shaping the delivery of PPP funds. We note similar patterns in the larger SBA PPP dataset in Table 3, Panel B and in Figure 3, which depicts the results visually. We also see a decline in the density just above a loan amount of $2 million in PPP Round 2, consistent with investigation aversion of firms.

Table 3 also reports data on a number of financial characteristics of early versus late public PPP recipients. Early applicants are larger whether size is measured in terms of book value of assets, the market value of assets, sales, or employee counts. Early applicants also exhibit traits of better quality firms, as they are less likely to have negative book value, are more likely to pay dividends, and have greater current ratios. Once again, the findings are less consistent with firms' demand driving early access. The multivariate regressions reported in Table 4 show similar patterns.[13] Firm size is positive and significant in all specifications.

It is possible that larger firms gain early access because they can better handle PPP paperwork. Here, the evidence *within* public PPP firms is relevant. While it is plausible that small private businesses such as tiny corner stores find the PPP paperwork daunting,

[12]Larger loans are more profitable *within* buckets but there is some non-monotonicity at certain points where fees decline. For instance, simple computations show that a PPP loan of $580,000 produces less fees than one of $350,000 – although neither generates more fees than a $5 million loan.

[13]The coefficients in linear probability models are interpretable as marginal effects.

this is less plausible for publicly listed firms, who file far more complex documents to comply with periodic disclosure and audit requirements. The results for public firms indicate that intermediary supply effects shape PPP funds delivery and more generally that intermediary supply effects matter (see also Cherry, Jiang, Matvos, Piskorski, and Seru, 2021).

4.2. Size and Early PPP Access: Small versus Big Banks

We next examine whether large firm prioritization varies across small and big banks. Differences in prioritization – or the lack thereof – can speak to the client priorities of small versus big banks. The hypothesis that such prioritization can exist come from the view that the value added by big banks is access to one-stop shopping and networks, which are more relevant to larger firms. Small banks specialize in relationship-oriented lending. Recent evidence that emphasizes this viewpoint is the 2018 FDIC Small Business Lending Survey.[14] In the PPP setting, the loans are SBA guaranteed. Further, the rules are quite explicit that lenders should rely on borrower certifications and representations to submit applications. Hence soft information held by banks about borrower credit quality, one reason for housing small firm relationships in small banks (Stein, 2002) is not a consideration. Do we still see a big bank tilt towards larger firms?

Our tests need a definition of a "big bank." Our classification is based on whether a bank belongs to the top 10 banks by asset size in the U.S. The classification produces reasonable variation in bank type. The big-10 banks provide $480 million in PPP funding in our public PPP sample while $1.1 billion comes from smaller (non-big-10) lenders. The smaller banks provide $802.2 million (or 71.5%) in funding in PPP Round 1 and $280.3 million (63.6%) in funding in PPP Round 2. Relatedly, small banks seem more likely to offer early PPP access compared to big banks, a pattern seen across many specifications, suggesting that they are quicker to serve small businesses in times of need compared to big banks.

Table 5 reports the firm and loan size data for early versus late PPP borrowers cross-classified by bank type. Panel A shows that there are significant differences in both size measures between the two PPP rounds for big banks. For big banks, average early and late loan sizes are $3.4 million and $1.8 million, respectively, versus $2.5 million and $2.2 million for small banks. The early-late differences are muted for small banks. The mean asset size of big-10 bank clients is $144.2 million for early PPP borrowers versus $61.4 million for late PPP borrowers. For the smaller banks, the early-late size differences are muted and even reversed using this metric for size.

[14] See `https://www.fdic.gov/bank/historical/sbls/full-survey.pdf`. Other work on relationship banking includes Petersen and Rajan (1994); Berger and Udell (1995), Drucker and Puri (2005) and Bharath, Dahiya, Saunders, and Srinivasan (2007).

We present visual evidence of the size distributions for big and small banks. A leftward shift in the density of PPP customers in the later period would indicate a propensity to shift smaller clients later. Figure 4 depicts the densities of firm size for small and big banks for the early and late periods. We observe a more significant shift in the density for big banks. For big banks, the Kolmogorov-Smirnov D-statistic testing for the equality of cumulative distribution functions between early and late PPP borrowers is 0.3272 (p-value = 0.001). The differences are significant. For small banks, the statistic halves to 0.1527 ($p = 0.085$). We see similar patterns when looking at loan (rather than firm) size in Figure 5.

Regression results are in Table 6. We interact the natural logarithm (log) of firm assets with a bank size indicator in Panel A and log loan size in Panel B. The interaction coefficients are negative, indicating that small banks mitigate the impact of early access for large firms. Internet Appendix Table IA.2 shows that multinomial logit estimates show similar results. Small banks mitigate the propensity for large firms to get early PPP funding.

4.3. Bank Relationships

We consider the role played by bank relationships in large borrower prioritization in PPP. The bank relationship dummy variable is best interpreted as an indicator for firms that have economically meaningful bank relationships captured in the DealScan or UCC databases.

Let us start with all firms that have a recorded bank relationship with *big* banks. Early PPP access firms at big banks have a slightly greater mean book value, $247.6 million compared to $151.1 million for late borrowers (Table 5, Panel B). The differences are not significant. The results for PPP loan amount in Panel B are similar. Directionally, large firms go sooner but the size differences are not significant. We have one piece of evidence that relationships help alleviate earlier PPP access for large firms.

In contrast, Table 5, Panel C shows a strikingly different pattern for firms with no recorded bank relationship: early and late access firms provided with PPP funds by big banks have mean size of $80.0 million and $33.6 million, respectively. The difference is significant ($p = 0.003$). We find similar patterns for no-relationship borrowers at small banks, with mean firm size of $64.3 million and $37.7 million, for early and late PPP borrowers, respectively. The results on PPP loan amount in Panel C are similar. The sharp contrast between the no-relationship and relationship samples indicate that prior relationships help mitigate early access for large borrowers. Figure 6 and 7 show supporting evidence in graphs. The distributions of the book value of assets tilt less towards larger firms receiving PPP early when firms have prior bank relationships. The patterns are somewhat clearer in Figure 8, which plots histograms rather than densities of the probability of early PPP access.

We turn to regressions for the econometric evidence. Examine Columns 3–4 of Table 6 first, which pertain to firms with a prior bank relationship. As in Columns 1–2, the coefficients of the two size measures, firm assets (Panel A) and PPP loan amount (Panel B) in Columns 3–4 are positive but the size coefficient is significant in only one of four specifications. The more interesting evidence is based on the size-*small* bank interaction term. Here, the interaction coefficient is negative and significant. Thus, within firms with a prior banking relationship, a small bank relationship helps small firms gain early PPP access.

Let us now examine the no-relationship sample in columns 5–6 of Table 6. Large firms tend to go early, as indicated by the significant and positive size coefficient. The coefficients for the size-small bank interaction term in Columns 5–6 are now economically small and three of four coefficients are insignificant. That is, early PPP access for large firms is no longer reversed. Thus, the "concierge" treatment of larger firms is predominantly when firms do not have prior banking relationships, but it is mitigated when PPP applicants have prior banking relationships with small banks. The results are robust to using multinomial logit models (Internet Appendix, Tables IA.3 and IA.4).

4.4. The SBA PPP Dataset

We round off the analysis of relationships with evidence from the SBA PPP dataset. We note that financial characteristics such as book value are unavailable in the sample, so we use loan amount as a proxy for size. A second issue is the presence of a very large number of tiny firms. A concern this raises that they have undue influence on the results. We note this point and will present analysis attentive to this issue. The main question again is whether large firms gain early access and whether there is an attenuating effect for small banks.

It is convenient to present the visual evidence using histograms based on SBA-defined bins. We first check whether unconditionally, large firms get early access in this sample. They do. See Figure 9 for the UCC–SBA PPP sample, which, we recollect, is the universe of PPP borrowers matching with the master database of all firms maintained by the UCC database provider.[15] The next question is whether the large firm preferences vary across big and small banks. Figure 10 shows that for small banks, the histogram is relatively flat for loan amounts above the smallest bin of $0–$150,000 – and decreases for large loan sizes. However, the histogram slopes upward for the big banks. Thus, even in the SBA PPP sample, big, but not small banks, appear to prioritize big firms for early access.[16] Panels C through F report the data classified by bank relationships. We do not find it easy to tell any

[15]The results for the full SBA sample in Internet Appendix Figure IA.1 are similar.

[16]The results are robust to shrinking small bank capacity in a manner that creates equivalence between the proportion of PPP clients that big and small banks serve early. There results are available upon request.

differences between big and small banks in the figures. We turn to the statistical evidence.

For the basic descriptive statistics, we revert to Panel B, Table 3. We have 274,764 early and 286,065 late PPP applicants in the UCC–SBA sample. Size is again positively correlated with early access. For example, in this sample, the mean (median) PPP loan size for early applicants is $277,680 ($109,913), whereas it is $128,396 ($49,877) for late applicants. The results are similar if we use the number of jobs supported by the PPP, which we tread here with caution given press reports that there may be errors in jobs reporting.[17]

We turn to regressions in Table 7 using a structure parallel to that in Table 6. Early access is the dependent variable. Of interest are the coefficients for PPP loan amount and its interaction with the big-small bank indicator. Controls in the SBA PPP dataset include granular NAICS-6 industry and zip code level geography fixed effects, the fields made available in the release.

The results have an interesting feature that we address after discussing the main results. In all specifications in Table 7, the coefficient for the size is positive. Thus, size is positively related to early access and consistent with intermediary supply effects shaping PPP supply. Turn to specifications (2) and (3) in Table 7. Specification (2) shows that the coefficient for the size-small bank interactive term is negative. This is the by-now familiar result that small banks help undo the large firm prioritization, now obtained for the broad PPP sample. In the no-relationship sample, the coefficient is now *positive* and significant. Thus, absent prior banking relationships, small banks preference larger loan amounts even more. The results based on multinomial logit models are qualitatively similar (Internet Appendix, Table IA.5).

An interesting feature of the results in Table 7 is the *positive* coefficient for the small bank-firm size interaction in specification (1) that does not condition on bank relationships. This sign, which indicates that small banks prioritize large firms *more* than big banks, is exactly the opposite of what we find for the public sample in Table 6. In a statistical sense, any sign is possible because the overall specification should average the positive and negative coefficients in specifications (2) and (3). However, the economics are interesting and reflect the point made in opening this section: the preponderant presence of very tiny firms. We investigate this issue formally.

In the aggregate PPP dataset, loans in the lowest SBA bins of below $150,000 and between $0 and $350,000 account for 69.7% and 86.1% of the observations, respectively. There is a very large number of tiny "microloans" in the SBA data set. To what extent do they drive the results, especially the positive firm size-small bank interaction coefficient in the first

[17] E.g., see "Faulty data collection raises questions about Trump's claims on PPP program," Washington Post, July 14, 2020 at https://www.washingtonpost.com/business/2020/07/14/ppp-job-claims-sba. Note also that the SBA reporting may vary because of PPP requirements (e.g., foreign employees) or because not all firm's affiliates are able to apply.

specification in Table 7? As one test, we redo the regressions replacing loan amounts with bin indicators based on SBA loan buckets. We find that the anomalous positive interaction term is *only* in the smallest bucket. Another approach drawn from the asset pricing literature is to report "value weighted" results based on weighted least squares that assigns greater weights for larger loans. The coefficient for the size-small bank interaction reverses from 0.0262 to −0.0410 (p-value <0.001), the familiar result that small banks help undo the prioritization of large firms for early PPP access. These results are available upon request.[18]

Finally, we examine whether, within the universe of bank relationships, applying through relationship banks helps early access. Table 8 reports the evidence. Specification (1) shows the baseline result. The coefficient for applying through a relationship bank is positive, so applying through a relationship bank enables early access. Specification (2) examines the role of a prior *small* bank relationship. Once again, having a small bank relationship appears to help with early PPP access. Finally, in specification (3), we interact the small bank relationship with applying through a relationship bank. The positive sign indicates that the effects of applying through a relationship bank are more pronounced when the bank is small and the borrower has a prior relationship with the small bank.

To summarize the results, the PPP is an interesting natural experiment in which banks face a sudden and unexpected shock in which they must prioritize their clients. Given government guarantees of PPP loan repayment, traditional soft information considerations are not relevant in this setting. Larger clients appear to gain beneficial access to PPP funds sooner, an effect that is attenuated in small banks. The more even treatment of small clients is perhaps one reason why small firms bank with small banks, as banking with larger banks could lead the small firms into facing a "small fish in a big pond" effect. The relative prioritization of small businesses offers a different rationale for why small firms domicile their bank relationships with small banks worthy of more attention by academicians and regulators alike.

5. PPP Uptake

Besides the intermediaries involved in piping PPP supply to borrowers, a second force that drives PPP uptake comes from the concerns of small firms that are the program's targets. We open with an analysis of PPP uptake and show that it has positive average valuation effects, a metric of the program treatment effects. We then uncover a curious PPP

[18]The results are consistent with the view that small banks push small firms when the stake is meaningful, perhaps because of the greater option value from better chances of firms surviving and becoming economically consequential in the longer term.

"funding hesitancy," characterize related valuation effects, and explore the possible sources of this hesitancy exploiting the structural features of the program. This analysis focuses on public PPP recipients, as we observe the event of PPP return only for this sample. Control firms are small non-applicants identified in Section 3.

5.1. Characteristics of PPP Applicants

To understand PPP uptake, we begin by describing the types of listed firms that apply for PPP. Table 9 shows that the median (mean) PPP loan amount equals \$1.1 (\$2.4) million, representing 4.41% (7.30%) of the book value of assets and 3.52% (10.98%) of the market value of equity, respectively. The median (mean) ratio of the loan amount to cash and equivalents winsorized at 100% equals 26.9% (43.2%). Thus, PPP loans are economically meaningful relative to the liquidity on hand for our sample firms.

5.1.1. Industry

The SBA uses NAICS industry classifications in its lending operations. We drop firms with NAICS-2 equal to 99, special purpose acquisition firms, 79 PPP applicants from the financial sector, combining those with fewer than 20 PPP applicants into one bucket.[19] Figure 11, Panel A shows that the percentage of applicants varies substantially across sectors, ranging from lows of 4% to 5% in NAICS-2 = 22 and 48 to upwards of 50% in NAICS-2 = 33, 49, 54, and 56. The probability peaks at 70% for NAICS-2 = 72, the "accommodation and food services" sector that includes chain restaurants such as Denny's and Shake Shack relying on franchising as a business model. We include these firms in the main analysis, but excluding them does not alter our main conclusions.

For the regressions, we construct a suite of industry fixed effects with two considerations in mind. One, we attempt to construct industry variables of economic interest. The second is the familiar practical consideration, creating industry clusters that are populated sufficiently to result in estimable regressions. Internet Appendix Section IA.B describes the four industry clusters and shows that they capture substantial variation in application probabilities (see Figure 11, Panel B).

5.1.2. Financial Characteristics of PPP Applicants

Table 9 reports characteristics of PPP loan applicants as well as those of control non-applicants. The p-values are based on Wilcoxon rank-sum tests as many variables are skewed.

[19]The consolidated sectors have 67 firms from NAICS-2 = 11, 23, 44, 45, 52, 61, 71, and 81.

Panel A of Table 9 shows that PPP applicants are small. The mean (median) market value of equity of applicants, $110.9 million ($35.9 million), places the firms in the smallest Fama-French size decile. Applicants are smaller than non-applicants, whose mean (median) market value equals $484.7 million ($118.7 million). Other size metrics such as book value, sales, and the number of employees show the same pattern.[20]

PPP applicants appear to have less liquidity and less financing access relative to the small firm pool. Their cash and current ratios are lower and are highly unlikely to have credit ratings, which signals credit access (Faulkender and Petersen, 2006). Over 70% of the PPP applicants fall into the top quartile of constrained firms according to the Whited and Wu (2006) (WW) or the Hadlock and Pierce (2010) (SA) financial constraints indexes. PPP applicants also have greater distress risk. Applicants have low interest coverage ratios: more than three-quarters of them cannot cover interest 2.5 times, a benchmark for large investment grade companies. Over 68% of PPP applicants have Altman (1968) Z-scores below 1.81, a benchmark for high default risk. PPP applicants have lower distance to default (Bharath and Shumway, 2008; Duan, Wang, et al., 2012), lower nominal share prices, and 75.2% of them are penny stocks, an indicator of mortality.[21]

We note that the patterns are prior to the pandemic – and not caused by it. Thus, PPP applicants are smaller, weaker, more constrained, and have less liquidity than typical small firms *before* the pandemic. Moreover, these firms do not seem to have done better in the pandemic. Figure 12 shows that PPP applicants have lower average cumulative buy-and-hold abnormal returns (BHARs) from January 1, 2020 to March 23, 2020, the day before the passage of the CARES Act. Applicants do not do better in terms of returns from February 3, 2020 to March 23, 2020, the Covid period defined in Fahlenbrach et al. (2020) or in returns on March 24, 2020, when there was news on the imminent passage of the CARES Act.

Table 10 reports estimates of several regressions that explain the characteristics of PPP applicants relative to control firms. The return variables are interacted with a penny stock dummy variable to account for noise in price data in the latter. The regression results indicate that applicants are smaller, older, slower growing, and have less liquidity. The data paint a clear picture of the types of firms that apply for PPP. The applicants are typical of small firms in some respects and where there are differences, the PPP applicants appear to be weaker: smaller, less liquid, more constrained, and with greater distress risk. Additional tables employing indicators of constraints and distress, not reported here, give similar results.

[20] We note here that the results are conservative. The COMPUSTAT-disclosed number of employees for PPP firms is sometimes more than 500. For example, PPP eligibility for hotels is based on employees in an establishment, but COMPUSTAT reports the total employment count.

[21] See Seguin and Smoller (1997) and the SEC guidance on penny stocks, available at `https://www.sec.gov/fast-answers/answerspennyhtm.html`, which argues that these stocks are risky.

5.2. PPP Application Announcement Effects

We next examine the stock market valuation effects related to PPP. Figure 13 shows CARs (cumulative abnormal returns) for [-5, 5] where [0] denotes the filing date. The average CAR is over 4% in the time interval [-5, 1], much of it in [-2, 1]. From Panel B, the results are similar for both market adjusted or market model abnormal returns.

Table 11 uses a narrow [-1, +1] window around the filing date to estimate PPP uptake valuation effects. The estimates regress daily abnormal returns (using market-adjusted or market model returns) from January 1, 2020 until the event date plus one day. The independent variables of interest are the three dummy variables representing the filing date plus or minus one day. Using a regression sample *within* the pandemic period addresses the point in prior research that pandemic period returns are unusual. We include firm fixed effects, which absorb firm-level heterogeneity within the pandemic period. Finally, we account for the possible bunching of PPP applications in waves (Figure 2) by clustering standard errors by calendar dates.

We report three estimates, one for all PPP applicants, another one for those reporting PPP in 8-Ks, and finally, a sample that excludes penny stocks. For the full sample, Panel A of Table 11 shows that the PPP abnormal returns are about 1.1% and accrue on day [-1]. The estimates increase to about 1.6% for firms announcing PPP through 8-Ks. This increase is not surprising given that 10-Qs or 10-Ks contain other information and are thus less precise in picking up PPP information. See also Heitz, Narayanamoorthy, and Zekhnini (2020). Excluding penny stocks produces somewhat greater coefficients with no material impact on standard errors (Panel C). The announcement effects are somewhat greater for the subset of larger applicants. Overall, there is little evidence that taking PPP harms shareholders. In fact, PPP uptake appears to increase share prices.

5.3. Partial Anticipation and Treatment Effects

We discuss unadjusted treatment effects first. Using announcement effects and the pre-announcement value of PPP applicants, we find that the average change in the dollar market value of a PPP applicant is $1.57 million (after 1% winsorization to account for outliers). Across all the 555 PPP borrowers for which we have the relevant data, the total change in value is $871.61 million. As the total PPP loan amount for these firms equals $1.590 billion, the PPP bang for the buck equals $871.61 million ÷ $1.590 billion = 0.548. The 417 penny stocks in our sample take $937.94 million in PPP loans and experience an increase in market value of $342.44 million, giving a bang for the buck of just 0.365. The non-penny stocks, the stronger firms, gain $522.95 million and take $651.84 million, giving a bang for the buck of

about 0.802. Thus, the bang for the PPP buck is greater for the larger and stronger firms.

We adjust for partial anticipation next. Valuation changes on the event date are less than the actual event effect if an event is partially anticipated, as anticipations bake potential treatment effects into the pre-announcement share prices. We adjust for anticipation by scaling up the announcement returns by a factor related to the probability of PPP application (Acharya, 1988; Eckbo, Maksimovic, and Williams, 1990; Prabhala, 1997).

Suppose q_f is the probability assessed by the market that firm f applies for a PPP loan. Let the benefit of the PPP be B. On the date the market learns that firm f has applied for PPP funds, the change in its value, say D, equals $(1 - q_f)\, B$. Thus, the actual benefit B equals $\frac{D}{1-q_f}$ and the aggregate across all firms is $\sum_f \frac{D}{1-q_f}$, where $0 \leq q_f \leq 1$. We obtain estimates of q_f, the ex-ante probability of applying for PPP, from Table 10.

For the 533 PPP borrowers with the relevant data, the anticipation-corrected treatment effect of the PPP program equals \$1.411 billion, 91.2% of the aggregate PPP loan amount of \$1.548 billion. The bang for the buck is thus 0.912.[22] For penny stocks, the bang for the buck is 0.817, reflecting gains of \$742.20 million versus loan amounts of \$908.27 million. For non-penny stocks, it is 1.046, with shareholder gains and PPP loan amounts of \$669.08 million and \$639.40 million. As before, the larger, stronger PPP applicants produce a greater bang for the PPP buck.

5.4. Economics of the Estimates

How useful are the stock market data in understanding the PPP program impact? While impact assessment is not our focus, we comment briefly on this issue. In our view, the stock market valuation effects are useful as we have reasonably accurate times (news release dates) when share prices impound the PPP impact. On the other hand, share prices may not be the primary impact metric, which may be outcomes such as jobs or wages. But shareholder value is not entirely without use. The PPP was designed to keep enterprises running and is more impactful when business owners experience its positive effects. Additionally, the number of public PPP firms is small. Thus, any analysis of share prices, however accurately they pin down impact, does not subsume the need for alternative impact assessment studies. Our study simply adds one more data point and a different lens for this assessment.

Some other points are worth mentioning in this context. The PPP is announced alongside other aid packages as part of the \$2 trillion CARES Act bill. The other pieces of the bill – and other local pandemic and economic mitigation measures – can be confounders in

[22] We note that one large borrower, AutoNation, takes \$77 million in PPP loans and has about 10 times the amount as shareholder gain. We thus winsorize changes in value at the 1^{st} and 99^{th} percentiles to ensure that outliers like AutoNation do not drive the average treatment effects.

interpreting PPP effects. Our experiment design mitigates such concerns. In our study, stock prices reflect impact on event dates, which are staggered across firms and spaced away from the CARES Act announcement. Moreover, the totality of the CARES package is perhaps reflected in (and thus contaminates) the aggregate stock market return but the market return is stripped out when we compute abnormal returns.[23]

A final point is related to real-time economic tracking, a focus of the economics literature particularly in the wake of the pandemic (see Chetty et al., 2020), but also in other areas such as nowcasting macroeconomic data. The stock market responses are in fact a real-time assessment of the program effects that incorporate information known to market about the PPP application and its assessment of PPP effects. We do not advocate extrapolating our estimates of treatment effects to the entire $525 billion as the non-public firms have simply no analog in the public space, e.g., private schools or not-for-profit organizations. In our view, the takeaway is that even in public firms, the valuation effects are positive but the bang for the buck is small and concentrates in the larger and stronger subset of firms.

6. Funding Hesitancy

We turn to tests of funding hesitancy. As discussed in Section 1, several firms that obtained PPP loans returned the funds within a short period of time before using the funds. We characterize the decision to return PPP funding, examine related valuation effects, and assess evidence for the role played by government investigation threats in the decision to return PPP funds.

6.1. Returners versus Retainers

Table 12 reports the characteristics of 117 public firms that returned PPP loans – henceforth "returners." Alongside, we report the characteristics of the 565 public PPP recipients firms that did not return PPP funds – henceforth "retainers." The mean (median) loan amount for PPP returners equals $4.43 ($3.33) million compared to $2.02 ($0.96) million for retainers. Firms that return PPP money have applied for larger loan amounts. As we will see shortly, returners also appear to be larger by other metrics and somewhat financially stronger.

The mean (median) book value of assets for the returners equals $288.4 ($86.0) million compared to $71.4 ($27.7) million for the retainers. Table 12 shows that the difference is

[23]The broad market-wide effects of PPP are perhaps best reflected in the market's positive reaction (+9.38%) to the PPP on March 24, 2020, but this is not the impact of PPP alone as the program is embedded in the larger CARES package.

significant. We see similar differences in other size characteristics including market capitalization, sales, and the number of employees. Returners are less likely to have negative book value, have higher Tobin's Q but lower sales growth, and are more likely to pay dividends (24.3% versus 12.4% for retainers). Returners have better liquidity with higher current ratios, cash balances, and are more likely to be rated (6.0% versus 1.9% for retainers) although access to public debt is overall low, as typical for small firms. Returners are also less financially constrained per the Whited-Wu and the Hadlock-Pierce SA indexes, have greater distances to default, higher Altman Z scores, and are less likely to be penny stocks compared to retainers. Returners are clearly stronger than retainers.

We also examine industry patterns (Figure 14). Around 22.5% of health sector firms return PPP funds compared to 15.1% of non-health firms. In contrast, only 10.7% of high-tech firms return PPP funds compared to 18.4% of firms in non-high-tech industries. While both industries faced better prospects in the pandemic, the health firms have greater regulatory interactions, which may explain why these firms are less likely to keep PPP funds and face the prospect of a negative investigation. Only 11.4% of the firms in industries impacted by Covid return PPP funds compared to 18.3% in non-Covid industries. Likewise, only 12.5% of machinery industry firms return PPP funds compared to 17.3% of firms that are not in the machinery sector. Thus, firms with greater demand for funds and those more prone to distress from illiquidity are less likely to return funds.

We do not find evidence that returners benefit less from PPP stimulus (Figure 15 and Table 12). The mean (median) stimulus day return of PPP returners equals 7.0% (6.5%) compared to 5.2% (3.6%) for retainers. The data show that the Covid period returns and the PPP loan announcement effects are similar for the two samples. Returners have a higher PPP application bang for the buck than do the retainers. Little in these patterns suggests that firms that return PPP funds are the ones that have benefitted less from PPP.

6.2. Regression Evidence

Table 13 reports estimates of regressions that model the decision to return PPP loans. In the sample are 543 PPP firms with sufficient data. The role of firm size is notable. Large firms are more likely to return PPP funds. A one standard deviation increase in the natural logarithm of assets increases the probability of returning the PPP loan by at least 9.05 pp, or by 52.74% relative to the unconditional mean. This result also holds for firms with at least $50 million in market capitalization. Penny stock firms are less likely to return PPP funds. As discussed earlier, research (e.g., Seguin and Smoller, 1997) suggests that penny stocks face greater failure hazard, and given their classification as speculative investments,

face greater hurdles in capital raising. We find that these firms are more likely to retain PPP funds.

Specification 3 includes stock return data. We find that firms with *better* Covid period returns tend to return PPP funds. In Internet Appendix Tables IA.6 and IA.7, we find that less constrained and low bankruptcy firms are more likely to return PPP funds. Collectively, these findings add to the basic point that returners are more likely to be the better quality applicants for PPP – even before the pandemic – concentrating PPP uptake among the weaker firms.

6.3. PPP Return Announcement Effects

We display the cumulative abnormal returns (CARs) associated with PPP return starting from date $t = -5$, where $t = 0$ denotes the filing date of the disclosing 8-K. Figure 16 shows that the announcement effects are positive for both the market-adjusted and the market model abnormal returns. In Figure 17, we find that PPP return dates spike in early May 2020, when the SBA clarified that firms returning funds early would not be audited.

Table 14 reports the estimates of a fixed effects regression of the abnormal return on date dummy variables that are non-zero in [-1, +1] where [0] is the filing date. The sample includes returns in [-60, +1]. We cluster standard errors by calendar date. The announcement effect is about +3% regardless of the specification.[24] We consider treatment effects akin to those for announcement effects. The average change in value is $11.74 million, with the total of $1.256 billion across all 107 borrowers for which we can compute this statistic.[25] The amount of the loan returned is $538.87 million, producing a bang for the buck estimate of about 2. If we add the loan amount returned, $538.87 million, to the dollar announcement effect, essentially assuming that the loan amount was a wealth transfer, wealth effect of returning PPP is $1.795 billion.

As before, we can correct announcement effects for partial anticipation by scaling them for the portion impounded in the pre-announcement share price, which is $(1 - q)$ where q is the probability that the funds are returned. Doing so using the probability model estimated in Table 13 shows that anticipation-corrected net gain is $2.148 billion across 105 PPP returners. Returning $530.64 million should have resulted in losses of $530.64 million to the returners but instead this turns into a gain of $2.148 million, or about 10.5% of firm value (before PPP return announcement).

[24] The results are robust to excluding a small number of firms (about a half-dozen) who indicate in their 8-K disclosures that their performance has improved.

[25] We winsorize changes in value at the 1^{st} and 99^{th} percentiles to account for outliers such as AutoNation.

6.4. More Evidence on Indirect Costs of PPP

The fact that firms return PPP although it is bargain financing – and that markets react positively to it – suggests that there are indirect costs of taking PPP. The release from these costs is realized when PPP is returned and is valued by markets. We next consider tests that can speak to the nature of these costs, specifically those arising out of government investigation. Before these tests, we consider some other explanations for PPP return.

One possibility is that returners have alternative sources of funds. Equity financing is one possible source but equity issuance traditionally sends a negative signal to the market. A better candidate is bank lending, whose announcements trigger positive announcement effects (James, 1987; Lummer and McConnell, 1989; Billett, Flannery, and Garfinkel, 1995; Chen, Ho, and Liu, 2019). This interpretation, if correct, reinforces our point concerning indirect costs. If firms prefer more expensive bank capital over far cheaper PPP funding, it suggests that they see positive value in being subject to scrutiny by private capital providers but the same scrutiny by the government has negative value.

Another explanation is signaling. According to this hypothesis, firms return PPP funds to signal improvements in firm fundamentals otherwise unobserved by the market. We have reservations about this explanation. One issue is that the $2 million discontinuity, which we will turn to shortly, is not relevant for signaling. Another is the evidence on announcement effects by firm size. Signaling should be stronger when less anticipated, that is, for smaller and worse-quality firms. We do not find this in the data. We leave more tests of signaling for future work, not necessarily mutually exclusive from the ones we examine.

6.4.1. Loan Amount and PPP Return

If government investigations are more likely for large PPP loans, the probability of returning PPP funds should increase in PPP loan size. We note that audit pronouncements were released at various points of time in late April to May.[26] Thus, investigation concerns are less likely to have informed *applications* that occurred before but could drive the decision to return PPP.

Figure 18 shows that the probability of returning PPP funds is greater for larger loan amounts. We confirm the positive relation between PPP loan return and loan size in regression analysis in Table 15 (Column 1). We find that a one standard deviation increase in the

[26] E.g., see "Joint Statement by Secretary Steven T. Mnuchin and Administrator Jovita Carranza on the Review Procedure for Paycheck Protection Program Loans," SBA, April 28, 2020 at https://www.sba.gov/article/2020/apr/28/joint-statement-secretary-steven-t-mnuchin-administrator-jovita-carranza-review-procedure-paycheck and "PPP Changes Trip Up Small Businesses," Wall Street Journal, May 12, 2020 at https://www.wsj.com/articles/paycheck-protection-program-changes-trip-up-small-businesses-11589288403.

natural logarithm of PPP loan amount increases the probability of returning the loan by 10.36 pp, or by 60.37% relative to the unconditional mean. We examine other tests next.

6.4.2. $2 Million Discontinuity: PPP Return

A second test concerns a $2 million loan amount threshold for loan audits. The interim final rule issued by SBA in the Federal Register on June 1, 2020 says that all loans are subject to audit. However, both the Treasury and the SBA have indicated that firms with loans less than $2 million will be presumed to have applied in good faith.[27] If this is relevant, firms just above the $2 million threshold experience more threats relating to PPP investigation than those below.

We first examine univariate statistics around the $2 million threshold. The sample odds of returning PPP funds are 9% for loan amounts of $1.5–$2 million but more than double to 24% for loan amounts between $2–$2.5 million (Figure 18). Relatedly, 9.50% of the 442 firms with loan amounts less than $2 million returned PPP funds, while 31.2% of the 237 firms with loan amounts more than $2 million did so. The discontinuity in PPP return probability is clearly visible in Figure 19 that superposes the histogram for applying for PPP on the histogram for returning PPP. The discontinuity in PPP returns is quite stark here.

We turn to discontinuity designs around the $2 million loan amount threshold. One issue in this type of analysis is statistical power. Regression discontinuity designs fit high order polynomials to the running treatment variable and then check for discontinuities. Our public PPP sample is relatively small to filter out the non-linear curvatures present under a hypothetical null, with the additional difficulty of having a 1/0 outcome variable for returns and in local designs that use even smaller subsamples centered around the $2 million threshold. We choose to include all observations in a global design. This approach brings in more observations but ones that are more distant from the threshold are possibly less informative of considerations around the $2 million threshold. We have no easy answer to this tradeoff but present the evidence for what it is worth and turn to other evidence in larger samples thereafter.

Table 15 gives the regression results. The coefficient for the threshold indicator is the marginal effect of borrowing above the discontinuity threshold beyond the effect of PPP loan size. In the baseline model, this threshold indicator coefficient is positive and significant. The probability of returning the loan increases by 8.85% when firms borrow $2 million and above (Column 2). The coefficient remains positive but with reduced significance when we

[27] E.g., see "SBA Clarifies Certification Requirements Today For Paycheck Protection Program Borrowers," Forbes, May 13, 2020 at https://www.forbes.com/sites/juliejason/2020/05/13/sba-clarifies-certification-requirements-today-for--paycheck-protection-program-borrowers.

incorporate the full set of controls (Column 3).

6.4.3. $2 Million Discontinuity: Loan Application

We exploit another PPP design feature that creates a different type of discontinuity around the $2 million cutoff but speaks to the government investigation concerns in the larger SBA PPP sample. The SBA announced that PPP funds returned before May 18, 2020 would be presumed to have been made in good faith and thus not subject to audit.[28] Thus, if investigation threats are of concern, we should see that PPP *applications* after May 18, 2020 should tail off just above the $2 million threshold relative to just below.[29]

Figure 20 shows the histogram for SBA loan application amounts before and after May 18, 2020. A discontinuity appears in the PPP application density just above the $2 million cutoff after the PPP return deadline. Before May 18, 2020, applications for loan amounts between $1.5–$2.5 million comprise 66.56% of applications for $1.5–$2 million. After May 18, 2020, 90.48% of all applications for loan amounts between $1.5–$2.5 million are applications for $1.5–$2 million. This result suggests that investigation aversion is a part of the PPP funding hesitancy we find. The threat of audit appears to have deterred some firms from applying for PPP – or pushed them to apply for amounts below $2 million.[30]

6.4.4. Indicative UK Evidence

We next consider some evidence from the UK. Here, the government program to aid businesses in the wake of Covid took the form of a business rates relief program, equivalent to relief on property taxes. This program also saw "PPP-like" returns of funds. An important difference is that in contrast to the U.S., firms in the U.K. returned government aid due to public pressure that was not accompanied by any explicit or implicit threat of government investigation.[31] Thus, share price responses to returns should be free of concerns about government investigations and reflect, e.g., losses from access to Covid-19 related relief.

We gather data on U.K. business rates relief returners from press reports. The subset we identified from press reports includes large retailers: Tesco, Sainsbury's, Morrison's, Asda,

[28] E.g., see "PPP Loan Rules Relaxed By SBA For Loans Under $2,000,000 – Uncertainty Still Abounds For Many," Forbes, May 14, 2020 at https://www.forbes.com/sites/alangassman/2020/05/14/ppp-loan-rules-relaxed-by-sba-for-loans-under-2000000uncertainty-still-abounds-for-many.

[29] The before-after design mitigates fee discontinuity related explanations – the fees did not change but the application behavior did. Relatedly, we don't see a discontinuity for the $350,000 loan amount cutoff that also presents a fee discontinuity.

[30] The public sample is rather small for a before-after May 18, 2020 design. However, Figure 3 shows a decline in the density of PPP applications by public firms above the $2 million cutoff in PPP Round 2.

[31] See, e.g., *£1.8Bn-Plus in Covid Rates Relief to Be Handed Back as B&M Joins List*, The Guardian, December 3, 2020 and *B&Q Owner Kingfisher to Repay £130M of Covid Business Rates Relief*, The Guardian, December 7, 2020.

B&M, Pets at Home, and Whole Foods. The announcement effects for the subset with returns is *negative*, and range from -2.05% to -11.08%. One interesting case is that of the retailer Marks and Spencer, which announced that it would not shy away from the business rates relief. Upon this announcement, the firm experienced +9.02% abnormal return. The UK evidence suggests that returning subsidies unrelated to scrutiny avoidance results in negative announcement effects. In the U.S., we see positive announcement effects when firms return subsidized funding, supporting the investigation-avoidance interpretation of our U.S. PPP return results. As additional evidence, Internet Appendix Section IA.C gives extracts from company reports showing concerns about scrutiny motivating PPP returns.

7. Conclusion

The Paycheck Protection Program (PPP), a fiscal stimulus program in the U.S., aims to help small businesses suffering from the economic fallout of the Covid-19 pandemic. At $669 billion in fiscal commitments, the PPP is a significant portion of the $2 trillion CARES Act package intended to help the country through the deep, sudden, and widespread economic contraction and job losses from the Covid-19 pandemic.

The PPP is a significant shock in the supply of financing to small businesses. It provides extraordinarily cheap financing to small businesses that are highly constrained even in normal times. We use this shock to examine two questions. One is about using financial intermediaries to pipe the funding supply, which highlights the supply decisions of small and big banks under situations of extreme constraints. The other concerns the "funding hesitancy," or the apparent reluctance on the part of small businesses to receive government funding.

The first question concerns PPP funding delivery through the banking system. Banks are the dominant types of financial institutions in most countries and have widespread branch networks with extensive reach. Thus, they are logical entities to use to deliver funding to important sectors.[32]The need to get credit to important sectors is especially relevant in difficult times. But banks have their own incentives which can shape the delivery system. Our findings suggest that there are intermediary supply effects, that is, bank financial intermediaries shape the supply of PPP financing. Our evidence suggests that larger firms are likely to gain early access but the pro-large firm effects are attenuated in small banks and when firms have prior banking relationships.

[32]For example, in Germany, a bank-based system, German banks tried to develop the German VC market (Da Rin, Hellmann, and Puri, 2013). In India, banks are given quotas for priority sector lending, in the hope of getting credit to underserved, critical sectors and jumpstarting their growth (Banerjee and Duflo, 2014).

The finding is interesting in light of the large literature in banking suggesting that small firms benefit from pairing up with small banks. The literature lends empirical support to this proposition, and theoretical justification. Stein (2002) lays out a theory that explains this matching based on soft information. A number of papers have examined Stein (2002)'s theory, using different experiment designs, starting with Berger et al. (2005) who finds supportive evidence of small banks being better able to collect and act on soft information than large banks. But the literature has not converged on other additional reasons for small firm-small bank pairing. Our evidence suggests a new rationale for small firm-small bank pairing through evidence in which there is a large shock but credit risk – thus private information and soft information – is not at play given repayment guarantees.

We find that absent relationships both small and large banks prioritize large firms. This is consistent with underlying incentives since, if capacity constraints bind so that banks can process only a fixed amount of loan applications, banks make more fees by processing larger loans. Interestingly however, this prioritization flips when prior banking relationships are taken into account. Small banks prioritize small firms with prior bank relationships but we do not see similar prioritization by large banks. In times of shock and capacity constraints, small banks are more likely to prioritize small firm relationships. Given that PPP loans are guaranteed by the government, and there is no private or soft information involved our results suggest a new rationale for the benefits of pairing of small firms with small banks.

With its extraordinarily inexpensive financing terms, the PPP is also a very positive shock in financing supply to small businesses. Taking PPP has positive announcement effects, consistent with beneficial program impact for our small universe of public firms. Nevertheless, we detect a "funding hesitancy," some reluctance on the part of firms to take up PPP. Perhaps the most stark evidence of this hesitancy is that several public firms that bring up the bottom in terms of financial constraints indexes, manage to qualify for, apply for, and take PPP funds – yet return the money without using it as the program unfolds and the threat of government investigation begins to loom large. Interestingly, returning the PPP funds results in positive announcement effects, indicating that both firms – by revealed preference, giving up cheap funding – and markets value the release from PPP.

The findings suggest that taking PPP funds imposes significant indirect costs on participants. The costs appear to be related to the possibility of ex-post investigations of PPP recipients. Of concern are the subjectivity in the audit process, the broad powers of the government to seek remedies, and especially an openly adversarial stance towards public firms articulated in its pronouncements. It does not seem surprising that firms choose to turn away from PPP funding. Firms that are stronger before the pandemic tend to do so, concentrating PPP funds among the financially weaker applicants. From a policy viewpoint,

our findings suggest that when taxpayer funding is involved, policymakers should focus on both objective standards for program eligibility and also specify with similar objectivity the conduct of the ex-post audits concerning funds use. For instance, delineating safe harbors to circumscribe litigation, a standard practice in securities law since the 1930s, may be an appropriate tool in designing government aid programs.

Understanding the intermediary supply effects, market responses to PPP funding, and funding hesitancy can help design better policies for small businesses. We hope that our findings also shed light on and help move forward research on the nature of firm-bank relationships, especially for small firms and small banks.

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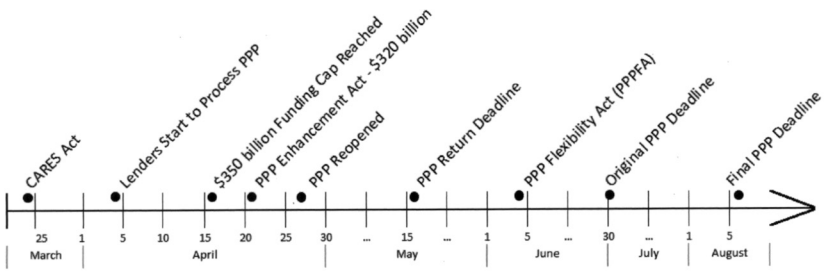


Figure 1. PPP timeline. This figure illustrates the timeline and key milestones of the Paycheck Protection Program (PPP).

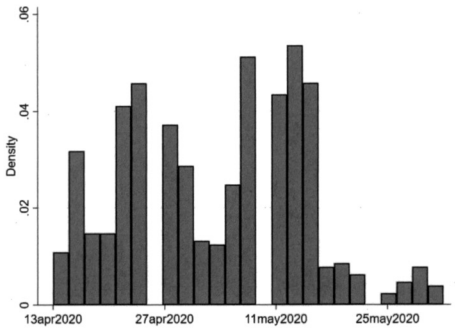


Figure 2. Density of PPP loan grant announcement dates. This figure plots the density of announcement dates for PPP loan grant announcements by public PPP borrowers.

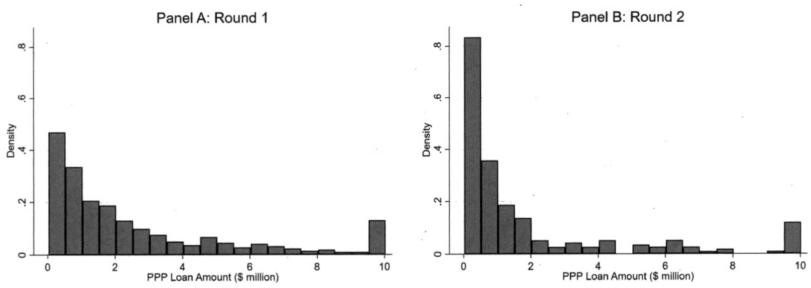


Figure 3. PPP loan size by PPP Round. This figure plots the density of PPP loan size for PPP Round 1 (before April 17, 2020) versus PPP Round 2 (after April 26, 2020) for public PPP borrowers. We set PPP loan size to $10M for loans above $10M, for the ease of exposition.

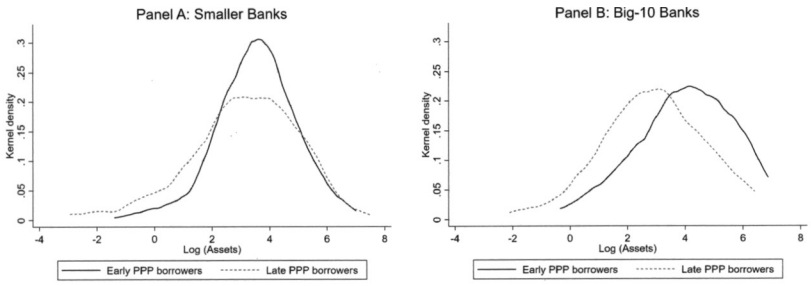


Figure 4. Early PPP access and firm assets: small versus big banks. This figure plots kernel densities of the natural logarithm of firm's assets for early versus late public PPP borrowers. Panel A reports the results for smaller (non-big-10) banks. Panel B reports the results for big-10 banks. *Log (Assets)* is winsorized at the 1^{st} and the 99^{th} percentiles.

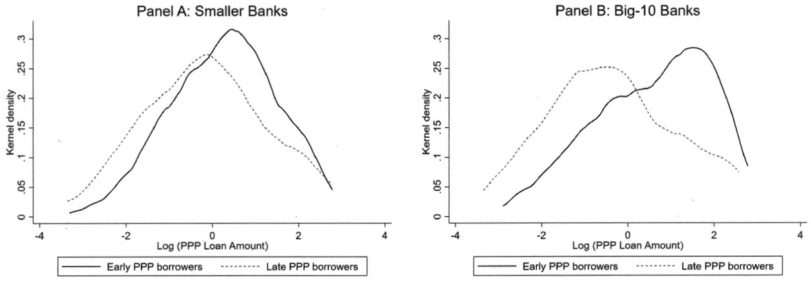


Figure 5. Early PPP access and PPP loan size: small versus big banks. This figure plots kernel densities of the natural logarithm of PPP loan amount for early versus late public PPP borrowers. Panel A reports the results for smaller (non-big-10) banks. Panel B reports the results for big-10 banks. *Log (PPP Loan Amount)* is winsorized at the 1^{st} and the 99^{th} percentiles.

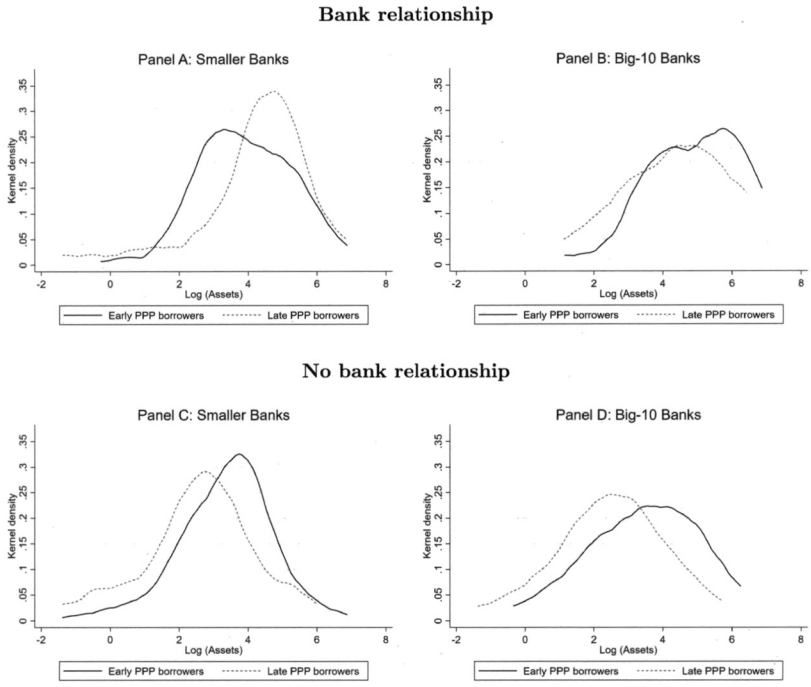


Figure 6. Early PPP access and firm assets by prior bank relationship. This figure plots kernel densities of the natural logarithm of firm's assets for early versus late public PPP borrowers, for firms with and without prior bank relationships (i.e., before the PPP). Panel A reports the results for smaller (non-big-10) banks and firms with bank relationships. Panel B reports the results for big-10 banks and firms with bank relationships. Panel C reports the results for smaller (non-big-10) banks and firms without bank relationships. Panel D reports the results for big-10 banks and firms without bank relationships. *Log (Assets)* is winsorized at the 1^{st} and the 99^{th} percentiles.

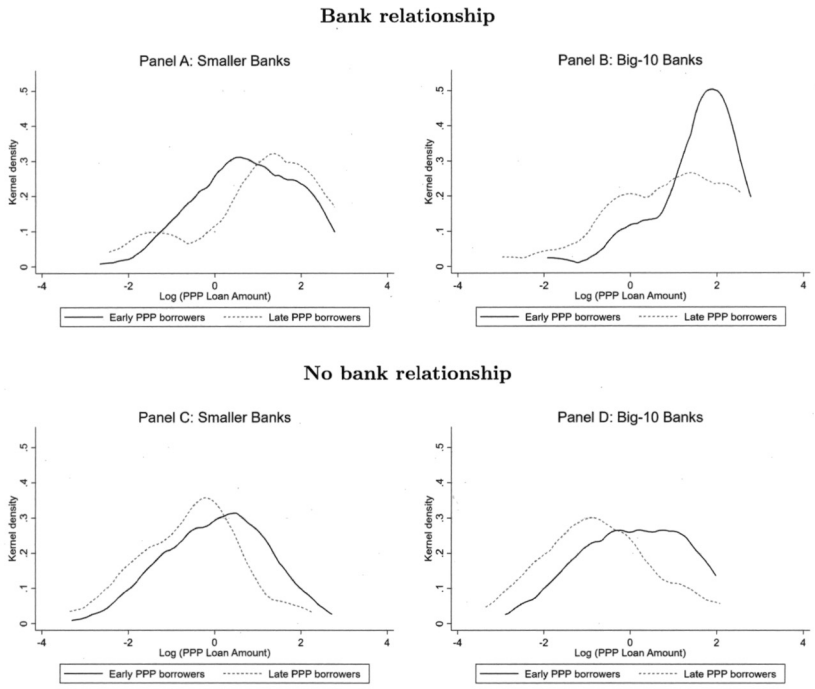


Figure 7. Early PPP access and PPP loan size by prior bank relationship. This figure plots kernel densities of the natural logarithm of PPP loan amount for early versus late public PPP borrowers, for firms with and without prior bank relationships (i.e., before the PPP). Panel A reports the results for smaller (non-big-10) banks and firms with bank relationships. Panel B reports the results for big-10 banks and firms with bank relationships. Panel C reports the results for smaller (non-big-10) banks and firms without bank relationships. Panel D reports the results for big-10 banks and firms without bank relationships. *Log (PPP Loan Amount)* is winsorized at the 1^{st} and the 99^{th} percentiles.

