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Why bank types still matter: Paycheck Protection Program lending during COVID-19

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The COVID-19 pandemic has affected the U.S. economy in many different ways. A unique combination of business shutdowns, stay-at-home orders, disruptions in global trade, layoffs, and credit defaults presented a demand shock, a supply shock, and a financial shock at the same time. To counteract some of the detrimental effects, Congress passed the Coronavirus Aid, Relief, and Economic Security Act (CARES Act), a $2.2 trillion spending bill that was signed into law by then-president Trump on March 20, 2020. Representing the largest economic stimulus package in U.S. history, the CARES Act triples in size the American Recovery and Reinvestment Act of 2009 (ARRA) that followed the Global Financial Crisis and exceeds other more recent important legislation such as the 2021 American Rescue Plan Act ($1.9 trillion) or the INVEST in America Act 2021 (also known as the Bipartisan Infrastructure Bill, $1.2 trillion).

The Paycheck Protection Program

Representing one of the core features of the CARES Act, the Paycheck Protection Program (PPP), between April 2020 and May 2021, channeled federally guaranteed loans to small businesses. Critically, it did so through the American banking system. Overseen by the Small Business Administration (SBA), the PPP disbursed nearly $800 million through the nation's preexisting privately owned and largely for-profit collection of banks and lending institutions. Furthermore, in working through that

system, the program relied on institutions that had a long record of systematically denying poor and non-white neighborhoods adequate access to credit and capital. Practices such as redlining and sub-prime lending in mortgage markets, or discrimination in loans to small businesses had devastating effects on businesses and communities (e.g. Massey and Denton 1993; Squires 2003; Oliver and Shapiro 2006; Rugh and Massey 2010).

Run by the Small Business Administration (SBA), a government agency established in 1953 to support entrepreneurs and small businesses with various lines of credit, the PPP offered low-interest loans from banks and lenders to maintain payroll and cover mortgage payments, lease expenses, and utilities. Every loan is federally guaranteed and if a company meets certain criteria based on full-time equivalent employees and how the loan is spent, it can apply for partial or full forgiveness. As of October 23, 2022, the SBA so far has forgiven 93 percent of all PPP loans (SBA 2022). Eligibility for a PPP loan hinged on a business having 500 or fewer employees, a tangible net worth not exceeding $15 million, and a net income of no more than $5 million. In total, the SBA has approved more than 11.3 million PPP loans with the average loan being around $69,000 (SBA 2022). The whole program can be split into three consecutive phases, representing windows during which businesses could apply for a loan: April 3–16, 2020 (phase 1), April 27–August 8, 2020 (phase 2), and January 12–May 31, 2021 (phase 3). Unlike similar programs in other countries like Germany but in line with previous SBA assistance to small businesses, the PPP uses the U.S. system of banks and lenders to distribute the funds. This implies that firms need to approach qualified financial intermediaries which then apply to the SBA and channel the loan. Throughout the course of the program, the SBA has substantially increased the number of certified lenders to cope with the demand for PPP loans and to cover a wider range of borrowers and geographies. During phase 2, for instance, another 600 lenders, both banks and non-depository institutions, were admitted to the program (GAO 2021).

Banking, credit provision, and inclusivity

Soon after the CARES Act's passage, a cottage industry developed around PPP research with the program drawing heightened scrutiny and increased criticism both from media pundits and

academics. Scholars have examined which industries and sectors receive PPP loans, the effectiveness of the program, its impact on minority communities, and lending patterns by firm size and location. In addition, some studies and newspaper accounts reference the role banks and lenders play in the program and how the (non-)existence of insider knowledge and bureaucratic capacities was skewed towards larger, more established businesses (see, for instance, Borawski & Schweitzer 2021; Center for Responsible Lending 2020; Chetty et al. 2020; Sanchez-Moyano 2021). However, one of the most fundamental aspects of the program, its reliance on the pre-existing, mainly for-profit system of banks and lenders and the effects thereof, have been largely ignored to date with remaining puzzles left to be solved.[1] This is especially noteworthy since the comparative literature on finance and banking has pointed out time and again that banks matter – for better or worse. The distinction between so-called relationship banking on the one hand and market-based banking on the other hand map the discourse. While the former is more in line with traditional intermediation based on spatial proximity between the borrower and the lender, including, very often, long-standing customer relationships built on mutual trust and experience, the latter follows an "originate-to-distribute" strategy in which loans are bundled, securitized, moved off the books, and sold in secondary markets. In this case, lending becomes more impersonal and governed by standardized metrics with fees and commissions income as prime motives (Hardie et al. 2013).