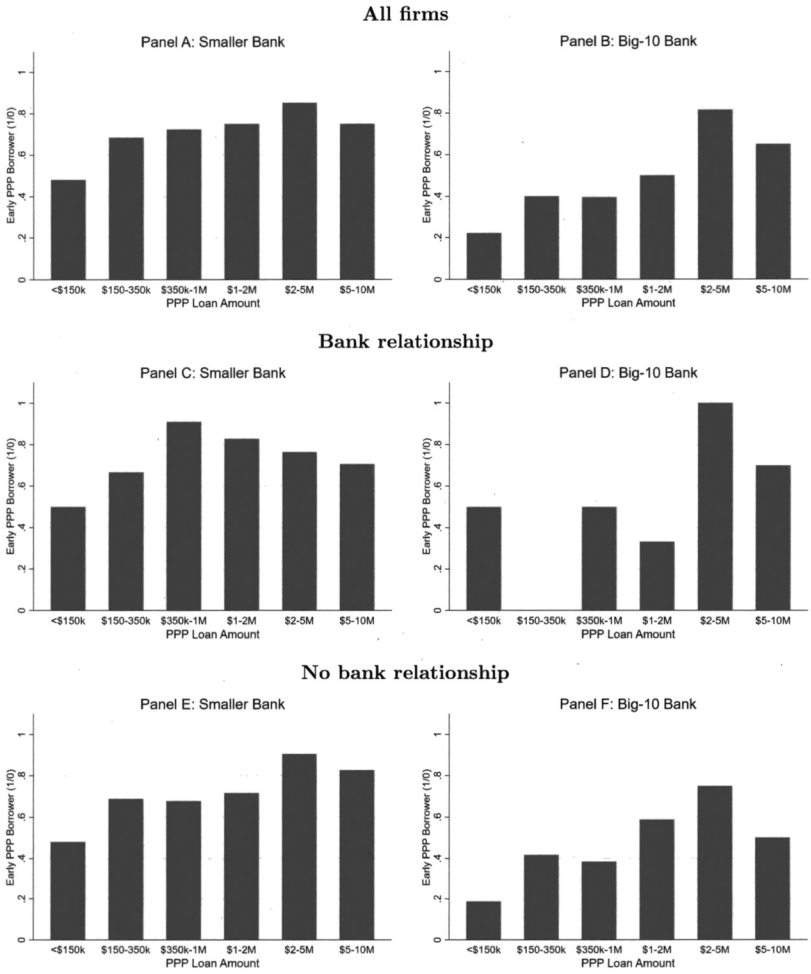


Figure 8. Probability of early PPP borrowing and PPP loan size by prior bank relationship. This figure plots the probability of borrowing early (i.e., in PPP Round 1) versus borrowing late (i.e., in PPP Round 2) for public PPP borrowers, by PPP loan size bin. Panel A reports the results for smaller (non-big-10) banks. Panel B reports the results for big-10 banks. Panel C reports the results for smaller (non-big-10) banks and firms with bank relationships. Panel D reports the results for big-10 banks and firms with bank relationships. Panel E reports the results for big-10 banks and firms without bank relationships. Panel F reports the results for smaller (non-big-10) banks and firms without bank relationships.

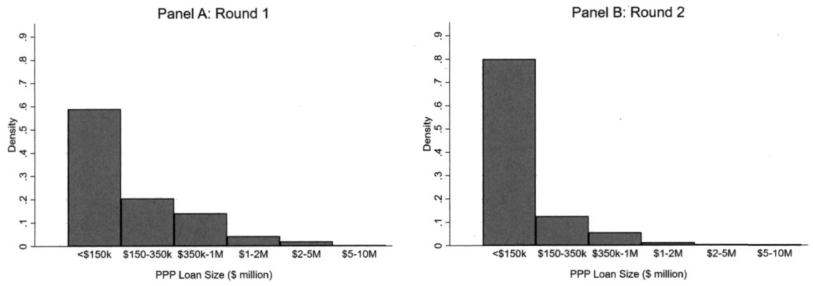


Figure 9. PPP loan size by PPP Round: SBA PPP data. This figure plots the density of PPP loan size for PPP Round 1 (before April 17, 2020) versus PPP Round 2 (after April 26, 2020). The sample is based on UCC–SBA PPP data and includes all PPP borrowers that are non-financial corporations. The results are similar if we include other types of businesses.

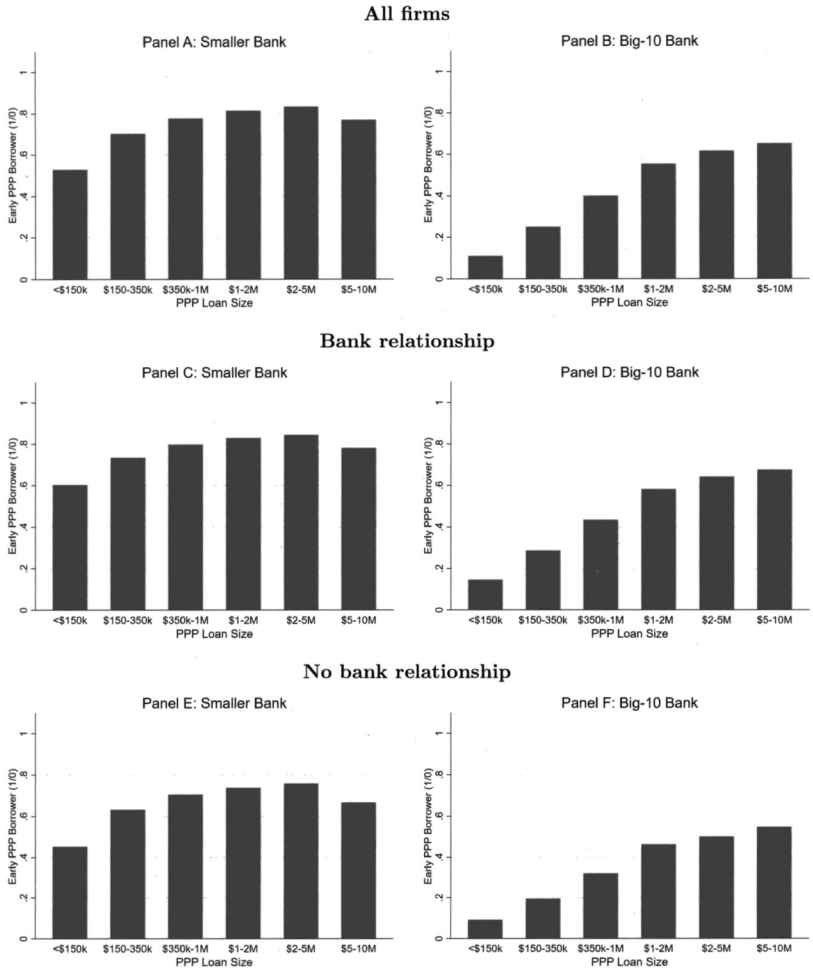


Figure 10. Probability of early PPP borrowing by prior bank relationship: SBA PPP data. This figure plots the probability of borrowing early (i.e., in PPP Round 1) versus borrowing late (i.e., in PPP Round 2) for PPP borrowers from the UCC–SBA PPP data, which we restrict to non-financial corporations, for comparability, by PPP loan size bin. Panel A reports the results for smaller (non-big-10) banks, with this category including non-bank lenders. Excluding non-bank lenders does not affect the results. Panel B reports the results for big-10 banks. Panel C reports the results for smaller (non-big-10) banks and firms with bank relationships. Panel D reports the results for big-10 banks and firms with bank relationships. Panel E reports the results for smaller (non-big-10) banks and firms without bank relationships. Panel F reports the results for big-10 banks and firms without bank relationships.

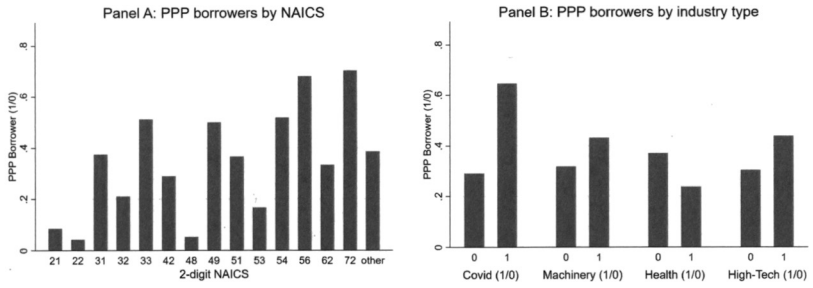


Figure 11. Public PPP borrowers by industry. This figure plots the share of PPP-eligible U.S. public companies that were granted a PPP loan, by NAICS (Panel A) and industry type (Panel B). We measure industry using 2-digit NAICS as follows: 21 = Mining, Quarrying, and Oil and Gas Extraction; 22 = Utilities; 31–33 = Manufacturing; 42 = Wholesale Trade; 48 = Transportation and Warehousing; 51 = Information; 53 = Real Estate and Rental and Leasing; 54 = Professional, Scientific, and Technical Services; 56 = Administrative and Support and Waste Management and Remediation Services; 62 = Health Care and Social Assistance; 71 = Arts, Entertainment, and Recreation; 72 = Accommodation and Food Services; and other = Other (except Public Administration).

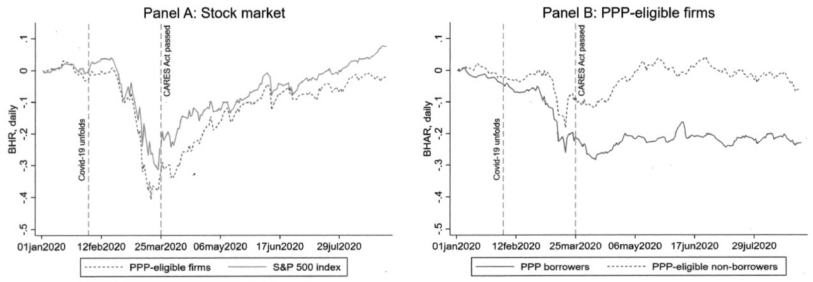


Figure 12. Evolution of PPP borrower returns: PPP applicants and control firms. This figure plots daily buy-and-hold average returns (BHRs) for PPP-eligible small public firms versus the S&P 500 index (Panel A) and buy-and-hold average abnormal returns (BHARs) for PPP borrowers versus PPP-eligible non-borrowers (Panel B), from January to August 2020. We define the abnormal return as the stock return over the S&P 500 return. We exclude penny stocks, which we define as stocks with an average share price of less than $5 in December 2019, because of illiquidity. BHAR is set to zero for the first trading day of the year, which is January 2, 2020.

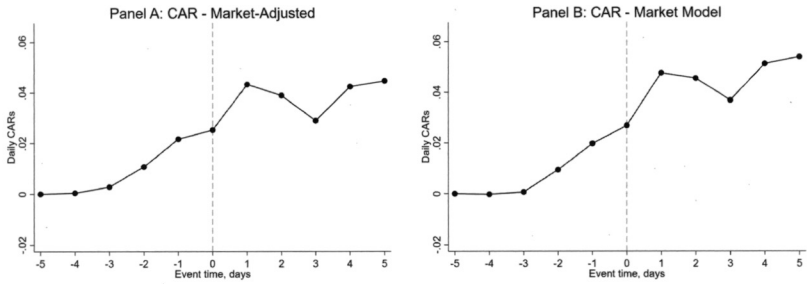


Figure 13. Cumulative abnormal returns (CARs) around PPP loan grant announcement dates. This figure plots daily CARs for PPP loan grant announcements. The abnormal return in Panel A is the stock return minus the S&P 500 return, where the abnormal return is set to zero for Day -5. The abnormal return in Panel B is calculated using the market model based on S&P 500 return, where the abnormal return is set to zero for Day -5. We exclude penny stocks, which we define as stocks with an average share price of less than $5 in December 2019.

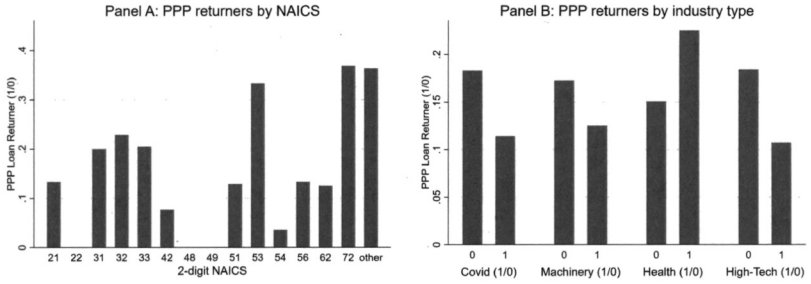


Figure 14. Firms that return PPP loans by industry. This figure plots the share of PPP borrowers that returned the PPP loans to the SBA, by NAICS (Panel A) and industry type (Panel B). See Fig. 11 for NAICS definitions.

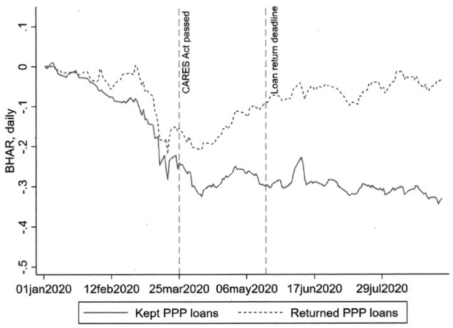


Figure 15. Evolution of PPP borrower stock returns: PPP returners and retainers. This figure plots daily buy-and-hold average abnormal returns (BHARs) for PPP returners versus retainers from January to August 2020, where the abnormal return is the stock return over the S&P 500 return. We exclude penny stocks, which we define as stocks with an average share price of less than $5 in December 2019, because of illiquidity. BHAR is set to zero for the first trading day of the year, which is January 2, 2020.

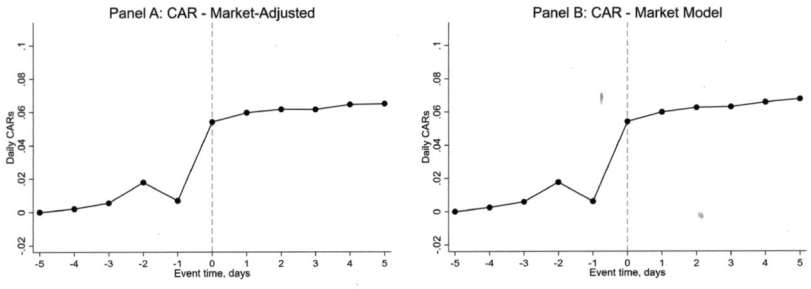


Figure 16. Cumulative abnormal returns (CARs) around PPP loan return announcement dates. This figure plots daily CARs for PPP loan return announcements. The abnormal return in Panel A is the stock return minus the S&P 500 return, where the abnormal return is set to zero for Day -5. The abnormal return in Panel B is calculated using the market model based on S&P 500 return, where the abnormal return is set to zero for Day -5. We exclude penny stocks, which we define as stocks with an average share price of less than $5 in December 2019.

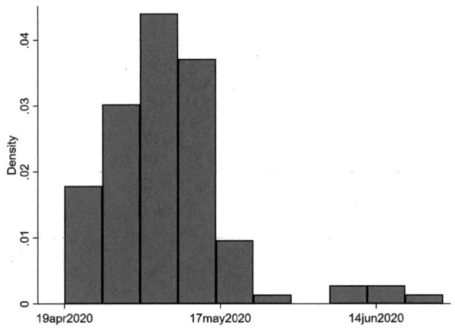


Figure 17. Density of PPP loan return announcement dates. This figure plots the density of announcement dates for returning PPP loans. We omit two announcement dates in August 2020, for the ease of exposition.

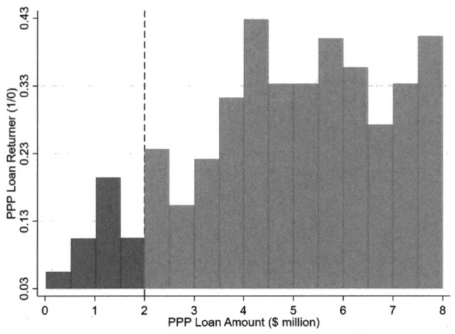


Figure 18. PPP loan return probability by loan size. This figure plots the probability of U.S. public borrowers returning PPP loans to the SBA, by PPP loan size bin. The vertical line is the loan amount of $2 million. We set PPP loan size equal to $8M for loans above $8M, for the ease of exposition.

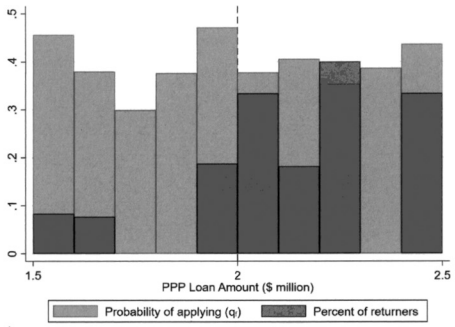


Figure 19. PPP loan return probability around the $2M loan size cutoff. This figure plots the probability of U.S. public borrowers returning PPP loans to the SBA, in the vicinity of the $2M loan size cutoff, above which the loans are subject to audit. We also plot the application probability of these firms around the cutoff. The vertical line is the loan amount of $2 million.

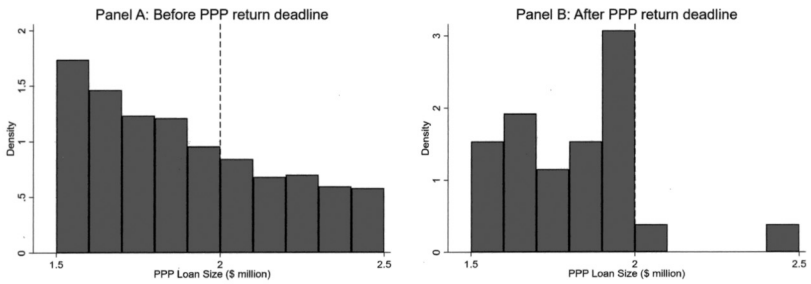


Figure 20. PPP applications around the $2M loan size cutoff: SBA PPP data. This figure plots densities of the PPP loan amount in the vicinity of the $2M loan size cutoff, above which the loans are subject to audit. The graph is based on the UCC–SBA PPP data, which we restrict to non-financial corporations, for comparability. Panel A reports the results for the period before the PPP loan return deadline on May 18, 2020. Panel B reports the results for the period after the PPP loan return deadline. The vertical line is the loan amount of $2 million.

Table 1
Full SBA PPP sample and UCC–SBA PPP sample

This table summarizes the number and the amount of PPP loans to all PPP recipients, by recipient type. Panel A reports statistics for the SBA's PPP data release in December 2020. Panel B reports statistics for the UCC–SBA PPP data.

	Number	Amount ($B)	Median	Mean
Recipient Type	(1)	(2)	(3)	(4)
Panel A: Full SBA data				
Corporation	1,498,552	207.97	41,120	138,782
LLC	1,455,353	135.25	25,000	92,935
Subchapter S	701,332	98.06	40,000	139,825
Non-Profit Organization	178,533	36.85	41,600	206,393
Sole Proprietorship	817,826	16.94	11,400	20,719
LLP	36,448	6.07	46,904	166,446
Independent Contractor	144,472	1.64	8,976	11,383
Other	324,334	20.16	15,200	62,153
Total	5,156,850	522.95	22,880	101,409
Panel B: UCC–SBA data				
Corporation	617,749	130.25	69,000	210,843
LLC	406,595	66.41	47,777	163,326
Subchapter S	247,101	60.19	80,352	243,565
Non-Profit Organization	45,705	22.90	152,500	501,119
Sole Proprietorship	84,297	4.22	20,000	50,066
LLP	14,509	3.68	76,500	253,362
Independent Contractor	2,692	0.08	13,945	30,415
Other	50,519	10.62	47,881	210,242
Total	1,469,167	298.34	59,920	203,070

Table 2
Public PPP borrower sample

Column (1) reports the number of observations at each stage of PPP borrower sample construction. Column (2) reports the respective numbers for firms that subsequently returned PPP loans to SBA.

	All PPP Borrowers	PPP Loan Returners
	(1)	(2)
1. Initial PPP borrower sample	739	123
2. Exclusions based on economic considerations:	57	6
Reason 1: Financial firm	57	6
Reason 2: Special purpose acquisition company (SPAC)	0	0
3. Final sample, including:	682	117
Matched to Compustat	586	113
Matched to Yahoo! Finance	663	117
Matched to SBA's PPP loan disclosures (Jul, Aug, or Dec)	538	17
Matched to Lender RSSD IDs (e.g., FDIC, FFIEC, NCUA)	623	92
Matched to DealScan & UCC	405	82
4. PPP announcements, including:	682	117
PPP announcements from 8-K filings	439	68
PPP announcements from 10-Qs, 10-Ks, and other sources	243	49
5. PPP borrowing disclosed after PPPFA	258	8

Table 3
Public and private PPP borrowers by PPP round

Columns (1) to (3) report the mean, median, and standard deviation of several financial characteristics of firms that obtained PPP loans in PPP Round 1. Columns (4) to (6) report the same statistics for firms that obtained PPP loans in PPP Round 2. Column (7) reports the number of observations and Column (8) reports p-values from a Wilcoxon rank sum test comparing early borrowers with late borrowers. In the case of discrete variables, the statistics are proportions and the p-values are for tests of the difference in proportions. Variables are defined in Internet Appendix Section IA.D. Continuous variables are winsorized at the 1^{st} and the 99^{th} percentiles.

	Early PPP borrowers			Late PPP borrowers			Difference tests	
	Mean	Median	SD	Mean	Median	SD	N	p-value
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Public PPP borrower sample								
Firm size								
PPP Loan Amount ($ million)	2.671	1.482	3.084	1.982	0.723	3.098	679	0.000
Book Value of Assets ($ million)	120.3	39.2	520.2	99.8	23.3	367.7	569	0.000
Market Cap ($ million)	115.4	41.6	282.6	101.4	24.6	297.1	561	0.000
Sales ($ million)	77.8	25.8	160.9	86.8	11.1	229.8	569	0.000
# Employees ('000)	0.254	0.109	0.380	0.217	0.061	0.359	561	0.000
Other financial characteristics								
Firm Age (years)	15.694	12.000	12.958	15.315	10.500	13.104	569	0.199
Book Equity <0 (1/0)	17.7%	—	—	32.1%	—	—	568	0.000
Tobin's Q	1.773	1.201	2.181	1.516	0.972	2.188	569	0.001
Sales Growth	0.617	0.032	3.484	0.468	0.002	2.536	511	0.571
Dividend Payer (1/0)	15.3%	—	—	13.6%	—	—	569	0.172
Current Ratio	2.651	1.876	2.872	2.551	1.407	4.150	568	0.002
Cash/Non-Cash Assets	1.086	0.237	3.353	1.086	0.215	2.730	569	0.587
Free Cash Flow/Assets	0.144	0.032	0.872	0.327	0.047	2.106	477	0.235
Financial constraints								
Has Credit Rating (1/0)	2.7%	—	—	2.6%	—	—	682	0.531
WW Index ≥ p75 (1/0)	72.4%	—	—	71.0%	—	—	406	0.857
SA Index ≥ p75 (1/0)	76.1%	—	—	79.5%	—	—	527	0.641
Leverage and distress								
Zero Debt (1/0)	8.6%	—	—	9.2%	—	—	569	0.410
Market Leverage	0.234	0.165	0.224	0.303	0.212	0.295	512	0.297
Interest Coverage <1.5 (1/0)	77.3%	—	—	80.1%	—	—	436	0.725
Altman Z-score <1.81 (1/0)	67.8%	—	—	71.2%	—	—	479	0.616
Distance-to-Default	2.743	2.368	2.075	2.534	1.960	2.030	409	0.087
Penny Stock (1/0)	72.4%	—	—	81.1%	—	—	561	0.222
Stock returns								
Covid Period Return	-0.322	-0.388	0.383	-0.309	-0.387	0.379	638	0.800
Stimulus Day Return	0.059	0.049	0.109	0.047	0.030	0.127	644	0.022
Panel B: Full SBA PPP sample and UCC–SBA PPP sample								
Full SBA data								
PPP Loan Size ($ million)	0.209	0.080	0.349	0.084	0.032	0.183	1,297,214	0.000
# Jobs ('000)	0.040	0.018	0.062	0.018	0.008	0.036	1,211,239	0.000
UCC–SBA data								
PPP Loan Size ($ million)	0.278	0.110	0.452	0.128	0.050	0.269	560,829	0.000
# Jobs ('000)	0.050	0.022	0.077	0.024	0.010	0.048	526,684	0.000

Table 4
Early PPP borrower propensity

This table reports the results from a linear regression in which the dependent variable is an indicator for public company receiving a PPP loan before April 17, 2020 when the PPP funds ran out and independent variables are company characteristics. Continuous variables are winsorized at the 1^{st} and the 99^{th} percentiles. Standard errors are clustered at the industry level, defined as 2-digit NAICS, where we combine industries with few PPP-eligible companies into one bucket. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively. t-statistics are presented in parentheses.

	Dependent variable = Early PPP Borrower (1/0)		
	(1)	(2)	(3)
Log (Assets)	0.0338**	0.0325**	0.0370**
	(2.48)	(2.20)	(2.74)
Log (Age)	0.00373	0.00412	0.00353
	(0.12)	(0.13)	(0.11)
Book Equity <0 (1/0)	-0.141***	-0.132**	-0.127**
	(-3.05)	(-2.73)	(-2.54)
Tobin's Q	-0.00162	-0.000765	0.00448
	(-0.08)	(-0.04)	(0.24)
Current Ratio	-0.00537	-0.00510	-0.00611
	(-1.00)	(-0.93)	(-1.14)
Cash/Non-Cash Assets	0.00417	0.00385	0.00429
	(1.51)	(1.38)	(1.57)
Penny Stock (1/0)	-0.0414	-0.0432	-0.0115
	(-0.71)	(-0.73)	(-0.21)
Covid Industry (1/0)		0.00389	0.0112
		(0.06)	(0.14)
Machinery Industry (1/0)		0.140*	0.152*
		(1.80)	(2.07)
Health Industry (1/0)		-0.00694	-0.0196
		(-0.19)	(-0.49)
High-Tech Industry (1/0)		-0.0494	-0.0513
		(-1.11)	(-1.22)
Covid Period Return			-0.161
			(-1.61)
Covid Period Return × Penny Stock (1/0)			0.191*
			(2.08)
Stimulus Day Return			-0.590
			(-1.49)
Stimulus Day Return × Penny Stock (1/0)			0.570
			(1.59)
# obs.	543	543	535
Adjusted R^2	0.0321	0.0291	0.0256

Table 5
Early versus late PPP access, small versus big banks, and bank relationships

This table compares the size of early versus late PPP borrowers that obtained a PPP loan through one of big-10 banks (*Big-10 Bank*) versus other banks (*Smaller Bank*). Panel A reports the results for all firms. Panel B reports the results for firms with prior bank relationships. Panel C reports the results for firms without prior bank relationships. We classify the following banks as big-10 banks: JPMorgan Chase Bank, Wells Fargo Bank, Bank of America, Citibank, U.S. Bank, Truist Bank, PNC Bank, Bank of New York, State Street Corporation, and TD Bank. Columns (1) to (2) report means and medians of the size variable for firms that obtained PPP loans in PPP Round 1 (i.e., early PPP borrowers). Columns (3) to (4) report the respective means and medians for PPP Round 2 (i.e., late PPP borrowers). Column (5) reports the number of observations and Column (6) reports p-values from a Wilcoxon rank sum test comparing early borrowers with late borrowers. Continuous variables are winsorized at the 1^{st} and the 99^{th} percentiles.

	Early PPP borrowers		Late PPP borrowers		Difference tests	
	mean	median	mean	median	N	p-value
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: All firms						
Smaller banks						
Book Value of Assets	82.402	36.385	86.682	26.979	372	0.093
PPP Loan Amount	2.468	1.404	2.216	0.862	440	0.004
Big-10 banks						
Book Value of Assets	144.158	55.110	61.366	18.625	153	0.000
PPP Loan Amount	3.428	2.220	1.848	0.588	179	0.000
Panel B: Bank relationship						
Smaller banks						
Book Value of Assets	118.763	43.079	178.308	94.652	125	0.119
PPP Loan Amount	3.577	2.124	5.267	3.558	137	0.138
Big-10 banks						
Book Value of Assets	247.562	161.465	151.072	68.755	48	0.158
PPP Loan Amount	6.069	5.533	4.428	1.639	53	0.150
Panel C: No bank relationship						
Smaller banks						
Book Value of Assets	64.317	34.813	37.709	14.878	247	0.000
PPP Loan Amount	1.932	1.054	1.091	0.681	303	0.000
Big-10 banks						
Book Value of Assets	80.047	37.745	33.638	11.947	105	0.003
PPP Loan Amount	1.880	1.087	1.127	0.464	126	0.001

Table 6
Early PPP access, lender effects, and bank relationships

This table reports the results from a linear regression in which the dependent variable is an indicator for an early public PPP borrower. An early borrower is a company receiving a PPP loan before April 17, 2020. The size variable is *Book Value of Assets* in Panel A and *PPP Loan Amount* in Panel B. *Smaller Bank (1/0)* is a dummy for PPP lender being a non-big-10 bank. We classify the following banks as big-10 banks: JPMorgan Chase Bank, Wells Fargo Bank, Bank of America, Citibank, U.S. Bank, Truist Bank, PNC Bank, Bank of New York, State Street Corporation, and TD Bank. Continuous variables are winsorized at the 1^{st} and the 99^{th} percentiles. Standard errors are clustered at the industry level, defined as 2-digit NAICS, where we combine industries with few PPP-eligible companies into one bucket. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively. t-statistics are presented in parentheses. Constants are omitted for brevity. Continuous variables are winsorized at the 1^{st} and the 99^{th} percentiles.

	Dependent variable = Early PPP Borrower (1/0)					
	All firms		Bank relationship		No bank relationship	
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Firm size						
Log (Assets) × Smaller Bank (1/0)	-0.0547**	-0.0583**	-0.0960*	-0.120**	-0.0224*	-0.0209
	(-2.22)	(-2.63)	(-2.07)	(-2.38)	(-1.80)	(-1.65)
Log (Assets)	0.0875***	0.0692***	0.0752**	0.0540	0.0880***	0.0795***
	(5.22)	(3.04)	(2.51)	(1.18)	(7.52)	(4.15)
Smaller Bank (1/0)	0.421***	0.429***	0.538**	0.651**	0.338***	0.319***
	(4.10)	(4.70)	(2.68)	(2.61)	(4.25)	(4.57)
Firm Characteristics	No	Yes	No	Yes	No	Yes
Penny Stock Dummy	No	Yes	No	Yes	No	Yes
Industry Dummies	No	Yes	No	Yes	No	Yes
Returns Controls	No	Yes	No	Yes	No	Yes
# obs.	525	493	173	167	352	326
Adjusted R^2	0.0884	0.0705	0.0131	0.0415	0.132	0.0941
Panel B: PPP loan size						
Log (PPP Loan Size) × Smaller Bank (1/0)	-0.00813	-0.0297*	-0.0438	-0.103**	0.0231	0.0126
	(-0.38)	(-1.77)	(-0.80)	(-2.98)	(1.39)	(0.55)
Log (PPP Loan Size)	0.0664**	0.0602**	0.0360	0.0518	0.0750***	0.0763***
	(2.54)	(2.43)	(0.68)	(0.92)	(3.22)	(3.02)
Smaller Bank (1/0)	0.260**	0.333***	0.303	0.581**	0.199**	0.221**
	(2.58)	(4.22)	(1.16)	(2.87)	(2.66)	(2.90)
Firm Characteristics	No	Yes	No	Yes	No	Yes
Penny Stock Dummy	No	Yes	No	Yes	No	Yes
Industry Dummies	No	Yes	No	Yes	No	Yes
Returns Controls	No	Yes	No	Yes	No	Yes
# obs.	525	493	173	167	352	326
Adjusted R^2	0.0760	0.0672	0.00146	0.0408	0.127	0.0956

Table 7
Early PPP access and bank relationships:
SBA PPP data

This table reports the results from a linear regression in which the dependent variable is an indicator for an early PPP borrower. The sample is the UCC–SBA PPP dataset. An early borrower is a company receiving a PPP loan before April 17, 2020. Column 1 estimated the regression based on all firms in the dataset. Columns 2 (3) use the subsample of firms with (without) a bank relationship before the PPP. A firm has a bank relationship if it is recorded as having a security interest filing under UCC between 2015 and 2019. *Log (PPP Loan Size)* is the natural logarithm of the PPP loan size from the SBA PPP data, which we restrict to non-financial corporations, for comparability. *Smaller Bank (1/0)* is a dummy for PPP lender being a non-big-10 bank. We classify the following banks as big-10 banks: JPMorgan Chase Bank, Wells Fargo Bank, Bank of America, Citibank, U.S. Bank, Truist Bank, PNC Bank, Bank of New York, State Street Corporation, and TD Bank. Continuous variables are winsorized at the 1^{st} and the 99^{th} percentiles. Standard errors are clustered at the industry level, defined as 2-digit NAICS, where we combine industries with few PPP-eligible companies into one bucket. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively. t-statistics are presented in parentheses. Constants are omitted for brevity. Continuous variables are winsorized at the 1^{st} and the 99^{th} percentiles.

	Dependent variable = Early PPP Borrower (1/0)		
	All firms	Bank relationship	No bank relationship
	(1)	(2)	(3)
Log (PPP Loan Size) × Smaller Bank (1/0)	0.0262***	-0.00510	0.0488***
	(6.73)	(-1.58)	(12.85)
Log (PPP Loan Size)	0.0784***	0.0976***	0.0543***
	(22.10)	(33.60)	(12.99)
Smaller Bank (1/0)	0.357***	0.303***	0.403***
	(34.71)	(39.89)	(37.63)
NAICS-6 FEs	Yes	Yes	Yes
ZIP-5 FEs	Yes	Yes	Yes
# obs.	549,390	298,842	244,967
Adjusted R^2	0.284	0.254	0.266

Table 8
Early PPP access and Applying Through Relationship Bank
SBA PPP data

This table reports the results from linear regression in which the dependent variable is an indicator for an early PPP borrower. The sample includes all firms in the UCC–SBA PPP data that have a bank relationships before the PPP. A firm has a bank relationship if it is recorded as having a security interest filing under UCC between 2015 and 2019. An early borrower is a company receiving a PPP loan before April 17, 2020. *Relationship Bank PPP* is a dummy variable for whether the firm applies through its relationship bank. *Small Bank Relationship* is a dummy variable for whether the firm had a relationship with a small bank. We classify the following banks as big-10 banks: JPMorgan Chase Bank, Wells Fargo Bank, Bank of America, Citibank, U.S. Bank, Truist Bank, PNC Bank, Bank of New York, State Street Corporation, and TD Bank. Standard errors are clustered at the industry level, defined as 2-digit NAICS, where we combine industries with few PPP-eligible companies into one bucket. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively. t-statistics are presented in parentheses. Constants are omitted for brevity. Continuous variables are winsorized at the 1^{st} and the 99^{th} percentiles.

	Dependent variable = Early PPP Borrower (1/0)		
	(1)	(2)	(3)
Relationship Bank PPP (1/0)	0.0950***		-0.102***
	(17.38)		(-13.97)
Small Bank Relationship (1/0)		0.213***	0.0971***
		(32.29)	(16.14)
Relationship Bank PPP (1/0) × Small Bank Relationship (1/0)			0.242***
			(47.74)
NAICS-6 FEs	Yes	Yes	Yes
ZIP-5 FEs	Yes	Yes	Yes
# obs.	298,842	298,842	298,842
Adjusted R^2	0.150	0.169	0.186

Table 9
Publicly listed PPP applicants and control firms

Columns (1) to (3) report the mean, median, and standard deviation of several financial characteristics of firms that applied for PPP loans. Columns (4) to (6) report the same statistics for the control group of firms with fewer than 500 employees reported in COMPUSTAT that did not apply for the PPP. Column (7) reports the number of observations and Column (8) reports p-values from a Wilcoxon rank sum test comparing applicants with non-applicants. In the case of discrete variables, the statistics are proportions and the p-values are for tests of the difference in proportions. Continuous variables are winsorized at the 1^{st} and the 99^{th} percentiles.

	PPP borrowers (N=682)			Non-applicants (N=1,452)			Difference tests	
	Mean	Median	SD	Mean	Median	SD	N	p-value
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Firm size								
PPP Loan Amount ($ million)	2.434	1.139	3.104	—	—	—	679	—
Book Value of Assets ($ million)	113.7	34.8	476.0	526.3	84.7	1,503.0	2,021	0.000
Market Cap ($ million)	110.9	35.9	287.1	487.8	118.7	951.6	1,947	0.000
Sales ($ million)	80.7	22.9	185.8	120.8	13.0	299.2	2,021	0.000
# Employees ('000)	0.242	0.090	0.373	0.116	0.059	0.132	2,013	0.000
Other financial characteristics								
Firm Age (years)	15.571	12.000	12.995	9.873	7.000	9.740	2,021	0.000
Book Equity <0 (1/0)	22.4%	—	—	15.9%	—	—	2,019	0.000
Tobin's Q	1.690	1.140	2.185	2.592	1.333	3.875	2,021	0.000
Sales Growth	0.570	0.024	3.216	0.672	0.037	3.176	1,545	0.845
Dividend Payer (1/0)	14.8%	—	—	14.3%	—	—	2,021	0.546
Current Ratio	2.619	1.692	3.337	5.017	2.451	7.207	2,004	0.000
Cash/Non-Cash Assets	1.086	0.233	3.162	3.501	0.400	7.733	2,007	0.000
Free Cash Flow/Assets	0.203	0.033	1.392	0.392	0.011	2.750	1,682	0.000
Financial constraints								
Has Credit Rating (1/0)	2.6%	—	—	5.7%	—	—	2,134	0.000
WW Index $\geq$ p75 (1/0)	71.9%	—	—	46.5%	—	—	1,262	0.000
SA Index $\geq$ p75 (1/0)	77.2%	—	—	72.7%	—	—	1,872	0.248
Leverage and distress								
Zero Debt (1/0)	8.8%	—	—	15.5%	—	—	2,018	0.000
Market Leverage	0.256	0.178	0.251	0.228	0.100	0.270	1,682	0.000
Interest Coverage <1.5 (1/0)	78.2%	—	—	76.8%	—	—	1,457	0.749
Altman Z-score <1.81 (1/0)	68.9%	—	—	61.0%	—	—	1,623	0.030
Distance-to-Default	2.685	2.254	2.062	3.713	3.137	2.486	961	0.000
Penny Stock (1/0)	75.2%	—	—	59.5%	—	—	1,948	0.000
Stock returns								
Covid Period Return	-0.318	-0.387	0.381	-0.327	-0.361	0.310	2,028	0.136
Stimulus Day Return	0.055	0.042	0.116	0.058	0.049	0.103	2,042	0.078

Table 10
PPP borrowing propensity

This table reports the results from a linear probability (OLS) model where the dependent variable is an indicator for public company receiving a PPP loan and independent variables are company characteristics. Continuous variables are winsorized at the 1^{st} and the 99^{th} percentiles. Standard errors are clustered at the industry level, defined as 2-digit NAICS, where we combine industries with few PPP-eligible companies into one bucket. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively. t-statistics are presented in parentheses.

	Dependent variable = PPP Borrower (1/0)		
	(1)	(2)	(3)
Log (Assets)	-0.0350***	-0.0268***	-0.0255**
	(-3.81)	(-4.10)	(-2.86)
Log (Age)	0.0635***	0.0639***	0.0646**
	(3.45)	(3.09)	(2.88)
Book Equity <0 (1/0)	-0.0602	-0.0606	-0.0635
	(-1.53)	(-1.45)	(-1.48)
Tobin's Q	-0.0134***	-0.0126***	-0.0128***
	(-4.70)	(-4.19)	(-3.74)
Current Ratio	-0.00725***	-0.00642***	-0.00622***
	(-3.78)	(-3.37)	(-3.28)
Cash/Non-Cash Assets	-0.00558***	-0.00578***	-0.00556**
	(-3.67)	(-3.05)	(-2.77)
Penny Stock (1/0)	0.00162	0.0114	0.0728
	(0.03)	(0.30)	(1.66)
Covid Industry (1/0)		0.331**	0.334**
		(2.82)	(2.88)
Machinery Industry (1/0)		0.127	0.134
		(1.07)	(1.03)
Health Industry (1/0)		0.0510	0.0502
		(0.46)	(0.44)
High-Tech Industry (1/0)		0.134	0.144
		(1.13)	(1.23)
Covid Period Return			-0.129
			(-1.56)
Covid Period Return × Penny Stock (1/0)			0.157*
			(2.06)
Stimulus Day Return			0.158
			(0.39)
Stimulus Day Return × Penny Stock (1/0)			0.124
			(0.33)
# obs.	1,797	1,797	1,762
Adjusted R^2	0.0798	0.111	0.114

Table 11
PPP loan grant announcement effects

This table reports the results from a event study analysis where the dependent variable is the company's stock return measured as stock return minus S&P 500 return (Panel A) or abnormal stock return calculated using the market model based on S&P 500 return (Panel B). The key independent variable *Day* is an indicator for the treading day relative to the PPP loan grant announcement date, *Day 0* (e.g., 8-K filing, press release). The time period is from Day -60 to Day +1. The estimation window for the market model is Day -270 to Day -61. The day count excludes non-trading days (e.g., weekends, holidays). Continuous variables are winsorized at the 1^{st} and the 99^{th} percentiles. Standard errors are clustered at the trading day level. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively. t-statistics are presented in parentheses.

	Panel A: Market-adjusted			Panel B: Market model		
	Day -1	Day 0	Day +1	Day -1	Day 0	Day +1
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: All observations						
Across firms						
Abnormal return	0.0112**	0.00307	0.00194	0.0114***	0.00533	0.00530
t-statistic	(2.43)	(0.64)	(0.39)	(2.88)	(1.15)	(1.28)
Within firms						
Abnormal return	0.0112**	0.00309	0.00195	0.0114***	0.00534	0.00531
t-statistic	(2.42)	(0.63)	(0.38)	(2.88)	(1.12)	(1.28)
Panel B: Only 8-K filings						
Across firms						
Abnormal return	0.0159***	0.00431	0.00676	0.0157***	0.00652	0.00850
t-statistic	(3.68)	(0.74)	(1.26)	(3.97)	(1.14)	(1.66)
Within firms						
Abnormal return	0.0159***	0.00435	0.00680	0.0158***	0.00656	0.00853*
t-statistic	(3.70)	(0.74)	(1.28)	(3.98)	(1.13)	(1.70)
Panel C: Only 8-K filings & non-penny stocks						
Across firms						
Abnormal return	0.0175***	0.00741	0.0106	0.0165***	0.0108	0.0122
t-statistic	(3.22)	(0.97)	(1.43)	(2.88)	(1.25)	(1.61)
Within firms						
Abnormal return	0.0175***	0.00742	0.0106	0.0165***	0.0108	0.0122
t-statistic	(3.23)	(0.98)	(1.39)	(2.95)	(1.24)	(1.57)

Table 12
Public PPP returners versus retainers

Columns (1) to (3) report the mean, median, and standard deviation of several financial characteristics of firms that returned PPP loans to SBA. Columns (4) to (6) report the same statistics for firms that retained PPP loans. Column (7) reports the number of observations and Column (8) reports p-values from a Wilcoxon rank sum test comparing returners with retainers. In the case of discrete variables, the statistics are proportions and the p-values are for tests of the difference in proportions. Continuous variables are winsorized at the 1^{st} and the 99^{th} percentiles.

	Returned PPP loan (N=117)			Retained PPP loan (N=565)			Difference tests	
	Mean	Median	SD	Mean	Median	SD	N	p-value
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Firm size								
PPP Loan Amount ($ million)	4.430	3.330	4.105	2.023	0.956	2.681	679	0.000
Book Value of Assets ($ million)	288.4	86.0	1,032.0	71.4	27.7	126.7	569	0.000
Market Cap ($ million)	276.1	118.0	565.1	71.0	28.2	133.0	561	0.000
Sales ($ million)	159.1	49.6	321.5	61.7	19.2	127.2	569	0.000
# Employees ('000)	0.390	0.215	0.467	0.206	0.077	0.337	561	0.000
Other financial characteristics								
Firm Age (years)	17.441	13.000	14.627	15.118	11.000	12.544	569	0.327
Book Equity <0 (1/0)	11.7%	—	—	24.9%	—	—	568	0.000
Tobin's Q	2.085	1.432	2.693	1.594	1.063	2.035	569	0.000
Sales Growth	0.464	0.070	2.695	0.597	0.011	3.337	511	0.018
Dividend Payer (1/0)	24.3%	—	—	12.4%	—	—	569	0.000
Current Ratio	3.845	2.548	4.814	2.321	1.504	2.793	568	0.000
Cash/Non-Cash Assets	1.131	0.405	2.050	1.075	0.211	3.379	569	0.003
Free Cash Flow/Assets	0.137	0.017	1.115	0.218	0.043	1.449	477	0.152
Financial constraints								
Has Credit Rating (1/0)	6.0%	—	—	1.9%	—	—	682	0.000
WW Index $\geq$ p75 (1/0)	51.3%	—	—	76.7%	—	—	406	0.001
SA Index $\geq$ p75 (1/0)	62.7%	—	—	80.7%	—	—	527	0.015
Leverage and distress								
Zero Debt (1/0)	12.6%	—	—	7.9%	—	—	569	0.000
Market Leverage	0.187	0.118	0.199	0.272	0.199	0.259	512	0.003
Interest Coverage <1.5 (1/0)	61.5%	—	—	81.8%	—	—	436	0.014
Altman Z-score <1.81 (1/0)	48.3%	—	—	73.6%	—	—	479	0.000
Distance-to-Default	3.807	3.043	2.349	2.336	1.953	1.834	409	0.000
Penny Stock (1/0)	53.2%	—	—	80.5%	—	—	561	0.000
Stock returns								
Covid Period Return	-0.332	-0.384	0.362	-0.315	-0.388	0.386	638	0.823
Stimulus Day Return	0.070	0.065	0.091	0.052	0.036	0.120	644	0.020
PPP Grant Abnormal Return	0.031	0.017	0.108	0.021	0.001	0.127	646	0.151

Table 13
PPP loan return propensity

This table reports the results from a linear probability (OLS) model where the dependent variable is an indicator for public company returning a PPP loan to the SBA and independent variables are company characteristics. Continuous variables are winsorized at the 1^{st} and the 99^{th} percentiles. Standard errors are clustered at the industry level, defined as 2-digit NAICS, where we combine industries with few PPP-eligible companies into one bucket. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively. t-statistics are presented in parentheses.

	Dependent variable = PPP Loan Returner (1/0)		
	(1)	(2)	(3)
Log (Assets)	0.0560***	0.0540***	0.0563***
	(4.44)	(4.36)	(3.99)
Log (Age)	-0.00962	-0.00134	-0.00225
	(-0.78)	(-0.10)	(-0.18)
Book Equity <0 (1/0)	0.0311	0.0226	0.0206
	(0.56)	(0.45)	(0.45)
Tobin's Q	0.0121***	0.00826**	0.00696*
	(3.68)	(2.47)	(1.83)
Current Ratio	0.0168***	0.0158***	0.0163***
	(3.50)	(3.11)	(3.25)
Cash/Non-Cash Assets	0.000876	-0.000548	0.000252
	(0.21)	(-0.12)	(0.05)
Penny Stock (1/0)	-0.112**	-0.122**	-0.214*
	(-2.22)	(-2.74)	(-2.09)
Covid Industry (1/0)		-0.0309	-0.0318
		(-1.35)	(-1.24)
Machinery Industry (1/0)		-0.0695**	-0.0813**
		(-2.56)	(-2.38)
Health Industry (1/0)		0.0814**	0.0836**
		(2.30)	(2.65)
High-Tech Industry (1/0)		-0.0367	-0.0362
		(-1.48)	(-1.25)
Covid Period Return			0.297**
			(2.65)
Covid Period Return × Penny Stock (1/0)			-0.239
			(-1.70)
Stimulus Day Return			0.140
			(0.44)
Stimulus Day Return × Penny Stock (1/0)			-0.157
			(-0.60)
PPP Grant Abnormal Return			0.158
			(0.36)
PPP Grant Abnormal Return × Penny Stock (1/0)			0.0424
			(0.08)
# obs.	543	543	535
Adjusted R^2	0.110	0.116	0.118

Table 14
PPP loan return announcement effects

This table reports the results from a event study analysis where the dependent variable is the company's stock return measured as stock return minus S&P 500 return (Panel A) or abnormal stock return calculated using the market model based on S&P 500 return (Panel B). The key independent variable *Day* is an indicator for the treading day relative to the PPP loan return announcement date, *Day 0* (e.g., 8-K filing, press release). The time period is from Day -60 to Day 1. The estimation window for the market model is Day -270 to Day -61. The day count excludes non-trading days (e.g., weekends, holidays). Continuous variables are winsorized at the 1^{st} and the 99^{th} percentiles. Standard errors are clustered at the trading day level. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively. t-statistics are presented in parentheses.

	Panel A: Market-adjusted			Panel B: Market model		
	Day -1	Day 0	Day +1	Day -1	Day 0	Day +1
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: All observations						
Across firms						
Abnormal return	-0.00662	0.0256***	0.00395	-0.00742	0.0263***	0.00409
t-statistic	(-1.08)	(3.23)	(0.56)	(-1.15)	(3.23)	(0.56)
Within firms						
Abnormal return	-0.00659	0.0256***	0.00386	-0.00740	0.0263***	0.00410
t-statistic	(-1.05)	(3.32)	(0.54)	(-1.12)	(3.35)	(0.56)
Panel B: Only 8-K filings						
Across firms						
Abnormal return	-0.00983	0.0294***	0.00273	-0.0116	0.0308***	0.00162
t-statistic	(-1.29)	(2.97)	(0.34)	(-1.46)	(3.04)	(0.18)
Within firms						
Abnormal return	-0.00983	0.0294***	0.00273	-0.0116	0.0308***	0.00162
t-statistic	(-1.25)	(3.12)	(0.33)	(-1.42)	(3.22)	(0.18)
Panel C: Only 8-K filings & non-penny stocks						
Across firms						
Abnormal return	-0.0108	0.0281***	0.00455	-0.0132	0.0300***	0.00384
t-statistic	(-1.35)	(2.67)	(0.35)	(-1.48)	(2.68)	(0.28)
Within firms						
Abnormal return	-0.0108	0.0281***	0.00455	-0.0132	0.0300***	0.00384
t-statistic	(-1.28)	(2.72)	(0.35)	(-1.43)	(2.71)	(0.29)

Table 15
PPP loan return, loan size, and $2M loan size cutoff

This table reports the results from a linear probability (OLS) model where the dependent variable is an indicator for public company returning a PPP loan to the SBA and independent variables are the natural logarithm of PPP loan amount, an indicator for loan amount above $2 million, and company characteristics. Continuous variables are winsorized at the 1^{st} and the 99^{th} percentiles. Standard errors are clustered at the industry level, defined as 2-digit NAICS, where we combine industries with few PPP-eligible companies into one bucket. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively. t-statistics are presented in parentheses.

	Dependent variable = PPP Loan Returner (1/0)		
	(1)	(2)	(3)
Log (PPP Loan Amount)	0.0751***	0.0489**	0.0449
	(7.22)	(2.74)	(1.63)
Above $2M (1/0)		0.0885*	0.00473
		(1.82)	(0.08)
Log (PPP Loan Amount)^2			0.0208**
			(2.76)
Firm Characteristics	No	No	Yes
Penny Stock Dummy	No	No	Yes
Industry Dummies	No	No	Yes
Returns Controls	No	No	Yes
# obs.	568	568	534
Adjusted R^2	0.0600	0.0628	0.127

Internet Appendix to "Small Bank Financing and Funding Hesitancy in a Crisis: Evidence from the Paycheck Protection Program"

NOT FOR PUBLICATION

Section IA.A: Supplementary Graphs and Tables

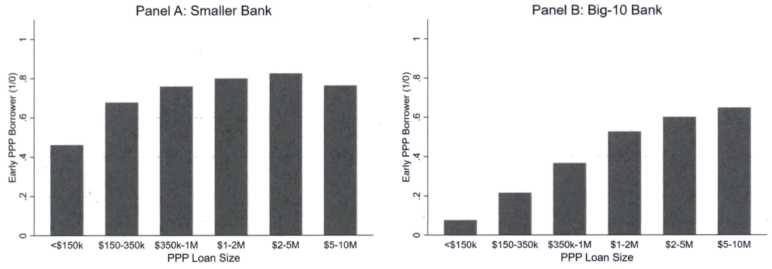


Figure IA.1. Probability of early PPP borrowing: small versus big banks – Full SBA data. This figure plots the probability of borrowing early (i.e., in PPP Round 1) versus borrowing late (i.e., in PPP Round 2) for PPP borrowers from the SBA's PPP data release in December 2020, which we restrict to non-financial corporations, for comparability, by PPP loan size bin. Panel A reports the results for smaller (non-big-10) banks, with this category including non-bank lenders. Excluding non-bank lenders does not affect the results. Panel B reports the results for big-10 banks.

Table IA.1
Matching statistics: DealScan and UCC

Columns (1) to (3) report the mean, median, and standard deviation of several financial characteristics of firms that we were able to match to DealScan. Columns (4) to (6) report the same statistics for firms that we were able to match to UCC and Columns (7) to (9) report the same statistics for unmatched firms. In the case of discrete variables, the statistics are proportions. Continuous variables are winsorized at the 1^{st} and the 99^{th} percentiles.

	Matched to DealScan (N=231)			Matched to UCC (N=301)			Unmatched (N=277)		
	Mean	Median	SD	Mean	Median	SD	Mean	Median	SD
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Panel A: Firm size									
PPP Loan Amount ($ million)	4.106	2.651	3.834	3.278	1.900	3.527	1.233	0.564	1.844
Book Value of Assets ($ million)	154.5	62.1	209.7	116.0	48.9	182.8	45.8	17.6	78.1
Market Cap ($ million)	119.1	41.9	206.1	126.1	39.7	220.9	65.4	31.5	98.6
Sales ($ million)	136.8	65.4	183.9	103.8	34.5	170.5	29.5	6.2	82.4
# Employees ('000)	0.629	0.230	1.178	0.456	0.150	0.977	0.097	0.042	0.159
Panel B: Other financial characteristics									
Firm Age (years)	22.846	23.000	13.631	16.936	13.000	13.791	10.681	7.500	10.105
Book Equity <0 (1/0)	15.0%	—	—	20.7%	—	—	27.6%	—	—
Tobin's Q	1.252	1.066	1.204	1.614	1.128	1.847	1.847	1.177	2.311
Sales Growth	0.154	-0.011	1.710	0.316	0.026	1.779	1.289	0.036	5.477
Dividend Payer (1/0)	22.0%	—	—	14.2%	—	—	10.0%	—	—
Current Ratio	2.330	1.683	2.078	2.381	1.662	2.279	2.761	1.712	3.134
Cash/Non-Cash Assets	0.484	0.104	1.555	0.833	0.163	2.161	1.360	0.383	2.338
Free Cash Flow/Assets	0.098	0.029	0.442	0.099	0.033	0.608	0.259	0.040	1.086
Panel C: Financial constraints									
Has Credit Rating (1/0)	7.4%	—	—	5.0%	—	—	0.4%	—	—
WW Index $\geq$ p75 (1/0)	60.5%	—	—	66.5%	—	—	79.7%	—	—
SA Index $\geq$ p75 (1/0)	51.8%	—	—	70.5%	—	—	93.5%	—	—
Panel D: Leverage and distress									
Zero Debt (1/0)	9.3%	—	—	7.5%	—	—	10.0%	—	—
Market Leverage	0.326	0.278	0.264	0.304	0.245	0.267	0.186	0.100	0.227
Interest Coverage <1.5 (1/0)	67.6%	—	—	77.1%	—	—	86.4%	—	—
Altman Z-score <1.81 (1/0)	56.4%	—	—	66.4%	—	—	78.3%	—	—
Distance-to-Default	2.676	2.370	1.840	2.632	2.305	2.019	2.703	2.054	1.963
Penny Stock (1/0)	65.4%	—	—	72.7%	—	—	83.9%	—	—
Panel E: Stock returns									
Covid Period Return	-0.331	-0.408	0.408	-0.326	-0.398	0.391	-0.280	-0.371	0.466
Stimulus Day Return	0.066	0.052	0.110	0.066	0.057	0.121	0.044	0.016	0.131
PPP Grant Abnormal Return	0.016	0.002	0.108	0.022	0.006	0.122	0.028	0.004	0.135

Table IA.2
Early PPP access and lender effects

This table reports the results from a multinomial logit model for public PPP recipients where the dependent variable is a categorical variable for the intersection between a bank type (big-10 bank versus smaller bank) and borrower type (early versus late PPP borrower). The independent variable is firm size (Panel A) and the PPP loan size (Panel B). The dependent variable *Bank Type–Borrower Type Category (Y)* takes the value of 3 for smaller (non-big-10) bank and early PPP borrower, 2 for smaller bank and late PPP borrower, 1 for big-10 bank and early PPP borrower, and 0 for big-10 bank and late PPP borrower. We classify the following banks as big-10 banks: JPMorgan Chase Bank, Wells Fargo Bank, Bank of America, Citibank, U.S. Bank, Truist Bank, PNC Bank, Bank of New York, State Street Corporation, and TD Bank. An early borrower is a public company receiving a PPP loan before April 17, 2020. Continuous variables are winsorized at the 1^{st} and the 99^{th} percentiles. Standard errors are clustered at the industry level, defined as 2-digit NAICS, where we combine industries with few PPP-eligible companies into one bucket. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively. z-statistics are presented in parentheses. Constants are omitted for brevity.

	Dependent variable = Bank Type–Borrower Type Category (Y)			
	Predictor	Coefficient	Relative risk ratio	z-statistic
	(1)	(2)	(3)	(4)
	Panel A: Firm size			
Y = 3: Smaller Bank–Early PPP Borrower	Log (Assets)	-0.196***	0.82	(-3.08)
Y = 2: Smaller Bank–Late PPP Borrower	Log (Assets)	-0.364***	0.69	(-5.63)
Y = 1: Big-10 Bank–Early PPP Borrower	[Base outcome]	—	—	—
Y = 0: Big-10 Bank–Late PPP Borrower	Log (Assets)	-0.448***	0.64	(-4.37)
# obs.	525			
Pseudo-R^2	0.0185			
Log-likelihood	-615.6			
	Panel B: PPP loan size			
Y = 3: Smaller Bank–Early PPP Borrower	Log (PPP Loan Amount)	-0.233**	0.79	(-2.41)
Y = 2: Smaller Bank–Late PPP Borrower	Log (PPP Loan Amount)	-0.412***	0.66	(-3.10)
Y = 1: Big-10 Bank–Early PPP Borrower	[Base outcome]	—	—	—
Y = 0: Big-10 Bank–Late PPP Borrower	Log (PPP Loan Amount)	-0.554***	0.57	(-3.75)
# obs.	525			
Pseudo-R^2	0.0172			
Log-likelihood	-616.5			

Table IA.3
Early PPP access and lender effects
Bank relationship

This table reports the results from a multinomial logit model for public PPP recipients where the dependent variable is a categorical variable for the intersection between a bank type (big-10 bank versus smaller bank) and borrower type (early versus late PPP borrower), for a subsample of publicly listed firms with prior bank relationships (i.e., before the PPP). The independent variable is firm size (Panel A) and the PPP loan size (Panel B). The dependent variable *Bank Type–Borrower Type Category (Y)* takes the value of 3 for smaller (non-big-10) bank and early PPP borrower, 2 for smaller bank and late PPP borrower, 1 for big-10 bank and early PPP borrower, and 0 for big-10 bank and late PPP borrower. We classify the following banks as big-10 banks: JPMorgan Chase Bank, Wells Fargo Bank, Bank of America, Citibank, U.S. Bank, Truist Bank, PNC Bank, Bank of New York, State Street Corporation, and TD Bank. An early borrower is a public company receiving a PPP loan before April 17, 2020. Continuous variables are winsorized at the 1^{st} and the 99^{th} percentiles. Standard errors are clustered at the industry level, defined as 2-digit NAICS, where we combine industries with few PPP-eligible companies into one bucket. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively. z-statistics are presented in parentheses. Constants are omitted for brevity.

	Dependent variable = Bank Type–Borrower Type Category (Y)			
	Predictor	Coefficient	Relative risk ratio	z-statistic
	(1)	(2)	(3)	(4)
	Panel A: Firm size			
Y = 3: Smaller Bank–Early PPP Borrower	Log (Assets)	-0.497***	0.61	(-3.07)
Y = 2: Smaller Bank–Late PPP Borrower	Log (Assets)	-0.384**	0.68	(-1.99)
Y = 1: Big-10 Bank–Early PPP Borrower	[Base outcome]	—	—	—
Y = 0: Big-10 Bank–Late PPP Borrower	Log (Assets)	-0.364**	0.69	(-2.20)
# obs.	173			
Pseudo-R^2	0.0253			
Log-likelihood	-198.2			
	Panel B: PPP loan size			
Y = 3: Smaller Bank–Early PPP Borrower	Log (PPP Loan Amount)	-0.750***	0.47	(-4.36)
Y = 2: Smaller Bank–Late PPP Borrower	Log (PPP Loan Amount)	-0.588***	0.56	(-2.98)
Y = 1: Big-10 Bank–Early PPP Borrower	[Base outcome]	—	—	—
Y = 0: Big-10 Bank–Late PPP Borrower	Log (PPP Loan Amount)	-0.500**	0.61	(-2.23)
# obs.	173			
Pseudo-R^2	0.0328			
Log-likelihood	-196.7			

Table IA.4
Early PPP access and lender effects
No bank relationship

This table reports the results from a multinomial logit model for public PPP recipients where the dependent variable is a categorical variable for the intersection between a bank type (big-10 bank versus smaller bank) and borrower type (early versus late PPP borrower), for a subsample of publicly listed firms without prior bank relationships (i.e., before the PPP). The independent variable is firm size (Panel A) and the PPP loan size (Panel B). The dependent variable *Bank Type–Borrower Type Category (Y)* takes the value of 3 for smaller (non-big-10) bank and early PPP borrower, 2 for smaller bank and late PPP borrower, 1 for big-10 bank and early PPP borrower, and 0 for big-10 bank and late PPP borrower. We classify the following banks as big-10 banks: JPMorgan Chase Bank, Wells Fargo Bank, Bank of America, Citibank, U.S. Bank, Truist Bank, PNC Bank, Bank of New York, State Street Corporation, and TD Bank. An early borrower is a public company receiving a PPP loan before April 17, 2020. Continuous variables are winsorized at the 1^{st} and the 99^{th} percentiles. Standard errors are clustered at the industry level, defined as 2-digit NAICS, where we combine industries with few PPP-eligible companies into one bucket. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively. z-statistics are presented in parentheses. Constants are omitted for brevity.

	Dependent variable = Bank Type–Borrower Type Category (Y)			
	Predictor	Coefficient	Relative risk ratio	z-statistic
	(1)	(2)	(3)	(4)
	Panel A: Firm size			
Y = 3: Smaller Bank–Early PPP Borrower	Log (Assets)	-0.0409	0.96	(-0.52)
Y = 2: Smaller Bank–Late PPP Borrower	Log (Assets)	-0.393***	0.68	(-4.79)
Y = 1: Big-10 Bank–Early PPP Borrower	[Base outcome]	—	—	—
Y = 0: Big-10 Bank–Late PPP Borrower	Log (Assets)	-0.425***	0.65	(-6.47)
# obs.	352			
Pseudo-R^2	0.0289			
Log-likelihood	-409.6			
	Panel B: PPP loan size			
Y = 3: Smaller Bank–Early PPP Borrower	Log (PPP Loan Amount)	-0.00414	1.00	(-0.08)
Y = 2: Smaller Bank–Late PPP Borrower	Log (PPP Loan Amount)	-0.428***	0.65	(-6.21)
Y = 1: Big-10 Bank–Early PPP Borrower	[Base outcome]	—	—	—
Y = 0: Big-10 Bank–Late PPP Borrower	Log (PPP Loan Amount)	-0.526***	0.59	(-3.80)
# obs.	352			
Pseudo-R^2	0.0273			
Log-likelihood	-410.3			

Table IA.5
Early PPP access, lender effects, and bank relationships: SBA PPP data

This table reports the results from a multinomial logit model based on SBA PPP data and UCC–SBA PPP data where the dependent variable is a categorical variable for the intersection between a bank type (big-10 bank versus smaller bank) and borrower type (early versus late PPP borrower). The independent variable *Log (PPP Loan Size)* is the natural logarithm of the PPP loan size from the SBA's PPP data release in December 2020, which we restrict to non-financial corporations, for comparability. The dependent variable *Bank Type–Borrower Type Category (Y)* takes the value of 3 for smaller (non-big-10) bank and early PPP borrower, 2 for smaller bank and late PPP borrower, 1 for big-10 bank and early PPP borrower, and 0 for big-10 bank and late PPP borrower. We classify the following banks as big-10 banks: JPMorgan Chase Bank, Wells Fargo Bank, Bank of America, Citibank, U.S. Bank, Truist Bank, PNC Bank, Bank of New York, State Street Corporation, and TD Bank. An early borrower is a public company receiving a PPP loan before April 17, 2020. Continuous variables are winsorized at the 1^{st} and the 99^{th} percentiles. Standard errors are clustered at the industry level, defined as 2-digit NAICS, where we combine industries with few PPP-eligible companies into one bucket. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively. z-statistics are presented in parentheses. Constants are omitted for brevity.

	Dependent variable = Bank Type–Borrower Type Category (Y)			
	Predictor	Coefficient	Relative risk ratio	z-statistic
	(1)	(2)	(3)	(4)
Panel A: All firms				
Y = 3: Smaller Bank–Early PPP Borrower	Log (PPP Loan Size)	-0.167***	0.85	(-7.77)
Y = 2: Smaller Bank–Late PPP Borrower	Log (PPP Loan Size)	-0.601***	0.55	(-19.03)
Y = 1: Big-10 Bank–Early PPP Borrower	[Base outcome]	—	—	—
Y = 0: Big-10 Bank–Late PPP Borrower	Log (PPP Loan Size)	-0.635***	0.53	(-27.00)
# obs.	554,422			
Pseudo-R^2	0.0390			
Log-likelihood	-626379			
Panel B: Bank relationship				
Y = 3: Smaller Bank–Early PPP Borrower	Log (PPP Loan Size)	-0.256***	0.77	(-7.89)
Y = 2: Smaller Bank–Late PPP Borrower	Log (PPP Loan Size)	-0.634***	0.53	(-16.21)
Y = 1: Big-10 Bank–Early PPP Borrower	[Base outcome]	—	—	—
Y = 0: Big-10 Bank–Late PPP Borrower	Log (PPP Loan Size)	-0.600***	0.55	(-38.48)
# obs.	301,552			
Pseudo-R^2	0.0294			
Log-likelihood	-323917			
Panel C: No bank relationship				
Y = 3: Smaller Bank–Early PPP Borrower	Log (PPP Loan Size)	-0.103***	0.90	(-4.33)
Y = 2: Smaller Bank–Late PPP Borrower	Log (PPP Loan Size)	-0.515***	0.60	(-14.52)
Y = 1: Big-10 Bank–Early PPP Borrower	[Base outcome]	—	—	—
Y = 0: Big-10 Bank–Late PPP Borrower	Log (PPP Loan Size)	-0.549***	0.58	(-24.88)
# obs.	252,870			
Pseudo-R^2	0.0284			
Log-likelihood	-296605			

Table IA.6
Financial constraints, solvency, and PPP loan return

This table reports the results from a linear probability (OLS) model where the dependent variable is an indicator for public company returning a PPP loan to the SBA and independent variables are financial constraints and solvency indexes. Continuous variables are winsorized at the 1^{st} and the 99^{th} percentiles. Standard errors are clustered at the industry level, defined as 2-digit NAICS, where we combine industries with few PPP-eligible companies into one bucket. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively. t-statistics are presented in parentheses.

	Dependent variable = PPP Loan Returner (1/0)								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
WW Index	-0.142***	-0.138***	-0.137***						
$\geq$ p75 (1/0)	(-3.72)	(-3.85)	(-3.38)						
SA Index				-0.111***	-0.123***	-0.113**			
$\geq$ p75 (1/0)				(-3.27)	(-3.31)	(-2.71)			
Altman Z-score							-0.097***	-0.109***	-0.111***
<1.81 (1/0)							(-3.42)	(-3.29)	(-3.46)
Penny Stock Dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry Dummies	—	Yes	Yes	—	Yes	Yes	—	Yes	Yes
Returns Controls	—	—	Yes	—	—	Yes	—	—	Yes
# obs.	400	400	394	519	519	511	479	479	472
Adjusted R^2	0.0716	0.0920	0.0910	0.0587	0.0754	0.0753	0.0720	0.0934	0.0962

Table IA.7
PPP loan return propensity and distance to default

This table reports the results from a linear probability (OLS) model where the dependent variable is an indicator for public company returning a PPP loan to the SBA and independent variables are *Distance-to-Default* and other company characteristics. Continuous variables are winsorized at the 1^{st} and the 99^{th} percentiles. Standard errors are clustered at the industry level, defined as 2-digit NAICS, where we combine industries with few PPP-eligible companies into one bucket. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively. t-statistics are presented in parentheses.

	Dependent variable = PPP Loan Returner (1/0)		
	(1)	(2)	(3)
Distance-to-Default	0.0549***	0.0617***	0.0633***
	(4.93)	(4.62)	(4.79)
Log (Assets)	0.0872***	0.0901***	0.0970***
	(4.21)	(3.66)	(3.48)
Log (Age)	-0.0270	-0.0150	-0.0199
	(-1.71)	(-1.00)	(-1.25)
Book Equity <0 (1/0)	0.0331	0.0104	0.0286
	(0.46)	(0.21)	(0.50)
Tobin's Q	0.00776	0.00141	0.00313
	(0.49)	(0.11)	(0.31)
Current Ratio	0.00669	0.00361	0.00287
	(1.32)	(0.73)	(0.62)
Cash/Non-Cash Assets	0.00239	-0.00107	-0.000491
	(0.20)	(-0.09)	(-0.05)
Penny Stock (1/0)	-0.00524	-0.0101	-0.0893
	(-0.10)	(-0.19)	(-0.73)
Covid Industry (1/0)		-0.0362	-0.0408
		(-0.99)	(-0.99)
Machinery Industry (1/0)		-0.0896**	-0.0908
		(-2.26)	(-1.76)
Health Industry (1/0)		0.153***	0.132***
		(3.03)	(3.41)
High-Tech Industry (1/0)		-0.0211	-0.0186
		(-0.67)	(-0.48)
Covid Period Return			0.169
			(1.13)
Covid Period Return × Penny Stock (1/0)			-0.0802
			(-0.41)
Stimulus Day Return			-0.713**
			(-2.71)
Stimulus Day Return × Penny Stock (1/0)			0.615*
			(1.98)
PPP Grant Abnormal Return			0.645
			(1.28)
PPP Grant Abnormal Return × Penny Stock (1/0)			-0.697
			(-1.06)
# obs.	383	383	382
Adjusted R^2	0.140	0.162	0.166

Section IA.B: Industry Clusters for Estimating Application Probability

We create the following four industry clusters for estimating application probability:

- *Covid Impacted Industries:* These firms are in industries negatively impacted by Covid-19 pandemic (Fahlenbrach et al. (2020)) and may be more likely to apply for PPP funding.
- *Health Sector:* We identify these as firms in Fama-French 49 industries 11, 12, and 13, respectively. Firms in these sector may experience growth opportunities that increase funding demand. On the other hand, availability of private capital may deter PPP application as it raises the probability of a negative finding of ineligibility. This may be a concern for these firms as many are supervised by government agencies and apply for government grants.
- *High Tech Sector:* We identify these as firms with Fama-French-49 industry codes of 35, 36, or 37. The firms may see growth opportunities from changes in work habits that result in greater demand for technology. They may also be better able to function remotely than (say) a meatpacking plant. These factors may push the firms to seek PPP funding.
- *Machinery Sector:* This includes "heavy industry" firms with Fama-French-49 industry code = 21 (usually NAICS-2 = 33). These firms have more rigidity on the real side and may thus have greater demand for short-term liquidity.

Figure 11, Panel B shows that our industry clusters pick up significant variation in PPP application patterns. 64.8% of the 176 firms in Covid-19 industries apply for PPP, about double the full-sample application probability of 31.96%. In the machinery sector, 16 out of 37 firms (43.2%) apply, again higher than the baseline odds. The application probability is lower in the health sector, where 191 out of 805 firms apply for PPP loans (23.7%). We find that 112 out of 255 high tech firms (43.9%) apply for PPP funding, again higher than the baseline of around 39%.

Section IA.C: Evidence of PPP Scrutiny Concerns

Quotes from EDGAR filings

- Albert Bourla, Pfizer CEO: "Pfizer made it a point to not accept government funding. ... to liberate our scientists from any bureaucracy that could come from accepting money."
- Adamis Pharmaceuticals 8-K filing: "... Such audit or review could result in the diversion of management's time and attention and legal and reputational costs."
- Nature's Sunshine Products 8-K filing: "... civil, criminal, and administrative penalties ... adverse publicity, damage to reputation ... consume significant financial and management resources."

PPP Loan Necessity Questionnaire (Form #3509)

Subjective questions, assessment based on "... totality of circumstances."[1]

- *... Has Borrower voluntarily ceased, reduced, or altered its operations? [Why? in 1000 characters or less]*
- *Did Borrower begin any new capital improvement projects not due to COVID-19? [Comments in 1000 characters or less]*
- *Has borrower paid dividends, prepaid debt, paid any employees $250K, was 20% owned by public companies ... ?*

[1] See, e.g., *New Uncertainty About the Uncertainty Certifiction: SBA's Draft Questionnaires for PPP Loans Over $2 Million*, Daily Tax Report, November 4, 2020.

Section IA.D: Definitions of Variables

Variable	Definition	Source	Formula
PPP borrowing			
Early PPP Borrower (1/0)	Dummy for early PPP borrower versus late borrower, defined based on SBA approval date, loan grant date, or contract date (in that order)	EDGAR, SBA	=1 if approved or borrowed before April 27, 2020, 0 o/w
PPP Borrower (1/0)	Dummy for PPP borrower versus public PPP-eligible non-borrower	EDGAR	=1 if borrower, 0 o/w
PPP Loan Returner (1/0)	Dummy for PPP loan returner versus PPP loan retainer	EDGAR	=1 if loan returned, 0 o/w
PPP Loan Amount ($ million)	Aggregate PPP loan amount per EDGAR filer, measured in $ million	EDGAR	=ppp_size
PPP Loan Size ($ million)	PPP loan amount per SBA PPP recipient, measured in $ million	SBA PPP data (Dec)	=loanamount
Above $2M (1/0)	Dummy for PPP loan size of $2 million or above	EDGAR	=(ppp_size≥2)
Big-10 Bank (1/0)	Dummy for PPP lender being a big-10 bank, that is, JPMorgan Chase Bank, Wells Fargo Bank, Bank of America, Citibank, U.S. Bank, Truist Bank, PNC Bank, Bank of New York, State Street Corporation, or TD Bank	Call reports	=1 if big_bank=1, 0 o/w
Smaller Bank (1/0)	Dummy for PPP lender being a non-big-10 bank; see Big-10 Bank (1/0)	Call reports	=1 if big_bank=0, 0 o/w
Bank Type–Borrower Type Category	Categorical variable for the intersection between a bank type (big-10 bank versus smaller bank) and borrower type (early versus late PPP borrower)	EDGAR, Call reports	= 3 if big_bank=1 & early=1; 2 if big_bank=1 & early=0; 1 if big_bank=0 & early=1; 0 if big_bank=0 & early=0
Bank Relationship (1/0)	Dummy for the firm obtaining a secured loan from a bank in 2015–2019	UCC	=1 if securedpartyname is bank, 0 o/w
Relationship Bank PPP (1/0)	Dummy for the firm obtaining a secured loan from its PPP lender in 2015–2019	UCC	=1 if lender= securedpartyname, 0 o/w
Small Bank Relationship (1/0)	Dummy for the firm obtaining a secured loan from a small (non-big-10) bank in 2015–2019	UCC, Call reports	=1 if securedpartyname!= big_bank, 0 o/w
Firm size			
Book Value of Assets ($ million)	Assets, measured in $ million	Compustat	=at
Market Cap ($ million)	Market Capitalization, measured in $ million	Compustat	=prcc_f*csho
Sales ($ million)	Sales, measured in $ million	Compustat	= sale
# Employees ('000)	Employees, measured in thousand	Compustat	=emp, set to 2018 if N/A
Other financial characteristics			
Firm Age (years)	Years since IPO, capped at 37 years	Compustat	=fyear-min(fyear) if prcc_f!=., 0 if missing
Book Equity <0	Dummy for negative Book Equity defined as in Fama-French: BE = book value of stockholders' equity, plus balance sheet deferred taxes and investment tax credit (if available), minus the book value of preferred stock	Compustat	=(seq OR ceq+pstk OR at-lt, in that order) +(txditc OR txdb+itcb, where each is set to 0 if missing OR 0, in that order) +(pstkrv OR pstkl OR pstk, in that order)
Tobin's Q	Market Value of Assets/Assets	Compustat	=(at+prcc_f*csho-ceq)/at, set to 0 if ceq<0 or if missing
Sales Growth	Year-on-year sales growth	Compustat	=(sale-sale[_n-1])/sale[_n-1]
Dividend Payer (1/0)	Dummy for dividend payer	Compustat	=(dv>0) if dv!=.
Current Ratio	Current Assets/Current Liabilities	Compustat	=act/lct
Cash/Non-Cash Assets	Cash/(Assets-Cash)	Compustat	=che/(at-che), where at is in thousands
Free Cash Flow/Assets	(Operating Cash Flow - Extraordinary Items + Interest Paid - Interest Expense*((Pretax Income - Net Income)/Pretax Income) - CapEx)/Assets	Compustat	=(oancf-xidoc+intpn-xint*((pi-ni)/pi)-capx)/at
Financial constraints			
Has Credit Rating (1/0)	Dummy for company having a long-term S&P credit rating or a Mergent rating for an issue with maturity of at least three years	S&P, Mergent	=1 if rated, 0 o/w

Variable	Definition		
WW Index ≥ p75 (1/0)	Dummy for WW (Whited and Wu) Index in 4th (upper) quartile of *all* public firms, where WW Index is calculated as -0.737*Ln of Min(Assets,4500) + 0.043*Squared Ln of Min(Assets,4500) – 0.040*Min(Years since IPO,37)	Compustat	=(WW_quart==4) if WW_quart!=., using xtile, where WW=-0.737*log(min(at,4500)) +0.043*(log(min(at,4500)))^2 -0.040*min(age,37)
SA Index ≥ p75 (1/0)	Dummy for SA (Hadlock and Pierce) Index in 4th quartile of *all* public firms, where SA Index is -0.737*Ln of Min(Assets,4500) +0.043*Squared Ln of Min(Assets,4500) -0.040*Min(Years since IPO,37)	Compustat	=(SA_quart==4) if SA_quart!=., using xtile, where SA=-0.737*log(min(at,4500)) +0.043*(log(min(at,4500)))^2 -0.040*min(age,37)
Leverage and distress			
Zero Debt (1/0)	Dummy for zero debt	Compustat	=1 if dlc+dltt=0 or (dltt=. & dlc=0), 0 o/w
Market Leverage	(Short-Term Debt + Long-Term Debt)/(Debt + Market Cap)	Compustat	=(dlc+dltt)/ (dlc+dltt+prcc_f*csho)
Interest Coverage <1.5 (1/0)	Dummy for 1 + Pretax Income/Interest Expense <1.5	Compustat	=((1+pi/xint)<1.5) if (1+pi/xint)!=.
Altman Z-score < 1.81 (1/0)	Dummy for Altman Z-score <1.81, wehere Z-score is calculated as 1.2*Working Capital/Assets + 1.4*Retained Earnings/Assets + 3.3*EBIT/Assets + 0.6*Market Cap/Liabilities + 0.999*Sales/Assets	Compustat	=1 if Z-score <1.81, 0 o/w, where Z-score= 1.2*(act-lct)/at +1.4*re/at +3.3*(pi+xint+dp-dp)/at+.6*prcc_f*csho/lt +.999*sale/at
Distance-to-Default	Distance-to-default from NUS RMI Credit Research Initiative	NUS RMI	= dtd
Penny Stock (1/0)	Dummy for company's stock price below $5 based on (1) closing stock price as of fiscal year-end for cross-sectional tests or (2) average stock price in December 2019 for event study analysis	Compustat	=(prcc_f<5) if prcc_f!=. OR mean(p_adjclose, Dec 2019)<5
Industry composition			
Covid Industry (1/0)	Dummy for Covid-19 Affected Industry	Compustat	=1 if sic corresponds to Covid-19 industry, 0 o/w
Machinery Industry (1/0)	Dummy for Machinery Industry	Compustat	=1 if sic corresponds to FF49==21, 0 o/w
Health Industry (1/0)	Dummy for Health, Pharma, and Biotech Industry	Compustat	=1 if sic corresponds to FF49==11,12,13, 0 o/w
High-Tech industry (1/0)	Dummy for Business Equipment – Computers, Software, and Electronic Equipment Industry	Compustat	=1 if sic corresponds to FF49==35,36,37, 0 o/w
Returns and event study variables			
Buy-and-Hold Abnormal Return	Cumulative return on the stock over the S&P 500 return from January 1, 2020 to August 15, 2020, adjusted for stock splits and dividends	Yahoo! Finance	=cumulative (R_adjclose - S&P 500 R_adjclose)
Covid Period Return	Cumulative stock return from February 2, 2020 to March 23, 2020, adjusted for stock splits and dividends	Yahoo! Finance	=cumulative R_adjclose, Covid period
Stimulus Day Return	Stock return on March 24, 2020, adjusted for stock splits and dividends	Yahoo! Finance	=R_adjclose, Mar 24, 2020
Abnormal Return	Company's (1) market-adjusted return (stock return minus S&P 500 return) or (2) market model return (based on S&P 500), adjusted for stock splits and dividends	Yahoo! Finance	=R_adjclose - S&P 500 R_adjclose OR Abnormal R_adjclose
Day -1 (1/0)	Trading day preceding (1) PPP loan grant announcement day or (2) PPP loan return announcement day, as appropriate	EDGAR	=(evday==-1) OR (evday1==-1)
Day 0 (1/0)	Trading day of (1) PPP loan grant announcement or (2) PPP loan return announcement, as appropriate	EDGAR	=(evday==0) OR (evday1==0)
Day +1 (1/0)	Trading day following (1) PPP loan grant announcement day or (2) PPP loan return announcement day, as appropriate	EDGAR	=(evday==1) OR (evday1==1)

An Empirical Review of the Paycheck Protection Program

U.S. House of Representatives Committee on Small Business

Subcommittee on Oversight, Investigations, and Regulations

March 16, 2022

Testimony by:

Dr. Iryna Demko, Research Associate

Center for Economic Development

Maxine Goodman Levin College of Urban Affairs

Cleveland State University



Thank you for the invitation to testify at a hearing titled "An Empirical Review of the Paycheck Protection Program." It is an honor for me to present before you and answer questions. I am a Research Associate at the Center for Economic Development in Maxine Goodman Levin College of Urban Affairs at Cleveland State University. The Center for Economic Development provides research and technical assistance to government agencies, non-profit organizations, and the private sector. One of the Center's focus areas includes applied research supporting economic inclusion.

I have focused my research on the access of minority, Hispanic- and female-owned businesses to PPP loans. In 2020, these businesses received smaller PPP loans than their business counterparts of the same size.[1] For example, Hispanic-owned businesses with less than four employees received 5% smaller loans compared to non-Hispanic-owned businesses of the same size, or $828 less.

In 2020, on average, female-owned businesses received 12% less per employee compared to male-owned businesses (or $1,144 less). Minority-owned businesses received 11% less per employee than their white-owned businesses (or $1,013 less). Hispanic-owned businesses received 8% less per employee than non-Hispanic business owners (or $727 less).

Larger companies displayed increased discrepancies in loan amounts. On average, female-owned businesses with less than four employees received 17% smaller PPP loans than male-owned businesses of the same size (or $3,233 less); and female-owned businesses with 20 to 500 employees received 22% smaller loans than male-owned businesses of the same size (or $102,813 less).

I conducted over 20 interviews with a variety of PPP loans recipients. The sample consisted of businesses in Northeast Ohio, where nearly 40% of previously employed residents filed for unemployment as the pandemic started (Figure 1). I interviewed small businesses that received PPP loans ranging from about $20,000 to over $2 million. The sample included female-owned, male-owned, minority-owned, and white-owned businesses. Every respondent expressed appreciation for the assistance provided by the government in the form of PPP loans, and the majority stated that the loan helped them retain employees. Almost every interviewee mentioned frustration with the application process and uncertainty around what it entailed.

In general, businesses that received smaller loan amounts (less than $150,000) reported more difficulty with the loan application process, filing multiple applications with multiple banks and pursuing more unique funding sources such as Fintech. Respondents cite the reason for these difficulties stemming from the size of their business. For example, a business owner complained: "[I] could not get anyone's attention or response because I am a small business." Some respondents

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[1] Demko, I., & Sant'Anna, A.C. (2021). Impact of Race, Ethnicity, and Gender on the SBA Paycheck Protection Program (PPP) Loan Amounts. Working paper available at SSRN: https://ssrn.com/abstract=3864218

stated that lenders could have been incentivized to work with businesses of diverse ownership and size.

Beyond the difficulty in finding a lender, many recipients of smaller PPP loans expressed frustration over loan amount limits and permitted uses. Many interview respondents did not realize that rent, mortgage, and utility payments could be included in the requested PPP amount. As a result, they missed out on the opportunity to receive higher loan amounts.

Most businesses do not have experience in doing their financials. They had a steep learning curve to understand how to apply for the loan. "For us, it was all foreign language," said one PPP recipient.[2] This highlights the importance of communication strategies and free technical assistance to guarantee the success of a public policy.

From a policy perspective, if the goal is to target ethnic disparities and support inclusion in federal aid for entrepreneurs, then the program cannot be one size fits all. PPP lasted 18 weeks in 2020 and 20 weeks in 2021 (Figure 2). In 2021, SBA set aside a two-week exclusive application period for smaller businesses and non-profits with fewer than 20 employees. While a few small businesses interviewed in Northeast Ohio did mention that the exclusive application period SBA created for smaller businesses in 2021 was a valuable change, others felt that it was not enough and that more targeted outreach programs would have been beneficial.

Interview findings did not confirm biases by lenders or the SBA against minority- or female-owned businesses. By design, the interviews did not have questions on discrimination in credit access and included only one question about business certification (minority-owned, female-owned, veteran-owned). Businesses received unequal treatment from PPP lenders not based on the demographics of their ownership, but when their business was smaller and requesting a loan under $150,000. These findings have important implications because previous literature found that minority-owned firms are substantially smaller than white-owned firms.[3,4] Research comparing male and female business owners also found women operating smaller businesses in terms of annual turnover and employment size.[5] As such, female- and minority-owned businesses tend to fall under the case of businesses that may have applied for smaller PPP loans.

---

[2] Demko, I., Sant'Anna, A.C., & Liang, K. (2021). An Overview of the Paycheck Protection Program (PPP) Loans and Implications to Agricultural Enterprise Recovery from COVID. *Journal of Agriculture, Food Systems, and Community Development*, *11*(1), 1-8.

[3] Fairlie, R.W., & Robb, A.M. (2007). Why are black-owned businesses less successful than white-owned businesses? The role of families, inheritances, and business human capital. *Journal of Labor Economics, 25*(2), 289-323.

[4] Perry, A.M., & Romer, C. (2020). To expand the economy, invest in black business, Brookings Institute.

[5] Carter, S. & Shaw, E. (2006). *Women's Business Ownership: Recent Research and Policy Development*, DTI Small Business Service Research Report, London.

Figure 1. Unemployment Filings in Northeast Ohio in 2020

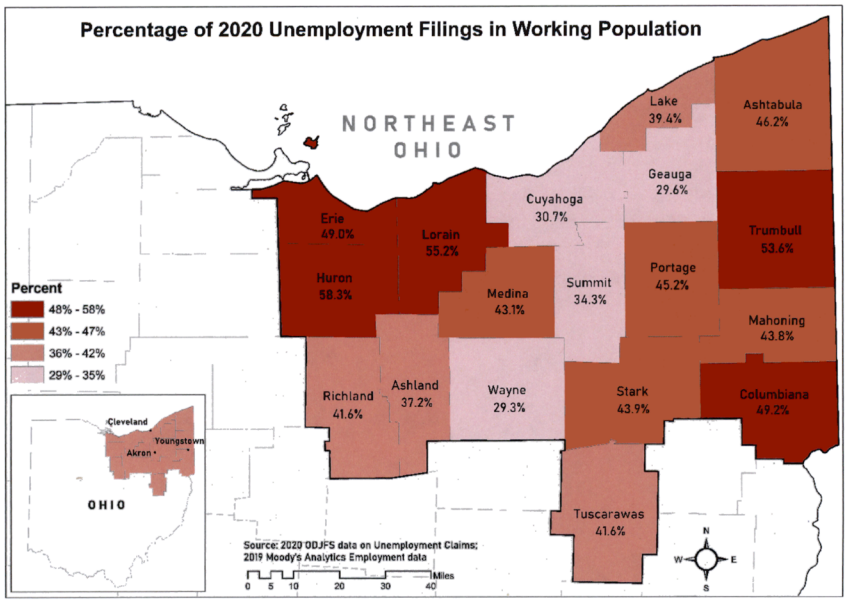
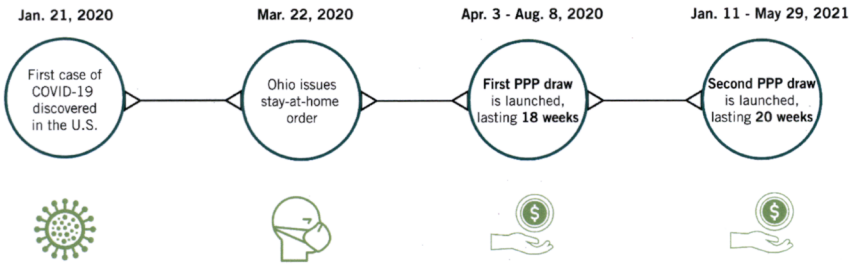


Figure 2. Paycheck Protection Program (PPP) Timeline





Report to Congressional Addressees

September 2021

PAYCHECK PROTECTION PROGRAM

Program Changes Increased Lending to the Smallest Businesses and in Underserved Locations



GAO-21-601

GAO@100 Highlights

Highlights of GAO-21-601, a report to congressional addressees

September 2021

PAYCHECK PROTECTION PROGRAM

Program Changes Increased Lending to the Smallest Businesses and in Underserved Locations

Why GAO Did This Study

The COVID-19 pandemic resulted in significant turmoil in the U.S. economy, leading to temporary and permanent business closures and high unemployment. In response, in March 2020, Congress established PPP under the CARES Act and ultimately provided commitment authority of approximately $814 billion for the program over three phases. When initial program funding ran out in 14 days, concerns quickly surfaced that certain businesses were unable to access the program, prompting a series of changes by Congress and SBA.

The CARES Act includes a provision for GAO to monitor the federal government's efforts to respond to the COVID-19 pandemic. GAO has issued a series of reports on this program, and has made a number of recommendations to improve program performance and integrity. This report describes trends in small business and lender participation in PPP.

GAO analyzed loan-level PPP data from SBA and county-level data from four U.S. Census Bureau products and surveyed a generalizable sample of PPP lenders, stratified by lender type and size. GAO also reviewed legislation, interim final rules, agency guidance, and relevant literature, as well as interviewed SBA officials.

View GAO-21-601. For more information, contact John Pendleton at (202) 512-8678 or pendletonj@gao.gov.

What GAO Found

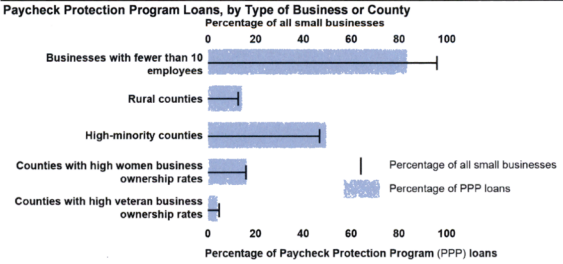
The Paycheck Protection Program (PPP) supports small businesses through forgivable loans for payroll and other eligible costs. Early lending favored larger and rural businesses, according to GAO's analysis of Small Business Administration (SBA) data. Specifically, 42 percent of Phase 1 loans (approved from April 3–16, 2020) went to larger businesses (10 to 499 employees), although these businesses accounted for only 4 percent of all U.S. small businesses. Similarly, businesses in rural areas received 19 percent of Phase 1 loans but represented 13 percent of all small businesses. Banks made a vast majority of Phase 1 loans.

In response to concerns that some underserved businesses—in particular, businesses owned by self-employed individuals, minorities, women, and veterans—faced challenges obtaining loans, Congress and SBA made a series of changes that increased lending to these businesses. For example,

- SBA admitted about 600 new lenders to start lending in Phase 2 (which ran from April 27–August 8, 2020), including nonbanks (generally, lending institutions that do not accept deposits).
- SBA developed guidance after Phase 1 helping self-employed individuals participate in the program.
- SBA targeted funding to minority-owned businesses in part through Community Development Financial Institutions in Phases 2–3. (Phase 3 ran from January 12–June 30, 2021.)

By the time PPP closed in June 2021, lending in traditionally underserved counties was proportional to their representation in the overall small business community (see figure). While lending to businesses with fewer than 10 employees remained disproportionately low, it increased significantly over the course of the program.

Paycheck Protection Program Loans, by Type of Business or County



Source: GAO analysis of Small Business Administration and Census Bureau data. | GAO-21-601

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Abbreviations

CDFI	Community Development Financial Institution
Census	U.S. Census Bureau
COVID-19	Coronavirus Disease 2019
MDI	Minority Depository Institution
PPP	Paycheck Protection Program
SBA	Small Business Administration

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GAO@100 U.S. GOVERNMENT ACCOUNTABILITY OFFICE
A Century of Non-Partisan Fact-Based Work
441 G St. N.W.
Washington, DC 20548

September 21, 2021

Congressional Addressees

Congress passed the CARES Act in March 2020 in response to the Coronavirus Disease 2019 (COVID-19) pandemic.[1] The CARES Act provided more than $2 trillion in emergency assistance and health care response for individuals, families, and businesses affected by COVID-19. Stay-at-home orders, social distancing requirements, and reduced consumer demand early in the pandemic caused both temporary and permanent business closures, particularly among small businesses. Congress included the Paycheck Protection Program (PPP) in the CARES Act, providing commitment authority of $349 billion to support small businesses affected by the pandemic and to keep small business workers employed.[2]

Administered by the Small Business Administration (SBA) through a network of participating lenders, PPP provided forgivable loans to small businesses for payroll and certain other eligible costs. To provide relief quickly, lenders began approving loans 7 days after the CARES Act was enacted. When the program's initial round of funding ran out in 14 days, policy makers and small business organizations raised concerns that the smallest businesses and those owned by minorities, women, and veterans had difficulty accessing the program. In response, Congress made program changes, renewed the program twice, and provided approximately an additional $465 billion to meet continued demand.

[1]Pub. L. No. 116-136, 134 Stat. 281 (2020).

[2]PPP was one of the programs Congress created, expanded, or funded under the CARES Act to support workers and small businesses in the economic downturn. Congress also eased borrowing requirements for the Economic Injury Disaster Loan program and created and provided appropriations for Economic Injury Disaster Loan Advances. For more information, see GAO, *Economic Injury Disaster Loan Program: Additional Actions Needed to Improve Communication with Applicants and Address Fraud Risk*, GAO-21-589 (Washington, D.C.: July 30, 2021). In addition, the CARES Act created three federally funded temporary unemployment insurance programs that expanded benefit eligibility and enhanced benefits. This report does not assess the efficacy of PPP in addressing the needs of small businesses during the pandemic, nor does it compare outcomes of recipient businesses to nonrecipient businesses or businesses that utilized other small business lending programs during the pandemic.

The CARES Act includes a provision for us to monitor and oversee the federal government's efforts to prepare for, respond to, and recover from COVID-19.[3] We have issued a series of reports on this program and made a number of recommendations to improve program performance and integrity. For example, in July 2021, we issued a report on the safeguards SBA put in place during the PPP loan approval and forgiveness processes and SBA's oversight of PPP loans and lenders.[4] We also included emergency loans for small businesses—which include PPP—as a new area on our High-Risk List in March 2021 because of the potential for fraud, significant program integrity risks, and need for much improved program management and oversight.[5] This report describes how small business and lender participation in PPP evolved over time.

To describe how small business and lender participation in PPP evolved over time, we analyzed loan-level PPP data from SBA for loans approved from April 3, 2020, to June 30, 2021, and county-level data from four U.S. Census Bureau (Census) products: the 2019 release of the American Community Survey 5-year estimates; the 2018 Annual Business Survey; the 2017 Nonemployer Statistics dataset; and the 2017 Statistics of U.S. Businesses dataset. Specifically, we used PPP data to describe the size, type, and sector of recipient businesses. Because SBA does not have complete data on the race, gender, and veteran status of business owners, we used Census data and estimates to describe the demographic and socioeconomic characteristics of counties in which recipient businesses were located.[6] To assess the reliability of the data sources we used in our analyses, we primarily reviewed related documentation. In some cases, we also interviewed agency officials and

[3]We regularly issue government-wide reports on the federal response to COVID-19. For the latest report, see GAO, *COVID-19: Continued Attention Needed to Enhance Federal Preparedness, Response, Service Delivery, and Program Integrity*, GAO-21-551 (Washington, D.C.: July 19, 2021). Our next government-wide report will be issued in October 2021 and will be available on GAO's website at https://www.gao.gov/coronavirus.

[4]See GAO, *Paycheck Protection Program: SBA Added Program Safeguards, but Additional Actions Are Needed*, GAO-21-577 (Washington, D.C.: July 29, 2021).

[5]See GAO, *High Risk Series: Dedicated Leadership Needed to Address Limited Progress in Most High-Risk Areas*, GAO-21-119SP (Washington, D.C.: Mar. 2, 2021).

[6]As we reported in July 2021, SBA did not require demographic information—for example, the race, gender, and veteran status of the business owner—in the PPP borrower application. However, SBA revised its PPP borrower application form in January 2021 to allow for the optional disclosure of demographic information and included such a section in all subsequent revisions and an optional demographic information form as part of the PPP loan forgiveness application. See GAO-21-577.

tested data for missing values and obvious errors. Because PPP applicants self-certified the accuracy of the information they provided to lenders and SBA, the reliability of the PPP data depends on the accuracy of the information they provided. We determined the data sources we used for our analyses were sufficiently reliable for the purposes of describing small business and lender participation in PPP.

We did not assess PPP loans for fraud, and SBA officials told us they did not flag fraudulent loans or remove them from the PPP dataset they provided to us.[7] While the full extent of fraud in PPP is not yet known, as of March 2021, the Department of Justice had announced charges in 134 cases involving 431 loans to borrowers who were charged with fraud (such as bank fraud, wire fraud, or identity theft). Similarly, the SBA Office of Inspector General found that, of the 5.2 million total loans made from April 3 to August 9, 2020, lenders made more than one loan each to 4,260 borrowers and 57,473 loans to individuals on the Department of the Treasury's "Do Not Pay" list.[8]

We also surveyed a generalizable sample of 1,383 PPP lenders, stratified by lender type and size, to obtain their perspectives on the program.[9] We administered the survey from February 2021 to April 2021 and received 781 responses. We obtained a weighted response rate of 57.3 percent.[10] Finally, we reviewed legislation, interim final rules, agency guidance, and relevant literature, and we interviewed SBA officials. For more information on our scope and methodology, see appendix I.