In general, alternative banks like credit unions, public banks, or cooperatives still tend to adhere to relationship banking whereas large derivatives banks like Bank of America, Wells Fargo, or JP Morgan have shifted towards market-based banking. The literature suggests that this matters and further accounts for differences in credit provision to small and medium-sized enterprises as well as inclusivity towards poor and marginalized communities (see, for instance: Berger & Udell, 2006; Baradaran 2015; Schneiberg & Parmentier, 2021). More recently, financial technology firms – fintechs – have emerged as an important class of lenders, relying heavily on data mining, automation and online banking to provide credit to traditionally underserved customer groups who often lack relationships

[1] Exceptions, yet with a focus in the role of fintech lenders, are, for instance: Li and Strahan 2021; Balyuk et al. 2022; Erel and Liebersohn 2022; or Fei and Yang 2022.

with traditional lenders (Gorman 2020; Berg et al. 2021; Howell et al. 2022). Fintechs fit less neatly into the category of alternative banks as traditionally framed, eschewing key features of those institutions – localism, relational banking, service-based missions – and embracing for-profit missions, volume strategies, abstract scoring, and completely impersonal data-based transactions with borrowers. Yet they stand as distinct alternatives to large, market-based bank corporations (and banks more generally) and relate to disadvantaged communities in distinctive ways. In short, one can expect to detect clear differences in PPP lending patterns across different bank types. Furthermore, alternative banks can be expected to be more inclusive along lines of class and race. In a nutshell, the key question reads: How do differences in bank or lending institution type shape access to credit for small businesses in poor and/or minority communities in the United States?

Analytical strategy

To substantiate the theoretical claim and test these expectations we provide descriptive analyses of the full sample of over 11 million PPP loans distributed between April 2020 and May 2021. To distinguish bank types we categorized each lender according to the following scheme representing sub-systems: (1) Top 50 derivatives banks that are large market-based financial institutions; (2) Community banks, which are small, locally-owned and -operating deposit-taking institutions closely tied to local economies; (3) Credit unions representing financial cooperatives owned and operated by depositor-members, engaged in conventional lending practices; (4) Community development financial institutions (CDFI) that are federally certified to assist low-income individuals and communities; and finally (5) financial technology firms, or fintechs, that use software and AI-based solutions to offer traditional banking services without a brick-and-mortar presence.[2] We also added another battery of variables from the American Community Survey and other databases to control for demographic and socio-

[2] The original scheme also includes institutions of the Farm Credit System – a specialized network of banks, credit unions and non-bank lenders focused on agricultural enterprises in (mostly) rural areas – as well as Large- and Medium-Sized Commercial Banks which are similar to the largest derivatives-heavy bank holding corporations, but smaller in balance sheet size and trading activity (see Cassell et al. 2022).

economic characteristics as well as differences in local banking markets.[3] We move the unit of analysis from individual loans to more than 72,000 Census Tracts across the United States that are a useful tool for fine-grained analysis of socio-economic areas. In a first step, we look at the national level and the entire universe of PPP loans. In a second step, we thereafter zoom in on Cuyahoga county and Cleveland, Ohio, which we use an example of high loan coverage rates to investigate lending dynamics on the local level.

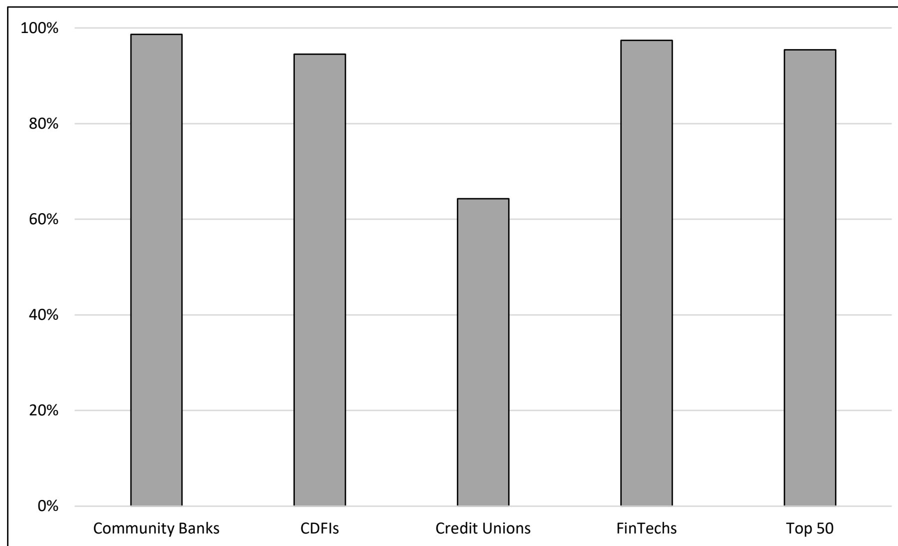
The national level: bank types and lending profiles