[7]SBA officials told us they track Department of Justice cases related to PPP and the corresponding loans.

[8]Small Business Administration, Office of Inspector General, *Flash Report: Duplicate Loans Made Under the Paycheck Protection Program*, Report No. 21-09 (Washington, D.C.: Mar. 15, 2021); and *Management Alert: Paycheck Protection Program Loan Recipients on the Department of Treasury's Do Not Pay List*, Report No. 21-06 (Washington, D.C.: Jan. 11, 2021).

[9]We also used this survey to inform our July 2021 report on SBA's implementation of PPP (GAO-21-577). See app. I of that report for more details on the survey's methodology and app. II for the survey's full results.

[10]We used a weighted response rate because our survey sample incorporated strata with different probabilities of selection. A weighted response rate may more accurately reflect the level of participation. For example, large units that contribute relatively more to the estimate of a total would have a larger "weight" on the response rate.

We conducted this performance audit from July 2020 to September 2021 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Background

The CARES Act, signed into law by the President on March 27, 2020, established PPP under section 7(a) of the Small Business Act to provide forgivable loans to small businesses and nonprofit organizations, referred to collectively as "small businesses."[11] Under the law, qualifying businesses (in general, these include businesses with 500 or fewer employees or that meet SBA's industry-based size standard) could obtain loans equal to 2.5 months of average total monthly payments for payroll costs up to $10 million, and were required to self-certify their need for the loan.[12]

PPP Commitment Authority and Lending Volume

When loan approvals ended in June 2021, Congress had provided commitment authority of about $814 billion to PPP in three phases (see table 1).[13]

[11]SBA administers the 7(a) guaranteed loan program, which provides small businesses access to capital that they would not be able to access in the competitive market. In fiscal year 2019, SBA approved $23 billion in loans through the 7(a) program.

[12]As set forth in the CARES Act, borrowers had to certify in good faith that (1) current economic uncertainty made the loan request necessary to support the applicant's ongoing operations and (2) funds would be used to retain workers and maintain payroll or make payments for other covered expenses. Pub. L. No. 116-136, § 1102(a)(1)(B), 134 Stat. 281, 291 (2020) (codified at 15 U.S.C. § 636(a)(36)(G)(i)(I),(II)). To streamline the process, SBA required minimal review from lenders—such as confirming receipt of borrower certifications and supporting payroll documentation.

[13]SBA's loan-level PPP data included the date SBA approved the loan but not the date the application was received. As a result, Phase 1 data include loans approved from April 3–16, 2020, Phase 2 data include loans approved from April 27–August 8, 2020, and Phase 3 data include loans approved from January 12–June 30, 2021. The dataset includes 10 loans with approval dates on April 20-22, 2020, which we categorized as Phase 1, and one loan with an approval date of August 9, 2020, which we categorized as Phase 2.

Table 1: Paycheck Protection Program (PPP) Phases

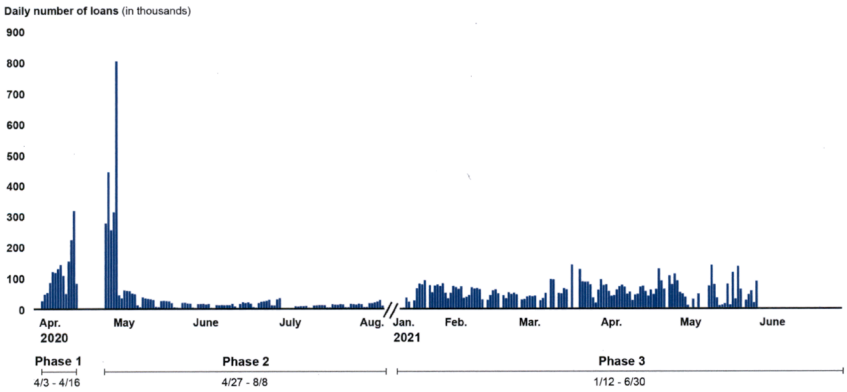
Phase	Legislation	Date enacted	Commitment authority provided	Application period
1	CARES Act	March 27, 2020	$349 billion	April 3, 2020–April 16, 2020
2	Paycheck Protection Program and Health Care Enhancement Act	April 24, 2020	$310 billion	April 27, 2020–August 8, 2020
3	Consolidated Appropriations Act, 2021	December 27, 2020	$147.45 billion	January 11, 2021–May 31, 2021[a]
	American Rescue Plan Act of 2021	March 11, 2021	$7.25 billion	

Source: GAO analysis of relevant laws. | GAO-21-601

[a]The PPP Extension Act of 2021 extended the application period for Phase 3 from March 31, 2021, to May 31, 2021, and allowed the Small Business Administration until June 30, 2021, to process those applications. On May 4, 2021, the PPP general fund was exhausted and closed to new applications, except those processed by a community financial institution lender.

Early demand for PPP loans was high. Daily lending volume—that is, the number of loans approved per day—was highest from April 3–May 1, 2020, when 31 percent of all PPP loans were approved (see fig. 1).

Figure 1: Paycheck Protection Program Lending Volume by Approval Date, April 2020–June 2021



Source: GAO analysis of Small Business Administration data. | GAO-21-601

PPP Lenders

The CARES Act authorized SBA to use lenders already approved to participate in the 7(a) program and permitted SBA and Treasury to approve new lenders to issue PPP loans, provided they met certain requirements.[14] Participating lenders included depository institutions (for example, banks and credit unions) and non-depository institutions (for example, nonbanks) (see fig. 2).[15] For the purposes of this report, we refer to depository institutions as "banks" and characterize them by size:

- large banks: total assets of $10 billion or more;
- medium banks: total assets from $1 billion to $10 billion; and
- small banks: total assets of less than $1 billion.

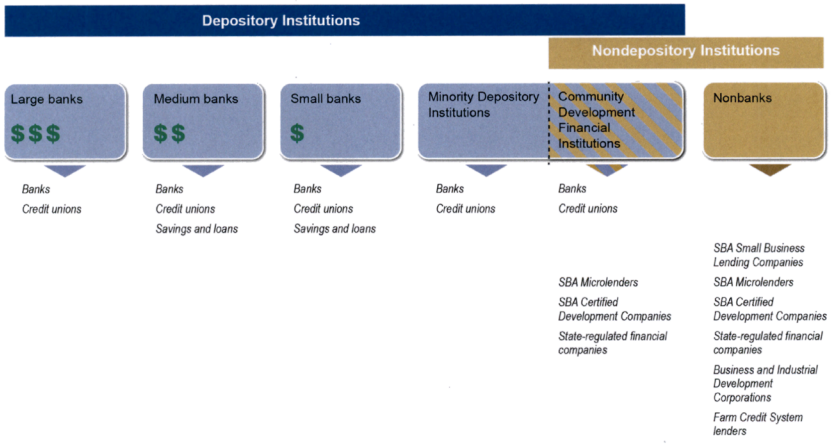
Further, some lenders are designated Community Development Financial Institutions (CDFI) and Minority Depository Institutions (MDI). CFDIs and MDIs target loans to businesses and individuals in traditionally underserved areas with the goal of expanding economic opportunity. CDFIs include both banks and nonbanks, while MDIs include only banks.[16]

[14]Pub. L. No. 116-136, § 1102(a), 134 Stat. 281, 290 (2020) (codified at 15 U.S.C. § 636(a)(36)(F)(iii)). In an interim final rule published April 2, 2020, SBA announced that any federally insured depository institution, credit union, or farm credit institution in good standing with its regulator would automatically qualify to participate in PPP upon submission of SBA's PPP Lender Agreement. 85 Fed. Reg. 20,811, 20,815 (Apr. 15, 2020). SBA and the Department of the Treasury were jointly responsible for approving lenders new to SBA to issue PPP loans. According to SBA officials, SBA approved new federally regulated lenders, and only new non-federally regulated and insured lenders required joint SBA and Treasury approval.

[15]In general, nonbanks provide lending services but do not accept deposits. Nonbanks include SBA Small Business Lending Companies, SBA Microlenders, SBA Certified Development Companies, state-regulated financial companies, Business and Industrial Development Corporations, and Farm Credit System lenders.

[16]The Department of the Treasury administers the CDFI Fund, which certifies lenders as CDFIs that share a common goal of expanding economic opportunity in low-income communities by providing access to financial products and services for local residents and businesses. MDIs are defined as depositories that (1) if a privately owned institution, 51 percent is owned by socially and economically disadvantaged individuals; (2) if publicly owned, 51 percent of the stock is owned by socially and economically disadvantaged individuals; and (3) in the case of a mutual institution where the majority of the board of directors, account holders, and the community that the institution serves is predominantly minority. The term "minority" means any Black American, Native American, Hispanic American, or Asian American. 12 U.S.C. § 1463 note; 15 U.S.C. § 636(a)(36)(A)(xi)(II). We assigned to the CDFI/MDI group all lenders SBA flagged as CDFIs, MDIs, or both, and all remaining lenders to one of the other groups.

Figure 2: Overview of Paycheck Protection Program Lenders



Source: GAO analysis of Small Business Administration data and guidance. | GAO-21-601

Note: All lenders that the Small Business Administration (SBA) flagged as Minority Depository Institutions, Community Development Financial Institutions, or both, were assigned to the Community Development Financial Institutions/Minority Depository Institutions group, and all remaining lenders were assigned to one of the other groups.

PPP Borrowers

As PPP was initially implemented, small businesses or nonprofit organizations were generally eligible for PPP loans if they had 500 or

fewer employees.[17] These businesses comprise approximately 99 percent of businesses of all sizes.[18]

Businesses that may not have paid employees (sole proprietors, independent contractors, self-employed individuals, qualified joint ventures, and single-member limited liability companies) were eligible for a PPP loan. For the purposes of this report, we refer to these business types collectively as "self-employed individuals." Based on the statutory definition of payroll costs for self-employed individuals, the calculation of loan amounts for these businesses differed from the calculations used by other businesses, and the program requirements related to these calculations changed over the course of the program.[19]

We used information from the 2020 Bureau of Labor Statistics's Business Response Survey to identify six "hardest-hit sectors," or sectors that were most likely to experience adverse effects to business operations as a result of the pandemic.[20] These six sectors are (1) accommodation and food services; (2) arts, entertainment, and recreation; (3) educational services; (4) health care; (5) manufacturing; and (6) retail trade.[21]

Finally, the CARES Act included a Sense of the Senate statement noting the Senate's preference that SBA should issue guidance to lenders to ensure that processing and disbursement of loans prioritizes businesses in underserved and rural markets, including veterans and members of the

[17]Under the CARES Act, eligible borrowers included: (1) businesses that are small under SBA's size standards (either the industry size standard or the alternative size standard); (2) any business, 501(c)(3) nonprofit organization, 501(c)(19) veterans organization, or Tribal business concern with 500 or fewer employees or that meets the applicable SBA industry size standard if more than 500; (3) any business in the accommodations and food services sector that has more than one physical location and employs not more than 500 employees per physical location; and (4) sole proprietors, independent contractors, and eligible self-employed individuals.

[18]U.S. Census Bureau, *Nonemployer Statistics*, 2017; and *Statistics of U.S. Businesses*, 2017.

[19]15 U.S.C. § 636(a)(36)(A)(viii)(I)(bb).

[20]Adverse effects to business operations included a shortage of supplies or inputs, decreased demand for products or services, difficulty moving or shipping goods, and government-mandated closure of a business location.

[21]Sector names refer to their classification codes within the North American Industry Classification System, which is the standard used by federal statistical agencies in classifying business establishments according to industry.

military community, small business concerns owned and controlled by socially and economically disadvantaged individuals, women, and businesses in operation for less than 2 years.[22] For the purposes of this report, we refer to "traditionally underserved businesses and counties" more broadly as very small businesses; those owned by minorities, women, or veterans; or those located in rural counties, counties with high minority populations, or Tribal areas.[23]

Application and Lending Processes

To apply for a PPP loan, potential borrowers first submitted applications directly to a participating lender (see fig. 3). The lender then reviewed the application documentation and submitted its loan approval decision to SBA through SBA's loan processing portal.[24] Once received, SBA issued a loan number to the lender.[25] The lender then disbursed the loan amount to the borrower.

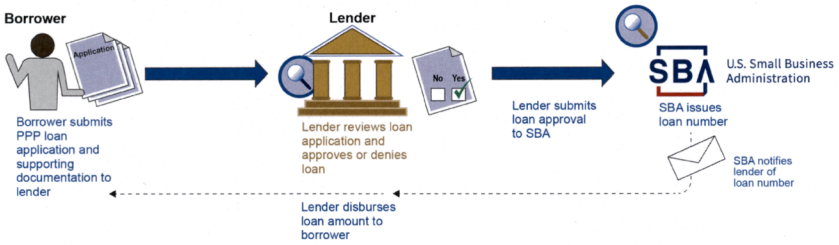
[22]Pub. L. No. 116-136, § 1102(a), 134 Stat. 281, 293 (2020) (codified at 15 U.S.C. § 636(a)(36)(P)(iv)).

[23]In our analyses, we used businesses with fewer than 10 employees and those owned by self-employed individuals to represent very small businesses. To represent minority-, women-, and veteran-owned businesses, we used counties with high shares of minority residents and high shares of women- and veteran-owned businesses. We include Tribal areas when collectively referring to traditionally underserved counties.

[24]SBA guidance stated that PPP was "first come, first served." 85 Fed. Reg. 20,811, 20,813 (Apr. 15, 2020).

[25]SBA issued a loan number when it agreed to guarantee the loan. Initially, SBA reviewed loan and borrower information to look for duplicate applications before issuing a loan number to the lender. For Phase 3, SBA began conducting upfront compliance checks before issuing a loan number to the lender. For more information, see GAO-21-577.

Figure 3: Overview of the Paycheck Protection Program (PPP) Application Process



Source: GAO analysis of Small Business Administration information. | GAO-21-601

Key Program Changes

As the program continued, Congress and SBA made a series of changes to PPP to increase lender participation and availability, target funding, and modify loan calculations (see table 2). In addition, for Phase 3, Congress allowed certain businesses that had already received a PPP loan to receive a second loan, referred to throughout this report as "second draw" loans.

Table 2: Key Paycheck Protection Program Changes, by Program Phase

Phase	Legislation or program guidance and date	Description of change
1	Technical event (April 8, 2020)	The Small Business Administration (SBA) released the nonbank lender application form allowing new nonbank lenders to participate in the Paycheck Protection Program (PPP).
2	Interim final rule (April 20, 2020)	SBA provided instructions for self-employed individuals filing a Form 1040 Schedule C to apply by calculating the loan amount based on the business's net profit from 2019.
	Guidance (April 23, 2020)	SBA issued clarifying guidance stating that public companies with access to capital markets would be unlikely to have made a certification of need for a PPP loan in good faith, and allowed companies 2 weeks to return loan funds if they applied for the loan prior to the issuance of the guidance.
	Interim final rule (April 30, 2020)	SBA adjusted portfolio requirements for Community Development Financial Institutions (CDFI), majority minority-, women-, or veteran/military-owned financial institutions, and certain other nonbank lenders, which allowed smaller lenders to participate in PPP.
	Technical event (May 28, 2020)	SBA established a $10 billion set-aside for businesses that applied through CDFIs to target lending to minority-owned businesses and underserved communities.[a]
3	Consolidated Appropriations Act, 2021 (December 27, 2020)	Congress allowed some businesses to receive a second loan and targeted eligibility for second loans to businesses that met certain criteria, including having 300 or fewer employees and documenting revenue losses in 2020.

Phase	Legislation or program guidance and date	Description of change
	Guidance (January 11, 2021)	SBA dedicated the first few days of Phase 3 to processing loans made through community financial institutions, which include CDFIs, Minority Depository Institutions, Certified Development Companies, and Microloan Intermediaries.
	Guidance (February 22, 2021)	SBA established a 14-day loan application period exclusively for businesses or nonprofits with fewer than 20 employees.
	Interim final rule (March 4, 2021)	SBA revised the maximum loan amount calculation for self-employed individuals filing a Form 1040 Schedule C based on either gross income or net profit, which allowed for larger loans.

Source: GAO analysis of SBA guidance and relevant laws. | GAO-21-601.

Note: Phase 1 includes the application period from April 3–16, 2020, Phase 2 from April 27–August 8, 2020, and Phase 3 from January 11–May 31, 2021.

[a]Congress established additional set-asides throughout the course of the program. These included a total $60 billion set-aside for businesses that applied through community financial institutions, certain small insured depository institutions, and certain small credit unions established under the Paycheck Protection Program and Health Care Enhancement Act as well as $15 billion for lending by community financial institutions and $35 billion to new first draw PPP borrowers established under the Consolidated Appropriations Act, 2021.

Program Changes Increased Lending to the Smallest Businesses and in Underserved Locations

PPP lending in Phase 1 of the program favored larger and rural businesses, and banks made the vast majority of Phase 1 loans. Partly as a result of program changes made by Congress and SBA, the share of loans to most traditionally underserved businesses and counties we analyzed substantially increased in Phases 2 and 3, and generally was proportional to their representation in the overall small business community when the program closed in June 2021.

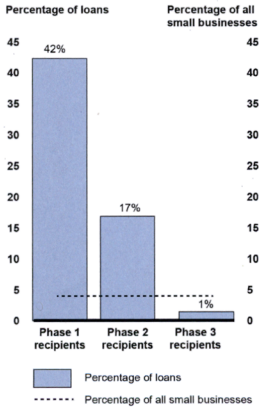
Phase 1 Loans Flowed to Larger Businesses and Rural Areas Primarily through Banks

Larger, Rural, and Certain Hardest-Hit Businesses Received Early Loans

Larger businesses. Larger businesses—small businesses with 10 to 499 employees—received a higher share of loans in Phase 1 relative to their share of all small businesses. Specifically, 42 percent of loans in Phase 1 went to these larger businesses, despite accounting for only 4 percent of all small businesses in the U.S. (see fig. 4). The share of first draw loans to these businesses decreased over time, suggesting that much of their demand for loans was met early in the program. Further, as we reported in September 2020, during Phases 1–2, a larger share of loans over $2

million were canceled compared to smaller loans following reports that publicly traded companies had received loans and SBA's subsequent guidance clarifying the economic necessity requirements. As a result, the demand for larger loans may have diminished over time because of increased scrutiny from the public, the Department of the Treasury, and SBA.[26] Finally, because the loan amount for each recipient business was based on average payroll, larger businesses generally received larger loans, likely precipitating the exhaustion of Phase 1 funding after just 2 weeks.[27]

Figure 4: Percentage of First Draw Paycheck Protection Program Loans to Larger Businesses Relative to Percentage of All Small Businesses, by Program Phase



Source: GAO analysis of Small Business Administration and Census Bureau data. | GAO-21-601

Note: Larger businesses are those with 10 to 499 employees. This analysis excludes loans that were approved and subsequently canceled, and second draw loans. Generally, Phase 1 data include loans approved from April 3–16, 2020, Phase 2 data include loans approved from April 27–August 8, 2020, and Phase 3 data include loans approved from January 12–June 30, 2021.

[26]GAO-20-701.

[27]The average (median) loan size for recipient businesses with fewer than 10 employees was $21,697 ($18,115), compared to $296,292 ($146,000) for recipient businesses with 10 to 499 employees.

Research on small business lending and PPP suggests businesses with pre-existing relationships with banks were able to access PPP earlier than businesses without such relationships. For example, one study on PPP found that among businesses that applied for PPP loans from banks, approval rates were generally higher for businesses with a pre-existing relationship with a bank.[28] Also, larger businesses were more likely to have these relationships than the smallest businesses.[29]

Other research found that the smallest businesses were less aware of PPP and less likely to apply early in the program.[30] If they did apply, the smallest businesses applied later, faced longer processing times, and were less likely to have their applications approved, which may also partly explain why early lending skewed toward larger businesses during Phase 1.

Businesses in rural areas. Rural counties generally received a higher number of loans per small business in Phase 1 than metro counties (see fig. 5).[31] Additionally, while only 13 percent of small businesses are

[28]Alexander W. Bartik et al., "The Targeting and Impact of Paycheck Protection Program Loans to Small Businesses," (working paper 27623, National Bureau of Economic Research, July 2020). Additionally, as we found in GAO-21-577, because lenders were required to apply relevant Bank Secrecy Act program requirements, they had to collect additional information from PPP loan applicants with which they did not have a pre-existing relationship. Because pre-existing clients required the lender to conduct less due diligence, their applications could be processed more quickly. The Bank Secrecy Act requires banks and other financial institutions to take precautions against money laundering and other illicit financial activities by conducting due diligence activities and informing the Department of the Treasury of suspicious activity by their customers.

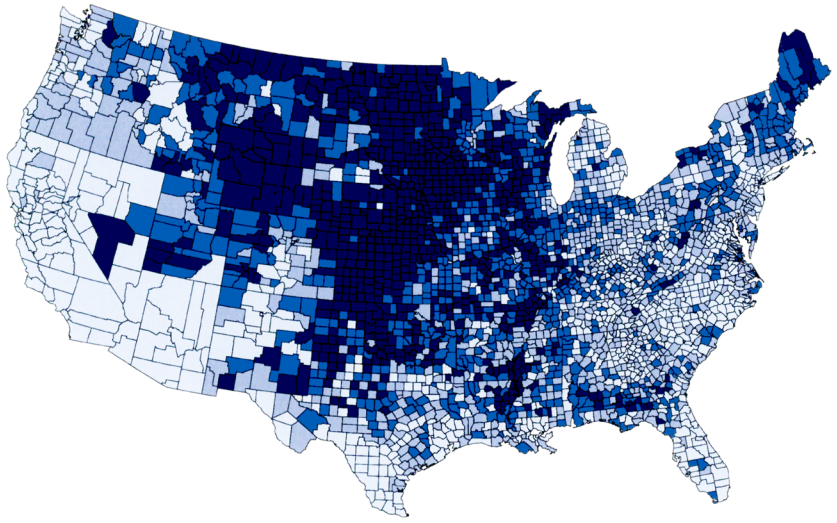
[29]According to the Federal Reserve Banks' 2020 Small Business Credit Survey, larger businesses (those with annual revenue greater than $1 million) were more likely to have existing banking relationships. See Federal Reserve Banks of Atlanta, Boston, Chicago, Cleveland, Dallas, Kansas City, Minneapolis, New York, Philadelphia, Richmond, St. Louis, and San Francisco, "*Small Business Credit Survey: 2020 Report on Employer Firms* (New York, NY: 2020). The survey was conducted in the third and fourth quarters of 2019 and yielded 5,514 responses from small employer firms with one to 499 full or part-time employees, in the 50 states and the District of Columbia.

[30]Christopher Neilson, John Eric Humphries, and Gabriel Ulyssea. "Information Frictions and Access to the Paycheck Protection Program," (working paper 27624, National Bureau of Economic Research, July 2020).

[31]We used data from the Department of Agriculture's Economic Research Service to classify counties as "metro" if they have one or more high-density urban areas with 50,000 or more residents or are outlying counties that are economically tied to these central counties, as measured by the share of workers commuting on a daily basis to the central counties. Rural counties are outside the boundaries of metro areas and have no cities with 50,000 or more residents.

located in rural counties, 19 percent of all Phase 1 loans went to businesses in these counties.

Figure 5: Paycheck Protection Program Loans per Small Business in Phase 1, by County



Source: GAO analysis of Small Business Administration and Census Bureau data. | GAO-21-601

Note: This analysis excludes loans that were approved and subsequently canceled. Generally, Phase 1 data include loans approved from April 3–16, 2020.

Businesses in rural counties also received loans earlier on average than businesses in metro areas. Specifically, in the period from April 3–May 1, 2020, when loan volume was at its highest, loans were approved an average of 3 days earlier for businesses in rural areas than loans for businesses in metro areas.

Additionally, we found that businesses in rural counties collectively received a higher share of loans in Phase 1 than the share of small businesses in rural counties, even in high-minority rural counties and rural counties with poorer socioeconomic outcomes.[32] More specifically, businesses in rural counties received a high share of Phase 1 loans potentially because many of their loans were approved by small banks, which approved loans earlier than large banks. For example, of all loans approved by small banks from April 3–May 1, 2020 (when daily approvals were highest), 59 percent were approved before initial funding ran out on April 16, 2020. Conversely, of all loans approved by large banks from April 3–May 1, 2020, only 34 percent were approved before initial funding ran out. In total, 44 percent of loans approved by small banks went to businesses in rural areas compared to 6 percent of loans approved by large banks.

Businesses in hardest-hit sectors. Collectively, businesses in the hardest-hit sectors—accommodation and food services; arts, entertainment, and recreation; educational services; health care; manufacturing; and retail trade—received a higher share of loans early in the program, as well as a high share of second draw loans in Phase 3, than the share of small businesses in those sectors.[33] Specifically, businesses in these sectors received 40 percent of loans in Phase 1, and account for 27 percent of all small businesses nationwide. Moreover, like

[32]For this analysis, we define minority counties as those in which the percentage of minority residents was higher than the national share of 27.5 percent. To determine a county's socioeconomic status relative to the national estimate, we used five indicators: median household income, unemployment rate, use of public assistance income, poverty rate, and no internet access. Among all five indicators, small businesses in rural counties with a county-level estimate worse than the national estimate still received a relatively high share of loans compared to small businesses in those counties. Based on 2015–2019 5-year estimates from Census's American Community Survey data, median household income was $62,843, the national unemployment rate was 5.3 percent, the national share of households receiving public assistance income was 2.4 percent, the national poverty rate was 12.9 percent, and the national share of households without internet access was 13.9 percent.

[33]Based on our analysis of data from the U.S. Bureau of Labor Statistics's 2020 Business Response Survey, businesses in these sectors were most likely to experience adverse effects to their business operations as a result of the COVID-19 pandemic.

loans to larger businesses, the share of loans to businesses in hardest-hit sectors declined over time, suggesting that demand for loans among these businesses was met early in the program.

However, businesses in some of the hardest-hit sectors received a higher share of loans than others. In particular, in Phase 1, businesses in the retail trade, health care, accommodation and food services, and manufacturing sectors received a higher share of loans relative to the number of small businesses in those sectors (see fig. 6). Conversely, businesses in the arts, entertainment, and recreation and educational services sectors received a lower share of Phase 1 loans than the share of small businesses in those sectors.

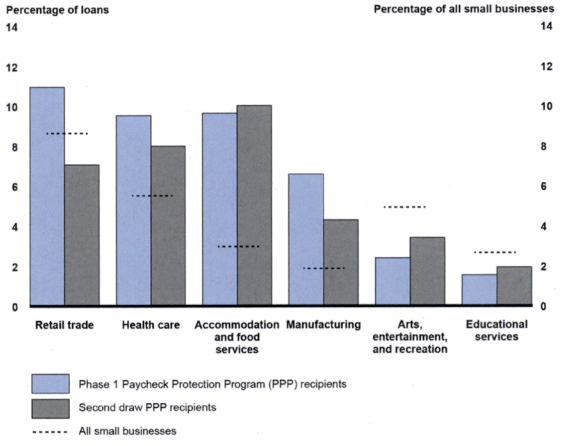
Businesses in the retail trade sector that received loans in Phase 1 were more concentrated in rural areas, and businesses in the educational services sector were less concentrated in rural areas than recipient businesses overall. Because businesses in rural counties received a higher share of Phase 1 loans than businesses in metro counties, location may partly explain the higher share of early loans to businesses in the retail trade sector and the lower share of early loans to businesses in the educational services sector. Additionally, businesses in the accommodation and food services, educational services, and manufacturing sectors that received loans in Phase 1 were larger, on average, than recipient businesses overall, which may further explain the high share of loans to these sectors. Finally, researchers found that early application rates were particularly high in the accommodation and retail sectors, which likely resulted in higher rates of loans to businesses in these sectors.[34]

Businesses in the hardest-hit sectors also received a high share of second draw loans (35 percent) in Phase 3 than the share of small businesses in those sectors (27 percent), demonstrating their ongoing demand for financial assistance as the pandemic continued. However, as with early loans, businesses in certain hardest-hit sectors received a higher share of second draw loans than others. Businesses in the health care, accommodation and food services, and manufacturing sectors received a relatively high share of second draw loans, while those in retail

[34]Bartik et al., "The Targeting and Impact of Paycheck Protection Program Loans."

trade; arts, entertainment, and recreation; and educational services sectors received a relatively low share.[35]

Figure 6: Percentage of Paycheck Protection Program Recipients Relative to the Percentage of All Small Businesses in the Hardest-Hit Sectors



Source: GAO analysis of Small Business Administration, Census Bureau, and Bureau of Labor Statistics data. | GAO-21-601

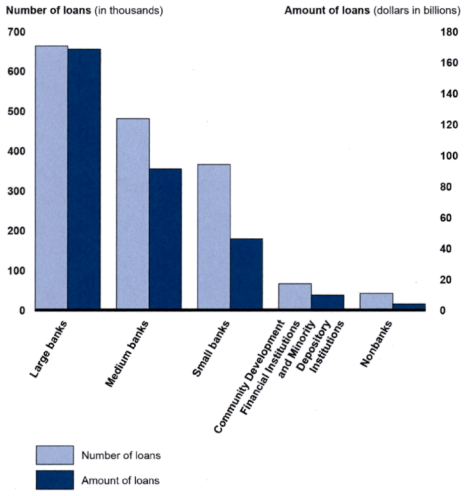
Note: This analysis excludes loans that were approved and subsequently canceled. Generally, Phase 1 data include loans approved from April 3–16, 2020, and second draw applies to Phase 3 loans (those approved from January 12–June 30, 2021).

[35]Congress created two sector-specific SBA programs to target aid to venue operators and food services businesses. The Shuttered Venue Operators Grant program, established in 2020 by the Consolidated Appropriations Act, 2021, and amended by the American Rescue Plan Act, includes over $16 billion in grants to shuttered venues. The Restaurant Revitalization Fund, established in 2021 by the American Rescue Plan Act, provides funding to restaurants and other food service establishments to compensate for pandemic-related revenue losses. Businesses eligible for these programs generally fall into the accommodation and food services and arts, entertainment, and recreation sectors. Businesses that chose to receive both a PPP loan in Phase 3 and a Shuttered Venue Operators Grant had the amount of their PPP loan deducted from their Shuttered Venue Operators Grant award.

Banks Made the Vast Majority of Phase 1 Loans

Banks collectively made more than 93 percent of all loans in Phase 1. Large banks made 41 percent of loans (663,577 loans), medium banks made 30 percent of loans (481,063 loans), and small banks made 23 percent of loans (366,030 loans) (see fig. 7). CDFIs and MDIs collectively made 4 percent of loans (66,419 loans) and nonbank lenders made 3 percent of loans (42,112 loans).[36] When measuring lending activity by the total dollar amount of loans made in Phase 1, the distribution among large, medium, and small banks was similar.

Figure 7: Number and Total Dollar Amount of Paycheck Protection Program Loans Made in Phase 1, by Lender Type



Source: GAO analysis of Small Business Administration data. | GAO-21-601

Note: For this analysis, all depository lenders are categorized as "banks," including banks, credit unions, and savings and loan associations. Large banks are as those with at least $10 billion in

[36]As discussed later in this report, limited lending among CDFIs, MDIs, and nonbanks in Phase 1 corresponded with low participation among certain traditionally underserved businesses and counties during the same period.

assets, medium banks are those with $1 to $10 billion, and small banks are those with less than $1 billion based on publicly available call reports. All nondepository lenders are categorized as "nonbanks," including SBA Small Business Lending Companies, SBA Certified Development Companies, SBA Microlenders, Business and Industrial Development Corporations, Farm Credit System lenders, and state-regulated financial companies. Generally, Phase 1 data include loans approved from April 3–16, 2020.

Although large banks made more loans than all other lender types in Phase 1, researchers found they underperformed compared to small banks—with underperformance defined as having made a smaller share of PPP loans relative to their share of non-PPP small business loans.[37] Further, bank performance affected whether PPP borrowers were able to access loans before funding ran out at the end of Phase 1. Specifically, only 25 percent of all PPP borrowers located in areas with underperforming banks (regardless of size) obtained PPP approval prior to the end of Phase 1. By contrast, approximately 42 percent of all PPP borrowers in areas with banks that over-performed (or made more PPP loans than their share of other small business loans) had access to funds in Phase 1.

Small banks may have been more experienced with small business lending, and therefore better equipped to process PPP applications than other lenders, according to researchers and our analysis. For example, research from the Federal Deposit Insurance Corporation found that community banks (which are generally smaller banks) held a high share of small business loans before the COVID-19 pandemic.[38] It also found that community banks' participation in PPP was proportionately larger than their size in the banking industry, meaning that community banks made a larger share of PPP loans than other types of loans. Further, based on results from our survey of PPP lenders, small banks approved the highest percentage of PPP applications on average (approximately 96

[37]João Granja et al., "Did the Paycheck Protection Program Hit the Target?." (working paper 27095, National Bureau of Economic Research, November 2020).

[38]Margaret Hanrahan and Angela Hilton, "The Importance of Community Banks in Paycheck Protection Program Lending." *FDIC Quarterly*, vol. 14, no. 4 (2020). For the purposes of this research, community banks include banks with assets less than $1 billion, banks that primarily engage in basic banking activities rather than specialty activities, and banks that operate within a limited geographic scope.

percent), compared to an estimated 93 percent for large and medium banks, and an estimated 86 percent for CDFIs and MDIs.[39]

Program Changes, Including Lender Pool Expansion, Increased Lending to Traditionally Underserved Businesses and Counties in Phases 2 and 3

Lending Increased to Traditionally Underserved Businesses and Counties

Following concerns raised by small business associations that some traditionally underserved businesses faced challenges accessing loans in Phase 1, Congress and SBA modified PPP to increase participation among certain businesses, such as self-employed individuals, women-owned businesses, and businesses in minority counties.[40] These changes included increasing the number of lenders in the program, targeting funding and processing timeframes to certain businesses, and expanding program eligibility (see table 3).

[39]We surveyed a generalizable sample of 1,383 PPP lenders, stratified by lender type and size, to obtain their perspectives on the program. The survey closed on April 15, 2021, and we received 781 responses. We obtained a weighted response rate of 57.3 percent. The 95 percent confidence intervals for these estimates are (95, 97) for small banks, (91, 94) for medium and large banks, and (84, 89) for CDFIs and MDIs.

[40]Changes were also intended to target PPP lending to veteran-owned businesses. The share of loans to businesses in counties with large shares of veteran-owned businesses was generally consistent over time.

Table 3: Selected Paycheck Protection Program Changes

Type of change	Phase	Description of change
Lender participation	1	The Small Business Administration (SBA) released the nonbank lender application form allowing new nonbank lenders to participate in the Paycheck Protection Program.
	2	SBA adjusted portfolio requirements for Community Development Financial Institutions (CDFI), majority minority-, women-, or veteran/military-owned financial institutions, and certain other nonbank lenders, which allowed smaller lenders to participate in PPP.
Targeted funding and processing timelines	2	SBA established a $10 billion set-aside for businesses that applied through CDFIs to target lending to minority-owned businesses and traditionally underserved communities.[a]
	3	SBA dedicated the first few days of Phase 3 to processing loans made through community financial institutions, including CDFIs, Minority Depository Institutions, Certified Development Companies, and Microloan Intermediaries. SBA also established a 14-day loan application period exclusively for businesses or nonprofits with fewer than 20 employees.
Expanded business eligibility	2	SBA issued a rule instructing self-employed individuals to apply by calculating the loan amount based on the business's net profit from 2019.
	3	SBA revised the maximum loan amount calculation for self-employed individuals filing a Form 1040 Schedule C based on either gross income or net profit, which allowed for larger loans and enabled increased loan access for businesses with very little or negative net profit.

Source: GAO analysis of SBA guidance. | GAO-21-601

Note: Phase 1 includes the application period from April 3–16, 2020, Phase 2 from April 27–August 8, 2020, and Phase 3 from January 11–May 31, 2021.

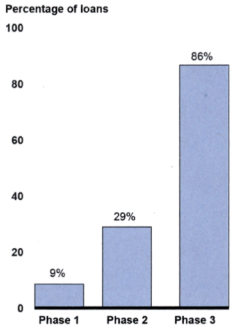
[a]Congress established additional set-asides throughout the course of the program. These included a $60 billion set-aside for businesses that applied through community financial institutions, certain small depository institutions, and certain small credit unions established under the Paycheck Protection Program and Health Care Enhancement Act as well as $15 billion for lending by community financial institutions and $35 billion to new first draw PPP borrowers established under the Consolidated Appropriations Act, 2021.

Self-employed individuals. While the share of loans to self-employed individuals was low in Phase 1, program changes helped increase their share substantially in later phases of the program. Specifically, loans to self-employed individuals increased from 9 percent of all loans in Phase 1 to 86 percent in Phase 3 (see fig. 8).[41] This increase corresponded with SBA issuing guidance for self-employed individuals to apply for loans and increasing the number and types of lenders in the program at the end of

[41]Census's Statistics on U.S. Businesses includes data on the number of small businesses based on characteristics including business size and industry sector, but it does not include data on business ownership type that are comparable to SBA's data on PPP recipients. As a result, we were not able to provide information on the share of these businesses relative to all small businesses in the U.S. The share of loans to businesses with fewer than 10 employees also increased across all three phases.

Phase 1, and allowing for larger loan amounts for self-employed individuals in Phase 3.

Figure 8: Percentage of First Draw Paycheck Protection Program Loans to Self-Employed Individuals, by Program Phase



Source: GAO analysis of Small Business Administration data. | GAO-21-601

Note: Self-employed individuals include independent contractors, sole proprietorships qualified joint ventures, and single-member limited liability companies. This analysis excludes loans that were approved and subsequently canceled. Generally, Phase 1 data include loans approved from April 3–16, 2020, Phase 2 data include loans approved from April 27–August 8, 2020, and Phase 3 data include first draw loans approved from January 12–June 30, 2021. The U.S. Census Bureau's Statistics on U.S. Businesses does not include data on the share of these businesses relative to all small businesses in the U.S.

Women-owned businesses. The share of loans to businesses in counties with a large share of women-owned businesses also increased, potentially because of Congress's and SBA's modifications related to increasing lender participation and expanding business eligibility. Because SBA does not have complete data on the gender of business owners who obtained PPP loans, we used estimates from Census's Annual Business Survey to assess the extent to which businesses in counties with large shares of women-owned businesses were able to

access PPP.[42] For the purposes of this analysis, we examined lending in counties with shares of women-owned businesses that were higher than the national estimate.[43] We refer to these counties as having a "large share" of women-owned businesses.

The share of loans to businesses in counties with large shares of women-owned businesses doubled between Phase 1 and Phase 2, from 9 percent to 18 percent (see fig. 9).[44] This increase corresponded with the increase in the number and types of lenders after Phase 1 and targeted funding for traditionally underserved businesses and communities in Phases 2 and 3. In addition, approximately 90 percent of women business owners are self-employed individuals, according to Census data.[45] As a result, program changes aimed at increasing participation among self-employed individuals likely also contributed to the increase in lending to counties with large shares of women-owned businesses.

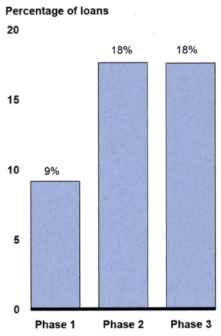
[42]As we reported in July 2021, SBA did not require demographic information—for example, the race, gender, and veteran status of the business owner—in the PPP borrower application. However, SBA revised its PPP borrower application form in January 2021 to allow for the optional disclosure of demographic information and included such a section in all subsequent revisions and an optional demographic information form as part of the PPP loan forgiveness application. See GAO-21-577. The Annual Business Survey provides information on selected economic and demographic characteristics for employer businesses (those with paid employees) and business owners by sex, ethnicity, race, and veteran status. We used county-level data from 2017, the most recently available data at the time of our review. While these data include employer businesses of all sizes, small businesses comprise more than 99 percent of all businesses in the U.S., and therefore are representative of small businesses.

[43]For our analysis, we excluded counties whose estimated shares had a relative standard error greater than 20 percent. We determined counties to be similar to the national estimate if the 95 percent confidence interval surrounding their estimated share fell within the 95 percent confidence interval surrounding the national share estimate. Based on data from the 2017 Annual Business Survey, approximately 20 percent of all businesses were women-owned.

[44]Sixteen percent of all small businesses are located in counties with above-national shares of women-owned businesses.

[45]U.S. Census Bureau, *Number of Women-Owned Employer Firms Increased 0.6% From 2017 to 2018* (Washington D.C.: Mar. 29, 2021).

Figure 9: Percentage of First Draw Paycheck Protection Program Loans to Businesses in Counties with Large Shares of Women-Owned Businesses, by Program Phase



Source: GAO analysis of Small Business Administration and Census Bureau data. | GAO-21-601

Note: Counties with large shares of women-owned businesses include counties where the share of women-owned businesses is higher than the national share at the 95 percent confidence level, based on the U.S. Census Bureau's Annual Business Survey data. This analysis excludes loans that were approved and subsequently canceled and loans that could not be matched to data from the U.S. Census Bureau. Generally, Phase 1 data include loans approved from April 3–16, 2020, Phase 2 data include loans approved from April 27–August 8, 2020, and Phase 3 data include first draw loans approved from January 12–June 30, 2021. Sixteen percent of all small businesses are located in counties with above-national shares of women-owned businesses.

Businesses in high-minority counties. Small businesses in counties with a high share of minority residents ("high-minority counties") received a relatively low share of loans in Phase 1, but they experienced greater access over time, potentially resulting from a number of program changes.[46] Because SBA does not have complete data on the race of business owners who obtained PPP loans, we used Census's American Community Survey to measure the percentage of loans in each phase

[46]Forty-seven percent of all small businesses are located in high-minority counties.

that went to businesses in high-minority counties, or counties with a share of minority residents above the national share.[47]

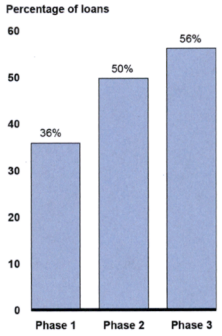
Based on our analysis, 36 percent of Phase 1 loans went to small businesses located in high-minority counties, but this increased to 50 percent in Phase 2 (see fig. 10).[48] Similarly, researchers found that businesses in high-minority counties received a lower share of Phase 1 loans than low-minority counties, but a higher share of Phase 2 loans.[49] This trend corresponds with a general increase in the number and types of lenders in the program after Phase 1 and program changes to target funds to lenders that lend in traditionally underserved counties in Phases 2 and 3. For example, in Phase 2, SBA established a $10 billion set-aside for businesses that applied through CDFIs, seeking to target lending to minority-owned businesses and traditionally underserved counties.

[47]As we reported in July 2021, SBA did not require demographic information—for example, the race, gender, and veteran status of the business owner—in the PPP borrower application. However, SBA revised its PPP borrower application form in January 2021 to allow for the optional disclosure of demographic information and included such a section in all subsequent revisions and an optional demographic information form as part of the PPP loan forgiveness application. See GAO-21-577. The American Community Survey is an ongoing survey of about 3.5 million U.S. households that uses a series of monthly samples to produce annually updated estimates for census tracts across the U.S. The survey collects data on the economic, social, housing, and demographic characteristics of communities at various geographic levels, including metropolitan areas, states, and counties. We used county-level 2015–2019 5-year estimates, the most recently available data at the time of our review.

[48]For this analysis, we define high-minority counties as counties where the percentage of minority residents was higher than the national share of 27.5 percent.

[49]This research used zip code-level data from Census's County Business Patterns on employer businesses to analyze PPP loans. R. Fairlie and F.M. Fossen, "Did the Paycheck Protection Program and Economic Injury Disaster Loan Program get disbursed to minority communities in the early stages of COVID-19?." *Small Business Economics* (2021).

Figure 10: Percentage of First Draw Paycheck Protection Program Loans to Businesses in High-Minority Counties, by Program Phase



Source: GAO analysis of Small Business Administration and Census Bureau data. | GAO-21-601

Note: High-minority counties were identified based on data from the U.S. Census Bureau's American Community Survey and include counties with a share of minority residents greater than the national share of 27.5 percent. This analysis excludes loans that were approved and subsequently canceled and loans that could not be matched to the data from the U.S. Census Bureau. Generally, Phase 1 data include loans approved from April 3–16, 2020, Phase 2 data include loans approved from April 27–August 8, 2020, and Phase 3 data include first draw loans approved from January 12–June 30, 2021. Forty-seven percent of all small businesses are located in high-minority counties.

Loans to minority-owned businesses may also have been low in Phase 1 because these businesses lacked pre-existing relationships with banks, particularly small banks. According to the Federal Reserve Banks' 2019 Small Business Credit Survey, prior to the pandemic, Black and Hispanic business owners were more likely to seek financing from large banks and online lenders than from small banks.[50] The 2020 update to the survey found this trend continued during Phases 1 and 2: regardless of where businesses applied for PPP loans, those that had a relationship with a

[50]Federal Reserve Bank of Atlanta, *Small Business Credit Survey: 2019 Report on Minority-Owned Firms* (New York, NY: 2019). The 2018 survey was conducted in the third and fourth quarters of 2018 and generated 6,614 responses from employer firms with information on the race or ethnicity of a firm's owner(s).

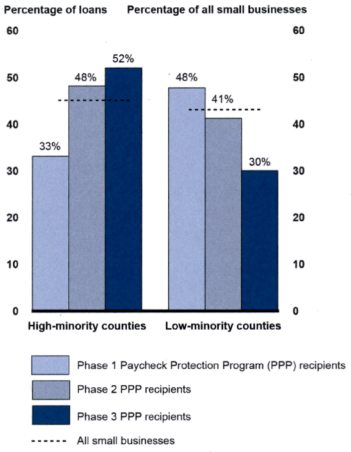
bank were more likely to apply for PPP loans than those that did not.[51] The survey also demonstrated that minority-owned businesses were less likely to have a relationship with a bank. Our survey of PPP lenders found CDFIs and MDIs were more likely than other types of lenders to report that they accepted applications from borrowers with whom they had no prior relationship.[52]

Additionally, when comparing high-minority counties by metro and rural status, we found that businesses in high-minority metro counties were underrepresented in Phase 1 relative to their share of total small businesses, even in high-minority metro counties with better socioeconomic outcomes. By contrast, businesses in low-minority metro counties received a share of loans higher than their share of small businesses in Phase 1 (see fig. 11). However, participation among businesses in high-minority metro counties increased in Phases 2–3. This suggests that program changes successfully targeted lending to businesses in high-minority counties.

[51]Federal Reserve Banks of Atlanta, Boston, Chicago, Cleveland, Dallas, Kansas City, Minneapolis, New York, Philadelphia, Richmond, St. Louis, and San Francisco, *Small Business Credit Survey: 2021 Report on Firms Owned by People of Color* (New York, NY: 2021).

[52]We surveyed a generalizable sample of 1,383 PPP lenders, stratified by lender type and size, to obtain their perspectives on the program. The survey closed on April 15, 2021, and we received 781 responses. We obtained a weighted response rate of 57.3 percent. Ninety percent of CDFI/MDIs reported accepting PPP applications from businesses with whom they had no prior relationship, compared to 73 percent of large banks. The 95 percent confidence interval for these estimates are (83, 95) for CDFI/MDIs and (67, 79) for large banks.

Figure 11: Percentage of First Draw Paycheck Protection Program Loans to Businesses in Metro Counties Relative to the Percentage of All Small Businesses, by Program Phase and Share of Minority Residents



Source: GAO analysis of Small Business Administration and Census Bureau data. | GAO-21-601

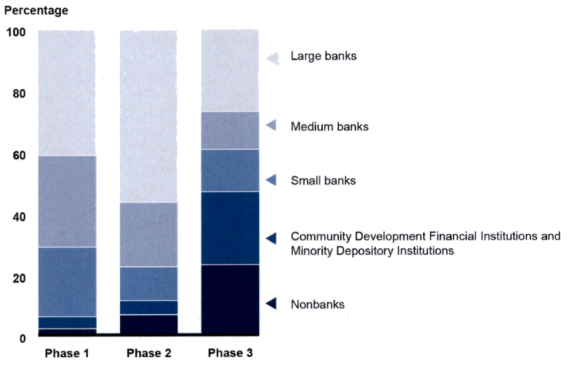
Note: We used data from the Department of Agriculture's Economic Research Service to classify counties as "metro" if they have one or more high-density urban areas with 50,000 or more residents or are outlying counties that are economically tied to these central counties, as measured by the share of workers commuting on a daily basis to the central counties. Rural counties are outside the boundaries of metro areas and have no cities with 50,000 or more residents. High-minority counties were identified based on data from the U.S. Census Bureau's American Community Survey and include counties with a share of minority residents greater than the national share of 27.5 percent. Forty-seven percent of all small businesses are located in high-minority counties. This analysis excludes loans that were approved and subsequently canceled and loans that could not be matched to the data from the U.S. Census Bureau. Generally, Phase 1 data include loans approved from April 3–16, 2020, Phase 2 data include loans approved from April 27–August 8, 2020, and Phase 3 data include first draw loans approved from January 12–June 30, 2021.

Nonbanks, CDFIs, and MDIs Substantially Increased Lending in Later Phases

To increase lending to traditionally underserved businesses and counties, Congress and SBA modified PPP to include more lenders, particularly

those that lend to traditionally underserved businesses.[53] Nonbanks, CDFIs, and MDIs each made a greater percentage of PPP loans in Phases 2 and 3 (see fig. 12). Specifically, the percentage of loans made by nonbanks increased significantly, from 3 percent of loans in Phase 1 to 23 percent of loans in Phase 3. In addition, the percentage of loans made by CDFIs and MDIs rose from 4 percent of loans in Phase 1 to 24 percent of loans in Phase 3. Further, beginning in Phase 2, SBA added 623 new lenders to make PPP loans, increasing the total number of lenders from 4,837 to 5,460. CDFIs, MDIs, and nonbanks made 97 percent of the nearly 1.5 million loans issued by new lenders in the last two phases of the program.

Figure 12: Percentage of Paycheck Protection Program Loans, by Lender Type and Program Phase



Source: GAO analysis of Small Business Administration data. | GAO-21-601

Note: For this analysis, all depository lenders are categorized as "banks," including banks, credit unions, and savings and loan associations. Large banks are as those with at least $10 billion in assets, medium banks are those with $1 to $10 billion, and small banks are those with less than $1 billion based on publicly available call reports. All nondepository lenders are categorized as "nonbanks," including SBA Small Business Lending Companies, SBA Certified Development Companies, SBA Microlenders, Business and Industrial Development Corporations, Farm Credit

[53]SBA and the Department of the Treasury were jointly responsible for approving lenders new to SBA to issue PPP loans. According to SBA officials, SBA approved new federally regulated lenders, and only new non-federally regulated and insured lenders required joint SBA and Treasury approval.

System lenders, and state-regulated financial companies. This analysis excludes loans that were approved and subsequently canceled. Generally, Phase 1 data include loans approved from April 3–16, 2020, Phase 2 data include loans approved from April 27–August 8, 2020, and Phase 3 data include first draw loans approved from January 12–June 30, 2021.

Nonbanks, CDFIs, and MDIs made a higher proportion of loans to traditionally underserved businesses and counties than other types of lenders, particularly small banks. Specifically, self-employed individuals received 85 percent of nonbanks' loans, but only 47 percent of loans overall, which suggests that nonbank lenders' increased participation over time could have helped increase lending to these borrowers. In addition, 21 percent of loans made by CDFIs or MDIs and 23 percent of loans made by nonbanks went to businesses in counties with large shares of women-owned businesses, compared to 4 percent of loans made by small banks.[54] Similarly, 64 percent of loans made by nonbanks and 69 percent of loans made by CDFIs and MDIs went to businesses in high-minority counties, compared to 22 percent of loans made by small banks.[55] These findings suggest the changes SBA and Congress made to increase lending to traditionally underserved businesses through nonbanks, CDFIs, and MDIs helped these businesses better access PPP.

By Program Close, Lending in Traditionally Underserved Counties Was Comparable to Their Share of Small Businesses

By the end of Phase 3, PPP lending to businesses in traditionally underserved counties was proportionate to their representation in the overall small business community, in part because of the changes Congress and SBA made to the program.[56] For example, while loans to businesses in rural counties were high from the start of the program, loans to businesses in high-minority counties and counties with large shares of women-owned businesses reached proportionate levels by the end of Phase 3. However, while lending to businesses with fewer than 10

[54]By comparison, 19 percent of loans made by large banks and 10 percent of loans made by medium banks went to businesses in counties with large shares of women-owned businesses.

[55]Fifty-four percent of loans made by large banks and 36 percent of loans made by medium banks went to businesses in counties with high minority populations.

[56]For the purposes of this report, we refer to "traditionally underserved businesses and counties" more broadly as very small businesses; those owned by minorities, women, or veterans; or those located in rural counties, counties with high minority populations, or Tribal areas. In our analyses, we used businesses with fewer than 10 employees and those owned by self-employed individuals to represent very small businesses. To represent minority-, women-, and veteran-owned businesses, we used counties with high shares of minority residents and high shares of women- and veteran-owned businesses. We include Tribal areas when collectively referring to traditionally underserved counties.

employees increased significantly over time, it remained disproportionately low by the end of Phase 3.

Specifically, the share of loans to businesses in rural counties exceeded their share of all small businesses (see fig. 13). Overall, 15 percent of loans went to small businesses in rural counties, while 13 percent of all small businesses are located in these counties.

Despite initial access challenges, lending to high-minority counties exceeded and lending to counties with large shares of women-owned businesses reached their share of small businesses by the program's end. Businesses in high-minority counties received 50 percent of all loans and account for 47 percent of all small businesses nationwide. Overall, businesses in counties with large shares of women-owned businesses accounted for 16 percent of loans and represent 16 percent of small businesses. In addition, the share of loans to businesses in counties with large shares of veteran-owned businesses was generally commensurate with the share of small businesses in those counties. Overall, counties with large shares of veteran-owned businesses accounted for 4 percent of loans and 5 percent of small businesses.

Businesses across the hardest-hit sectors received 30 percent of all program loans but account for 27 percent of small businesses.

However, the share of loans to businesses with fewer than 10 employees remained below their share of small businesses overall, despite program changes to increase their participation over time. These businesses received 84 percent of all loans, but represent 96 percent of all small businesses. In particular, self-employed individuals received 47 percent of loans.[57] By comparison, businesses with 10 to 499 employees received 16 percent of all loans, despite accounting for just 4 percent of all small businesses.

The proportionately low program participation for businesses with fewer than 10 employees and self-employed individuals could be, in part, because they were able to obtain other forms of assistance. For example, in July 2021, we reported that businesses with fewer than 10 employees accounted for 86 percent of approved applications in the Economic Injury

[57]Data were not available to calculate the percentage of all businesses that are self-employed individuals.

Disaster Loan program—an SBA-administered program that provided $230 billion in loans and advances to small businesses and nonprofits between March 2020 and May 2021.[58] Further, many self-employed individuals may have been eligible for unemployment insurance.[59]

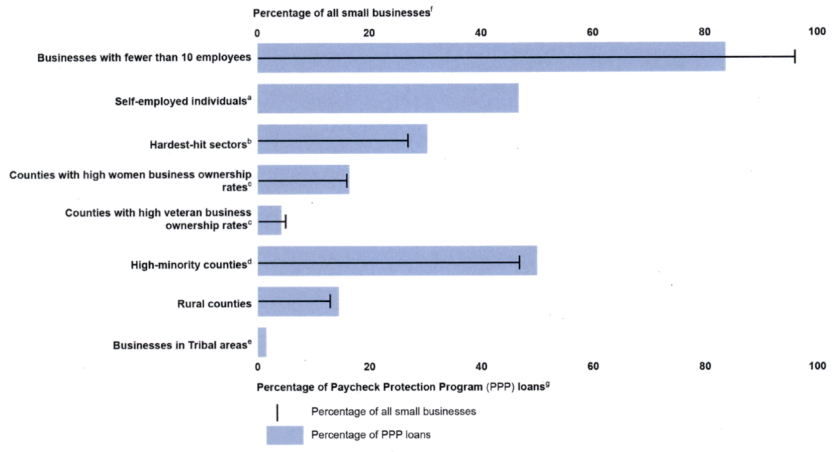
Finally, businesses on Tribal lands received 1 percent of all PPP loans.[60]

[58]See GAO-21-589.

[59]SBA has noted that a self-employed individual's participation in PPP may affect eligibility for unemployment compensation.

[60]Although SBA's loan-level data include the type of businesses that received loans, these data did not consistently record whether businesses were Tribal businesses. Because these data were not available, we estimated the percentage of PPP loans that went to businesses located on Tribal lands. Tribal lands in our analysis included federally recognized American Indian reservations and off-reservation trust land areas, state-recognized American Indian reservations, and Hawaiian homelands for which Census publishes data. Businesses located in these Tribal areas may or may not be Tribal businesses. In addition, data were not available to calculate the percentage of all businesses located on Tribal lands.

Figure 13: Percentage of Paycheck Protection Program Loans Relative to the Share of Small Businesses, by Type of Business or County



Source: GAO analysis of Small Business Administration and Census Bureau data. | GAO-21-601

[a]Self-employed individuals include independent contractors, sole proprietorships, qualified joint ventures, and single-member limited liability companies. Data were not available to calculate the percentage of all small businesses that were self-employed individuals.

[b]Hardest-hit sectors include businesses holding the sector classification code within the North American Industry Classification System identified by the Bureau of Labor Statistics's 2020 Business Response Survey as those that were most likely to experience adverse effects to their business operations as a result of the COVID-19 pandemic. Collectively, businesses in these sectors received a proportionate share of PPP loans relative to their share of all small businesses, but businesses in certain sectors including educational services and arts, entertainment, and recreation received a lower share of PPP loans than their share of all small businesses. The Consolidated Appropriations Act, 2021, enacted December 27, 2020, established the Shuttered Venue Operators Grant program to target over $16 billion in grants to venue operators. Eligible businesses generally fall into the arts, entertainment, and recreation sector.

[c]Counties with large shares of women- and veteran-owned businesses include counties in which the share of business ownership is higher than the national share at the 95 percent confidence level, based on Census's Annual Business Survey.

[d]High-minority counties include counties with a share of minority residents greater than the national share based on Census's American Community Survey.

[e]Data were not available to calculate the percentage of all businesses that are Tribal businesses.

[f]We define all small businesses as employer businesses with fewer than 500 employees and all non-employer businesses based on 2017 data from Census's Statistics of U.S. Businesses and Non-Employer Statistics.

[g]This analysis excludes loans that were approved and subsequently canceled and includes both first and second draw loans. For counties and Tribal areas, loans that could not be matched to Census data were excluded.

Our analysis suggests that program changes made by Congress and SBA helped to increase access for the intended businesses and counties.[61] We will continue to monitor and report on the use of PPP and related small business loan and grant funds through our government-wide reports.

Agency Comments

We provided a draft of this report to the Small Business Administration and the Department of the Treasury for review and comment. Both provided technical comments, which we incorporated as appropriate.

We are sending copies of this report to the appropriate congressional committees, the Administrator of the Small Business Administration, and the Secretary of the Treasury. In addition, the report is available at no charge on the GAO website at https://www.gao.gov.

If you or your staff have any questions about this report, please contact me at (202) 512-8678 or pendletonj@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made key contributions to this report are listed in appendix II.



John H. Pendleton
Director, Financial Markets and Community Investment

[61]Our analysis did not account for the total number of businesses that may have permanently closed as a result of the pandemic, or those that may have utilized other assistance instead of PPP.

List of Addressees

The Honorable Patrick Leahy
Chairman
The Honorable Richard Shelby
Vice Chairman
Committee on Appropriations
United States Senate

The Honorable Ron Wyden
Chairman
The Honorable Mike Crapo
Ranking Member
Committee on Finance
United States Senate

The Honorable Patty Murray
Chair
The Honorable Richard Burr
Ranking Member
Committee on Health, Education, Labor, and Pensions
United States Senate

The Honorable Gary C. Peters
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The Honorable Rob Portman
Ranking Member
Committee on Homeland Security and Governmental Affairs
United States Senate

The Honorable Benjamin Cardin
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Committee on Small Business and Entrepreneurship
United States Senate

The Honorable Kyrsten Sinema
Chair
The Honorable James Lankford
Ranking Member
Subcommittee on Government Operations and Border Management
Committee on Homeland Security and Governmental Affairs
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The Honorable Rosa L. DeLauro
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House of Representatives

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The Honorable Cathy McMorris Rodgers
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The Honorable Norma J. Torres
House of Representatives

The Honorable Bonnie Watson Coleman
House of Representatives

The Honorable Frederica S. Wilson
House of Representatives

Appendix I: Objectives, Scope, and Methodology

This report examines how small business and lender participation in the Paycheck Protection Program (PPP) evolved over time.

Small Business Administration Data

To address this objective, we used loan-level PPP data provided by the Small Business Administration (SBA) on the nearly 12.5 million loans approved from April 3, 2020, through June 30, 2021. The dataset included 70 variables describing loans, small business borrowers, and lenders. In addition, SBA provided a list of lenders approved to participate in PPP. This dataset included 10 additional variables, including information on the lender type and size.

For all analyses, we excluded loans that were approved and subsequently canceled (approximately 6 percent of all loans). To understand the extent to which different types of businesses and business owners were able to access the program, our primary unit of analysis was the number of loans (i.e., whether a business received a loan) rather than the loan amount, which is determined by a formula based on a business's payroll and other expenses and can be sensitive to geographical variations in the cost of doing business.

SBA's loan-level PPP data included the date SBA approved the loan but not the date the application was received. As a result, we categorized loans into three phases based on the date SBA approved the loan. Phase 1 is based on the program's initial funding from the CARES Act and includes loans approved from April 3–16, 2020.[1] Phase 2 is based on the program's second round of funding through the Paycheck Protection Program and Health Care Enhancement Act and includes loans approved from April 27–August 8, 2020.[2] Phase 3 is based on the program's third round of funding through the Consolidated Appropriations Act, 2021, and American Rescue Plan Act of 2021, and includes loans approved from January 12–June 30, 2021.[3]

[1]CARES Act, Pub. L. No. 116-136, §§ 1102(b), 1107(a)(1), 134 Stat. 281, 301 (2020). The dataset includes 10 loans with approval dates on April 20-22, 2020, which we categorized as Phase 1.

[2]Paycheck Protection Program and Healthcare Enhancement Act, Pub. L. No. 116-139,§ 101(a) 134 Stat. 620, 620 (2020). The dataset includes 1 loan with an approval date of August 9, 2020, which we categorized as Phase 2.

[3]Consolidated Appropriations Act, 2021, Pub. L. No. 116-260, div. N, tit. III, §323, 134 Stat. 1182, 2018-22 (2020); American Rescue Plan Act of 2021, Pub. L. No. 117-2, § 5001(d), 135 Stat. 4, 85.

We categorized lenders by type and size. In its list of approved PPP lenders, SBA indicated the lender category (depository or nondepository) and subcategory (lender type). SBA indicated whether a lender was a Community Development Financial Institution (CDFI) by matching its data to a list of CDFIs provided by the Department of the Treasury. SBA also indicated whether a lender was a Minority Depository Institution (MDI) by matching its data to MDI lists from the Federal Deposit Insurance Corporation, the Office of the Comptroller of the Currency, and the National Credit Union Administration. CFDIs and MDIs share a goal of expanding economic opportunity by providing loans to businesses and individuals in traditionally underserved areas. CDFIs include both depository institutions and nonbanks, while MDIs include only depository institutions. We categorized any lender that SBA indicated was a CDFI, an MDI, or both, as "CDFI/MDI."

For the remaining lenders, we categorized all depository lenders—banks, credit unions, and savings and loan associations—as "banks." SBA provided the size of depository lenders using publicly available call reports, which we used to define large banks as those with at least $10 billion in assets, medium banks as those with at least $1 billion but less than $10 billion in assets, and small banks as those with less than $1 billion in assets. We categorized the remaining nondepository lenders as "nonbanks," and these included SBA Small Business Lending Companies, SBA Certified Development Companies, SBA Microlenders, Business and Industrial Development Corporations, Farm Credit System lenders, and state-regulated financial companies.

Analysis of Business and Lender Characteristics

To understand the characteristics of businesses that received PPP loans, we generally analyzed each characteristic by program phase and lender type category. To provide a benchmark, we determined the total number of small businesses for each characteristic using U.S. Census Bureau (Census) data. Specifically, we defined small businesses as employer businesses with fewer than 500 employees and all non-employer businesses based on 2017 data from Census's Statistics of U.S. Businesses and Non-Employer Statistics. Based on the data available, this provides the best estimate of the number of small businesses that were eligible for PPP loans, but it does not precisely capture the full universe of eligible businesses because businesses with 500 employees are excluded and we do not account for variations in SBA's size standards and eligibility criteria across industries and business types.

For business size, we defined the smallest businesses as those with fewer than 10 employees and analyzed those businesses by program

phase. We also analyzed loans to self-employed individuals—which also include sole proprietors, independent contractors, qualified joint ventures, and single member limited liability companies—by program phase and lender category type.

For business sector, we analyzed data from the U.S. Bureau of Labor Statistics's 2020 Business Response Survey and found that businesses in the following six sectors were most likely to experience adverse effects to their business operations as a result of the COVID-19 pandemic: accommodation and food services; arts, entertainment, and recreation; educational services; health care; manufacturing; and retail trade. We considered these industries "hardest-hit sectors" and analyzed them by program phase and location.

While the dataset provided by SBA included variables indicating the race, gender, and veteran status of the business owner, the value was missing or unreported for most loans (76 percent missing for race, 61 percent for gender, and 67 percent for veteran status). We determined these variables were not complete enough to analyze for the purposes of our analysis. Instead, we used estimates from Census's 2018 Annual Business Survey to assess the extent to which counties with a high share of these businesses were able to access PPP. The survey provides information on selected economic and demographic characteristics for businesses and business owners by sex, ethnicity, race, and veteran status.[4] We used county-level data covering 2017, the most recently available data at the time of our review. While these data include employer businesses of all sizes, small businesses comprise more than 99 percent of all businesses in the U.S.

We geocoded the loan-level PPP dataset and merged it with Census's Annual Business Survey data to indicate the share of small businesses owned by women and veterans for the county in which the PPP recipient

[4]Census's Annual Business Survey is an electronic survey that sampled approximately 850,000 employer businesses in 2017. The sample is stratified by state, frame, and industry and is systematically sampled within each stratum. Business ownership is defined as having more than 50 percent of the stock or equity in the business and is categorized by (1) sex (male, female, or equally male/female); (2) ethnicity (Hispanic, equally Hispanic/non-Hispanic, or non-Hispanic); (3) race (White, Black or African American, American Indian or Alaska Native, Asian, Native Hawaiian or Other Pacific Islander, minority, equally minority/nonminority, or nonminority); and (4) veteran status (veteran, equally veteran/nonveteran, or nonveteran). Publicly held and other firms are not classifiable by sex, ethnicity, race, and veteran status. Firms equally male-/female-owned, equally minority-/nonminority-owned, and equally veteran-/nonveteran-owned are counted and tabulated as separate categories.

business was located. Specifically, we compared each county's share of women- and veteran-owned businesses to the national estimate and categorized each county as above, below, or similar to the national estimate. We then compared the share of PPP loans to businesses in counties with above-national shares of women and veteran business ownership to those same counties' share of small businesses. For our analysis, we excluded counties whose share estimates had a relative standard error greater than 20 percent. We determined counties to be similar to the national average if the 95 percent confidence interval surrounding their estimated share fell within the 95 percent confidence interval surrounding the national estimate. For all surveys, we excluded Puerto Rico and U.S. territories from our analysis.

Analysis of County Characteristics

To identify the characteristics of the counties served by PPP, we merged the geocoded loan-level PPP data with data from Census's American Community Survey—an ongoing survey of around 3.5 million households across the U.S. We used county-level 2015–2019 5-year estimates, the most recently available data at the time of our review.[5] We analyzed five socioeconomic indicators at the county level: median household income, poverty rate, unemployment rate, percentage of households receiving public assistance income, and percentage of households with no internet access.

We compared each measure for the county in which a PPP recipient small business was located to the national measure, and categorized each small business as being located in county whose estimate is above or below the national estimate. To facilitate comparison across geographic areas, we calculated the number of loans per small business in a county using data from the 2017 Statistics of U.S. Businesses and 2017 Nonemployer Statistics. We also used American Community Survey data to analyze the share of PPP loans that went to businesses in counties with minority population shares above or below the national estimate and the share that went to rural counties compared to metro counties. We referred to counties classified as "non-metro" by the U.S. Department of Agriculture's Economic Research Service as "rural" and all

[5]The American Community Survey uses a series of monthly samples to produce annually updated estimates for different geographic units, including counties, across the U.S. The survey collects data on the economic, social, housing, and demographic characteristics of communities at various geographic levels, including metropolitan areas, states, and counties.

other counties as "metro."[6] We also analyzed the percentage of PPP loans that went to businesses located on Tribal lands, which may or may not be Tribal businesses.[7]

Lender Survey

To learn more about lenders' experience with PPP applications and the recipients they served, we administered a web-based survey to a representative sample of PPP lenders.[8] In the survey, we asked lenders about the number of applications received and approved, reasons for not approving an application, and the extent to which PPP borrowers had an existing relationship with the lender. We administered the survey from February 2021 to April 2021, and we collected information for the 14-month period from March 2020 to April 2021.

To identify the universe of PPP lenders, we used data provided by SBA on August 3, 2020, which contained 5,466 lenders. We stratified our sample (seven strata) and used a stratified random sample of each: (1) small banks and savings and loans, (2) medium banks and savings and loans, (3) large banks and savings and loans, (4) extra-large banks, (5) credit unions, (6) nonbank lending institutions, and (7) minority-owned depository institutions and community development financial institutions.[9]

Our initial sample size was designed to achieve a stratum-level margin of error of no greater than plus or minus 8 percentage points for an attribute

[6]The U.S. Department of Agriculture's Economic Research Service defines counties as either metro or non-metro areas based on population and commuting patterns. Metro counties are defined as having at least one urban area with a population of 50,000 or more, plus adjacent territory that has a high degree of social and economic integration with the urban core, as measured by commuting ties. Non-metro areas do not have an urban area with at least 50,000 people and do not have measured commuting ties to a metro county.

[7]Tribal lands in our analysis included federally recognized American Indian reservations and off-reservation trust land areas, state-recognized American Indian reservations, and Hawaiian homelands for which Census publishes data.

[8]We also used this survey to inform our July 2021 report on SBA's implementation of PPP. See GAO, *Paycheck Protection Program: SBA Added Program Safeguards, but Additional Actions Are Needed*, GAO-21-577 (Washington, D.C.: July 29, 2021). Specifically, see app. I of that report for more details on the survey's methodology and app. II for the survey's full results.

[9]We defined small banks and savings and loans as those with less than $250 million in total assets, medium banks and savings and loans as those with $250 million or more and less than $1 billion in total assets, large banks and savings and loans as those with $1 billion or more and less than $250 billion in total assets, and extra-large banks as those with $250 billion or more in total assets.

level at the 95 percent level of confidence. Our resulting sample size was 1,383 and we received 781 survey responses. We obtained a weighted response rate of 57.3 percent.[10] Because we followed a probability procedure based on random selections, our sample is only one of a large number of samples that we might have drawn. Since each sample could have provided different estimates, we express our confidence in the precision of our particular sample's results as a 95 percent confidence interval (for example, plus or minus 8 percentage points). This is the interval that would contain the actual population value for 95 percent of the samples we could have drawn. Confidence intervals are provided with each sample estimate in the report. All survey results presented in the body of this report are generalizable to the estimated population of 5,451 in-scope depository institutions, except where otherwise noted.

Data Reliability

To assess the reliability of the SBA data, we identified potential variables for use in our analyses and output statistics on these variables (e.g., frequencies of values, number of blanks or zero values, minimum, maximum, and mean) to identify any potential reliability concerns, such as outliers or missing values. We met with relevant SBA officials to discuss each of the variables to understand how SBA collected, used, and maintained the data; the reliability and completeness of key variables; reasons for any potential discrepancies we identified; and whether our understanding of the data and approach to analyzing them were accurate and reasonable. After these meetings, we requested updated versions of the data and updated our analyses accordingly. In the instances in which we identified potential outliers or errors, we discussed them with SBA, and when necessary, requested a correction. We also reviewed related interviews and data reliability checks conducted for previous reports in which we analyzed PPP data.[11] We determined that all data elements we assessed were sufficiently appropriate and reliable for this report's objectives.

To assess the reliability of all Census data, we reviewed technical information for each data source. We determined the surveys were sufficiently reliable for the purposes of reporting business characteristics

[10]We used a weighted response rate because our survey sample incorporated strata with different probabilities of selection. A weighted response rate may more accurately reflect the level of participation. For example, large units that contribute relatively more to the estimate of a total would have a larger "weight" on the response rate.

[11]For example, GAO, *COVID-19: Federal Efforts Could Be Strengthened by Timely and Concerted Actions*, GAO-20-701 (Washington, D.C.: Sept. 21, 2020).

on the county level. Findings from each survey are subject to sampling errors.

To further inform our work, we reviewed legislation, interim final rules, agency guidance, and academic studies, and interviewed SBA officials. We also reviewed and summarized relevant literature.

We conducted this performance audit from July 2020 to September 2021 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Appendix II: GAO Contacts and Staff Acknowledgments

GAO Contact	John H. Pendleton, (202) 512-8678 or pendletonj@gao.gov
Staff Acknowledgments	In addition to the contact named above, Cory Marzullo (Assistant Director), Christopher Forys (Analyst in Charge), Vida Awumey, Irina Carnevale, Chelsea Carter, Rachel DeMarcus, Gita DeVaney, Jacob Fender, Toni Gillich, Ying Long, John Mingus, Julia Robertson, Rebecca Shea, Jena Sinkfield, Shenandoah Sowash, Tyler Spunaugle, Farrah Stone, and Seyda Wentworth made key contributions to this report.

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Impact of Race and Gender on the SBA Paycheck Protection Program (PPP) Loan Amounts

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Electronic copy available at: https://ssrn.com/abstract=3864218

Abstract

The Paycheck Protection Program (PPP) helped to preserve employment relationships during the sudden shutdown of economic activity due to the Covid-19 pandemic. In this paper, we analyze access of the minority and women-owned businesses to PPP loans. Our quantitative results show that a minority-owned business with 5 to 9 employees received a 21% smaller PPP loan than their white-owned business counterpart. A women-owned small business with 5 to 9 employees received a 15% smaller PPP loan than a male-owned business. Using Lee bounds, we found that women-owned businesses in rural counties received $2,634 and $8,856 smaller PPP loans than those in urban counties. From the interviews with PPP loan recipients in Northeast Ohio, we learned that businesses that received smaller loan amounts had more difficulty with the loan application process compared to businesses that received larger loans. The discrepancy in PPP loans to women- and minority-owned businesses may have stemmed from a lack of access and knowledge about the program itself.

Keywords: women-owned business, minority-owned business, Paycheck Protection Program (PPP)

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Introduction

The small business crisis has fallen disproportionally on minority- and women-owned businesses. From February to April 2020, the Covid-19 pandemic cut 41% of businesses owned by African-Americans and closed 25% of women-owned firms in the U.S. (Fairlie, 2020). Nevertheless, these companies are important employers and contributors to the economy. In 2018, one million minority-owned small businesses in the U.S. employed almost 10 million workers and generated more than $1.5 trillion in economic output. Women owned nearly 300,000 of them, employing 2.3 million workers.[1] Minority- and women-owned small businesses tend to be smaller in size. Nationally, over half of them have 1 to 4 employees and nearly 80% have nine employees or less (Appendix Table A1).

This paper analyzes whether small business owner race or gender played a role in the loan amount granted through the Paycheck Protection Program (PPP) loans. PPP loans are guaranteed and potentially forgivable loans offered by the U.S. Small Business Administration (SBA) to small businesses affected by the pandemic to keep their workers on the payroll. With almost $800 billion approved in more than 11 million loans passing through 5,469 financial institutions, the PPP has been one of the largest economic stimulus programs in U.S. history.[2] In 2020, PPP supported almost 51 million jobs in the U.S. A typical (median) PPP loan of $22,500 retained 3 jobs. Minority and women-owned businesses may have been more vulnerable to the pandemic, yet studies have shown that they face challenges when it comes to credit access. Our findings highlight differences in the PPP loan amount received by minority- and women-owned small businesses in comparison to white- and male-owned. Policy makers can use our results to design policies that better target minority- and women-owned small businesses.

Literature Review and Contribution

Our contribution to the literature is fourfold. First, our paper adds to the literature on small-business credit access, a crucial element to their growth. The use of commercial financing reduces the exit rates of new firms (Yunwei & Minniti, 2015). In the case of the PPP loans, loans were instrumental in providing fast cash relief for businesses and funds to keep the payroll. Becker (1971) hypothesized that individuals who tend to discriminate behave as though they are

[1] 2018 U.S. Census Annual Business Survey (ABS), Table ID: AB1800CSA04
[2] Small Business Administration. Paycheck Protection Program (PPP) Report. Approvals through 05/23/2021.

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willing to pay something, either directly or in the form of a reduced income, to be able to discriminate. This theory asserts that individuals discriminate because they prefer to avoid members of another race or gender. In the context of credit markets, a financial institution that would normally loan funds at rate r will require instead a rate of $r(1 + d)$, with d being the discrimination coefficient. Phelps (1972) considers the case in which lenders use demographic group as a proxy for the economically important factors when deciding whom to issue the loan. At the same time, the Equal Credit Opportunity Act (ECOA) requires that equally qualified borrowers be able to access credit regardless of their race, ethnicity, gender, and other protected classes.

National Survey of Small Business Finances (NSSBF), collected by the Federal Reserve from 1987 to 2003, has been used by many researchers as a common source to investigate some of the factors influencing differentials in the credit market experiences of small businesses across different demographic groups. Findings from the 2003, 1998, and 1993 NSSBF reveal that women and minority borrowers experience greater difficulty securing loans than white male borrowers. Using the 1993 NSSBF ($n = 3{,}400$), Cavalluzzo and Cavalluzzo (1998) observed substantial ceteris paribus differences in denial rates between businesses owned by African Americans and white male-owned firms. They conclude that there is not enough evidence to eliminate discrimination as a potential explanation for some observed differences. Using data from the 1993 and 1998 NSSBF ($n = 3{,}561$), Blanchflower et al. (2003) found that black-owned businesses were about twice as likely to be denied credit even after controlling for observed differences in creditworthiness and other factors. Notably, the magnitude of the black-white differential in small-business loan approval rates is considerably larger than in mortgage discrimination. According to Blanchard et al. (2008), differences in loan approval rates are driven by lenders' stereotypes about the ability of black- and Hispanic-owned businesses to succeed under some circumstances. Using data from the 1998 and 2003 NSSBF ($n = 1{,}256$), Asiedu et al. (2012) found that both black- and Hispanic-owned businesses faced discrimination in obtaining loan renewals in 2003. Among large-scale, well-established small businesses, loan denial rates were 31.5% for minority-owned businesses and 12.3% for nonminority-owned businesses (Bates & Robb, 2013).

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In the Small Business Credit Survey conducted by the Federal Reserve Bank in 2016 (n = 7,916), black-owned businesses applied for new funding at a rate 10% higher than white-owned businesses, but their approval rates were 19% lower. When looking only at firms approved for at least some financing, 40% of minority-owned firms with good personal and/or business credit scores received the full amount requested, compared to 68% of nonminority-owned firms in good standing.[3] Similar trends continued in 2019 (n = 6,614).[4]

Second, we contribute to the literature examining the role of neighborhood characteristics on small business financing. Neighborhoods, where poverty rates are high and minority residents are numerous, have traditionally been viewed as unattractive markets by risk-averse financial institutions. Using 2004-2011 Kauffman Firm Survey data (n = 657), Bates and Robb (2016) investigate loan accessibility among urban small businesses. Black firm ownership, other factors being equal, was associated with smaller loan amounts. Using the Community Reinvestment Act (CRA) small business lending data, Immergluck (2002) measured small business lending flows to neighborhoods in the Philadelphia metropolitan area (n = 1,197). Black tracts received fewer loans after accounting for firm density, firm size, industrial mix, neighborhood income, and the credit quality of local firms. This paper uses nationally representative SBA's PPP loan data (n = 5,212,128) to test the hypothesis of whether minority- and women-owned businesses in rural counties received lower loan amounts than those in urban counties.

Third, we add to the literature on access to credit by women-owned businesses. Credit constraints are one of the main problems that inhibit small business growth, and they are a bigger issue for women-owned businesses (Carter & Allen, 1997; Giglio, 2020). Women-owned businesses are concentrated disproportionately in crowded subsections of lower-order services, e.g., retail, leisure, and hospitality, and are relatively scarce in value-added and capital intense sectors. This lessens the availability of credit. Asymmetric information for women-owned businesses causes credit to be more difficult to obtain or unfairly priced (Scalera & Zazzaro, 2001). In the 2016 Small Business Credit Survey, women-owned businesses applied for business loans around the same rate as male-owned businesses but were much less likely to obtain

[3] Fed Small Business. (2017). 2016 Small Business Credit Survey: Report on minority-owned firms.
[4] Fed Small Business. (2019). Small Business Credit Survey: 2019 Report on minority-owned firms.

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financing (47% success compared to 61%). Fewer women-owned businesses were granted all of the financing they requested in comparison to male-owned businesses, and more women-owned businesses received no financial assistance at all.[5]

Finally, we contribute to the literature on unequal access to the PPP program. In September and October 2020, after the first round PPP closed and prospects for additional stimulus funding were uncertain, the Federal Reserve Bank conducted its national Small Business Credit Survey, including firms temporarily closed at the time of survey (n = 9,693). The survey found that Black-owned businesses were almost half as likely as white-owned businesses to receive the entire PPP funding amount they requested, and they were nearly five times as likely to receive none.[6] Schweitzer and Borawski (2021) also found that Black, Hispanic, or American Indian or Alaska Native majorities received fewer PPP loans on average. Liu and Parilla (2020) break down how small businesses in majority-white neighborhoods received PPP loans faster than small businesses in majority-Black and majority-Latino or Hispanic neighborhoods. Fairlie and Fossen (2021) also found that PPP funds flowed to minority communities later than to communities with lower minority shares. Additionally, Erel and Liebersohn (2020) found that Fintech was disproportionately used in zipcodes with a larger minority share of the population.

The Paycheck Protection Program and Data Description

The Paycheck Protection Program (PPP) was authorized by the United States federal government's passage of the Coronavirus Aid, Relief, and Economic Security (CARES) Act in late March 2020. These loans were designed to directly incentivize small businesses, self-employed workers, sole proprietors, certain nonprofit organizations, and tribal businesses impacted by Covid-19 to keep their workers on payroll through the pandemic. Congress built on the principles of the SBA's existing 7(a) loan guarantee program to distribute loans through certified lenders (banks, credit unions, CDFIs, and, eventually, financial technology companies and non-bank lenders). SBA removed the majority of the 7(a) program's rules—requiring no fees, no credit scores, and no collateral from applicants.

[5] Fed Small Business. (2017). 2016 Small Business Credit Survey: Report on minority-owned firms.
[6] Fed Small Business. (2021). Small Business Credit Survey: 2021 Report on employer firms.

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To be eligible for the Paycheck Protection Program, an applicant must have 500 or fewer employees. The amount of a PPP loan is approximately equal to 2.5 times the applicant's average monthly payroll costs. PPP loans may also be used to pay for mortgage interest, rent, utilities, worker protection costs related to Covid-19, uninsured property damage costs caused by looting or vandalism during 2020. SBA issues loan forgiveness if at least 60% of the proceeds are spent on payroll costs. If not forgiven, PPP loans have an interest rate of 1%.

This paper focuses on the first draw PPP loans issued by SBA from April 3 through August 8, 2020. During this time, SBA issued $525 billion in PPP loans to over 5 million small businesses. Original PPP funds were depleted on April 16 with $319 billion allocated to 1,620,219 small businesses. SBA started to accept applications again on April 27, 2020, with extra funds from the Paycheck Protection Program and Health Care Enhancement Act. Thus, there is a gap in PPP loan approvals between April 16 and April 27, 2020. The first draw PPP closed on August 8, 2020, with $130 billion in available funding that went unclaimed.

We employ the national database of PPP loan recipients released by the U.S. Small Business Administration (SBA). Data include the exact dollar amount for loans with a value below $150,000 but not borrower names. For larger loans, borrower names are available, though the loan amounts are grouped into bins. SBA issues summary reports of national PPP data including loan size. Using this summary data in the SBA's report from August 8, 2020, we calculated the averages per PPP loan range (Column 4 in Table 1) and used them to impute the amount of PPP loan received when the loan recipient name was unknown.[7]

We compared the distribution of PPP loan counts and amounts by state and industry, in the data released by SBA, against the SBA's Summary Report (Appendix Tables A2-A5). The imputed total amount by state ($525 billion) is $211 million smaller (-0.04%) than the total amount of the PPP loans reported by SBA.[8] The imputed total amount by industry is 1.7% larger than in the

[7] Small Business Administration. Paycheck Protection Program (PPP) Report. Approvals through 08/08/2020.
[8] States with the largest PPP loan amounts have the largest absolute difference between the two amounts: Florida (-$227,474,945), New York ($204,326,246), Texas ($146,563,322), and Ohio ($90,451,230). The largest relative

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SBA's Summary Report because of the disproportionally large amount of PPP loans received by the Transportation sector (Stevenson, 2020). Industries that suffered from the pandemic and social distancing restrictions the most, i.e., Health Care, Retail Trade, Accommodation, and Arts, received one-third of the total allocated PPP amount, $159 billion in 1,519,514 loans.

The average size of the PPP loan was $100,769 and the median was $22,500. From Table 2, 87% of all loans were $150,000 or less. However, loans above $150,000 accounted for 72% of the distributed amount. Loans below $150,000 were more commonly seen after April 27, 2020 (Appendix Tables A6-A7). During the first round (April 3-April 16), the average PPP amount was $196,788, compared to $57,458 during the second round (April 27-August 8).

The minimum loan size was 1-cent to a business owner (LLC) from Ocala, Florida on April 8, 2020. The maximum PPP loan ranged from $5 to $10 million.[9] To ensure all program rules were followed, all loans went through an automated review. SBA manually reviewed all loans of $2 million or more. In addition, any loan could be selected for a manual review (SBA, 2020). The dataset includes almost 5,000 large loans totaling $33 billion. Of these large loans, 74% were distributed during the first two weeks, from April 3 to April 16, 2020.

PPP loan applications must be submitted in English to the PPP lender. SBA provides documents in 17 different languages to explain eligibility requirements, help fill out applications, and answer frequently asked questions.[10] The SBA encouraged PPP loan recipients to support the American economy by asking them to purchase American-made equipment and products to the extent feasible.[11] Non-profits including churches, temples, mosques, synagogues, and other houses of worship qualified for PPP loans as long as they met application requirements. Demographic information for borrowers in the PPP loan application was requested on a voluntary basis.

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difference was 2% to 5% for American Samoa (-5%), -$640,924; Delaware (-2%), -$29,027,808; Vermont (-2%), -$25,863,616; and Northern Mariana Islands (-2%), -$965,858.

[9] The maximum imputed loan size was $6,996,438.

[10] U.S. Small Business Administration. First draw PPP loan.

[11] Office of Capital Access. PPP first draw borrower application form. U.S. Small Business Administration.

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SBA data includes 536,817 PPP loan recipients with known business owner's race or ethnicity (Table 3). Based on this self-reported demographic information, Minority and Hispanic business owners received 121,081 loans (23%) corresponding to $11.7 billion (18%). Native American business owners received the highest average PPP loan, $154,429. African American business owners received lower average PPP loans, $84,747, compared to Asian Americans ($92,570), Unanswered Race/Ethnicities ($98,029), Hispanics or Latinos ($103,783), and Whites ($132,741). African American business owners also received a lower median PPP amount, $20,832, compared to Unanswered Race/Ethnicities ($21,200), Hispanics or Latinos ($29,391), Asian Americans ($33,300), and Whites ($38,577).

Most zipcodes in the U.S. had associated businesses receiving PPP loans (Figure 1). Only 1,525 out of 33,120 zipcodes (4.6%) did not receive the first draw PPP loan. We used American Community Survey data at the zipcode level to analyze distributions of PPP loans among different neighborhoods in the U.S. (Table 4). On average, a small business located in a majority African American zipcode received smaller PPP loans than a small business located in majority Hispanic or Latino, White, and Asian American neighborhoods.

SBA data includes 1,115,755 PPP loan recipients with known business owner gender. We utilized Mergent Intellect Dataset to determine the gender of the business owner where the gender of the PPP loan recipient was unanswered. Using exact match by company name, zipcode, and state, we filled in 9,540 observations with missing business owner gender information, which corresponds to $5.6 billion in PPP, or 1% of the total distributed amount. Based on the resulting 1,125,295 observations, the average PPP loan received by the women-owned businesses was $100,349, which is $32,435 smaller than the loan amount received by the male-owned businesses (Table 5). The median PPP loan received by the women-owned businesses was $27,471, which is $12,059 smaller than the loan amount received by the male-owned businesses.

Differences in PPP amounts across minority- and women-owned businesses may be partially explained by different sizes of these businesses compared to white- and male-owned businesses. PPP loan data included information on the number of jobs retained by each borrower, which we

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used as a proxy for the number of employees. On average, women-owned businesses had fewer employees than male-owned businesses (Table 6). African American business owners employed fewer people than Asian American, White, Hispanic or Latino, and Native American business owners (Table 7).

We employed 2013 Rural Urban Continuum Codes to analyze access to PPP loans in rural areas compared to urban areas. Small businesses located in urban counties received 90% of the PPP loan amount (Table 8). On average, small businesses located in rural areas received $71,842, smaller than in suburban areas ($77,515) and urban areas ($104,715). A typical loan received by a small business in rural areas was $20,000, smaller than in suburban areas ($20,832) and urban areas ($23,125).

The SBA also provided the names of the financial institutions (but no other identifiers) that facilitated the loan applications and distributions. PPP loans were allocated through eligible financial institutions. These eligible institutions included regional and community banks, credit unions, Farm Credit Associations, Community Development Financial Institutions (CDFIs), and Minority Depository Institutions, or any other lender approved by the SBA and enrolled in the program. To ensure the funds reached a lot of areas underserved by traditional banks, online lenders, e.g., Fintechs, were made eligible to issue PPP loans on April 14, 2020.

We supplemented information on lender characteristics from various sources. Information on commercial banks was collected from the Federal Deposit Insurance Corporation (FDIC) call reports. Similarly, data on farm credit lenders were collected from call reports made available by the Farm Credit Association. Credit Union information was collected from call reports from the National Credit Union Administration. Lastly, characteristics from non-traditional lenders, e.g., non-banks, Fintechs, CDFIs, were gathered from Mergent, Inc.

Commercial banks distributed most of the first draw PPP loans (95% of the amount and 89% of the loans). Large-scale lenders, possessing over $50 billion in assets, distributed 36% of the

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loans. The top lender was JPMorgan Chase Bank.[12] The vast majority of lenders, 5,338 of 5,460, had less than $10 billion in assets. The average loan through a bank was almost 3 times higher than a loan through a Fintech, $108,112 versus $38,838 (Table 9). The median loan through the bank was $25,000 while through the Fintech it was $16,119.

Summary statistics for each variable are shown in Table 10. The number of days to approval represents the number of days since April 3 when the program started to the date of approval. As such, applications made later would have a greater number of days to approval. The number of mandated lockdown days we calculated using the dates from Wu et al. (2020). Small business loan demand was approximated by the amount in loans granted through the credit reinvestment act (CRA). Data on the CRA was collected from the Federal Financial Institutions Examination Council. We aggregated the loan amounts awarded to small businesses and farms during the year of 2019.

Hypothesis

In this study, we investigate whether business owner race or gender affected the loan amount awarded. Using the ordinarily linear squares (OLS) estimation, we test two primary hypotheses: 1) women-owned businesses received the same loan amount as male-owned businesses; 2) minority-owned businesses received the same loan amount as white-owned businesses. Then, we run a Lee's (2009) treatment-effect bound estimator to test a secondary hypothesis: 1) women-owned businesses in rural counties received lower loan amount than those in urban counties and; 2) minority-owned businesses located in rural counties received a lower loan amount than those in urban counties.

Methodology

Our analysis is composed of a macro and micro-level. At the macro-level, we investigated whether business owner gender, race, lender type, and business location characteristics affected the loan amount granted. Our macro-level analysis strategy has two parts. For the first part, we estimated linear and truncated regressions. For the second part, we utilized a Lee (2009) bounds

[12] Office of Capital Access. Paycheck Protection Program Report through August 8, 2020. U.S. Small Business Administration.

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estimator to identify the bounds of the average treatment effects from owner gender and race on the loan amount awarded. At the micro-level, we conducted structural interviews with PPP recipients in Northeast Ohio. The micro-level analysis allowed for a qualitative and in-depth analysis of the impact from PPP loans on small businesses. The Northeast Ohio region was chosen because Covid-19 has heavily impacted its small businesses, and 40% of all layoffs and unemployment claims in Ohio have been attributed to it (Lendel, 2020).

Macro-Level Analysis

Model

The following log-log model is used to test the two primary hypotheses:

$$loan\ amount_i = \alpha + \beta X_i + \pi M_i + \gamma G_i + \delta Z_i + \theta W_i + \mu_i + l_i + \varepsilon_i \quad (1)$$

where X_i is a vector of small business and PPP program characteristics, Z_i a vector of lender characteristics, W_i is a vector of county-level characteristics, μ_i is a control for state fixed effects, and l_i controls for the different industry sectors, 21 different sectors in total. μ_i and l_i control for unobserved factors in a given state which may affect the PPP loan amount granted. M_i and G_i are the treatment variables. M_i is an indicator for whether the business is minority-owned and G_i is an indicator variable for the gender of the business owner.

Model (1) also controls for the business size using 8 categories based on the number of employees per PPP loan recipient. Additionally, we control for whether the loan was granted in the first round (April 3-April 16 2020) or the second round (April 27-August 8 2020). As shown in the descriptive statistics (Table 10), the total amount of loans granted in the first round differs from that in the second round. We also control for the days to loan approval (Muravyev et al., 2009; Liu & Parilla, 2020). Granja et al. (2020) discuss the importance of lender size and lender type (i.e. financial intermediary) in PPP loans. The model includes the size of the lender using the amount of their assets. Furthermore, we use information on CRA loans as a measure of small business lending demand prior to Covid-19. CRA has an important role in lending to small businesses (Ding et al., 2018), especially those in low-income areas where businesses may be less resilient to shocks such as the closure and reduction in demand brought on by the pandemic.

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When the sample is determined by an exogenous factor, then the sample selection is exogenous and the OLS estimator will be unbiased (Wooldridge, 2013). We also run a truncated regression for the PPP loans below $150,000 because for this subset the exact dollar amount is available.[13] From Table 2, PPP loans below $150,000 represent 87% of all loans and account for more than 70% of the distributed amount. In the case of our data, we find no differences between the results of the linear and truncated models (Table 11). Hence, our quantitative results section discusses the results of the OLS estimation.[14]

Lee Bounds Estimator – Testing the Secondary Hypothesis

In this study, we use the Lee bounds estimator to estimate the effect of treatment on treated. Lee (2009) proposes an estimator applicable to typical treatment evaluation problems in which there is non-random sample selection/attrition. In our case, PPP loans are only observed for those who received the loan. The procedure identifies first the excess number of small businesses that are induced to be selected because of the treatment, and then trimming the upper and lower tails of the outcome (e.g., PPP loan amount) distribution by this number, yielding a worst-case scenario bound. This estimator has the advantage of relying on few assumptions as it requires neither exclusion restrictions nor a bounded support for the outcome of interest (Tauchmann, 2014).[15]

The shares of observations with observed outcomes in the treatment group, q_T, and its control group, q_c, can be written as (Tauchmann, 2014):

$$q_T \equiv \frac{\sum_i I(T_i = 1, S_i = 1)}{\sum_i I(T_i = 1)} \; and \tag{2}$$

$$q_C \equiv \frac{\sum_i I(T_i = 0, S_i = 1)}{\sum_i I(T_i = 0)} \tag{3}$$

where $I(.)$ denotes the indicator function; Y_i is the outcome, i.e. PPP loan amount; T_i is the binary treatment indicator, i.e. business owner race or gender, S_i is the binary selection indicator,

[13] Appendix Tables A8-A9 show similarities in summary statistics of PPP loans ≤ $150,000 by business owner race, ethnicity, and gender compared to all PPP loans in Tables 3 and 5.

[14] We also run an F-test to see whether the interacted terms (gender*company size, and minority*company size) are statistically significant. In both cases, the null hypothesis is rejected. For the F-test of whether the coefficients of the interaction of gender*company size, the F-Statistic is $F(23, 3143) = 2601.67$ with a p-value of 0.00. For the F-test of whether the coefficients of the interaction of minority*company size, the F-Statistic is $F(14, 3143) = 40.93$ with a p-value of 0.00. Therefore, the interaction terms are valid and can be interpreted.

[15] We used command `leebounds` to implement the Lee bounds estimator in Stata (Tauchmann, 2014).

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i.e. PPP loan recipient location. When the treatment group is larger than the control group ($q_C < q_T$), $q = \frac{(q_T - q_C)}{q_T}$ and $1 - q$ marks the quantiles where the control outcome distribution is trimmed (Tauchmann, 2014). This procedure excludes the extreme values. As such, the marginal values of the outcome that are considered in the trimmed means are (y_q^T, y_{1-q}^T):

$$y_q^T = G_{Y|T=1,S=1}^{-1}(q) \tag{4}$$

$$y_{1-q}^T = G_{Y|T=1,S=1}^{-1}(1-q) \tag{5}$$

where G_Y^{-1} denotes the inverse distribution of the outcome function. We now have all elements to calculate estimates for the upper and lower bound (Tauchmann, 2014):

$$\hat{\theta}^{upper} = \frac{\sum_i 1(T_i = 1, S_i = 1, Y_i \geq y_q^T) Y_i}{\sum_i 1(T_i = 1, S_i = 1, Y_i \geq y_q^T)} - \frac{\sum_i 1(T_i = 0, S_i = 1) Y_i}{\sum_i 1(T_i = 0, S_i = 1)} \tag{6}$$

$$\hat{\theta}^{lower} = \frac{\sum_i 1(T_i = 1, S_i = 1, Y_i \geq y_{1-q}^T) Y_i}{\sum_i 1(T_i = 1, S_i = 1, Y_i \geq y_{1-q}^T)} - \frac{\sum_i 1(T_i = 0, S_i = 1) Y_i}{\sum_i 1(T_i = 0, S_i = 1)} \tag{7}$$

The range of the effect from the treatment (i.e. PPP loan amount by race, gender, and location) can be narrowed using covariates (Tauchmann, 2014). We use the categorical variable company size as a covariate to tighten the range of the treatment effect. Information on how the analytical standard errors are calculated can be found in Lee (2009). The Lee bounds allows us to identify whether the effect is different from zero. In cases where the bounds do not include zero, we can conclude whether the treatment on treated was positive or negative, which allows us to test the secondary hypothesis.

Robustness Checks

We run a series of robustness checks on the linear method to control for unobserved effects due to the month of PPP loan approval, zipcode level effects, state effects, and the interaction of these. In order to control for the average demographic characteristics of business owners in a certain location, we run county and zipcode fixed effects (Appendix Table A10).[16] Adding these fixed effects reduces the need for other controls such as the CRA loan demand and income levels. We also control for underlying factors that may be affecting everyone in a state at a given time by interacting state and month. Similarly, we cluster standard errors at the zipcode level and

[16] We used the Stata command `reghdfe` to implement the high dimensional fixed effects estimation (Correia, 2017). This allows for an OLS estimation with a large number of fixed effects (or dummies).

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also as two-way clusters: zipcode and state*month, zipcode and industry, zipcode and state (Appendix Table A11). The statistical significance of the coefficients, their magnitude, and signs are robust to these variations.

Quantitative Results

Table 11 presents the results from the linear model and the truncated regression. Given the similarity in the results, this section will focus on discussing the findings from the linear regression (Column 1). The linear model presents standard errors clustered at the county level and an R-squared of 0.41.

Small business owner's race and ethnicity played a large role in the amount of PPP loans received. On average, a minority-owned business received 6% less than a white-owned business (or $1,939 less). As expected, given the nature of the program, the loan amount awarded varies given the size of the company (number of employees). Nationwide distribution of minority-owned small businesses shows that 81% of them have nine employees or less (Appendix Table A1). The interacted coefficient of minority and company size shows that a minority-owned business with 5 to 9 employees received 21% less than their white-owned business counterpart[17]. These businesses represent 18% of all minority-owned small businesses.

Similar to the case of the owner's race and ethnicity, the owner's gender also seemed to play a larger role in the amount of PPP loans awarded. On average, a women-owned business received 22% less than a male-owned business (or $6,464 less). The size of this difference reduces as the company size increases. Nationally women-owned small businesses with nine employees or less accounted for 82% of all women-owned businesses (Appendix Table A1). The interacted coefficient of female and company size shows that a women-owned business with 5 to 9 employees received 15% less than its male-owned business counterpart. The difference in PPP loans awarded to male and women-owned businesses is larger when the company size is smaller.

[17] To estimate the impact from an interaction term you need to add the coefficient from the interaction to that of the coefficient from gender or minority on its own. For example, the effect for minority and company size with 5 to 9 employees is -0.06 – 0.15 = -0.21 (~21%). For further details see Wooldridge (2013).

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For example, women-owned businesses with 20 to 99 employees received 5% less in PPP loans than their male counterparts.

Suburban and rural areas received smaller PPP loans compared to urban areas, which may be linked to difficulties accessing PPP lenders in underbanked and underserved communities and a greater need for technical assistance to businesses in rural areas. Using Lee bounds, we find that women-owned businesses in rural counties received a lower PPP loan amount than those in non-rural counties, between $2,634 and $8,856 smaller (Table 12). As for minority-owned businesses, we cannot find a statistically significant difference between PPP amounts received by minority-owned businesses in rural counties versus non-rural counties. The range received by minority-owned businesses in rural counties goes from a negative to a positive amount. The treatment effect overlaps the zero value.

Counties with higher median income levels and higher small business loan demands (proxied by past CRA lending) are positively related to the loan amount awarded (Table 11). This result aligns with the findings from Schweitzer and Borawski (2021) showing that PPP loans had a wide reach to low- and middle-income communities served by the CRA loans. The same authors also find that PPP loans reached higher-income communities to a larger extent. Comparing the magnitude of the coefficients, our results suggest a larger impact from increases to income in comparison to increases in loan demands.

Results also show that larger lenders, those with a higher amount of assets, distributed larger PPP loans. An increase of 1% in lender assets is associated with an increase of 0.01% (or $3.23). Corresponding with the data description, loans approved in the second round (April 27-August 8) were smaller compared to the loans in the first round (April 3 - April 16). This result may be associated with the fact that a greater number of smaller businesses applied later in the program, while larger companies applied early on.

Data Limitations

As mentioned in the data section, answering the gender or race portions on the PPP loan application was optional. We tried replacing the unanswered parts by using data from Mergent

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Intellect on women-owned or minority certifications. Nevertheless, a substantial proportion is still unanswered. Even though we control for the unanswered data we do not observe them. Such limitation could mean that our results may be under or overestimating the true values. Therefore, our results need to be interpreted with caution. Although we conducted a series of robustness checks, the reasons for observing differences in loan amount may be due to different factors, for instance, owners' lack of knowledge about their eligibility to the program. We attempt to identify these factors in the interviews we conducted and which are discussed in the qualitative results section of the paper.

Micro-Level Analysis – Structural Interviews

In order to conduct a qualitative review of business' experiences applying for and receiving PPP loan funds, we performed 19 structural interviews with a variety of small businesses in Northeast Ohio. Our sample was composed of small businesses that received PPP loans under and over $150,000. Companies that received more than $150,000 in loan funding were identified using SBA data for business name and location and the Mergent Intellect Database for corresponding contact information. Since SBA data does not provide business names for loans of $150,000 or less, we reached these PPP loan recipients through local communities' Facebook pages. We also used personal contacts along with publicly available USA Spending data on PPP.

We targeted small businesses in Northeast Ohio (NEO), an 18-county area containing approximately 36% of Ohio's population, employment, and GDP.[18] Poverty and low income are persistent issues in Northeast Ohio that contribute to economic distress; as the region lost good-paying manufacturing jobs, low-wage service sector jobs took their stead.[19] Adding to this, the Coronavirus pandemic forced many businesses to close, and the economic situation in the region has become even more distressed as a result. In 2020, at least 800,000 workers in NEO filed for first-time unemployment benefits compared to 150,000 in 2019. Nearly 40% of previously employed residents filed for unemployment, an increase from 7% in 2019 (Figure 2). The

[18] Approved IRB-FY2021-147

[19] In 2019, per capita income in NEO was 8% lower than in the U.S. Every tenth family in NEO, almost 600,000 people, live in poverty, exceeding the poverty rate in the U.S. Source: 5-year ACS and BEA Data using StatsAmerica Measuring Distress tool

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pandemic has heavily affected small businesses that supported nearly 80% of all jobs in NEO (Demko et al., 2021).

From March through May 2021, we sent out a total of 316 e-mails inviting businesses to participate in the interview, with a follow-up reminder about one week after the first e-mail. There was a 6% positive response rate from the e-mails. Participants self-selected to participate and did not receive any direct benefits from the interview. The interviews were held via Zoom or telephone and ranged from 15 to 50 minutes, averaging around 30 minutes in length. Appendix B lists the 18 questions we asked each participant (Approved IRB-FY2021-147). We asked if the business had a certification of minority-owned, business-owned, or veteran-owned. We did not prompt answers about the role of gender, race, or ethnicity in small businesses' access to PPP loans.

Small businesses in our sample represented various industries of the economy such as professional services, wholesale trade, transportation, information services, construction, administrative services, and manufacturing. In terms of legal form, participants included 12 LLCs, 4 S Corporations, 2 C Corporations, and 1 Non-profit. The largest business had 240 employees, and two participants were sole proprietorships. The PPP loan amount responding businesses received varied from about $20,000 to over $2 million. Ten of the businesses received $150,000 or less in PPP loan funding, whereas nine businesses received over $150,000. Ten PPP recipients only included payroll in PPP while nine added rent, utilities, and personal protective equipment expenses.

Interview Findings

In general, the companies interviewed did not report any issues with PPP as it related to gender or race. In some instances, businesses reported that having a certain type of business certification helps them get business contracts. It is important to highlight that our sample is not representative of all experiences but provides a case study of small business experiences with PPP loans in Northeast Ohio. In diving deeper into the responses, we found strong differences between businesses that received less than, or equal to, $150,000 in PPP funds and businesses that received over $150,000. In general, businesses that received smaller loan amounts reported

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more difficulty with the loan application process, filing a larger number of applications and pursuing more unique funding sources such as FinTech.

Some universal experiences emerged across the majority of the businesses interviewed. With the exception of one respondent, businesses received the full loan amount requested. Only two businesses remembered that the application asked loan recipients to buy American-made products when possible. Almost every business vocalized some form of frustration with the application process and uncertainty around what it entailed. Every small business voiced appreciation for the assistance provided by the government in the form of PPP loans, and the majority stated that the loan helped them retain employees. Despite the PPP loan, a wide variety of strategies had to be implemented through the pandemic beyond layoffs, including partial and complete furloughs, reduced hours, and reduced salaries and wages for both employees and management. Several businesses had owners who took no salary for at least one quarter of 2020, whereas some larger businesses instituted management salary cuts of up to 25%. One business discussed their strategy of approaching employees later in their career and asking them to take early retirement; approximately 20 of their 240 employees were either terminated or took the early retirement option. Other businesses also had employees who retired, given the increased health risks posed by the pandemic.

Small PPP Loans Recipients ($150,000 or less)

This group included ten small businesses that received $150,000 or less in PPP loan funding. The smaller loan amount businesses pursued more unique lenders to receive PPP loans. Repeatedly these businesses reported difficulties in applying for the program using commercial banks, even those with whom they had extensive working relationships. This resulted in these businesses having to submit multiple applications with multiple banks and for several of them to ultimately pursue Fintech lenders like Lendio, Ready Capital, and Paypal. Respondents cite the reason for these difficulties stemming from the size of their business. For instance, a business owner complained: "[I] could not get anyone's attention or response because I am a small business." Many owners in this category vocalized the belief that "banks were incentivized to work with bigger businesses because they were paid a percentage of the loan amounts."

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Beyond the difficulty in finding a lender, smaller PPP loan recipients also vocalized frustration regarding the information each lender required for the application. Documentation required was not standard across lenders. One business complained that they had to submit multiple applications, even though it was with the same lender. The application form kept changing as the rules around PPP funding were clarified. "I would spend hours pulling the information, then the form changed," says this business owner. This increased substantially the time required for submission. Another owner described the most frustrating part of the process was "the release of new guidelines and clarifications weekly, making it super hard to stay on top of."

Lack of clarity and transparency about the PPP application was voiced overall by the respondents. Businesses expressed frustration over PPP amount limits and its use. For example, a few respondents did not realize that rent, mortgage, and utility payments could be included, and even vocalized their desire that these expenses had been permitted to be part of the calculations. This lack of clarity caused business owners to miss out on the opportunity to request higher PPP loan amounts. One business owner, in particular, stated that while the PPP loan was very helpful, it was not enough and that they wished they had been able to include rent and utilities in the loan application.

Large PPP Loans Recipients (over $150,000)

Nine businesses interviewed received larger loan amounts over $150,000, with the highest loan being over $2 million. These businesses themselves varied widely in size, from employee counts of 10 to 240. All businesses received funding through a commercial bank; none had to pursue an alternative funding source. Nevertheless, many of these businesses vocalized frustration with their bank, the application process, and the need to submit multiple applications. One business aptly explained the lack of communication: "the funny thing is, it seems the rules were so vague that the amount of money you were eligible for depended on what person you got on the phone with and what their interpretation and understanding of the rules were." However, overall their experience was more streamlined when compared with smaller loan recipients we interviewed. As one business owner stated, "it became just a matter of where we fell in line."

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Further, these businesses reported getting approved for funds more quickly, within the range of a few days to three weeks. One business owner shared that they were "pretty much instantly approved; it only took a day or two both times." Another echoed this, stating "approval was pretty immediate." Smaller loan amount businesses, on the other hand, reported that approval and receipt of funds from 10 days to 6 weeks. Larger loan amount businesses did report spending several more hours on their applications, given the complexities of having a larger business with greater employee counts. Some businesses reported spending "up to 20 or 30 hours" on their application, with others saying it took several days to gather the requisite information. On the other hand, smaller businesses said the application took as quick as 8 minutes to complete, echoing the expected time for completing the PPP loan application by SBA.[20]

Several businesses did voice that SBA substantially improved the application process between the first and second draws, with one larger business stating, "communication and clarity, my biggest issues, were drastically improved from the first round." Another larger business said that the process had "been improved through automation, making it a lot easier to apply" for the second draw. Some businesses still stated that lenders could have been further incentivized to work with businesses of all loan amounts.

Policy Implications and Conclusions

Of all small businesses, minority-owned have proven to be most vulnerable. Even before the pandemic, these businesses showed signs of limited financial health in terms of profitability and credit scores, and they are more likely to be concentrated in industries most immediately affected by the pandemic (Dua et al., 2020). Greater access to more affordable loans may facilitate economic recovery, enable minority- and women-owned businesses to improve their credit scores, and grow business. In addition, expanded access to borrowing opportunities may encourage women-owned businesses to enter into small business ownership at higher rates, which is important because the pandemic has hit women harder than men (Stevenson, 2020). In February 2020, women's labor force participation rate was 57%, the lowest it has been since 1988 (Ewing-Nelson, 2021).

[20] Office of Capital Access. PPP first draw borrower application form. U.S. Small Business Administration.

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Our quantitative results point to discrepancies between the PPP amounts received by women-owned businesses versus male-owned businesses, and minority-owned businesses versus white-owned businesses, after controlling for business size (number of employees). We also find that women-owned companies in rural counties received a lower PPP loan than those in urban counties. Nevertheless, it would be incorrect to read our findings as an accusation of the PPP program of discrimination. Rather, our findings highlight that further actions may be needed if the PPP loan program intends to reach a more diverse pool of applicants. The discrepancy in PPP loans to women- and minority-owned businesses may have stemmed from a lack of access and knowledge about the program itself. Further research is needed to investigate this hypothesis.

As such, women- and minority-owned businesses tend to fall under the case of businesses that may have applied for smaller PPP loans. Our qualitative findings suggest that smaller businesses faced difficulties in identifying lenders as well as knowing whether they were eligible for the program and the amount they could request. Similar to Humphries et al. (2020), we found that the smallest businesses had the least awareness of government assistance programs, including PPP, relative to larger firms. Minority- and women-owned small businesses may have benefited from technical assistance with the program application, as they also tend to have fewer resources to pay consultant fees. Effective policy requires that its rules and regulations be clear and transparent and that they reach eligible applicants through various business networks and associations. As an example, the smaller PPP recipients we interviewed mentioned using local Facebook groups and Twitter to navigate the application process and crowdsource finding lenders.

Similar to Bartik et al. (2020), our results identify the important role of borrower-lender relationships when applying for the PPP loan. Although PPP loans were intended for small businesses of all sizes, responses from the interviews suggest that larger businesses were preferred by larger lenders, such as commercial banks. Non-bank lenders were often the last resort after seeking more traditional lenders such as commercial banks. Businesses with loans of $150,000 or under also recounted having to submit multiple applications with multiple banks, with many of them ultimately having more success at smaller, local banks rather than larger multistate banks. This means that policymakers may want to pay close attention to bank mergers

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and the exits of local banks from underserved communities. Policymakers may also want to add further incentives to lenders that reach out to smaller businesses of diverse ownership and size, such as banks that have high participation in CRA lending.

From a policy perspective, if the goal is to target ethnic disparities and support inclusion in federal aid for entrepreneurs, then the program cannot be one size fits all (Hamilton, 2020; Carpenter & Loveridge, 2018). In 2021, during the second draw of PPP funding, SBA tried to address the unevenness of coverage by setting aside a two-week exclusive application period for smaller businesses and non-profits with fewer than 20 employees.[21,22] SBA also revised the PPP's funding formula for sole proprietors, independent contractors, and self-employed individuals. As a result, loans to minority-owned businesses increased by 20%, loans to women-owned businesses increased by 14%, and loans to small businesses in rural areas increased by 12% compared to the daily average rate of loans before the exclusivity period (SBA, 2021). While a few small businesses interviewed in Northeast Ohio did mention that the exclusive application period SBA created for smaller businesses during the second draw was a valuable change, others felt that it was not enough and that more targeted outreach programs would have been necessary.

Beyond this, valuable feedback directly from program participants repeatedly mentioned the need for a centralized application portal. As described above, different lenders had entirely different applications that asked for different information, and this added confusion and complexity to the process when businesses had to approach several different lenders and fill out new applications with new information each time. Further, a centralized portal would help avoid the problem of lenders being overwhelmed with processing applications. While several lenders have created their own online application portals, a centralized portal would make the process more transparent and less arduous for applicants. This centralized portal also would have increased clarity on the application requirements and eligibility by ensuring uniformity and providing increased communication.

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[21] PPP lender information. U.S. Small Business Administration.

[22] SBA also capped the maximum loan amount in the second draw at $2 million compared to $10 million in the first draw. Eligible borrowers had to have no more than 300 employees and demonstrate at least a 25% reduction in gross receipts due to the pandemic impact. Source: Second draw PPP loan. U.S. Small Business Administration.

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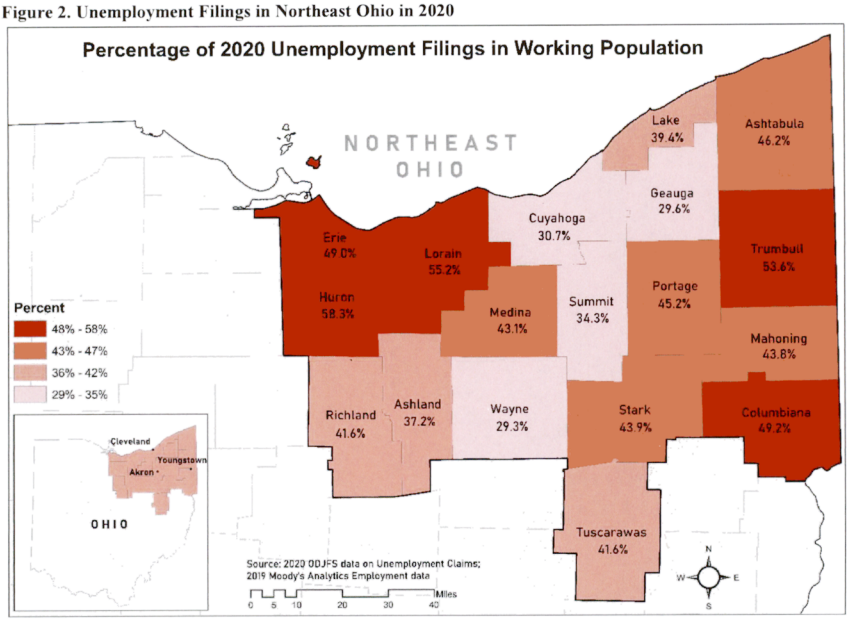
Figure 1. PPP Loans Distribution per Zipcode



Source: SBA First Draw PPP Data

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Figure 2. Unemployment Filings in Northeast Ohio in 2020



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Table 1. Reported Ranges of the PPP Loans with known Recipients Names

PPP Loan Range	PPP Loan Count	Total PPP Amount	Average Loan Size
>$150K -$350K	377,797	$84,782,932,509	$224,414
>$350K -$1M	199,679	$113,558,427,234	$568,705
>$1M -$2M	53,218	$73,887,171,387	$1,388,387
>$2M -$5M	24,248	$72,184,996,045	$2,976,946
>$5M - $10M	4,734	$33,121,136,431	$6,996,438

Source: Authors' calculations and SBA's PPP report on Approvals through 08/08/2020

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Table 2. PPP Loans Amount Summary Statistics, 04/03/2020-08/08/2020

PPP Loans by Size	Number of Loans	Mean	Median	Std Dev	Minimum	Maximum	Sum
PPP Loans ≤ $150,000	4,549,613	$32,322	$20,661	$32,836	$0.01	$149,999	$147,051,687,518
PPP Loans > $150,000	662,515	$570,812	$224,414	$793,446	$224,414	$6,996,438	$378,171,796,465
All PPP loans	**5,212,128**	**$100,769**	**$22,500**	**$336,359**	**$0.01**	**$6,996,438**	**$525,223,483,983**

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Table 3. Summary Statistics – PPP loans by Business Owner Race and Ethnicity

Business Owners	Number of Loans	Mean	Median	Std Dev	Minimum	Maximum	Sum
African American Business Owners	17,281	$84,747	$20,832	$281,981	$83	$6,996,438	$1,464,514,626
Hispanic or Latino Business Owners	42,058	$103,783	$29,391	$300,689	$74	$6,996,438	$4,364,889,550
Asian American Business Owners	58,840	$92,570	$33,300	$273,205	$8	$6,996,438	$5,446,844,510
White Business Owners	415,736	$132,741	$38,577	$362,140	$0.01	$6,996,438	$13,533,983,860
Native American Business Owners	2,870	$154,429	$40,000	$455,526	$290	$6,996,438	$443,210,992
Business Owners - Other Races (Eskimo)	5	$8,691	$6,000	$5,888	$4,900	$18,957	$43,457
Business Owners - Two and More Races	11	$43,285	$20,800	$64,125	$6,200	$224,414	$476,136
Unanswered Race/Ethnicity	4,675,327	$98,029	$21,200	$334,948	$1	$6,996,438	$458,318,498,048
All Loans	**5,212,128**	**$100,769**	**$22,500**	**$336,359**	**$0.01**	**$6,996,438**	**$525,223,483,983**

Source: Authors' calculations based on the SBA's Self-Reported Demographic Data in the First Draw PPP loan data

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Table 4. Summary Statistics – PPP loans by Zipcode Demographic Characteristics

Business Owners	Number of Loans	Mean	Median	Std Dev	Minimum	Maximum	Sum
Majority African American	238,997	$91,315	$20,594	$330,612	$0.01	$6,996,438	$21,824,125,069
Majority Hispanic or Latino	409,124	$98,157	$20,833	$328,645	$1	$6,996,438	$40,158,462,380
Majority Asian American	45,432	$110,432	$24,900	$375,690	$1	$6,996,438	$5,017,136,055
Majority White	4,477,456	$99,627	$23,000	$330,202	$1	$6,996,438	$446,073,705,101
Majority Native American Races	2,635	$137,235	$23,600	$466,846	$100	$6,996,438	$361,614,730
Majority Other Races	8,652	$84,307	$19,300	$306,443	$100	$6,996,438	$729,427,308
Majority Two and More Races	62	$81,964	$20,833	$152,283	$1,900	$568,705	$5,081,760

Source: Authors' Calculation based on U.S. Census Bureau's American Community Survey (ACS) Data and SBA's First Draw PPP loan data

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Table 5. Summary Statistics – PPP loans by Business Owner Gender

Business Ownership	Number of Loans	Mean	Median	Std Dev	Minimum	Maximum	Sum
Female-Owned	262,628	$100,349	$27,471	$285,355	$13	$6,996,438	$26,354,351,670
Male-Owned	862,667	$132,783	$39,530	$362,706	$0.01	$6,996,438	$114,547,599,561
Unanswered	4,096,373	$95,192	$20,833	$335,541	$1	$6,996,438	$389,943,182,746
All PPP Loans	**5,212,128**	**$100,769**	**$22,500**	**$336,359**	**$0.01**	**$6,996,438**	**$525,223,483,983**

Source: Authors' calculations based on the SBA's Self-Reported Demographic Data in the First Draw PPP loan data and Mergent Intellect Dataset

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Table 6. PPP Loan Recipients by Size and Business Owner Gender

Business Owner Gender	Number of Jobs	Mean	Median	Std Dev	Minimum	Maximum	Sum
Female-Owned	253,537	12	4	29	0	500	3,029,282
Male-Owned	827,190	14	5	34	0	500	11,729,227
Unanswered	3,793,523	10	2	30	0	500	36,165,583
All PPP Loans	**4,874,250**	**10**	**3**	**31**	**0**	**500**	**50,924,092**

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Table 7. PPP Loan Recipients by Size and Business Owner Race/Ethnicity

Race/Ethnicity	Number of Jobs	Mean	Median	Std Dev	Minimum	Maximum	Sum
African American Business Owners	16,785	11	3	32	0	500	190,152
Hispanic or Latino Business Owners	40,916	14	5	34	0	500	558,407
Asian American Business Owners	56,744	13	6	28	0	500	734,916
White Business Owners	405,409	14	5	33	0	500	5,804,336
Native American Business Owners	2,772	17	6	43	0	500	47,078
Business Owners - Other Races (Eskimo)	5	1	1	1	0	1	3
Business Owners - Two and More Races	9	6	4	8	1	24	58
Unanswered Race/Ethnicity	4,351,610	10	3	30	0	500	43,589,142
All Loans	**4,874,250**	**10**	**3**	**31**	**0**	**500**	**50,924,092**

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Table 8. PPP Loan Recipients by Degree of County Urbanization

Degree of County Urbanization	Number of Loans	Mean	Median	Std Dev	Minimum	Maximum	Sum
Urban Areas	4,518,211	$104,715	$23,125	$346,399	$0.01	$6,996,438	$473,125,764,580
Suburban Areas	401,702	$77,515	$20,832	$264,783	$27	$6,996,438	$31,137,921,504
Rural Areas	287,092	$71,842	$20,000	$254,658	$54	$6,996,438	$20,625,152,375

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Table 9. PPP Loan Recipients by Lender Type

Lender Type	Number of Loans	Mean	Median	Std Dev	Minimum	Maximum	Sum
Commercial Bank	4,617,584	$108,112	$25,000	$351,643	$0.01	$6,996,438	$499,218,172,432
Non-Traditional (non-banks, Fintechs, CDFIs, etc.)	362,265	$38,838	$16,119	$152,515	$1	$6,996,438	$14,069,469,492
Credit Union	211,849	$48,188	$16,499	$164,392	$8	$6,996,438	$10,207,945,777
Farm Credit Association	15,093	$82,045	$19,330	$355,178	$96	$6,996,438	$1,238,312,230

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Table 10. Summary Statistics for the Variables Used in the Macro-Level Analysis

Variables	Description	Mean	Standard Deviation	Observations
PPP Loans ≤ $150,000	Loan amount awarded through the PPP program from $0 to $150,000	$32,322	$32,836	4,549,613
Owner race				
White-Owned	White-owned businesses take the value of 1 and zero otherwise (Base-case)	0.07	0.27	4,549,613
Minority-Owned	Minority-owned businesses take the value of 1 and zero otherwise	0.02	0.15	4,549,613
Unanswered Owner Race	Owner race characteristics unknown take the value of 1 and zero otherwise	0.90	0.30	4,549,613
Owner gender				
Male-Owned	Male owned businesses take the value of 1 and zero otherwise (base-case)	0.15	0.36	4,549,613
Women-Owned	Women owned businesses take the value of 1 and zero otherwise	0.05	0.22	4,549,613
Unanswered Owner Gender	Owner gender characteristics unknown take the value of 1 and zero otherwise	0.80	0.40	4,549,613
Urban County	Dummy that takes on the value of 1 if county is a metro county (this is the base case)	0.86	0.34	4,544,937
Rural County	Dummy that takes on the value of 1 if county is remote rural and zero otherwise	0.06	0.23	4,544,937
Suburban County	Dummy that takes on the value of 1 if county is metro adjacent and zero otherwise	0.08	0.27	4,544,937
Loan demand	Total amount of CRA loans made to small businesses and farms in 2019	$1,617,993	$2,727,590	4,530,991
Median Income	Median county income	$73,305	$30,930	4,500,939
Lender Assets	Total lender assets	$785,000,000	$5,090,000,000	4,450,113
Lenders				
Credit Union	Credit Union lender takes the value of 1 and zero otherwise (Base-case)	0.04	0.21	4,544,921
Commercial Bank	Commercial bank lender takes the value of 1 and zero otherwise	0.79	0.41	4,544,921
Farm Credit Association	Farm Credit Association lender takes the value of 1 and zero otherwise	0.00	0.06	4,544,921
Non-traditional Lender	Non-traditional (incl. non-banks, Fintechs, CDFI, etc) lender takes the value of 1 and zero otherwise	0.17	0.37	4,544,921
Second PPP Round (Apr 27-Aug 8 2020)	Dummy that takes on the value of 1 if application is from the second round (Apr 27-Aug 28th) and zero otherwise	0.74	0.44	4,549,613
Days to approval	Number of days between April 3rd 2020 and the loan approval	35.42	30.24	4,549,613
Days in Lockdown	Total days of mandated state or county lockdown	6.76	5.58	4,549,501
Non-Profit	Business is a non-profit takes the value of 1 and zero otherwise	0.03	0.17	4,549,628
Company Size				
Less than 5 Employees	Companies with less than 5 employees take the value of 1 and zero otherwise (base-case)	0.64	0.48	4,548,943
5 to 9 Employees	Companies with 5 to 9 employees take the value of 1 and zero otherwise	0.18	0.38	4,548,943
10 to 19 Employees	Companies with 10 to 19 employees take the value of 1 and zero otherwise	0.09	0.29	4,548,943
20 to 49 Employees	Companies with 20 to 49 employees take the value of 1 and zero otherwise	0.03	0.16	4,548,943
50 to 99 Employees	Companies with 50 to 99 employees take the value of 1 and zero otherwise	0.00	0.04	4,548,943
100 to 249 Employees	Companies with 100 to 249 employees take the value of 1 and zero otherwise	0.00	0.02	4,548,943
250 to 499 Employees	Companies with 250 to 499 employees take the value of 1 and zero otherwise	0.00	0.01	4,548,943
Unaswered	Company size is unknown take the value of 1 and zero otherwise	0.07	0.25	4,548,943

Table 11. Linear Regression (OLS) and Truncated Regression Results. Standard Errors are in Parenthesis
(Continues on Next Page)

	Linear Regression (OLS) Log PPP Loans ≤ $150,000	Truncated Regression Log PPP Loans ≤ $150,000
Minority-Owned	-0.06 ***	-0.06 ***
	(0.010)	(0.010)
Minority-Owned 5 to 9 Employees	-0.15 ***	-0.15 ***
	(0.011)	(0.011)
Minority-Owned 10 to 19 Employees	-0.07 ***	-0.07 ***
	(0.010)	(0.010)
Minority-Owned 20 to 49 Employees	0.08 ***	0.08 ***
	(0.012)	(0.012)
Minority-Owned 50 to 99 Employees	-0.04	-0.04
	(0.044)	(0.044)
Minority-Owned 100 to 249 Employees	0.32	0.27
	(0.236)	(0.258)
Minority-Owned 250 to 499 Employees	-0.47 *	-0.47 *
	(0.274)	(0.274)
Women-Owned	-0.22 ***	-0.22 ***
	(0.005)	(0.005)
Women-Owned 5 to 9 Employees	0.07 ***	0.07 ***
	(0.005)	(0.005)
Women-Owned 10 to 19 Employees	0.09 ***	0.09 ***
	(0.005)	(0.005)
Women-Owned 20 to 49 Employees	0.17 ***	0.17 ***
	(0.007)	(0.007)
Women-Owned 50 to 99 Employees	0.17 ***	0.17 ***
	(0.035)	(0.035)
Women-Owned 100 to 249 Employees	0.04	0.003
	(0.160)	(0.162)
Women-Owned 250 to 499 Employees	0.05	0.05
	(0.239)	(0.239)
Rural County	-0.05 ***	-0.05 ***
	(0.012)	(0.012)
Suburban County	-0.05 ***	-0.05 ***
	(0.010)	(0.010)
Log Loan demand	0.04 ***	0.04 ***
	(0.004)	(0.004)
Log Median Income	0.07 ***	0.07 ***
	(0.012)	(0.012)
Log Lender Assets	0.01 ***	0.01 ***
	(0.001)	(0.001)
Commercial Bank	0.28 ***	0.28 ***
	(0.008)	(0.008)
Farm Credit Association	0.38 ***	0.38 ***
	(0.014)	(0.014)
Non-Traditional Lender	0.10 ***	0.10 ***
	(0.010)	(0.010)
Second PPP Round (Apr 27-Aug 8 2020)	-0.30 ***	-0.30 ***
	-0.001	(0.001)
Days to Approval	-0.003 ***	-0.003 ***
	(0.001)	(0.001)
Days in Lockdown	0.03	0.03
	(0.029)	(0.029)
Non-Profit	0.23 ***	0.23 ***
	(0.001)	(0.001)

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Table 11. Linear Regression (OLS) and Truncated Regression Results. Standard Errors are in Parenthesis (Continued)

	Linear Regression (OLS) Log PPP Loans ≤ $150,000	Truncated Regression Log PPP Loans ≤ $150,000
Unanswered Owner Race	0.02 ***	0.02 ***
	(0.006)	(0.006)
Unanswered Owner Gender	-0.15 ***	-0.15 ***
	(0.004)	(0.004)
5 to 9 Employees	1.02 ***	1.02 ***
	(0.005)	(0.005)
10 to 19 Employees	1.45 ***	1.45 ***
	(0.007)	(0.007)
20 to 49 Employees	1.68 ***	1.68 ***
	(0.010)	(0.010)
50 to 99 Employees	1.78 ***	1.78 ***
	(0.023)	(0.023)
100 to 249 Employees	0.81 ***	0.87 ***
	(0.120)	(0.106)
250 to 499 Employees	0.71 ***	0.71 ***
	(0.120)	(0.120)
Unaswered Company Size	0.73 ***	0.73 ***
	(0.020)	(0.020)
Minority-Owned Company Size Unaswered	-0.01	-0.01
	(0.028)	(0.028)
Unanswered Race-Owned 5 to 9 Employees	-0.06 ***	-0.06 ***
	(0.006)	(0.006)
Unanswered Race-Owned 10 to 19 Employees	-0.04 ***	-0.04 ***
	(0.008)	(0.008)
Unanswered Race-Owned 20 to 49 Employees	0.00	0.00
	(0.001)	(0.001)
Unanswered Race-Owned 50 to 99 Employees	-0.07 **	-0.07 **
	(0.028)	(0.028)
Unanswered Race-Owned 100 to 249 Employees	0.19	0.13
	(0.123)	(0.115)
Unanswered Race-Owned 250 to 499 Employees	0.54 ***	0.54 ***
	(0.171)	(0.171)
Unanswered Race-Owned Unaswered Company Size	-0.12 ***	-0.12 ***
	(0.021)	(0.021)
Women-Owned Company Size Unaswered	0.09 ***	0.09 ***
	(0.016)	(0.016)
Unanswered Owner Gender 5 to 9 Employees	0.07 ***	0.08 ***
	(0.004)	(0.005)
Unanswered Owner Gender 10 to 19 Employees	0.08 ***	0.07 ***
	(0.007)	(0.007)
Unanswered Owner Gender 20 to 49 Employees	0.07 ***	0.07 ***
	(0.001)	(0.006)
Unanswered Owner Gender 50 to 99 Employees	-0.03 ***	-0.03
	(0.022)	(0.022)
Unanswered Owner Gender 100 to 249 Employees	-0.15 **	-0.16 **
	(0.079)	(0.078)
Unanswered Owner Gender 250 to 499 Employees	-0.53 ***	-0.53 ***
	(0.135)	(0.135)
Unanswered Owner Gender Unaswered Company Size	-0.18 ***	-0.18 ***
	(0.012)	(0.012)
Constant	8.24 ***	8.29 ***
	(0.230)	(0.231)
State Fixed Effects	YES	YES
Industry Fixed Effects	YES	YES
Observations	4,389,632	4,389,632
R-Squared	0.405	0.64
sigma		0.85 ***
		(0.003)
Clusters (County-level	3,144	3,144

*10%, **5%, and ***1% are levels of statistical significance.

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Table 12. Lee Bounds Estimates for Women- and Minority-Owners in Rural Areas

	Loan Amount	Loan Amount		Loan Amount
Female			Minority	
Lower	-12,602.71 ***	-8,855.82 ***	Lower	-37,083.51 ***
	(305.72)	(258.39)		(499.85)
Upper	-2,722.74 ***	-2,633.83 ***	Upper	24,712.38 ***
	(211.92)	(227.13)		(299.97)
Covariate	No	Company Size		No
Observations	1,101,959	1101959		522,674
Number of Cells		7		
Selected observations	202,216	202216		121,889
Overall trimming porportion	0.09	0.0861		0.66
Selection	Rural	Rural		Rural
95% Confidence Interval	[-13,000, -2,400]	[-9,300, -2,300]		[-38,000, 25,000]

Rural counties were determined as those with a rural urban continuum code of 4 or higher.

*** 1% level of statistical significance

The covariate for company size was omitted since there were occasions where information was not available for minority in rural and urban in certain categories

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Appendix Table A1. National Distribution of Minority- and Women-Owned Small Businesses by Number of Employees

Firm Size	Number of Minority-Owned Firms	Percent of Minority-Owned Firms	Number of Female-Owned Firms	Percent of Female-Owned Firms
Firms with no employees	121,775	12%	152,923	13%
Firms with 1 to 4 employees	542,545	52%	593,464	52%
Firms with 5 to 9 employees	185,615	18%	190,325	17%
Firms with 10 to 19 employees	113,065	11%	113,310	10%
Firms with 20 to 49 employees	61,282	6%	64,133	6%
Firms with 50 to 99 employees	15,608	1%	16,829	1%
Firms with 100 to 249 employees	6,189	1%	7,585	1%
Firms with 250 to 499 employees	1,329	0.1%	1,729	0.2%
Firms with 500 employees or more	919	0.1%	1,111	0.1%
Total	**1,048,327**		**1,141,409**	

Source: U.S. Census Annual Business Survey (ABS) 2018, Table AB1800CSA04

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Appendix Table A2. PPP Loans Counts by Industry

	Industry	Loans Count in SBA data	Loans Count in SBA Summary Report	Absolute Difference between SBA's Summary Report and SBA Data	% Difference
1	Professional Services	681,111	681,111	0	0%
2	Other Services	583,385	583,385	0	0%
3	Health Care	532,775	532,775	0	0%
4	Construction	496,551	496,551	0	0%
5	Retail Trade	472,418	472,418	0	0%
6	Accommodation	383,561	383,561	0	0%
7	Real Estate	262,921	262,921	0	0%
8	Administrative Services	258,907	258,907	0	0%
9	Manufacturing	238,494	238,494	0	0%
10	Transportation	229,565	229,565	0	0%
11	Else	219,502	219,502	0	0%
12	Finance	181,493	181,493	0	0%
13	Wholesale Trade	174,707	174,707	0	0%
14	Agriculture	149,535	149,535	0	0%
15	Arts	130,760	130,760	0	0%
16	Education	88,022	88,022	0	0%
17	Information	73,824	73,824	0	0%
18	Mining	22,503	22,503	0	0%
19	Public Administration	14,291	14,291	0	0%
20	Management	9,472	9,472	0	0%
21	Utilities	8,331	8,331	0	0%
	Total	**5,212,128**	**5,212,128**	**0**	**0%**

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Appendix Table A3. PPP Loan Numbers Counts by State

	State	Loans Count in SBA data	Loans Count in SBA Summary Report	Absolute Difference between SBA's Summary Report and SBA Data	% Difference
1	CA	623,352	623,360	8	0.001%
2	FL	432,888	432,893	5	0.001%
3	TX	417,266	417,276	10	0.002%
4	NY	348,869	348,870	1	0.000%
5	IL	225,433	225,409	-24	-0.011%
6	GA	174,425	174,429	4	0.002%
7	PA	173,543	173,552	9	0.005%
8	NJ	157,404	157,405	1	0.001%
9	OH	149,152	149,144	-8	-0.005%
10	NC	129,286	129,289	3	0.002%
	All Other States	**2,380,510**	**2,380,501**	**-9**	**0.000%**
	Total	**5,212,128**	**5,212,128**	**0**	**0.000%**

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Appendix Table A4. PPP Loans Amount by State

	State	Imputed Loan Amount	Loan Amount Reported by SBA	Absolute Difference between Reported and Imputed Amount	% Difference between Reported and Imputed Amount
1	CA	$68,642,204,259	$68,644,418,670	$2,214,411	0.003%
2	TX	$41,179,890,946	$41,326,454,268	$146,563,322	0.355%
3	NY	$38,495,621,440	$38,699,947,686	$204,326,246	0.528%
4	FL	$32,478,897,381	$32,251,422,436	-$227,474,945	-0.705%
5	IL	$22,815,314,934	$22,849,324,883	$34,009,949	0.149%
6	PA	$20,729,940,425	$20,742,750,517	$12,810,092	0.062%
7	OH	$18,442,389,116	$18,532,840,346	$90,451,230	0.488%
8	NJ	$17,400,499,221	$17,360,085,952	-$40,413,269	-0.233%
9	MI	$16,018,858,254	$16,040,039,297	$21,181,043	0.132%
10	GA	$14,736,473,005	$14,688,047,519	-$48,425,486	-0.330%
	All Other States	**$234,283,395,003**	**$233,876,869,548**	**-$406,525,455**	**-0.174%**
	Total	**$525,223,483,983**	**$525,012,201,122**	**-$211,282,861**	**-0.04%**

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Appendix Table A5. PPP Loans Amounts by Industry

	Industry	Imputed Loan Amount	Loan Amount Reported by SBA	Absolute Difference between Reported and Imputed Amount	% Difference between Reported and Imputed Amount
1	Health Care	$67,861,928,247	$67,802,899,625	-$59,028,622	-0.1%
2	Professional Services	$66,908,788,745	$66,806,585,368	-$102,203,377	-0.2%
3	Construction	$64,984,450,975	$65,070,483,743	$86,032,768	0.1%
4	Manufacturing	$53,634,733,126	$54,101,623,487	$466,890,361	0.9%
5	Accommodation	$42,608,088,446	$42,477,369,498	-$130,718,948	-0.3%
6	Retail Trade	$40,621,758,567	$40,576,055,345	-$45,703,222	-0.1%
7	Other Services	$32,026,304,195	$31,687,938,997	-$338,365,198	-1.1%
8	Wholesale Trade	$27,765,166,826	$27,650,501,453	-$114,665,373	-0.4%
9	Administrative Services	$26,413,599,760	$26,591,901,997	$178,302,237	0.7%
10	Transportation	$17,566,688,110	$26,591,901,997	$9,025,213,887	34%
11	Real Estate	$15,782,264,203	$15,732,532,646	-$49,731,557	-0.3%
12	Finance	$12,261,099,886	$12,202,534,934	-$58,564,952	-0.5%
13	Education	$11,980,151,018	$12,075,274,769	$95,123,751	0.8%
14	Else	$9,827,662,739	$9,652,279,182	-$175,383,557	-2%
15	Information	$9,284,773,768	$9,336,848,657	$52,074,889	0.6%
16	Arts	$8,268,120,282	$8,223,383,720	-$44,736,562	-0.5%
17	Agriculture	$8,199,738,348	$8,140,628,410	-$59,109,938	-0.7%
18	Mining	$4,458,221,930	$4,542,309,832	$84,087,902	1.9%
19	Public Administration	$1,748,526,117	$1,755,782,485	$7,256,368	0.4%
20	Management	$1,545,190,245	$1,561,247,060	$16,056,815	1.0%
21	Utilities	$1,476,228,451	$1,501,077,180	$24,848,729	1.7%
	All Industries	**$525,223,483,983**	**$534,081,160,385**	**$8,857,676,402**	**1.7%**

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Appendix Table A6. PPP loans ≤ $150,000

	Timeline	Number of PPP loans	Share	Amount of PPP loans	Share
First Round	April 3-April 16 2020	1,202,834	26%	$57,053,380,443	39%
Second Round	April 27-August 8 2020	3,346,779	74%	$89,998,307,075	61%
Total PPP Loans ≤ $150,000		**4,549,613**		**$147,051,687,518**	

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Appendix Table A7. PPP loans > $150,000

	Timeline	Number of PPP loans	Share	Amount of PPP loans	Share
First Round	April 3-April 16 2020	417,385	63%	$261,786,249,145	69%
Second Round	April 27-August 8 2020	245,130	37%	$116,385,547,320	31%
Total PPP Loans > $150,000		**662,515**		**$378,171,796,465**	

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Appendix Table A8. Summary Statistics – PPP Loans ≤ $150,000 by Business Owner Race and Ethnicity

Business Owners	Number of Jobs	Mean	Median	Std Dev	Minimum	Maximum	Sum
African American Business Owners	15,437	$29,680	$18,700	$31,793	$83	$149,750	$458,169,638
Hispanic or Latino Business Owners	35,863	$36,134	$21,100	$35,535	$74	$149,942	$1,295,872,713
Asian American Business Owners	51,788	$39,203	$27,300	$34,166	$8	$149,987	$2,030,265,024
White Business Owners	336,972	$40,164	$26,200	$36,599	$0	$149,999	$13,533,983,860
Native American Business Owners	2,314	$40,030	$27,200	$35,854	$290	$148,900	$92,630,227
Business Owners - Other Races (Eskimo)	5	$8,691	$6,000	$5,888	$4,900	$18,957	$43,457
Business Owners - Two and More Races	10	$25,172	$18,950	$23,645	$6,200	$79,317	$251,722
Unanswered Race/Ethnicity	4,107,224	$31,564	$20,300	$32,369	$1	$149,999	$129,640,470,876
All PPP Loans ≤ $150,000	**4,549,613**	**$32,322**	**$20,661**	**$32,836**	**$0.01**	**$149,999**	**$147,051,687,518**

Source: Authors' calculations based on the SBA's Self-Reported Demographic Data in the PPP loan data

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Appendix Table A9. PPP Loan ≤ $150,000 Recipients by Size and Business Owner Gender

Business Owner Gender	Number of Jobs	Mean	Median	Std Dev	Minimum	Maximum	Sum
Female-Owned	224,084	$34,448	$20,833	$34,320	$13	$149,990	$7,719,166,599
Male-Owned	700,926	$40,861	$27,335	$36,294	$0.01	$149,999	$28,640,358,635
Unanswered	3,624,603	$30,539	$19,961	$31,753	$1	$149,999	$110,692,162,284
All PPP Loans ≤ $150,000	**4,549,613**	**$32,322**	**$20,661**	**$32,836**	**$0.01**	**$149,999**	**$147,051,687,518**

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Appendix Table A10. Liner Regression (OLS) with Variations in Fixed Effect Variables. Standard Errors are in Parenthesis (Continues on Next Page)

	Linear Regression (OLS) Log PPP Loans ≤ $150,000	Linear Regression (OLS) Log PPP Loans ≤ $150,000
Minority-Owned	-0.05 ***	-0.07 ***
	(0.010)	(0.008)
Minority-Owned 5 to 9 Employees	-0.17 ***	-0.15 ***
	(0.011)	(0.011)
Minority-Owned 10 to 19 Employees	-0.08 ***	-0.06 ***
	(0.010)	(0.010)
Minority-Owned 20 to 49 Employees	0.06 ***	0.08 ***
	(0.012)	(0.012)
Minority-Owned 50 to 99 Employees	-0.05	-0.05
	(0.044)	(0.042)
Minority-Owned 100 to 249 Employees	0.31	0.33
	(0.269)	(0.263)
Minority-Owned 250 to 499 Employees	-0.51 *	-0.47 *
	(0.278)	(0.287)
Women-Owned	-0.22 ***	-0.21 ***
	(0.005)	(0.005)
Women-Owned 5 to 9 Employees	0.07 ***	0.07 ***
	(0.005)	(0.005)
Women-Owned 10 to 19 Employees	0.09 ***	0.09 ***
	(0.005)	(0.005)
Women-Owned 20 to 49 Employees	0.17 ***	0.18 ***
	(0.008)	(0.008)
Women-Owned 50 to 99 Employees	0.18 ***	0.17 ***
	(0.035)	(0.035)
Women-Owned 100 to 249 Employees	0.02	0.020
	(0.160)	(0.159)
Women-Owned 250 to 499 Employees	0.08	0.06
	(0.237)	(0.238)
Rural County	-0.05 ***	a
	(0.011)	
Suburban County	-0.05 ***	a
	(0.010)	
Log Loan demand	0.02 ***	0.01 ***
	(0.001)	(0.000)
Log Median Income	0.08 ***	a
	(0.010)	
Log Lender Assets	0.02 ***	0.01 ***
	(0.001)	(0.000)
Commercial Bank	0.31 ***	0.27 ***
	(0.009)	(0.008)
Farm Credit Association	0.40 ***	0.39 ***
	(0.014)	(0.014)
Non-Traditional Lender	0.15 ***	0.09 ***
	(0.010)	(0.009)
Second PPP Round (Apr 27-Aug 8 2020)	-0.11 ***	-0.30 ***
	(0.005)	(0.006)
Days to Approval	-0.01 ***	-0.003 ***
	(0.000)	(0.000)
Days in Lockdown	0.03	0.000
	(0.028)	(0.008)
Non-Profit	0.23 ***	0.23 ***
	(0.007)	(0.006)

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Appendix Table A10. Liner Regression (OLS) with Variations in Fixed Effect Variables. Standard Errors are in Parenthesis (Continued)

	Linear Regression (OLS) Log PPP Loans ≤ $150,000	Linear Regression (OLS) Log PPP Loans ≤ $150,000
Unanswered Owner Race	0.02 ***	0.04
	(0.005)	(0.006)
Unanswered Owner Gender	-0.14 ***	-0.15 ***
	(0.004)	(0.004)
5 to 9 Employees	1.01 ***	1.01 ***
	(0.005)	(0.005)
10 to 19 Employees	1.43 ***	1.43 ***
	(0.007)	(0.007)
20 to 49 Employees	1.67 ***	1.66 ***
	(0.010)	(0.009)
50 to 99 Employees	1.77 ***	1.77 ***
	(0.023)	(0.024)
100 to 249 Employees	0.81 ***	0.79 ***
	(0.120)	(0.120)
250 to 499 Employees	0.70 ***	0.64 ***
	(0.121)	(0.123)
Unaswered Company Size	0.72 ***	0.71 ***
	(0.019)	(0.018)
Minority-Owned Company Size Unaswered	-0.01	0.00
	(0.028)	(0.027)
Unanswered Race-Owned 5 to 9 Employees	-0.06 ***	-0.05 ***
	(0.006)	(0.006)
Unanswered Race-Owned 10 to 19 Employees	-0.04 ***	-0.03 ***
	(0.008)	(0.008)
Unanswered Race-Owned 20 to 49 Employees	0.00	0.01
	(0.001)	(0.009)
Unanswered Race-Owned 50 to 99 Employees	-0.07 **	-0.07 **
	(0.028)	(0.028)
Unanswered Race-Owned 100 to 249 Employees	0.19	0.19
	(0.123)	(0.121)
Unanswered Race-Owned 250 to 499 Employees	0.54 ***	0.61 ***
	(0.172)	(0.174)
Unanswered Race-Owned Unaswered Company Size	-0.10 ***	-0.12 ***
	(0.020)	(0.019)
Women-Owned Company Size Unaswered	0.08 ***	0.09 ***
	(0.016)	(0.016)
Unanswered Owner Gender 5 to 9 Employees	0.07 ***	0.07 ***
	(0.004)	(0.007)
Unanswered Owner Gender 10 to 19 Employees	0.08 ***	0.08 ***
	(0.005)	(0.005)
Unanswered Owner Gender 20 to 49 Employees	0.07 ***	0.07 ***
	(0.001)	(0.007)
Unanswered Owner Gender 50 to 99 Employees	-0.02 ***	-0.03
	(0.022)	(0.023)
Unanswered Owner Gender 100 to 249 Employees	-0.15 **	-0.16 **
	(0.078)	(0.079)
Unanswered Owner Gender 250 to 499 Employees	-0.53 ***	-0.53 ***
	(0.135)	(0.136)
Unanswered Owner Gender Unaswered Company Size	-0.17 ***	-0.17 ***
	(0.012)	(0.011)
Constant	7.99 ***	9.86 ***
	(0.215)	(0.061)
Zipcode Fixed Effects		YES
County Fixed Effects		YES
Industry Fixed Effects	YES	YES
State*Month Fixed Effects	YES	
Observations	4,389,632	4,388,647
R-Squared	0.413	0.42
Clusters (County-Level)	3,144	3,143

*10%, **5%, and ***1% are levels of statistical significance. [a] dropped due to collinearity

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Appendix Table A11. Liner Regression (OLS) with Variations in Standard Errors Clustering. Standard Errors are in Parenthesis (Continues on Next Page)

	Linear Regression (OLS) Log PPP Loans ≤ $150,000	Linear Regression (OLS) Log PPP Loans ≤ $150,000	Linear Regression (OLS) Log PPP Loans ≤ $150,000
Minority-Owned	-0.06 ***	-0.06 ***	-0.06 ***
	(0.017)	(0.017)	(0.012)
Minority-Owned 5 to 9 Employees	-0.15 ***	-0.15 ***	-0.15 ***
	(0.018)	(0.018)	(0.016)
Minority-Owned 10 to 19 Employees	-0.07 ***	-0.07 ***	-0.07 ***
	(0.018)	(0.018)	(0.016)
Minority-Owned 20 to 49 Employees	0.08 ***	0.08 ***	0.08 ***
	(0.021)	(0.021)	(0.017)
Minority-Owned 50 to 99 Employees	-0.04	-0.04	-0.04
	(0.046)	(0.046)	(0.044)
Minority-Owned 100 to 249 Employees	0.32	0.32	0.32
	(0.299)	(0.299)	(0.228)
Minority-Owned 250 to 499 Employees	-0.47 *	-0.47 *	-0.47 **
	(0.230)	(0.230)	(0.227)
Women-Owned	-0.22 ***	-0.22 ***	-0.22 ***
	(0.008)	(0.043)	(0.007)
Women-Owned 5 to 9 Employees	0.07 ***	0.07 *	0.07 ***
	(0.006)	(0.034)	(0.006)
Women-Owned 10 to 19 Employees	0.09 ***	0.09 *	0.09 ***
	(0.006)	(0.043)	(0.006)
Women-Owned 20 to 49 Employees	0.17 ***	0.17 ***	0.17 ***
	(0.011)	(0.043)	(0.010)
Women-Owned 50 to 99 Employees	0.17 ***	0.17 ***	0.17 ***
	(0.029)	(0.052)	(0.029)
Women-Owned 100 to 249 Employees	0.04	0.038	0.04
	(0.125)	(0.104)	(0.121)
Women-Owned 250 to 499 Employees	0.05	0.05	0.05
	(0.211)	(0.289)	(0.212)
Rural County	-0.05 **	-0.05 **	-0.05 **
	(0.022)	(0.022)	(0.015)
Suburban County	-0.05 **	-0.05 **	-0.05 ***
	(0.019)	(0.019)	(0.012)
Log Loan demand	0.04 ***	0.04 ***	0.04 ***
	(0.008)	(0.008)	(0.006)
Log Median Income	0.07 ***	0.07 ***	0.07 ***
	(0.020)	(0.020)	(0.020)
Log Lender Assets	0.01 ***	0.01 ***	0.01 ***
	(0.002)	(0.002)	(0.002)
Commercial Bank	0.28 ***	0.28 ***	0.28 ***
	(0.016)	(0.016)	(0.015)
Farm Credit Association	0.38 ***	0.38 ***	0.38 ***
	(0.046)	(0.046)	(0.038)
Non-Traditional Lender	0.10 ***	0.10 ***	0.10 ***
	(0.018)	(0.018)	(0.026)
Second PPP Round (Apr 27-Aug 8 2020)	-0.30 ***	-0.30 ***	-0.3 ***
	(0.016)	(0.016)	(0.020)
Days to Approval	-0.003 ***	-0.003 ***	-0.003 ***
	(0.000)	(0.000)	(0.000)
Days in Lockdown	0.03 ***	0.03	0.03 **
	(0.002)	(0.002)	(0.016)
Non-Profit	0.23 ***	0.23 ***	0.23 ***
	(0.015)	(0.015)	(0.012)

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Appendix Table A11. Liner Regression (OLS) with Variations in Standard Errors Clustering. Standard Errors are in Parenthesis (continued)

	Linear Regression (OLS) Log PPP Loans ≤ $150,000	Linear Regression (OLS) Log PPP Loans ≤ $150,000	Linear Regression (OLS) Log PPP Loans ≤ $150,000
Unanswered Owner Race	0.02 *	0.02 *	0.02 **
	(0.010)	(0.010)	(0.010)
Unanswered Owner Gender	-0.15 ***	-0.15 ***	-0.15 ***
	(0.008)	(0.025)	(0.009)
5 to 9 Employees	1.02 ***	1.02 ***	1.02 ***
	(0.017)	(0.044)	(0.015)
10 to 19 Employees	1.45 ***	1.45 ***	1.45 ***
	(0.018)	(0.057)	(0.017)
20 to 49 Employees	1.68 ***	1.68 ***	1.68 ***
	(0.019)	(0.035)	(0.017)
50 to 99 Employees	1.78 ***	1.78 ***	1.78 ***
	(0.039)	(0.009)	(0.032)
100 to 249 Employees	0.81 ***	0.81 ***	0.81 ***
	(0.126)	(0.233)	(0.135)
250 to 499 Employees	0.71 ***	0.71 ***	0.71 ***
	(0.105)	(0.125)	(0.112)
Unaswered Company Size	0.73 ***	0.73 ***	0.73 ***
	(0.027)	(0.052)	(0.026)
Minority-Owned Company Size Unaswered	-0.01	-0.01	-0.01
	(0.029)	(0.029)	(0.032)
Unanswered Race-Owned 5 to 9 Employees	-0.06 ***	-0.06 ***	-0.06 ***
	(0.011)	(0.011)	(0.011)
Unanswered Race-Owned 10 to 19 Employees	-0.04 ***	-0.04 **	-0.04 **
	(0.011)	(0.012)	(0.012)
Unanswered Race-Owned 20 to 49 Employees	0.00	0.00	0.00
	(0.012)	(0.012)	(0.012)
Unanswered Race-Owned 50 to 99 Employees	-0.07 *	-0.07 *	-0.07 **
	(0.037)	(0.037)	(0.032)
Unanswered Race-Owned 100 to 249 Employees	0.19	0.19	0.19
	(0.159)	(0.149)	(0.151)
Unanswered Race-Owned 250 to 499 Employees	0.54 ***	0.54 ***	0.54 ***
	(0.144)	(0.144)	(0.152)
Unanswered Race-Owned Unaswered Company Size	-0.12 ***	-0.12 ***	-0.12 ***
	(0.025)	(0.025)	(0.025)
Women-Owned Company Size Unaswered	0.09 ***	0.09 **	0.09 ***
	(0.018)	(0.027)	(0.016)
Unanswered Owner Gender 5 to 9 Employees	0.07 ***	0.07 **	0.07 ***
	(0.008)	(0.019)	(0.007)
Unanswered Owner Gender 10 to 19 Employees	0.08 ***	0.08 ***	0.08 ***
	(0.008)	(0.011)	(0.009)
Unanswered Owner Gender 20 to 49 Employees	\0.07 ***	0.07 ***	0.07 ***
	(0.010)	(0.010)	(0.007)
Unanswered Owner Gender 50 to 99 Employees	-0.03 ***	-0.03	-0.03
	(0.023)	(0.023)	(0.023)
Unanswered Owner Gender 100 to 249 Employees	-0.15 **	-0.16 **	-0.16 **
	(0.063)	(0.063)	(0.066)
Unanswered Owner Gender 250 to 499 Employees	-0.53 ***	-0.53 ***	-0.53 ***
	(0.142)	(0.142)	(0.141)
Unanswered Owner Gender Unaswered Company Size	-0.18 ***	-0.18 ***	-0.18 ***
	(0.015)	(0.014)	(0.015)
Constant	8.24 ***	8.24 ***	8.24 ***
	(0.192)	(0.192)	(0.172)
State Fixed Effects	YES	YES	
Industry Fixed Effects	YES	YES	
Observations	4,389,632	4,389,632	4,389,632
R-Squared	0.405	0.405	0.405
Cluster (State-level)	52		
Two-way cluster (State and Month)			260
Cluster (Industry-Level)		21	
Cluster (Zipcode-level)	29,610	29,610	29,610

*10%, **5%, and ***1% are levels of statistical significance.

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Appendix B: Interview Questions (Approved IRB-FY2021-147)

1. Does your business have any of the following certifications? (Select all that apply)
    - Minority-owned business
    - Veteran-owned business
    - Women-owned business
    - None of the above
2. How would you describe the impact your business is currently experiencing due to the COVID-19 pandemic?
    - COVID-19 is not impacting my business in any way (positive or negative)
    - COVID-19 is positively impacting my business. Please explain how. Provide some examples.
    - COVID-19 is negatively impacting your business. Please explain how. Provide some examples.
3. How many full-time, part-time, and or seasonal employees worked at your business prior to the stay-at-home order in Ohio in March 2020?
4. Did you employ any of the following strategies since the beginning of the pandemic in March 2020? (From the options below choose all that apply)
    - Layoffs
    - Furloughs (Complete/Partial)
    - Reduced Employee Salaries/Wages
    - Reduced Supervisor/Management Salaries/Wages
    - Other (please specify):
5. Please tell us in your own words about your experience with applying to the PPP loan.
6. Who was your lender? (Choose an option below and state the name of your lender)
    - Commercial bank
    - Credit Union
    - Farm Credit
    - FinTech
    - Other
7. SBA said the estimated time for completing the PPP loan application, including gathering data needed, was 8 minutes. Do you agree? How long did it take you to submit the application?
8. Did you have any difficulties in the PPP loan application process? If so, please explain.
9. Did you receive help with the application? If so, who helped you? How did they help you?
10. How long did you have to wait for the PPP loan approval?

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11. Did you receive the full amount in PPP loan requested? If not, what percentage of the amount requested did you receive? (Please choose the option below with the best estimate the percentage of the requested amount.)
    - Less than 20% of the requested amount
    - 20-39% of the requested amount
    - 40-59% of the requested amount
    - 60-79% of the requested amount
    - 80-99% of the requested amount
12. Please describe how the PPP loan helped your business or your business's economic activities.
13. Did the PPP loan allow you to retain employees? If so, how many?
14. Will you need to lay off any employees due to the pandemic impact on your business in the next 3 months? If yes, how many?
15. PPP application asked your business to purchase only American-made equipment and products to the extent feasible. Did you have difficulties finding American products or equipment?
16. Have you applied/do you plan to apply for the PPP loan forgiveness?
17. Have you applied/do you plan to apply for the second round of PPP loans in 2021?
18. Do you have any other comments related to your experience and use of the PPP loan that you would like to share?

Thank you for your participation in this interview. We will be happy to share the results of our study with you. Please let us know if you would like to receive the study report.

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Testimony of

Robert J. Barnes

President and Chief Executive Officer

PriorityOne Bank

On behalf of the

Independent Community Bankers of America

Before the

United States House of Representatives

Committee on Small Business

Subcommittee on Oversight, Investigations, and Regulations

Hearing on

"An Empirical Review of the Paycheck Protection Program"

March 16, 2022

Washington, D.C.

Chairman Phillips, Ranking Member Van Duyne, and members of the Subcommittee, I am Robbie Barnes, President and CEO of PriorityOne Bank in Magee, Mississippi. I testify today on behalf of the Independent Community Bankers of America where I am Chairman of the Legislative Issues Committee and a member of the Federal Delegate Board. I am also active in the leadership of the Mississippi Bankers Association.

Thank you for the opportunity to testify at today's hearing, "An Empirical Review of the Paycheck Protection Program." The PPP has been a lifeline for small businesses and the people they employ in the communities I serve in South Central Mississippi. As a community banker, and as Chairman of the Financial Services Committee of the Governor's economic response team that was organized shortly after the pandemic began, I can tell you that the PPP staved off economic catastrophe. I want to thank this committee, Congress, and the SBA for crafting, passing, and implementing an absolutely vital program.

Banks, and community banks in particular, are what made the Program work. Without bank involvement, the PPP would have been far less effective in fulfilling its purpose – providing timely, effective, and efficient support for employment in an historic health and economic crisis. I hope that one of the lessons of this hearing will be the importance of preserving community bank SBA lending. As I will discuss later, an experiment in SBA direct lending would be ill conceived and would jeopardize small business access to capital.

In the PPP, PriorityOne Bank was committed to reaching out to ensure that every qualifying small business, church, non-profit or other borrower had the information and the help they needed to take full advantage of the Program. I am pleased to provide our perspective to this important discussion. My comments reflect my conversations with literally hundreds of community bankers from around the country.

Our Story

PriorityOne Bank has a rich history of serving South Central Mississippi, tracing its roots back to 1905. Today, we are a $900 million community bank with 230 employees and 15 branches in five counties. Our markets are rural, suburban, and urban. We are a full-service community bank offering small business, consumer, mortgage, insurance, and brokerage services. We are also a Community Development Financial Institution, which by definition means that we serve a predominantly low to moderate income market.

It is notable that, as one of the poorest states in the country, Mississippi has the highest concentration of CDFI banks in the nation. Fifty of the nation's 68 CDFI banks are headquartered in Mississippi. As a result, the state also has the lowest average PPP loan balance, about $43,000, which is slightly higher than my bank's average PPP loan, $32,500. With established relationships in lower income communities, CDFIs were prepositioned to extend PPP loans to smaller businesses with smaller credit needs. Mississippi lenders led the nation with the highest overall percentage of PPP loans of less than $150,000 (96.2 percent), loans of less than $100,000 (94 percent), and loans of less than $50,000 (88.7 percent). Like any community bank, we have a vital stake in the communities we service. We prosper when our communities prosper.

PriorityOne's partnership with the Small Business Administration is critical to our community service. I have been an SBA lender for more than 35 years, and my bank is both a Preferred lender and an Express lender. The 7(a) program is invaluable in allowing us to support local small businesses that would not otherwise qualify for conventional credit. As discussed below, our experience with the 7(a) program gave us a leg up over other lenders in navigating a sometimes tortuous PPP. We are committed to the 7(a) program's integrity and long-term sustainability and deeply appreciate this committee's support for it. The 504 program, in which we participate, is also of great value in supporting community investment, and I wish to thank this committee and Congress for including an increase to the 504 authorization cap in the FY 2022 funding bill thus avoiding a harmful shutdown of this important program.

Paycheck Protection Program

The Paycheck Protection Program rapidly and effectively deployed critical funding to small businesses, self-employed workers, not-for-profits, churches, schools, and other borrowers nationwide. The Program has helped these entities to maintain their employment and survive the economic shutdowns of 2020 and early 2021. We are in a better place today because of the PPP.

The Program was a natural fit for the business model and geographic footprint of community banks. We are small business lending specialists, and our strength is personal relationships in our communities and direct knowledge of local economic conditions. We were pre-positioned to help borrowers navigate the application process. Our network of branches made us more accessible than other institutions. There are countless stories of small businesses in desperate need that, unable to secure a PPP loan from a larger bank in a timely fashion, turned to a community bank where they were promptly and effectively served, despite sparse and often conflicting guidance from the SBA. Community bankers, including many members of our staff, worked around the clock to meet an overwhelming demand for PPP loans from existing as well as new customers. Federal Reserve Governor Michelle Bowman described community banks as "irreplaceable" during the pandemic.[1]

The data tell the story: Community banks were the predominant PPP lenders to local small businesses and accounted for nearly 60 percent of the program's total loan amount. Moreover, community banks made nearly 72 percent of the PPP loans to minority-owned small businesses, 81 percent of the PPP loans to women-owned small business, and nearly 69 percent of the PPP loans to veteran-owned small businesses.

Community banks also provided the majority of PPP loans to small businesses within demographically and socioeconomically underserved communities. Community banks made over 75 percent of PPP loans to majority-minority communities. They also provided more than 90 percent of PPP loans to communities with an average household income of less than $40,000 per year and more than 75 percent of PPP loans to communities with a poverty rate of at least 20 percent and long-term unemployment above 10 percent. Community banks accounted for 85 percent of PPP loans in rural communities. I am proud that my industry stepped up to support the

[1] Greely, Brendan. "How US community banks became 'irreplaceable' in the pandemic." Financial Times. August 30, 2021.

survival of these diverse and economically challenged businesses and communities in a time of crisis.

My bank's PPP lending is typical of a community bank. We made over 1,200 loans for approximately $40 million. Our average loan amount was $32,500. The smallest was for just $335, and the largest was for $617,000. In other words, our PPP lending disproportionately helped the smallest of small businesses. Thirty-nine percent of our loans were to minority and women-owned businesses. I should also mention that many self-employed farmers and other self-employed borrowers, who initially qualified for lower loan amounts under the net income calculation, were able to obtain larger loans after Congress made changes that allowed them to use gross income to calculate their loan amounts.

This is an enormously positive impact in the communities we serve. PriorityOne Bank's long history as a 7(a) lender helped us to navigate sometimes confusing SBA channels on behalf of our borrowers. I also know that other community banks have had similar results.

I would like to provide some examples of PriorityOne's PPP loans to illustrate the enormous value of the Program. Gulf South Products in Hattiesburg, MS is a live event production company that operates in four South Eastern states. This growing business came to a sudden halt in March 2020. Contracts were cancelled through the first quarter of 2021. This company had been banking with us since 2015. When they reached out to us, we assured them that we would do everything we could to help them survive the crisis, beginning with modification of their existing loans. With the rollout of the PPP, we walked them through the application process and extended a loan which allowed them to maintain their payroll in the second half of 2020 after they had exhausted their funds. As the pandemic persisted through 2020, we extended a second round PPP loan which allowed them to maintain payroll and pay rent into 2021. The business's PPP loans totaled $89,000. Business finally began to come back in the middle of 2021, and the business has resumed the growth that was abruptly cut off by the pandemic and projects strong growth, new hiring, and investments in the coming years. As the owner wrote to us, "As a result of being able to obtain PPP funding, we were able to ensure that our staff was ready when the lights came back on. None of this would have been possible without PPP funds."

Another PriorityOne customer, a startup fast food restaurant in central MS which we financed several years ago, has now expanded to over 12 locations and employs nearly 300 hourly employees, most of whom are low or moderate income minorities. With the onset of the pandemic, PPP loans allowed the business to continue paying their employees while transitioning to drive-thru only for several months. Without this assistance these employees would have lost their jobs, and the business would have failed. Today these employees are continuing to work and support their families.

A minority-owned nail salon secured a $11,689 PPP loan from PriorityOne. Ms. T. is the sole proprietor and employee of her nail salon, and our PPP loan helped her survive the pandemic when the salon was mandated to temporarily close. In April 2021, Ms. T applied online with us for a second draw PPP funds. She did not initially qualify, but we worked with her to show that her 40 percent drop in revenue was due to the pandemic shutdown and helped her receive funding. As a result, this business continues to remain operational today.

These are just a few of numerous additional examples I could provide in which PPP saved businesses and jobs in my market.

Challenges of the PPP

While the PPP has been effective in its fundamental purpose, we must acknowledge that it created significant frustration for borrowers and lenders, particularly in its early phases. A surge in applications overwhelmed the technological capacity of the SBA, for which of course it cannot be faulted. An agency accustomed to working with some 1,500 lenders had to scale up at short notice to accommodate some 5,000 lenders. Program guidance was vague and shifting, causing lenders to engage in guess work and repeatedly readjust their processes. Answers to basic program questions were sometimes hard to find. Of course, these criticisms should be held in perspective. The SBA was dedicated to making the program work and continued to adapt to circumstances and improve their processes. Community bank lenders were persistent because they knew how much was at stake for borrowers, and these frustrations were eventually overcome.

PPP Forgiveness

A critical component of a PPP loan is the opportunity for forgiveness. If conditions are met, a PPP loan is essentially a grant. The front-end process of approving applications and deploying funds for qualified borrowers is followed by a back-end process of determining whether a borrower qualifies for forgiveness in full or in part and documenting that determination. Our upfront processing, including knowing and having existing relationships with most of our borrowers, made forgiveness on the back end relatively straight forward. We did not make loans that we were not confident would qualify for forgiveness because we did not want to saddle anyone with unintended debt.

Ideally, this process should be minimally burdensome for the borrower, especially for smaller loans. This is how the success of the Program must be measured: straightforward, relatively simple processing of loans and forgiveness for qualified borrowers with minimal fraud. At PriorityOne Bank, approximately 90 percent of our PPP loans have been forgiven. We have experienced no cases of fraud or default in the more than 1,200 loans we have made. We recognize and appreciate the progress the SBA made in streamlining the forgiveness process over time. The Agency has worked under extraordinary circumstances. We are grateful to this committee and Congress at large for its role in making statutory changes and advocating for streamlined processes.

Like many community banks, our true value proposition is relationship lending. We believe we have a responsibility to our borrowers from loan origination until the loan has been successfully repaid. We want to ensure that the process works well for our borrowers from beginning to end. If there are technical or communications problems with the SBA, we want to use our expertise and relationship with the Agency to assist the borrower in resolving them. This type of

relationship lending explains why community banks have higher satisfaction ratings among small business borrowers than other lenders.[2]

Moving Forward: Integrity Must Be Safeguarded in the PPP and Other SBA Programs

It is critical that future SBA lending programs aim to reduce fraud and abuse to the greatest extent possible. Safeguarding taxpayer dollars is essential to sustaining public support for SBA lending programs.

At PriorityOne Bank, we did our due diligence and, as noted above, have experienced no fraud and expect to receive 100 percent forgiveness. This is typical of community bank PPP lenders. We own the consequences of our local lending decisions and underwrite with great care. Because we were on the ground in our communities, we knew which applicants were legitimate and viable. A fraudulent application would have been flagged immediately.

Fraud puts all SBA programs at risk. PriorityOne Bank and many community banks highly value a robust and sustainable 7(a) program. Under normal circumstances, the 7(a) program generates sufficient revenue through fee collections and recoveries of collateral on purchased, defaulted loans to not require appropriations to issue new loan guarantees. This structure usually requires no appropriation of taxpayer dollars.

We are grateful for this committee's strong support for the 7(a) program. Significant reforms to this successful program must be taken with great caution and care. A high volume of poorly underwritten loans could cause the 7(a) program to prematurely exceed its lending cap and shut down, leaving applicants stranded. SBA programs play a critical role in supporting small businesses and employment. Fraud has the potential to undermine these programs.

SBA Direct Lending Has a Poor Track Record and Is Costly for Taxpayers

As you consider the future of SBA lending, I wish to emphasize that direct lending is not the answer to capital access for small business. SBA direct lending has been tried and has failed. I ask you to consider the finding of a recent Congressional Research Service report:

> The SBA has authority to make direct loans but, with the exception of disaster loans and loans to Microloan program intermediaries, has not exercised that authority since 1998. The SBA indicated that it stopped issuing direct business loans primarily because the subsidy rate was "10 to 15 times higher" than the subsidy rate for its loan guaranty programs.[3]

The SBA retreated from direct lending as an ill-conceived experiment. Congress must not repeat this mistake. The recent Economic Injury Disaster Loan (EIDL) program, an SBA direct loan

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[2] For example, the 2021 "Small Business Credit Survey," conducted by the regional Federal Reserve Banks, found that 81 percent of community bank small-business loan applicants were satisfied with their experience, compared with 68 percent at large banks, 60 percent at finance companies, and 43 percent at online lenders.
[3] Congressional Research Service. "Small Business Administration: A Primer on Programs and Funding." Updated February 22, 2022. Page 12.

program, has been rife with fraud and poorly executed. Congress should heed this warning before creating a direct 7(a) program.

The involvement of banks is critical to reducing fraud. Community bankers know their customers. They know the difference between a legitimate business and a fake business set up to perpetrate fraud because they meet with business owners, visit their businesses, and see their operations. The SBA is not on the ground in many local markets and cannot assess borrowers firsthand. This distance from the borrower makes direct lending vulnerable to fraud.

In addition to the problem of fraud, the SBA simply does not have the resources to reach thousands of small businesses in need of credit. Today, there is a strong network of community banks, Community Development Financial Institutions, and other lenders already in place to meet demand for small business borrowers. Direct lending is a poor and costly alternative to private sector lending and would reach fewer borrowers.

Conclusion

Thank you again for convening today's hearing and for the opportunity to offer the community bank perspective on the Paycheck Protection Program and other SBA programs.

I'm happy to answer any questions you may have.

Question for the Record
Kweisi Mfume
Member of Congress

I am writing to you as a follow-up to the hearing entitled, "An Empirical Review of the Paycheck Protection Program" hosted by the United States House of Representatives Subcommittee on Oversight, Investigations, and Regulations at 10:00 am EST on Wednesday, March 16, 2022. I would like your office to prepare an answer to the following question.

There is a hotel in my District, the Merriweather Lakeshore Hotel, that received a Paycheck Protection Program (PPP) loan of almost $1.1 million on April 10, 2020. On April 15, 2020, the Merriweather Lakeshore Hotel fired 100 of its employees and closed to the public. According to PPP regulations, this hotel was required to spend 60% of its loan on payroll costs, yet it remained closed during the entire time that the loan would have had to be spent to be forgiven. Based on the information provided to me, the hotel refused to rehire almost all of the 100 fired employees, yet on July 19, 2021, the SBA forgave the PPP loan in full.

This example, if it proves to be true, could be indicative of a nationwide pattern. The Paycheck Protection Program infused $13.9 billion into the hotel industry over the course of the pandemic. Yet, while the number of hotels increased by 1,375 during the pandemic, the hotel industry employed 443,600 fewer workers in February 2022 than in February 2020. The SBA has forgiven 98% of hotel loans where a forgiveness decision was issued.

How would you or the GAO explain the disconnect between the loss of jobs in the hotel industry and the high rate of PPP loan forgiveness? Could you find out if other industries that have received billions from the Paycheck Protection Program also failed to return workers to their jobs?

GAO Response:

Representative Mfume, I thank you for this question. PPP loans assisted a significant number of hotels. According to SBA data, more than 460,000 businesses in the accommodation and food service industries received more than $41.5 billion in PPP loans. The Census Bureau estimates that there were about 733,000 businesses in the accommodation and food service industries in 2020.

We have reviewed aspects of the specific PPP loan you cited using information SBA has made publicly available. This information shows that the company that operates the hotel received an initial PPP loan of almost $1.1 million on April 10, 2020, and the loan was fully forgiven on July 19, 2021. PPP does not require loan recipients to return specific workers to their jobs, and there are exemptions and safe harbors, discussed further below, that allow PPP borrowers to qualify for full loan forgiveness in certain instances when they did not maintain their full complement of

staff. SBA's publicly available information does not indicate whether the hotel operator was eligible to exercise any of the available exemptions or safe harbors to qualify for full forgiveness even if it had reduced the number of its employees.

There are two primary components for loan forgiveness: use of the loan proceeds and maintenance of number of full-time equivalent (FTE) employees.

- **Use of loan proceeds.** The forgiveness amount is based on how the business used the loan proceeds, with borrowers being required to spend at least 60 percent on eligible payroll costs. These payroll expenses are not tied to specific employees, and borrowers have up to 24 weeks after origination of the loan to incur the costs (known as the covered period).
- **Maintenance of full-time equivalent employees.** Borrowers are required to maintain their FTEs during the covered period as compared to a reference period (February 15, 2019, through June 30, 2019, or January 1, 2020, through February 29, 2020). If the average number of FTE employees during the covered period is less, then the total eligible expenses available for forgiveness are reduced proportionally by the percentage reduction in FTE employees.

However, there are some exemptions and safe harbors created in statute and SBA regulations that eliminated FTE reduction penalties for certain PPP borrowers.

Exemptions. Any positions or employees that meet the following three criteria are exempt from FTE reduction penalties:

- Any positions for which the borrower can document, in good-faith, inability to rehire individuals who were employees on February 15, 2020, and the borrower was unable to hire similarly qualified employees for unfilled positions on or before (a) December 31, 2020, for a PPP loan made before December 27, 2020 or (b) the last day of the covered period, for a PPP loan made on or after December 27, 2020
- Any positions for which the borrower reduced the hours of an employee and then made a good-faith, written offer to restore the reduced hours, at the same number of hours and the same salary or wages as earned by the employee during the last pay period prior to the reduction in hours and the employee rejected the offer
- Any employees who during the covered period (a) were fired for cause, (b) voluntarily resigned, or (c) voluntarily requested and received a reduction of their hours

Safe harbors. The following two safe harbors exempt borrowers from any loan forgiveness reduction penalty based on a reduction in FTE employee levels:

- The borrower is able to document that it was unable to operate at the same level of business activity as the business was operating at before February 15, 2020, due to compliance with sanitation, social distancing, or any other worker or customer safety requirements established or guidance issued between March 1, 2020 and December 31, 2020 (or, for a PPP loan made on or after December 27, 2020, not later than the last day of the loan's covered period) by the Secretary of Health and Human Services, the Director of the Centers for Disease Control and Prevention, or the Occupational Safety and Health Administration in response to COVID-19.
- The borrower is able to document that: (a) the borrower reduced its FTE employee levels between February 15, 2020 and April 26, 2020 as compared to February 15, 2020 and (b) the borrower then eliminated those reductions by December 31, 2020 (or, for a PPP loan made on or after December 27, 2020, by the last day of the loan's covered period).

In summary, forgiveness decisions are based on certain requirements pertaining to payroll and other costs as well as to the maintenance of FTEs, and do not require loan recipients to return specific workers to their jobs. In addition, exemptions and safe harbors allow PPP borrowers to qualify for full loan forgiveness in certain instances when they did not maintain their full complement of staff.

Questions for the Record
House Small Business Committee
Hearing: "An Empirical Review of the Paycheck Protection Program"
March 16, 2022

Questions for the Record from Rep. Chrissy Houlahan addressed to Dr. Iryna Demko, Research Associate, Center for Economic Development, Maxine Goodman Levin College of Urban Affairs, Cleveland State University, Cleveland, OH

- Dr. Demko, your interviews of smaller PPP recipients showed there was a great deal of confusion about the loan application process and the amount calculation, especially among the smallest businesses. Can you describe for us what these businesses relayed to you about the application and calculation process?

  Ms. Houlahan, the most frustrating thing was the release of new guidelines and clarifications weekly, which made it hard for the businesses to stay on top. Small businesses were trying to figure out the rules and definitions on the fly. They needed the money and tried to follow the rules. SBA and lenders kept changing the application, which added time. One business owner shared he would spend hours pulling the information, then had to do it again because the form changed. SBA said the estimated time for completing the PPP loan application, including gathering data needed, was 8 minutes. It certainly took multiple hours to apply for the loan. One business owner stated that the payroll data gathering was a little bit complicated because they have many part-time employees, but it was worth it for the amount of money they got.

  The original thinking was a small business had to spend the loan within eight weeks. Towards the end of May 2020, the period to spend the loan was extended to 24 weeks instead of 8 weeks. One business owner explained that that portion of the PPP loan that they spent in May when the business was not open had zero benefit. It would have been a great benefit if they had been able to spread it out over 24 weeks when they started back on June 1st. Not to mention employees who were not allowed to get the unemployment benefit by accepting that payment.

  Lenders were all over the place in telling how much to ask for. One business owner stated that "the amount of money you were eligible for depended on what person you got on the phone with and what their interpretation and understanding of the rules were." This was confusing and everyone was clearly doing something different. One business owner got turned down by one of the lenders, and another lender said they were eligible for more money than they asked for. Things were weird.

  Smaller businesses experienced being neglected by their banks. One business owner thought their application was submitted but found out very late in the process that the bank had not actually submitted their application yet. Another business owner shared: "I was on hold for 2 or 3 hours at a time… I tried for 2 or 3 weeks, spending a total of 10 or 12 hours on hold, and nobody ever got back to me. So, I had to open a second business checking account with another bank to apply… It was a waste of time."

- For businesses in the position you described in your answer to Question No. 1 above, how does the unexpected debt arising from a good faith miscalculation hurt their ability to operate and grow?

  Things looked grim from March to May 2020. For one nonprofit, fundraising went up dramatically in the last two quarters of 2020. They worked hard to go into small supporters and foundations that they did not know existed before the pandemic. 2020 was a very difficult year; some resources have helped, but it has still continued to be difficult. Small businesses were hoping to just survive through 2021. One business owner shared: "I acquired a lot of debt because I could not pay all my bills when we were shut down for so long."

  PPP loan helped to give the businesses a cushion and breather. One business owner indicated that they would have had to take out a personal loan in order to afford to pay the expenses of the business or go in their savings or both without the PPP loan. The loan helped to retain people during a scary time. Another business owner said they would not be in business without the PPP loan. They did not personally have enough money to cover the business without it. They had no revenue for 2.5 months and very little for another three months, so they went six months with no or little revenue. Their landlords agreed to differ payments and that was a positive, but they still had some payroll and utilities.

Questions for the Record
House Small Business Committee
Hearing: "An Empirical Review of the Paycheck Protection Program"
March 16, 2022

Questions for the Record from Rep. Chrissy Houlahan addressed to Mr. Robert Barnes, President and Chief Executive Officer, PriorityOne Bank, North Magee, MS

- Mr. Barnes, if excess loan amounts that were spent on forgivable uses are not forgiven, they must be repaid at 1% interest over the life of the loan. This results in unintended debt for these borrowers. Your testimony says you did not want to saddle anyone with unintended debt. We know that borrowers would prefer these amounts be forgiven, and some lenders have reported the cost of servicing a loan like this exceeds the return for the lender. Given these dynamics, should excess loan amounts that were spent on forgivable uses be forgiven by SBA?

- Rep. Houlahan, yes, I believe that in instances where loan amount errors were made in good faith, and the loans were used for forgivable uses, that the excess loan amounts should be forgiven by the SBA. 3-30-2022

Credit Union National Association
CUNA

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March 16, 2022

The Honorable Dean Phillips
Chairman
Subcommittee on Oversight, Investigations, and Regulations
Committee on Small Business
Washington, DC 20510

The Honorable Beth Van Duyne
Ranking Member
Subcommittee on Oversight, Investigations, and Regulations
Committee on Small Business
Washington, DC 20510

Dear Chairman Phillips and Ranking Member Van Duyne,

On behalf of America's credit unions, I am writing regarding the hearing entitled, "An Empirical Review of the Paycheck Protection Program." The Credit Union National Association (CUNA) represents America's credit unions and their 130 million members.

The SBA and Treasury's implementation of the Paycheck Protection Program (PPP) left much to be desired as credit unions and other lenders experienced periodic inability to access to the E-Tran system and occasional unresponsiveness to credit unions asking for assistance. Despite these issues, credit unions were proud to offer PPP loans to help small business owners recover from the impact of the pandemic, facilitating more than 170,000 loans that averaged just $49,000. Our largest credit unions and our smallest credit unions participated in this program. We had one of our small credit unions – a $775,000 credit union in Birmingham, AL – even participate.

Through this program, credit unions helped Main Street America including businesses like non-profit organizations that are helping the minority communities in the cities of Wilmington and minority owned businesses in the lower east side of New York such as a small deli, tiny photography businesses, and the neighborhood bakery, in addition to many other restaurants, beauty salons, hardware stores, and retail stores.

Credit unions also put a significant amount of resources into the Paycheck Protection Program. Whether it was pulling lending officers from other departments or redirecting resources to adjust to the high demand of the loans, credit union staffers worked around the clock to process the loans to ensure the survival of America's small businesses.

Looking beyond the pandemic, small businesses across the country remain in critical need of funds and credit unions are in a position to pump billions of capital into the economy - at no cost to the government. There's only one obstacle: an arbitrary credit union Member Business Lending (MBL) cap which currently limits credit union lending activity to 12.25% of assets. As the Subcommittee continues to focus on empowering small community lenders, such as credit unions, to continue to provide credit to small businesses, it's critical that Congress remove the MBL cap. We believe that community financial

institutions the life blood of communities across the country and that the PPP program has demonstrated that credit unions ability to lend to small business should be enhanced so that small businesses can continue to prosper.

On behalf of America's credit unions and their 130 million members, thank you for holding this important hearing.

Sincerely,

Jim Nussle
President & CEO

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National Association of Federally-Insured Credit Unions

March 15, 2022

The Honorable Dean Phillips
Chairman
House Small Business Committee
Subcommittee on Oversight, Investigations, and Regulations
U.S. House of Representatives
Washington, DC 20515

The Honorable Beth Van Duyne
Ranking Member
House Small Business Committee
Subcommittee on Oversight, Investigations, and Regulations
U.S. House of Representatives
Washington, DC 20515

Re: Tomorrow's Hearing: "An Empirical Review of the Paycheck Protection Program"

Dear Chairman Phillips and Ranking Member Van Duyne:

I am writing on behalf of the National Association of Federally-Insured Credit Unions (NAFCU) in conjunction with tomorrow's Subcommittee hearing entitled "An Empirical Review of the Paycheck Protection Program." As you are aware, NAFCU advocates for all federally-insured not-for-profit credit unions that, in turn, serve over 127 million consumers with personal and small business financial service products.

The Paycheck Protection Program (PPP) was an important tool to help small businesses survive the pandemic. While there were various issues that emerged during the program, especially for small lenders such as credit unions, we were pleased to see Congress react to these challenges and improve access for credit unions to the program and streamline the forgiveness process for small businesses in subsequent legislation.

NAFCU and our credit union members continue to support the concept of expanding access to small dollar business loans post-PPP as credit unions have always focused on servicing this market. Credit unions have been recognized as doubling their efforts in providing small business lending post-recession, despite considerable consolidation in the marketplace and statutory limitations on member business lending (MBL). The PPP is a prime example of the role that credit unions played in filling a need in this area. Many credit unions stepped in to provide these loans to small businesses that were turned away from other financial institutions that did not want to make these smaller loans. Some credit unions that previously did no business lending swiftly sought authority from their boards of directors to offer business loans so they could provide businesses in need with PPP loans. The PPP was an example of how a public-private partnership can work effectively and efficiently to meet the needs of communities.

Moreover, compared to other types of lenders, credit unions disproportionately helped the smallest of small businesses during the PPP. An analysis of the Small Business Administration's (SBA) PPP data from the first two rounds shows that credit unions made loans in amounts much lower than the national average. In 2020, the average credit union PPP loan was under $50,000, while the average PPP loan overall was over $100,000.[1] In 2021, the average credit union PPP loan was $33,869, while the average

[1] DuPlessis, Jim, "PPP Helps Businesses and Credit Unions," *Credit Union Times* (June 15, 2021), available at https://www.cutimes.com/2021/06/15/ppp-helps-businesses-and-credit-unions/.

PPP loan overall was $42,000.[2] Furthermore, according to NAFCU's analysis of SBA's PPP data, a full 75 percent of credit union PPP loans went to businesses with fewer than five employees. While some have tried to criticize credit unions only because they only deployed 2 percent of all PPP loan dollars, they forget to mention this is because the loan size was so small, going to the smallest businesses.

NAFCU's recognition of the need for smaller loans for small businesses is why we have supported legislation such as H.R. 5189, the *Member Business Loan Expansion Act*, which would make it easier for credit unions to offer smaller business loans under $100,000 by ensuring these loans do not count toward the arbitrary credit union MBL cap. We believe bipartisan approaches such as this legislation provide small businesses a better alternative to get the support they need in a timely manner. Allowing lenders that have relationships with small businesses, such as credit unions, to do more to help is a better approach to addressing this need.

In recent years, NAFCU members have worked to increase the number of SBA lending partners despite statutory limitations imposed on credit unions' ability to provide small business loans. Moreover, credit unions continue to focus on providing credit to our nation's small businesses, regardless of size. Over the past five years, 57 percent of business loans made by credit unions were under $150,000, compared to 46 percent of loans under $150,000 for other lenders. Early in the pandemic, 70 percent of NAFCU members that were not already involved in SBA lending but did participate in the PPP expressed an interest in becoming a regular SBA lender. Given this increased interest in SBA lending programs and the expected demand in small business lending, it is imperative that credit unions have all options available to provide capital for small business members.

We thank you for the opportunity to share our concerns on this important topic. Should you have any questions or require any additional information, please contact me or Lewis Plush, NAFCU's Associate Director of Legislative Affairs, at lplush@nafcu.org.

Sincerely,

Brad Thaler

Brad Thaler
Vice President of Legislative Affairs

cc: Members of the Subcommittee on Oversight, Investigations, and Regulations

[2] Small Business Administration, Paycheck Protection Program (PPP) Report (May 31, 2021), available at https://www.sba.gov/sites/default/files/2021-06/PPP_Report_Public_210531-508.pdf.

UNITE HERE Local 11 Testimony for Small Business Oversight, Investigations and Regulations Subcommittee

March 16, 2022 Hearing: An Empirical Review of the Paycheck Protection Program
Kurt Petersen, Co-President, UNITE HERE Local 11

On behalf of our 32,000 members who work in hotels, food service and airports throughout Southern California and Arizona, UNITE HERE Local 11 thanks Chairwoman Velasquez and Small Business Committee members for the opportunity to present the following testimony regarding the Paycheck Protection Program.

PPP helped the hotel industry recover, but hotels left workers behind

UNITE HERE Local 11 published a report on May 24, 2021 titled "The Paycheck Protection Program in Name Only." At the time, we wrote that "the PPP has key flaws that allow businesses to spend billions on mortgages, rent, utilities and other non-payroll costs and, particularly in the hotel industry, enable large, wealthy corporations to monopolize a program meant for small businesses." Over the next ten months, as the witnesses at today's hearing have demonstrated, interventions by Small Business Committee Chairwoman Velasquez, other Congressional Democrats and the Biden Administration[i] helped direct a higher proportion of PPP funds to smaller, minority-owned borrowers.[ii]

However, data now appear to reveal that despite these interventions, not only has the PPP failed to protect hotel workers' paychecks, but $9.7 billion of the $9.8 billion lent to hotels for which a loan forgiveness decision has been made has been forgiven (a rate of over 98%). This is so despite the program's requirement that PPP borrowers must spend 60% of their loans on payroll expenses in order to qualify for full loan forgiveness.[iii] Initially, borrowers were required to spend 75% of their loans on payroll, but the "Paycheck Protection Program Flexibility Act" passed on June 5, 2020 lowered this threshold to 60%.[iv] While these changes undoubtedly helped small businesses, they also likely allowed larger borrowers in the hospitality industry and others to spend larger sums on paying down corporate and property-level debt to big banks, and other non-payroll costs.

After PPP infused $13.9 billion into hotels, the industry has not only weathered the pandemic but has grown on the backs of its workers, with fewer workers forced to do more work than before this unprecedented crisis.

While the number of U.S. private industry accommodations establishments increased by 1,375 from the first quarter of 2020 to the second quarter of 2021,[v] the industry employed 443,600 fewer workers in February 2022 than in February 2020 before the pandemic.[vi]

A recent analysis by David Autor et al., "The $800 Billion Paycheck Protection Program: Where Did the Money Go and Why Did it Go There?," demonstrated that only 23-34% of loans went to workers who would have otherwise lost their jobs.[vii] Yet as of January 3, 2022, SBA had forgiven $9.7 billion in loans to hotels.

UNITE HERE Local 11's analysis of employment data at unionized hotels in Southern California and Arizona whose owners or operators received PPP in 2020 demonstrated that 10 of 24 properties could not have spent 60% of their loan amount on payroll and qualified for full loan forgiveness because they didn't bring workers back to their jobs in sufficient numbers over the covered period for PPP loans.

U.S. hotels collected $3.3 billion of their total $13.9 billion in PPP loans through exemptions unavailable to non-hospitality borrowers. Hotels collected $1.34 billion through an exemption that allowed firms in the hospitality industry to receive funds at multiple locations, provided each location had fewer than 500 employees. And in 2021, hotels received $1.93 billion through language that provided hospitality businesses with 40% larger PPP loans than other borrowers.

Further, despite the SBA's limit of $20 million per "corporate group,"[viii] nine hotel chains appear to have received more than $20 million through 12 to 57 separate loans to their affiliates.

Loans to the hotel industry were also more skewed away from small businesses than loans to all PPP borrowers. In 2020, loans of under $150,000—more likely to be loans to true small businesses—represented 87.4% of the number of PPP loans to all industries, or 28.2% of the amount of PPP loans to all industries.[ix] However, for hotels, 2020 loans under $150,000 represented only 80.4% of all lending, and 25.1% of the total loan amount.[x]

By contrast, in 2020, loans of over $1 million—more likely to benefit wealthier borrowers with larger businesses—represented 1.6% of the number of PPP loans to all industries and 34.1% of the amount of loans.[xi] But for hotels, loans over $1 million represented 2.9% of the number of loans, and 39.1% of the amount.[xii] The average 2020 PPP loan was for $101,000,[xiii] but the average 2020 hotel PPP loan was for $161,000.[xiv]

In 2021, following the Biden Administration's changes, loans of under $150,000 represented 94.7% of the number of PPP loans to all industries, or 47.9% of the amount of PPP loans to all industries, a marked improvement from 2020 lending to small businesses.[xv] However, for hotels, 2021 loans under $150,000 represented only 72.7% of all lending, and 22.8% of the total loan amount[xvi]—a lower proportion than in 2020, when loans under $150,000 represented 80.4% of all lending, and 25.1% of the total loan amount. By contrast, in 2021, loans of over $1 million represented only .4% of the number of PPP loans to all industries and 16.4% of the amount of loans.[xvii] For hotels, loans over $1 million represented 3.7% of the number of loans, and 32.9% of the amount.[xviii] While the average 2021 PPP loan was for $45,000,[xix] the average 2021 hotel PPP loan was for $179,128, nearly four times that amount.[xx]

At best, the PPP was an inefficient mechanism for supporting small businesses and bringing workers back to their jobs in the hotel industry. But based on new academic analysis of payroll records by David Autor et al., the program's legacy appears far worse; SBA's rush to disburse funds and forgive loans resulted in a program that Autor called "highly regressive, with about three-quarters of PPP funds accruing to the top quintile of households."[xxi]

Case Study of Westmont Hospitality Group, an international hotel chain that collected $48 million through the PPP—including $29 million through JPMorgan Chase

Hotels collected $4.8 billion in the first two weeks of the PPP, before guardrails had been instituted to improve small businesses' access to loans.[xxii] As was the case with the program overall, larger borrowers monopolized this frenetic period of lending through their existing relationships with financial giants like JPMorgan Chase and Bank of America, the top two PPP lenders in 2020[xxiii] and 2021.[xxiv] These two banks alone lent $411 million to hotels during these first two weeks.[xxv]

As a result, the top ten lenders distributed 22% of total hotel loan volume during the first two weeks of the program versus 17% of total loan volume in subsequent funding rounds.[xxvi] Further, borrowers with fewer than 20 employees received 17% of hotel loans during the first two weeks as opposed to 25% in subsequent rounds.[xxvii]

Westmont Hospitality Group, an international hotel company that owns and operates over 400 hotels around the world, illustrates the problems created by lending during this period. According to public data, Westmont-related corporate entities received $48 million in First and Second Draw PPP loans. These loans included over $35.2 million approved for Westmont affiliates during the first two weeks of the program; JPMorgan Chase lent $20.4 million during this period, and an additional $9.2 million to Westmont affiliates in subsequent PPP rounds.[xxviii]

Local 11 filed a complaint with the SBA Office of Inspector General in July 2021 presenting evidence regarding one hotel connected to Westmont that received a PPP loan but issued WARN notices that it had permanently separated 122 workers, raising the question whether PPP had really served its purpose of protecting jobs.

Moreover, of the 15 entities that received loans listing Westmont's Texas headquarters address, seven listed "Red Roof Inn" under the franchise name field and eight left this field blank, making it impossible to tell which specific hotel property or properties and which workers received the loans.

Despite these outstanding questions, SBA had forgiven $26.6 million of the $35.2 million lent to Westmont during the first two weeks of the program as of January 3, 2022.[xxix]

Case Study of Los Serranos Golf Club in Chino Hills, California, a golf club managed by JC Resorts

Los Serranos Golf Club ("Los Serranos") in Chino Hills, California received both a first and second draw Paycheck Protection Program ("PPP") loan. Los Serranos is managed by JC Resorts, a company that manages golf course and resort properties throughout California.[xxx] Below we explain why, based on some plausible factual assumptions, Los Serranos was likely

not eligible for those loans because it appears "affiliated" with JC Resorts under SBA rules and because JC Resorts is itself too big for a PPP loan.

The SBA's affiliation rules are designed to ensure that only small businesses qualify for small business loans, and that businesses that are affiliated with companies that are too large for a loan do not obtain them.

We know that JC Resorts manages Los Serranos Golf Club, and that all the employees who work there are JC Resorts employees. We therefore assume that Los Serranos and JC Resorts are subject to a written management agreement, just as JC Resorts has with other golf clubs it manages. Under SBA rules, affiliation arises where an individual, concern or entity controls management of the loan applicant through a management agreement. We also believe that none of the exceptions to the affiliation rules for receiving a PPP loan apply to Los Serranos. The CARES Act (and subsequent amendments) waived the affiliation rules for five types of businesses: 1) hospitality businesses, 2) specifically recognized franchises, 3) businesses that receive financial assistance from a Small Business Investment Company ("SBIC"), 4) broadcasting companies, and 5) internet media companies. 15 U.S.C. § 636(a)(36)(D)(iv). It does not appear that any of these exceptions apply to Los Serranos.

Turning first to the last four business types, Los Serranos is not a specifically recognized franchise, a broadcasting company, or an internet media company. To Local 11's knowledge, Los Serranos has not received financial assistance from an SBIC.

Turning to the waiver for hospitality companies, Los Serranos is not a hospitality business because it operates and received its PPP loans under the NAICS code 713910, which is for golf courses and country clubs. The hospitality industry exception applies only to companies with an NAICS code beginning in 72 ("72 Company"). JC Resorts likely manages and is affiliated with 72 Companies and *those* companies are eligible for PPP loans because of the hospitality industry exception. However, Los Serranos is not eligible for that exception: The PPP FAQ explains that if a non-72 Company like Los Serranos is affiliated with a 72 Company, the non-72 company still counts all the employees of the 72 Company for purposes of PPP eligibility because the waiver does not apply to it. See SBA, Paycheck Protection Program FAQs 8–9 (June 25, 2020).

If we are correct that none of the affiliation waivers apply, then both JC Resorts and Los Serranos acting as a single affiliated entity had to be eligible for a PPP loan. This means that JC Resorts had to have fewer than 500 employees companywide, and less than $16.5 million annual revenue for Los Serranos to be eligible. We believe that neither is true. According to its website, JC Resorts manages 3 hotels, 2 restaurants and 10 golf courses, and it filed eleven California WARN Act notices with effective dates from June 15, 2020 to January 1, 2021 indicating that it had laid off 587 employees over that time period.

It is worth noting that Los Serranos would certainly have known the nature of its contractual relationship with JC Resorts, and in fact, was required to disclose facts about its management relationship on the PPP First Draw and Second Draw loan applications.[xxxi] This knowledge would

have put it on notice that it could not in our view apply for a PPP loan in good faith without knowing the number of employees and annual revenue of JC Resorts. We have asked SBA to investigate these loans, and are waiting for a response.

Hotel workers laid off by wealthy hotel chains that collected millions in PPP loans ask what happened to funds meant for payroll costs

Hotels terminated or furloughed millions of workers at the onset of the pandemic,[xxxii] and have since enjoyed billions in PPP relief without publicly disclosing whether funds were spent on payroll costs. Now, the American Hotel & Lodging Association ("AHLA") and its hotel members have faced a labor shortage —a situation that AHLA was still blaming on the availability of government benefits a month after enhanced unemployment benefits ended in September 2021. [xxxiii] Hotels have also vigorously lobbied against efforts to require employers to recall their employees to their previous jobs.[xxxiv]

Below, we highlight the stories of laid off hotel workers whose employers received millions from the PPP.

Chateau Marmont in Hollywood, California

In March 2020, the Chateau Marmont fired more than 200 of workers, leaving employees who had dedicated decades of their lives to the hotel without job security or company-provided healthcare during the pandemic. Chateau was approved for a $1.95 million PPP loan on February 5, 2021, but as of March 2022 only a small fraction of laid-off Chateau workers have been returned to their jobs.

Several workers have filed complaints with the California Division of Labor Standards Enforcement alleging that the Chateau Marmont has failed to recall them to work as required by a California law enacted in 2021. SB-93 requires hospitality employers to offer to rehire workers in positions for which they are qualified.

The workers who filed complaints are Martha Moran, who worked as a housekeeper for more than 33 years, and Jesus Moreno, who worked as a gardener for nearly 20 years at the Chateau Marmont. They both allege in their complaints—which remain pending investigation by the state agency—that the Chateau Marmont has contracted out room cleaning and gardening work to brand-new agency workers without first offering them these open positions. Of the 50 workers with the longest tenures at Chateau Marmont prior to the layoffs, approximately 46 were Latinx.

"I feel like management at Chateau Marmont aren't respecting my seniority or my humanity, and I say it's unfair," said Moran, who had worked as a housekeeper at Chateau Marmont since 1986 before she was laid off.[xxxv]

Since being laid off at the start of the pandemic, many of the hotel's workers have also spoken out about abuses they experienced working at the hotel, including disrespect, mistreatment, and a

racially stratified workplace. Two African-American women who formerly worked at the hotel have filed discrimination lawsuits against the Chateau Marmont.

Thomasina Gross, a former banquet server at the Chateau, alleges that she was subjected to unwanted touching by guests and that she was passed over for promotions in favor of white employees.

April Blackwell, a former night auditor, alleges in her suit that she experienced a racially hostile work environment and unsafe working conditions. As the only overnight front desk agent working in the Chateau's "anything goes" environment, she alleges she was subjected to racist and sexist harassment by guests while performing her job. The Chateau Marmont has since forced both workers to refile their claims in private arbitration. [xxxvi]

Merriweather Lakehouse Hotel in Columbia, Maryland

On April 10, 2020 Merriweather Lakehouse Hotel owner, IMH Columbia LLC, whose principal owner and investor is local developer David Costello, received a nearly $1.1 million PPP loan. By April 15, 2020, the hotel, which was operated by Ambridge Hospitality, had completely closed, laying off more than 100 hotel workers, the majority of whom were Black and brown women, many of whom had worked at the hotel for decades. Although the hotel remained closed, IMH Columbia LLC received a second PPP loan on February 5, 2021 for almost $1.5 million. From publicly available data, we know that the April 10, 2020 loan was forgiven in full by the SBA, despite the fact that the hotel was not open to the public from April 2020 to September 2021 and workers laid off due to the pandemic were not working or being paid.

Since the hotel's reopening in November of 2021, formerly laid off workers have been told that they would have to reapply for their jobs Although a law was recently passed in Howard County requiring hotels to give workers laid off due to COVID the right of first refusal in rehiring for open positions, the hotel is currently operated with workers from temporary staffing agencies. Only two of the workers laid off before COVID have been rehired.

Ty Hughes, a Columbia resident who worked setting up banquet functions at the Merriweather Lakehouse hotel for sixteen years prior to being laid off, reflected, "We were all laid off through no fault of our own. I worked hard and loved the people I worked for and with. There are banquets happening in our hotel now. Were it not for the pandemic I would be setting them up."

While laid off, Mr. Hughes struggled to pay bills after he was wrongfully cut off of unemployment due to problems with Maryland's unemployment system. He is still working to receive back payments which the state acknowledges it owes him and more than two years after being laid off has yet to find full time employment.

UNITE HERE Local 11 PPP Recommendations

UNITE HERE Local 11 is collaborating with members of Congress and the COVID Oversight Coalition—a diverse set of policy, government oversight, data, and labor groups including

Americans for Financial Reform, Public Citizen, Project on Government Oversight—to improve transparency and oversight of the PPP and address program design flaws that have been roadblocks to an equitable recovery.

We have asked SBA to investigate our concerns regarding PPP loans connected to Chateau Marmont, Westmont Hospitality Group, Los Serranos Golf Club, and the Merriweather Lakehouse hotel and have not yet received responses to our questions. The SBA OIG's Semiannual Report to Congress for April 1, 2021 to September 30, 2021 illustrates why this may be the case; while SBA OIG received 42,575 complaints related to PPP,[xxxvii] the agency had conducted only 126 investigations related to PPP and the Economic Injury Disaster Loan Program, 97 of which resulted in an indictment or complaint.[xxxviii]

On July 27, 2021, Congresswoman Nanette Diaz Barragan led a letter to SBA Administrator Isabel Guzman with 12 of her colleagues requesting greater transparency around PPP loan forgiveness in the hotel industry in which she stated, "Congress intended the PPP be used as a lifeline for small businesses to retain employees, not as a bailout for wealthy corporations. It is important that this funding is used to protect the jobs of hotel workers, as it was intended. We need additional transparency to make sure that is the case for those hotels accessing these loans."[xxxix]

On February 2, 2022, Congresswoman Judy Chu, who serves on the Small Business Committee, also wrote to Administrator Guzman asking for disclosure of how PPP borrowers claim to have spent loans, and for recipients of multiple loans for various locations, as in the hospitality industry, she asked SBA to disclose the franchise name, address, and payroll percentage for each individual location that received PPP assistance.[xl] She stated, "This information will provide Congress and the public with more information on the number and types of jobs that were retained thanks to PPP assistance. It will also provide transparency for workers who were laid off but not rehired by businesses that received PPP assistance."

On March 15, 2022, Congresswoman Ruben Gallego led a further letter to Administrator Guzman with 17 of his colleagues. He wrote to "raise questions regarding transparency and accountability in the forgiveness of PPP loans, especially certain loans received by the hotel industry. Specifically, we ask that the Small Business Administration (SBA) update Congress and increase transparency regarding the compliance process for these loans before they are forgiven." Gallego cites Westmont Hospitality, stating "lack of transparency has so far made it impossible to determine whether the jobs tied to these loans were actually retained" and requests a response in writing or briefing.

To our knowledge, SBA has yet to respond to any of these inquiries, but has continued to process loan forgiveness applications.

UNITE HERE Local 11 makes the following recommendations regarding PPP:

- SBA should release more PPP loan data to the public so that academics, workers and taxpayers can analyze the proportion of PPP loans that borrowers claim to have spent on payroll versus mortgages, utilities and other non-payroll costs and compare these data to Worker Adjustment and Retraining Notification ("WARN") Act notices filed by employers who fired workers and employment data from labor unions and workers.
- In April 2020, the Treasury Department stated SBA would audit any PPP loan of over $2 million.[xli] SBA should publicly report the results of all PPP loan audits for loans of $2 million or more, and present a plan for conducting audits that have not yet taken place.
- SBA should pause all loan forgiveness until the audits are completed and, during that time, also review and improve its loan forgiveness procedures and analysis.
- SBA should review all loans that forgave $1 million or more to consider whether clawbacks would be appropriate to ensure funds went to small businesses that spent loans on payroll costs, and present a plan to collaborate with the Department of Justice's new Chief Prosecutor for Pandemic Fraud on clawbacks.[xlii]
- SBA should issue an official lessons learned report to assess whether PPP was successful in its primary goals of protecting paychecks and supporting small businesses, and make recommendations to improve transparency, strengthen oversight and develop better loan forgiveness criteria.

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[i] "FACT SHEET: Biden-Harris Administration Increases Lending to Small Businesses in Need, Announces Changes to PPP to Further Promote Equitable Access to Relief," February 22, 2021, https://www.whitehouse.gov/briefing-room/statements-releases/2021/02/22/fact-sheet-biden-harris-administration-increases-lending-to-small-businesses-in-need-announces-changes-to-ppp-to-further-promote-equitable-access-to-relief/

[ii] "Paycheck Protection Program: Program Changes Increased Lending to the Smallest Businesses and in Underserved Locations GAO-21-601," Sep 21, 2021, https://www.gao.gov/products/gao-21-601

[iii] Hotel PPP loan data downloaded and analyzed as of January 3, 2022, the most recent date for which SBA has made data available via: https://data.sba.gov/dataset/ppp-foia. SBA has forgiven 98% of loan volume for hotel loans (NAICS Code 721110) with any amount listed under the "forgiveness amount" field.

[iv] H.R.7010 - Paycheck Protection Program Flexibility Act of 2020, June 5, 2020, https://www.congress.gov/bill/116th-congress/house-bill/7010#:~:text=The%20bill%20raises%20the%20non,of%20a%20paycheck%20protection%20loan.

[v] Preliminary data from the Quarterly Census of Employment and Wages, https://data.bls.gov/timeseries/ENUUS000205721?amp%253bdata_tool=XGtable&output_view=data&include_graphs=true

[vi] Current Employment Statistics Survey (February 2022 data is preliminary. 2119.2-1675.6=443.6) https://data.bls.gov/timeseries/CES7072100001?amp%253bdata_tool=XGtable&output_view=data&include_graphs=true

[vii] "The $800 Billion Paycheck Protection Program: Where Did the Money Go and Why Did it Go There?," David Autor, et al, January 2022 Working Paper, https://www.nber.org/papers/w29669.

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[viii] "Business Loan Program Temporary Changes; Paycheck Protection Program as Amended by Economic Aid Act," Page 74, https://www.sba.gov/sites/default/files/2021-01/PPP%20--%20IFR%20--%20Paycheck%20Protection%20Program%20as%20Amended%20by%20Economic%20Aid%20Act%20%281.6.2021%29.pdf

[ix] "Paycheck Protection Program (PPP) report, "Approvals through August 8, 2020, https://www.sba.gov/sites/default/files/2020-08/PPP_Report%20-%202020-08-10-508.pdf

[x] Hotel PPP loan data downloaded and analyzed as of January 3, 2022

[xi] Id.

[xii] Id.

[xiii] "Paycheck Protection Program (PPP) report, "Approvals through August 8, 2020, https://www.sba.gov/sites/default/files/2020-08/PPP_Report%20-%202020-08-10-508.pdf

[xiv] Hotel PPP loan data downloaded and analyzed as of January 3, 2022

[xv] "Paycheck Protection Program (PPP) report, "Approvals through May 31, 2021, https://www.sba.gov/sites/default/files/2021-06/PPP_Report_Public_210531-508.pdf

[xvi] Hotel PPP loan data downloaded and analyzed as of January 3, 2022

[xvii] "Paycheck Protection Program (PPP) report, "Approvals through May 31, 2021, https://www.sba.gov/sites/default/files/2021-06/PPP_Report_Public_210531-508.pdf

[xviii] Hotel PPP loan data downloaded and analyzed as of January 3, 2022

[xix] "Paycheck Protection Program (PPP) report, "Approvals through May 31, 2021, https://www.sba.gov/sites/default/files/2021-06/PPP_Report_Public_210531-508.pdf

[xx] Hotel PPP loan data downloaded and analyzed as of January 3, 2022

[xxi] "The $800 Billion Paycheck Protection Program: Where Did the Money Go and Why Did it Go There?," David Autor, et al, January 2022 Working Paper, https://www.nber.org/papers/w29669.

[xxii] Hotel PPP loan data downloaded and analyzed as of January 3, 2022

[xxiii] "Paycheck Protection Program (PPP) report, "Approvals through August 8, 2020, https://www.sba.gov/sites/default/files/2020-08/PPP_Report%20-%202020-08-10-508.pdf

[xxiv] "Paycheck Protection Program (PPP) report, "Approvals through May 31, 2021, https://www.sba.gov/sites/default/files/2021-06/PPP_Report_Public_210531-508.pdf

[xxv] Hotel PPP loan data downloaded and analyzed as of January 3, 2022

[xxvi] Id.

[xxvii] Id.

[xxviii] Id.

[xxix] Id.

[xxx] See Company Profile, JC Resorts, https://www.jcresorts.com/B2B_Company_Profile.php (last visited February 28, 2022) (describing JC Resorts as a "leader in the management and operation of premium resort and golf properties[.]"); Jack Kramer's Los Serranos Golf Club Selects JC Golf Management Team, JC Golf, https://www.jcgolf.com/san-diego-golf-blog/2018/01/30/losserranos-golf-club/ (January 30, 2018); Home Page, JC Resorts, https://www.jcresorts.com/ (last visited February 28, 2022) ("Golf" drop down menu identifying Los Serranos Golf Club as a JC Resorts property).

[xxxi] The First Draw application asked if "the Applicant . . . ha[s] common management with[] any other business?"
SBA, PPP Borrower Application Form 1 (April 2020). The Second Draw application clarified further, asking if "the
Applicant . . . ha[s] common management (including a management agreement) with any other business?" SBA,
PPP Second Draw Borrower Application Form 1 (January 2021) (emphasis added).

[xxxii] AHLA State-by-State Job Losses, February 2021, https://www.ahla.com/sites/default/files/Fact%20Sheet_2021%20State%20COVID19%20Impact.pdf

[xxxiii] "Hotel Jobs Report Shows Many Workers Still Aren't Coming Back," October 8th, 2021, https://skift.com/2021/10/08/hotel-jobs-report-shows-many-workers-still-arent-coming-back/

[xxxiv] "California to require some employers to rehire workers laid off due to the pandemic," April 19, 2021, https://www.abc10.com/article/news/local/california/california-require-some-employers-rehire-workers-pandemic/103-be5fe8c5-ac82-4a06-85ae-fc90e562b0df

[xxxv] "Veteran Latinx Workers at Chateau Marmont & Hilton Santa Monica Allege Discrimination & State Recall Law Violations," November 24, 2021, https://www.unitehere11.org/veteran-latinx-workers-at-chateau-marmont-hilton-santa-monica-allege-discrimination-state-recall-law-violations/

[xxxvi] "Chateau Marmont gave coveted jobs mostly to white people, lawsuit alleges," LA Times, January 28, 2021, https://www.latimes.com/business/story/2021-01-28/chateau-marmont-employee-lawsuit-alleges-racism-sexual-harassment; "Chateau Marmont Hit by Multiple Lawsuits in Wake of Racial Discrimination, Sexual Harassment Claims," Hollywood Reporter, January 28 2021, https://www.hollywoodreporter.com/lifestyle/lifestyle-news/chateau-marmont-hit-by-multiple-lawsuits-in-wake-of-racial-discrimination-sexual-misconduct-claims-4122968/

[xxxvii] SBA OIG's Semiannual Report to Congress for April 1, 2021 to September 30, 2021, Page 18, https://www.sba.gov/sites/default/files/2021-11/SBA%20OIG%20Fall%202021%20Semiannual%20Report%20to%20Congress_Final%20508.pdf

[xxxviii] Id. at 43

[xxxix] "Barragán & Colleagues Urge SBA to Improve Transparency of PPP Loan Forgiveness for the Hotel Industry," July 27, 2021, https://barragan.house.gov/2021/07/27/barragan-colleagues-urge-sba-to-improve-transparency-of-ppp-loan-forgiveness-for-the-hotel-industry/

[xl] Letter from Congresswoman Judy Chu to Administrator Guzman, February 3, 2022.

[xli] "Small business loans above $2 million will get full audit to make sure they're valid, Mnuchin says," April 20, 2020, https://www.cnbc.com/2020/04/28/small-business-loans-above-2-million-will-get-full-audit-to-make-sure-theyre-valid-mnuchin-says.html

[xlii] "Fact Sheet: President Biden to Announce New Steps to Combat Criminal Fraud and Identity Theft in Pandemic Relief Programs," March 1, 2022, https://www.whitehouse.gov/briefing-room/statements-releases/2022/03/01/fact-sheet-president-biden-to-announce-new-steps-to-combat-criminal-fraud-and-identity-theft-in-pandemic-relief-programs/

The Honorable Dean Phillips
Chairman, Subcommittee on Oversight,
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U.S. House of Representatives Committee on Small Business
Subcommittee on Oversight, Investigations, and Regulations

Hearing: "An Empirical Review of the Paycheck Protection Program"
March 16, 2022

Testimony for the Record
Submitted by Sunny Glottmann, Researcher
Center for Responsible Lending

Submitted March 21, 2022

March 21, 2022

Dear Chairman Phillips, Ranking Member Van Duyne, and members of the U.S. House of Representatives Small Business Subcommittee on Oversight, Investigations, and Regulations:

The Center for Responsible Lending ("CRL") respectfully submits the following written testimony for the record in connection with the House Small Business Committee hearing on March 16, 2022 titled, "An Empirical Review of the Paycheck Protection Program." CRL engages in nonpartisan research and policy to ensure a fair, inclusive financial marketplace. Our mission is to advocate for those who are marginalized and underserved by the existing financial marketplace, and to defend those consumers who are targeted with unfair and abusive financial products. These vulnerable households are often people of color, women, rural residents, and low-wealth families and communities. Our affiliate, Self-Help Federal Credit Union ("Self-Help"), a Community Development Financial Institution and SBA lender, was an active Paycheck Protection Program ("PPP") lender throughout the entire program, with 65 percent of its PPP loans going to small businesses or nonprofits led by people of color.

We are pleased the Subcommittee is holding a hearing to evaluate the program's effectiveness in preserving jobs and reaching underserved small businesses; however, we urge the Subcommittee and full Committee to expand its review to address the ongoing barriers underserved small businesses face in receiving full forgiveness. While access to PPP loans improved in the final rounds of the program due to changes implemented by Congress and the Small Business Administration (SBA), true access to the relief promised by PPP will remain out of reach for underserved businesses if they do not receive full forgiveness.

Notably, under the rules of the program, all 2020 PPP loans should have completed the forgiveness process prior to December of 2021.[1] Yet as of early 2022, well over 400,000 microbusinesses that received emergency PPP funding of $25,000 or less in 2020 remain partially or fully unforgiven and must repay all or a portion of those funds.[2] Of all 2020 PPP loans that remain fully unforgiven, 74 percent are loans of $25,000 or less – microbusinesses that are not receiving any of the relief they were promised.[3]

Denied forgiveness for all or part of their loans, these underserved businesses have been saddled with unexpected debt, exacerbating the economic hardships that persist since the onset of the COVID-19 pandemic. One such example is a mediation microbusiness in Massachusetts, which received a $5,800 PPP loan, and is being required to repay about $2,000 of the relief. Disabled and on a fixed income, the

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[1] Under program rules, "[i]f borrowers do not apply for forgiveness within 10 months after the last day of the covered period, then PPP loan payments are no longer deferred, and borrowers will begin making loan payments to their PPP lender." All 2020 PPP loans passed this deadline before the end of 2021. *See* SBA's forgiveness guidance at PPP loan forgiveness (sba.gov).

[2] Businesses with less than 10 employees are commonly defined as microbusinesses. Because PPP loan amounts were based on two-and-a-half month's employee (or owner-employee) wages and were capped at just over $20,000 per employee (or owner-employee), PPP loans of $25,000 or less primarily went to businesses with less than 10 employees.
CRL calculations using PPP loan data downloaded from the SBA website on February 9, 2022 (last updated January 3, 2022). To determine the share of fully forgiven loans, CRL calculated the number of loans whose currently approved PPP loan amount exceeded the forgiveness amount listed in the data. Loans with actively undisbursed funds (N<1,900) were excluded from calculations because these funds had not been distributed to borrowers and therefore borrowers would not be seeking forgiveness for funding received. Loans with "Current Approval Amounts" that were equal to 0 (N<10) were also omitted from the analysis. This analysis includes all data files in the SBA data library for PPP loans. Fully Paid loans were not omitted from the dataset as per the purpose of this analysis is to determine borrowers who did not receive full forgiveness regardless of whether or not the loan has been fully paid off.

[3] Yee, Amy & Andre Tartar. (February 17,2022). Small Businesses Still Face $28 Billion of Unforgiven PPP Loans. *Bloomberg.* https://www.bloomberg.com/news/articles/2022-02-17/small-businesses-still-face-28-billion-of-unforgiven-ppp-loans

owner notes that for her, repaying $2,000 "is no small thing" and will probably result in closing her business entirely.[4] Another, a small personal training studio in Florida, received $5,000 in PPP funds, yet now must repay about $4,000 of that amount. "I had done everything they'd asked me to do," the owner noted. "I felt very abandoned … I've decided I'm done with small business ownership."[5]

Of additional concern to the ongoing forgiveness process is the SBA Inspector General's February 28, 2022 report evaluating SBA's loan review processes, which claims that "outstanding loan forgiveness applications are a potential indicator of fraud."[6] This unsupported assertion criminalizes businesses that have yet to apply for loan forgiveness for a myriad of well-documented – and nonfraudulent – reasons. Moreover, because 74 percent of 2020 PPP loans that remain fully unforgiven are loans of $25,000 or less, this assumption disproportionately impacts small businesses of color, which are overwhelmingly microbusinesses. Over 90 percent of businesses owned by people of color have no employees other than the owner,[7] and over 80 percent of businesses owned by people of color have fewer than ten employees.[8]

For microbusinesses, which typically lack access to accounting and legal resources, applying for loan forgiveness is an obstacle-laden and multi-step process. Confusing guidance and changes in SBA's program rules on the loan forgiveness process have made it challenging for borrowers to complete the necessary steps for forgiveness. In fact, a Government Accountability Office survey of participating PPP lenders found that two-thirds of lenders reported that borrowers found the frequently changing loan forgiveness rules and guidance challenging and difficult to navigate as they sought forgiveness.[9]

In addition, some microbusinesses have refused to submit their forgiveness application because they disagree with their lender's calculation, and the process requires borrowers to submit a forgiveness application for less than the amount they believe they are eligible to receive.[10] An Illinois dance and fitness studio received a PPP loan for $16,933 in 2020, but its PPP lender has determined it is only eligible for $6,900 in forgiveness. "If I hit [submit], then that makes me accountable for the rest of the money," the owner noted, despite her belief that, having applied and used the funds in good faith, the full amount should be forgiven.[11] Unfortunately, under the rules of the program, if the business owner does not hit submit, she will be accountable for repaying the entire loan amount, plus interest, leaving the business in a worse financial position than it would have been had it not received PPP relief at all.

Further, for many immigrant-owned businesses, loan documentation, forgiveness forms, and technical assistance may not be available in their primary language. In an open-ended survey question to NALCAB and National CAPACD members, a respondent shared how one of her clients, a Vietnamese business

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[4] Banks are Reversing Course on PPP Loans to Small Business Owners. (July 12, 2021). *The Intercept* (https://theintercept.com/2021/07/12/covid-banks-sba-ppp-loans/).
[5] *Ibid.*
[6] SBA Inspector General Evaluation Report No. 22-09, February 28, 2022, SBA's Paycheck Protection Program Loan Review Processes.
[7] Employer and Nonemployer Firms: Firms and Receipts for Minority-Owned Businesses for 2018. (December 2021). *United States Census Bureau* https://www.census.gov/library/visualizations/2021/comm/employer-and nonemployer-firms.html; see also Small Business Credit Survey, 2021 Report on Firms Owned by People of Color. (2021). *Federal Reserve*. sbcs-report-on-firms-owned-by-people-of-color (fedsmallbusiness.org); and Survey of Business Owners. (2016). https://www.census.gov/library/publications/2012/econ/2012-sbo.html1/25 note: over 95% of all Black-owned businesses and over 91% of all Latino-owned businesses are non-employer firms
[8] U.S. Census Annual Business Survey (ABS) 2018, Table AB1800CSA04
[9] GAO-21-577, Paycheck Protection Program: SBA Added Program Safeguards, but Additional Actions Are Needed, July 2021, pp. 9-10.
[10] Covert, Bryce. (February 2,2022) *Bank of America is Refusing to Fully Forgive Some PPP Loans in Full, Giving Small Businesses Little Recourse.* The Intercept. https://theintercept.com/2022/02/02/bank-of-america-ppp-loans-small-businesses/
[11] *Ibid.*

owner, sought assistance applying for PPP loan forgiveness.[12] This client was unsure how to find their PPP loan number, required information for a loan forgiveness application, and their lender did not offer any in-language support.

Criminalizing small businesses because of size will do little to address the fraud-related activities involved in PPP loans, yet it will place immense economic hardship on microbusinesses that still face barriers seeking PPP forgiveness. Ensuring that deserving small businesses receive the forgiveness they were promised by Congress does not compromise SBA's ongoing efforts to diligently prosecute fraud and recover funds obtained through fraudulent means. Bad actors who knowingly committed fraud to take advantage of a public health and economic emergency can and should be held accountable, and SBA has the authority to do so even after the loan has been forgiven.

The SBA Inspector General correctly notes that "SBA can review and recover funds used for unauthorized purposes at any time," including after the PPP loan has been forgiven, but argues that as a result, SBA would have "to pursue the borrower to repay funds, which could prove more challenging and result in taxpayer funds being spent on ineligible loans," resulting in a "pay and chase" environment.[13] This flawed line of reasoning fails to recognize that, because fraud prevention measures were lacking in the approval phase of the program, all cases of PPP borrower fraud result in a "pay and chase" environment. Unlike lender fraud, in cases of borrower fraud, SBA is required to make PPP lenders whole – PPP loans are 100% guaranteed by the government.[14] As a result, no savings to taxpayer funds will be achieved by delaying forgiveness for the vast majority of small businesses that applied and used PPP funds in good faith.

In closing, the attached letter signed by over 50 organizations that work with microbusinesses and businesses of color urges Congress and SBA to make necessary changes to PPP forgiveness to prevent the unconscionable denial of forgiveness to underserved businesses. Several fixes to the forgiveness portion of the program are needed so that the businesses that were denied fair access at the program's outset are not disproportionately saddled with unanticipated debt on the back end, including:

1. Eliminate "gotcha" denials of loan forgiveness due to sudden changes in rules that were imposed without advance notice by allowing a 30-day grace period for rules changes that made eligibility or loan amount calculation more restrictive, both for microbusinesses that have not yet applied for forgiveness and those that have been denied full forgiveness due to changes without advance notice.

2. Rescind and reverse SBA's January 15, 2021 rule denying forgiveness in cases of good faith errors, both for microbusinesses that have not yet applied for forgiveness and those that have been denied full forgiveness under SBA's unfair January 15, 2021 standard.

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[12] NALCAB is a national non-profit membership association of mission-driven opportunity and economic development organizations that serve diverse Latino communities in 40 states, Washington D.C., and Puerto Rico. NALCAB works to strengthen the economy by advancing economic mobility in Latino communities.
National CAPACD is a coalition of nearly 100 community-based organizations spanning 21 states and the Pacific Islands. Its members work in low-income Asian American and Pacific Islander (AAPI) communities and neighborhoods to build social and economic justice for all. National CAPACD and NALCAB, in partnership with the UCLA Center for Neighborhood, distributed a survey questionnaire in November 2021 to better understand credit access among entrepreneurs of color. The survey was conducted via SurveyMonkey and was distributed to small non-profit organizations that provide services to small businesses only. The reported analysis is based on the survey responses collected with a sample size of n=43.

[13] *SBA Inspector General Evaluation Report No. 22-09*. (February 28, 2022). Retrieved from SBA's Paycheck Protection Program Loan Review Processes.

[14] *See* SBA's forgiveness guidance at PPP loan forgiveness (sba.gov).

3. Alleviate unnecessary paperwork burdens by implementing automatic forgiveness for microbusinesses with loans of $25,000 or less.

As a grant program structured as a forgivable loan, the fair execution of the forgiveness phase of PPP is as important as was fair access to the program. By eliminating "gotcha" rules and undue bureaucratic burdens, Congress and SBA can deliver on the program's promise, ensuring that all small businesses and nonprofits – and especially microbusinesses and other underserved and economically disadvantaged business owners – emerge from the pandemic on a solid foundation with an opportunity to rebuild.

Thank you again for the opportunity to present these views, and we welcome the opportunity to continue this conversation with Congress and SBA to change the current forgiveness rules so that microbusinesses can receive forgiveness for their PPP loans.



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The Honorable Isabel Guzman
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The Honorable Ben Cardin Chairman
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February 17, 2022

Dear Secretary Yellen, Chairman Cardin, Ranking Member Paul, Chairwoman Velázquez, Ranking Member Luetkemeyer, & Administrator Guzman,

Small businesses provide almost half of all jobs in the U.S. and create nearly two-thirds of all new jobs.[1] Prior to the pandemic, however, almost half of all small businesses in the U.S. reported two weeks or less of cash liquidity – leaving them without reserves to maintain payroll and operations through the prolonged and widespread shutdowns implemented in the wake of the COVID-19 public health emergency.[2] Recognizing this unprecedented economic crisis, Congress came together to create the Paycheck Protection Program ("PPP"), delivering urgently needed funds to small businesses to limit closures and mass unemployment. Designed as a forgivable loan, Congress explicitly promised that PPP funds spent properly would not have to be repaid, and America's small businesses relied on that promise to keep their doors open and their employees paid. Unfortunately, for too many of America's most economically vulnerable small businesses – underserved microbusinesses and businesses owned by people of color – Congress's promise is not being kept.

We, the undersigned organizations supporting microbusinesses and businesses owned by people of color, respectfully urge you to refrain from unfairly denying small business owners the relief they were promised by implementing the following three changes:

1. **Eliminate "gotcha" denials of loan forgiveness due to sudden changes in rules that were imposed without advance notice, both for loans that have not yet applied for forgiveness and loans that have been denied full forgiveness due to changes without advance notice.**

2. **Rescind and reverse SBA's January 15, 2021 rule denying forgiveness to microbusinesses that made good faith errors, provided funds were used for eligible purposes, both for loans that have not yet applied for forgiveness and loans that have been denied full forgiveness under SBA's unfair January 15, 2021 standard.**

3. **Alleviate unnecessary paperwork burdens for microbusinesses by implementing automatic forgiveness for loans of $25,000 or less that have not yet applied for forgiveness.**

Although Congress and SBA acted quickly to create and implement PPP, the roll-out of the program was chaotic. Initial funding was limited and quickly depleted by the overwhelming need, resulting in repeated starts and stops for the program. General program rules and forms were issued mere hours before the program opened to small businesses, and over the following weeks and months, SBA issued hundreds of pages of additional rules and updates. In April of 2020 alone, SBA and Treasury issued over twenty separate PPP rules documents and guidance updates.[3]

Caught up in this maelstrom were America's smallest businesses. Unlike all other SBA loan programs, under PPP, applicants were responsible for determining their own eligibility under the complex program rules.[4] While eligibility for SBA loan programs is typically determined by the lender and SBA, for PPP this burden was shifted to the small business borrower. Despite this change, each new PPP rule issued was immediately effective, with no grace period to allow small businesses to review and understand changes to eligibility or program requirements.[5] Further, because PPP was enacted under the umbrella of the SBA §7(a) program, §7(a) general eligibility rules also applied. Not all of these separate rules, however, were clearly referenced by SBA in its PPP application, nor were they published with other PPP rules documents.

Navigating complex and ever-changing eligibility rules was challenging for all small businesses, but for microbusinesses, which are unlikely to have accountants or attorneys on staff and often lack the resources to access these professionals, it was overwhelming. For "non-employer firms" (self-employed individuals, independent contractors, and sole proprietors with no employees other than the business owner), it was practically impossible. As a result, despite applying in good faith under the rules as they understood them, being approved by SBA-approved lenders and by the SBA, and using the funds as Congress intended, many of these microbusinesses are being denied full forgiveness.[6] A review of SBA's forgiveness data for 2020 PPP loans underscores the enormity of this issue: loans of $25,000 or less make up 60% of all unforgiven or partially forgiven loans.[7] Over 400,000 microbusinesses that received emergency funding of $25,000 or less in 2020 have been denied full forgiveness and must repay all or a portion of their PPP loans.[8] For too many of America's smallest, most vulnerable businesses, Congress's promised PPP lifeline has left them sinking under the weight of unexpected debt.

These statistics are especially troubling in light of the fact that more than 90% of all businesses owned by people of color are non-employer firms.[9] Despite Congress's explicit requirement to prioritize small businesses in underserved and rural markets, including businesses owned by socially and economically disadvantaged individuals,[10] barriers to access PPP for microbusinesses and businesses owned by people of color have been well-documented.[11] In large part due to the challenges in accessing PPP relief, the number of Black-owned businesses declined at nearly three times the rate of other demographic groups during the first few months of the pandemic.[12] Despite significant changes made to improve PPP access for microbusinesses and businesses owned by people of color in the final weeks of the program, the chaotic roll-out of PPP, combined with current forgiveness rules, penalizes microbusinesses and businesses owned by people of color by unfairly withholding the full forgiveness promised by Congress.

We, the undersigned organizations supporting microbusinesses and businesses owned by people of color, respectfully urge you to adjust the forgiveness requirements and refrain from unfairly denying small business owners the relief they were promised. Without changes, the forgiveness stage of PPP will exacerbate pre-existing inequities, inadvertently causing further harm to those who are least able to sustain it. Failure to act will turn Congress's PPP promise into a bait and switch.

1. **Eliminate "gotcha" denials of loan forgiveness due to sudden changes in rules that were imposed without advance notice.** Recognizing the urgency of implementation, SBA made each set of PPP rules immediately effective upon issuance, rather than following standard 30- to 60-day review periods.[13] Given that small business applicants were responsible for determining their own eligibility and loan amount, however, immediate effectiveness had the unintended consequence of causing significant harm by denying small businesses a reasonable period of time to review and understand program clarifications and changes. SBA should allow a 30-day grace period for changes that made eligibility or loan amount calculation more restrictive, both for business owners that have not yet applied for forgiveness and those who have been denied full forgiveness due to changes without advance notice.

2. **Rescind and reverse SBA's January 15, 2021 rule denying forgiveness to microbusinesses that made good faith errors, even where the borrower spent the funds for eligible purposes in good faith reliance on promised forgiveness.** Given that the complexities and ambiguities of the program rules and the chaotic roll-out made mistakes inevitable, good faith errors should be decided in favor of the small businesses PPP was designed to help. This approach should be applied both for business owners who have not yet applied for forgiveness and those who have been denied full forgiveness under SBA's unfair January 15, 2021 standard.

3. **Alleviate unnecessary paperwork burdens for microbusinesses by implementing automatic forgiveness for loans of $25,000 or less that have not yet applied for forgiveness.** For microbusinesses, the administrative burden of applying for forgiveness is daunting. Whether working with their lender directly or through the SBA Direct Forgiveness Portal, there are several steps to figure out and multiple rules to parse in order to apply for forgiveness – all while continuing to keep their business operating so they can avoid unemployment for their employees and themselves. Especially in the case of non-employer firms – self-employed individuals, independent contractors, and sole proprietors with no employees other than the business owner – the forgiveness application is a mere formality. Under SBA rules, because the loan amount for non-employee firms was based on documented owner income and included a strict maximum cap, and because they were permitted to use their entire PPP loan to replace their lost income, no additional supporting documentation is necessary at forgiveness. Yet if these microbusiness owners fail to navigate what continues to be a multi-step process to complete their forgiveness application, their promised PPP lifeline will leave them sinking under the weight of unexpected debt. Automatic forgiveness of loans of $25,000 or less would ensure that these smallest businesses are not unfairly penalized – and further harmed – by an unnecessary administrative burden.

In requesting these three changes to the forgiveness process, we recognize and strongly support SBA's diligence in rooting out fraud. None of these requested changes would impede SBA's ability to continue ensuring that cases of fraud are prosecuted, and misused funds are repaid. SBA may review a PPP loan at any time, either before, during or after forgiveness, and PPP borrowers are required to maintain their

records for three to six years following the date forgiveness is granted.[14] Ensuring that deserving small businesses receive the forgiveness they were promised by Congress does not compromise SBA's on-going efforts to diligently prosecute fraud and recover funds obtained through fraudulent means. Bad actors who knowingly committed fraud to take advantage of a public health and economic emergency can and should be held accountable, and SBA has the authority to do so even after the loan has been forgiven.

We appreciate your immediate attention to this request and thank you for your continued work to mitigate the impact of this public health crisis on small businesses, and to ensure fairness for underserved microbusinesses and businesses owned by people of color.

Sincerely,

American Business Immigration Coalition
American Latino Veterans Association (ALVA)
Arcata Economic Development Corporation
Appleseed Network
Business Expansion Funding Corp.
CAMEO - California Association for Micro Enterprise Opportunity
California Capital Finance Development Corporation
California Hispanic Chambers of Commerce
California Reinvestment Coalition
CDC Small Business Finance
CDFI Coalition
Center for Responsible Lending
Community Reinvestment Fund, USA
Consumer Action
Crowdfund Better
Economic Policy Institute
Fresno Metro Black Chamber of Commerce
Illinois Business Immigration Coalition
Illinois Hispanic Chamber of Commerce
Hope Policy Institute
Jefferson Economic Development Institute
Latino Coalition
League of United Latin American Citizens (LULAC)
Local First Arizona
Local Initiatives Support Coalition (LISC)
M&F Bank
Main Street Launch
Main Street Alliance
Microenterprise Collaborative of Inland Southern California
Mission Economic Development Agency
Mountain BizWorks
Nogales-Santa Cruz County Chamber of Commerce
National Association for Latino Community Asset Builders
National CAPACD - National Coalition for Asian Pacific American Community Development

National Cooperative Bank
National Urban League
NCRC Community Development Fund
North Virginia Hispanic Chamber of Commerce
Opportunity Finance Network
Pacific Community Ventures
Partner Community Capital
Prosperity Now
Rochdale Capital
Self-Help Federal Credit Union
Small Business & Entrepreneurship Council
Small Business for America's Future
Small Business Majority
TELACU
The Leadership Conference on Civil Rights
The Resurrection Project
UnidosUS
United States Hispanic Chamber of Commerce

Exhibit A
Microbusinesses Unfairly Harmed by Current Forgiveness Rules

- A product design microbusiness in Illinois was approved by his lender and SBA for a PPP loan of just under $20,000. Just days before his application was submitted, SBA issued a new rule, effective immediately, that limited the types of documentation self-employed individuals could use to apply. Despite completing his application in good faith, providing documentation to support his request, and spending the funds appropriately, his loan will not be forgiven. Instead of receiving the forgiveness promised by Congress, this microbusiness is being held back by an unexpected $20,000 debt trap.[15]
- A recording studio microbusiness in New Jersey was approved by her lender and SBA for a PPP loan of approximately $14,000 to cover the lost income of her only staff – the owner and her husband. Receiving PPP funds allowed them to avoid drawing the unemployment for which they were eligible and saved them from shutting down the business altogether. The owner applied in good faith under the rules as she understood them, was approved by her lender and SBA, and used the funds as intended – to replace her and her husband's lost income. Because rules for how a microbusiness may document owner income were confusing, with piecemeal changes and clarifications rolled out by SBA over time, she was unaware that their documented lost income did not provide a sufficient basis for obtaining a PPP loan.[16]
- A small family-owned microbrewery in California made a good-faith error in calculating its loan amount due to confusion concerning NAICS code requirements for restaurants and was approved for approximately $13,000 in PPP funding. Despite spending the funds properly on employee payroll and eligible uses, this microbusiness must now repay a portion of its loan, even though it is still struggling due to the impact of the pandemic.[17]
- A mediation and arbitration microbusiness in Massachusetts was approved by her lender and SBA for a $5,800 PPP loan. When she applied for forgiveness, her lender informed her she was not eligible for her loan amount, and therefore would be required to repay a portion of her loan. Disabled and on a fixed income, she believes this will result in permanent closure of her business.[18]
- An events microbusiness in Florida was approved by his lender and SBA for a PPP loan of $5,494, and meticulously documented his proper use of funds to ensure his PPP loan would be forgiven. But at forgiveness, his lender told him that because his income is seasonal, he is not eligible for full forgiveness. A portion of his PPP loan will become unexpected debt, which he notes will prevent him from investing in new equipment and staff.[19]
- A massage therapy microbusiness in New York was approved by her lender and SBA for a $10,000 PPP loan but has been denied forgiveness and will have to repay the full amount. She was told by her lender that she wasn't eligible for any PPP funds because her Schedule C showed negative net income – despite the fact that her negative net income was the result of investing her net profits back into her business. Because of the continuing impact of COVID-19 on her business, her business may not be able survive this additional blow.[20]
- A personal training microbusiness in Florida was approved by his lender and SBA for a $5,000 PPP loan. At forgiveness, his lender told him he was not eligible for a loan that size. Faced with the continuing impact of COVID-19 on his business and unexpected debt of approximately $4,000, he has decided to close his business permanently.[21]
- A Black sole proprietor was approved by his lender and SBA for a $1,200 PPP loan in May 2020.

At forgiveness, his lender notified him that he was only eligible for a loan of $600, saddling him with $600 of unexpected debt. When he contacted his lender to seek clarification on why he had not received full forgiveness for his loan, he was told that he could appeal with SBA through SBA's Capital Access Financial System borrower help desk, which he did; however, he reported that SBA referred him back to his lender. This microbusiness noted that the $600 he is expected to repay is the difference between making one month's rent or not.[22]

Endnotes

[1] Dilger, R. J. (2021). *Small Business Administration and Job Creation* (No. R41523). Congressional Research Service. https://sgp.fas.org/crs/misc/R41523.pdf.

[2] Farrell, Diana, Christopher Wheat, and Carlos Grandet (2019) *Place Matters: Small Business Financial Health in Urban Communities* JPMorgan Chase Institute. https://www.jpmorganchase.com/corporate/institute/report-place-matters.htm.

[3] *Paycheck protection program*. (n.d.). U.S. Department of the Treasury. Retrieved November 23, 2021, from https://home.treasury.gov/policy-issues/coronavirus/assistance-for-small-businesses/paycheck-protection-program

PPP lender information. (n.d.). PPP Lender Information. Retrieved November 23, 2021, from https://www.sba.gov/funding-programs/loans/covid-19-relief-options/paycheck-protection-program/ppp-lender-information#section-header-4

[4] *Paycheck protection program*. (n.d.). Paycheck Protection Program. Retrieved November 23, 2021, from https://www.sba.gov/funding-programs/loans/covid-19-relief-options/paycheck-protection-program

[5] *Business Loan Program Temporary Changes; Paycheck Protection Program.* (April 15,2020). U.S. Small Business Administration Federal Register Vol. 85, No. 73, Section II, April 15, 2020 PPP PPP--IFRN FINAL.pdf (treasury.gov)

[6] *See* Exhibit A attached hereto.

[7] CRL calculations using PPP loan data downloaded from the SBA website on February 9, 2022. To determine the share of fully forgiven loans, CRL calculated the number of loans whose currently approved PPP loan amount exceeded the forgiveness amount listed in the data. Loans with actively undisbursed funds (N<1,900) were excluded from calculations because these funds had not been distributed to borrowers and therefore borrowers would not be seeking forgiveness for funding received. Loans with "Current Approval Amounts" that were equal to 0 (N<10) were also omitted from the analysis. This analysis includes all data files in the SBA data library for PPP loans. Fully Paid loans were not omitted from the dataset as per the purpose of this analysis is to determine borrowers who did not receive full forgiveness regardless of whether or not the loan has been fully paid off.

[8] *Ibid.*

[9] *Employer and Nonemployer Firms: Firms and Receipts for Minority-Owned Businesses for* 2018. (December 2021). United States Census Bureau https://www.census.gov/library/visualizations/2021/comm/employer-and-nonemployer-firms.html; *see also Small Business Credit Survey, 2021 Report on Firms Owned by People of Color.* (2021). Federal Reserve. sbcs-report-on-firms-owned-by-people-of-color (fedsmallbusiness.org) ; *and Survey of Business Owners.* (2016). https://www.census.gov/library/publications/2012/econ/2012-sbo.html1/25 note: over 95% of all Black-owned businesses and over 91% of all Latino-owned businesses are non-employer firms.

[10] CARES Act, Pub. L. No. 116-36. Section 1102(a)(2)(36)(P)(iv)(2020). https://www.congress.gov/116/plaws/publ136/PLAW-116publ136.pdf

[11] Parilla, S. L. and J. (September 17, 2020). *New data shows small businesses in communities of color had unequal access to federal COVID-19 relief.* Brookings. https://www.brookings.edu/research/new-data-shows-small-businesses-in-communities-of-color-had-unequal-access-to-federal-covid-19-relief/

Paycheck Protection Program: Loan Forgiveness and Other Challenges, 116th Cong. House Small Business Committee. (June 17,2020). https://smallbusiness.house.gov/calendar/eventsingle.aspx?EventID=3296

[12] Wilmoth, D. (2020, August). *Black Business Owners Hit Hard by Pandemic*. U.S. Small Business Administration Office of Advocacy. https://cdn.advocacy.sba.gov/wp-content/uploads/2020/08/31083212/Black-Business-Owners-Hit-Hard-By-Pandemic.pdf 20.

[13] *See* Administrative Procedure Act at 5 U.S.C. 553(d)(3); *see also* Congressional Review Act at 5 U.S.C. 808(2).

[14] *Business Loan Program Temporary Changes; Paycheck Protection Program-Loan Forgiveness Requirements and Loan Review Procedures as Amended by Economic Aid Act*. (February 5, 2021). 86 Fed. Reg. 8294 (13 C.F.R. pt. 120)

[15] Borrower profiles were collected through 2021 by staff of CRL and its affiliates. Profiled individuals shared their stories with the condition that their identities would remain anonymous. The purpose of collecting anecdotal evidence was to demonstrate the myriad of reasons for which microbusinesses were unfairly penalized and denied full forgiveness for their PPP loan.

[16] *Ibid.*

[17] *Ibid.*

[18] *Banks are Reversing Course on PPP Loans to Small Business Owners.* (July 12, 2021). *The Intercept* (https://theintercept.com/2021/07/12/covid-banks-sba-ppp-loans/).

[19] *Ibid.*

[20] *Ibid.*

[21] *Ibid.*

[22] Burt, Kiyadh (2021). *Problems Remain for Minority Businesses after PPP Ends.* Hope Policy Institute http://hopepolicy.org/blog/problems-remain-for-minority-businesses-after-ppp-ends/.

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January 25, 2022

The Honorable Ben Cardin
Chair
Committee on Small Business & Entrepreneurship
United States Senate

The Honorable Rand Paul
Ranking Member
Committee on Small Business & Entrepreneurship
United States Senate

The Honorable Nydia Velazquez
Chair
Committee on Small Business
United States House of Representatives

The Honorable Blaine Luetkemeyer
Ranking Member
Committee on Small Business
United States House of Representatives

VIA ELECTRONIC DELIVERY

Re: PPP Relief for Small Businesses

Dear Chairs and Ranking Members:

Gusto is writing on behalf of all the small businesses who continue to struggle during the current surge of omicron COVID-19 cases, and request that Congress provide relief by making timely and commonsense changes to the Small Business Administration's (SBA) Paycheck Protection Program (PPP).

Specifically, we urge Congress to address the unforeseen issue of "tail" loans that is frustrating thousands of small business owners by **enabling the SBA to forgive outstanding loans of up to $5,000, and allow for the option to delay repayment for tail loans over $5,000.**

Our own data suggests many small businesses are in a precarious financial position. Since January 1, 2022, we have seen a sharp uptick in the share of businesses with less than one (1) month of payroll in reserves from 19% to 26% – a level not seen since February 2020. Unfortunately, no one anticipated the length of these challenges and all of the small business aid programs are now expired.

As you know, small businesses make up nearly half of the workforce – and there are more than 32.5 million of them across the country. Women and minorities are disproportionately employed by small businesses – which means that small business closures will disproportionately impact these communities.

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Gusto is a people platform that is focused on creating a world where work empowers a better life.[1] Our company enables SMB owners and managers to easily pay employees and contractors, remit taxes to state and federal authorities, stay compliant with ongoing employment law obligations, and keep accurate records of these activities. We provide payroll, human resources, health insurance benefits, and financial health benefits for more than one million employees of small businesses across the country. Our work and client base uniquely positions us to understand the needs and pain points of small businesses, and to provide insights into our customers' perspective on how best to serve them during this challenging time.

According to SBA data, for PPP loans that were less than $50,000, 2.5% of the loan amounts were not fully forgiven, while less than 1% of loan amounts of $50,000 or more were not fully forgiven.[2] Since almost 80% of all PPP loans were for less than $50,000, this difference in forgiveness for loans submitted is impacting over 170,000 businesses. Larger loans were likely given to larger firms with access to accountants and traditional lenders that could assist with the complex and frequently changing PPP requirements, and have had a higher percentage forgiven. Furthermore, access to PPP loans was unequal with minority businesses having difficulty obtaining funds.[3] Minority and women owned businesses are typically smaller, and this relief could be vital for businesses in underserved communities who did receive funding.

These partially forgiven loans result in "tail" loans for the remaining amounts. Borrowers that were impacted early in the pandemic were subject to 32 interim final rules and shifting guidance throughout 2020 and 2021, which means that some small businesses may have applied for their loan prior to the guidance about how to properly calculate their loan amount. [4] Many of these smaller borrowers were not expecting to make payments on these loans once they applied for forgiveness and have turned to SBA for help, but SBA does not have the statutory authority to grant any additional relief. As a result, small businesses that were significantly impacted by COVID will be repaying these unexpected loans over the next 2-5 years while also trying to rebuild.

On behalf of the over 200,000 small businesses that we serve, as well as the other small businesses that may be facing the unexpected expense of PPP tail loans, we urge additional relief to the smallest borrowers with loans under $50,000. We ask Congress to provide forgiveness of the tail loan if the tail loan is less than 10% of the original loan amount to a maximum amount of $5,000 (10% of $50,000).

The omicron surge is exacerbating staffing shortages, forcing reduced hours of operation and temporary closures of locations, and straining supply chains for our nation's small businesses

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[1] https://gusto.com/
[2] https://www.sba.gov/document/report-2021-ppp-forgiveness-platform-lender-submission-metrics-reports
[3] https://www.brookings.edu/research/new-data-shows-small-businesses-in-communities-of-color-had-unequal-access-to-federal-covid-19-relief/
[4] https://www.sba.gov/funding-programs/loans/covid-19-relief-options/paycheck-protection-program/ppp-lender-information#section-header-2

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that continue to face these adverse circumstances through no fault of their own, and still desperately need relief to survive.[5]

We thank you for your consideration of these essential relief measures for the smallest businesses. If you have any questions, please contact Steve Abbott (steve.abbott@gusto.com).

Sincerely,

Alyssa Harvey Dawson
Chief Legal Officer
Gusto

[5] https://www.statista.com/statistics/1222202/us-covid-19-closings-small-businesses/