Our results show some clear and expected trends but also reveal other more surprising findings. Figure 1 reports census tract coverage rates by lender type as an indicator of where banks do business. A number of remarkable things stand out. First, over the course the program, with a coverage rate of 98 percent, the sub-system of community banks covers most ground and disburses at least one PPP loan in almost every corner of the country. Second, a set of very different lender sub-systems follows suit, with CDFIs, FinTech lenders, smaller and top 50 derivatives banks each making loans in more than nine out of ten census tracts as well. Trailing behind are, third, the credit unions with a coverage rate of less than two thirds of all census tracts. It is no surprise that community banks are on top of the list since they possess the densest lender sub-system in the financial system with several thousand institutions. What stands out, however, is the relatively poor performance of the credit unions as well as the strong showing by the CDFIs. Given that they are much fewer in number, do not have a nationwide network of branches (unlike the top 50), and rely on a physical presence[4] in a neighborhood (unlike the fintechs), their strong performance is remarkable.

[3] For more details, including the results of the statistical estimations (on the ZCTA level) see Cassell et al. 2022.

[4] As a caveat the top three CDFI lenders in the program (*Prestamos*, *Lendistry* and *Capital Plus Financial*) teamed up with fintech firms to expand their business and scale up operations. These CDFI-fintech hybrids are hard to classify with further research necessary to understand the specifics of their business models. Future studies might consider singling them out as a separate category.

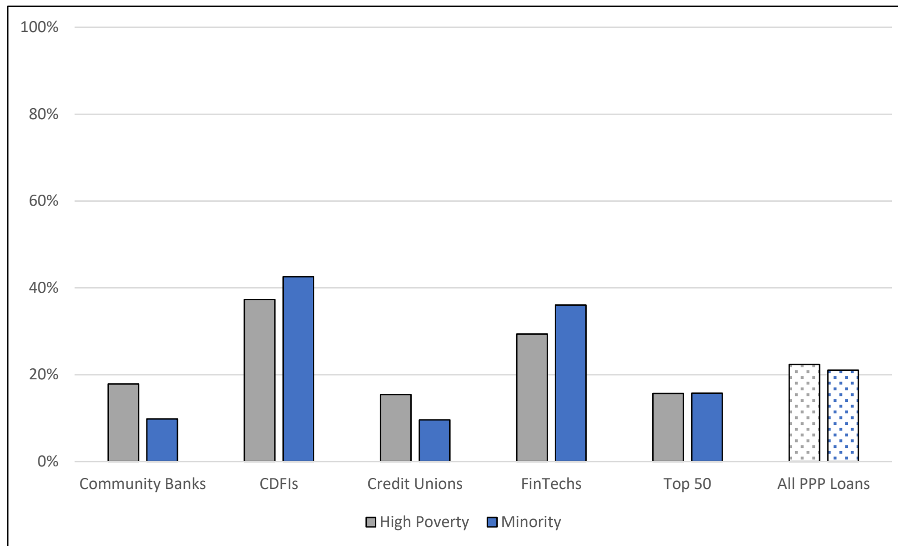
Figure 1 *Where lenders do businesses: Census tract coverage rates.*



Zooming in on communities with high poverty rates and more diverse demographics, figure 2 illustrates specific lending profiles by bank type.[5] Here it becomes clear that both CDFIs and FinTech lenders by far focus most on those areas. Close to 40 percent of all PPP loans disbursed by CDFIs and nearly 30 percent of those made by FinTechs went to a high poverty census tract, whereas all other lender types hover around the fifteen-percent mark. Overall, poor communities were underserved during the course of the program, which makes the contributions by CDFIs and FinTechs even more valuable. High-poverty areas constitute 24% of all U.S. census tracts, but received only 22% and of all PPP loans. Although lending exclusivity is more pronounced in terms of class than race, – where 18% minority census tracts received 21% of all PPP loans – the contrast between bank types becomes even starker when looking at minority-majority communities. Here, 43 percent of all CDFI loans and 36 percent of all FinTech loans went to such areas. Both lenders easily distance top 50 banks (16%), Community Banks and Credit Unions (each with 10%). These results are backed by our statistical analysis using different hurdle and structural equation modeling techniques, including various robustness checks (Cassell et al. 2022).

[5] Classifications of "high poverty" and "minority" community status are based on dichotomous categorization scheme. A census tract counts as "high poverty" if its share of individuals below the poverty line is greater than 20%. "Minority" census tracts have a "white population" of less than 50%.

Figure 2 *Lending specificity in poor and minority areas by lender type.*



On the ground operations: Cleveland

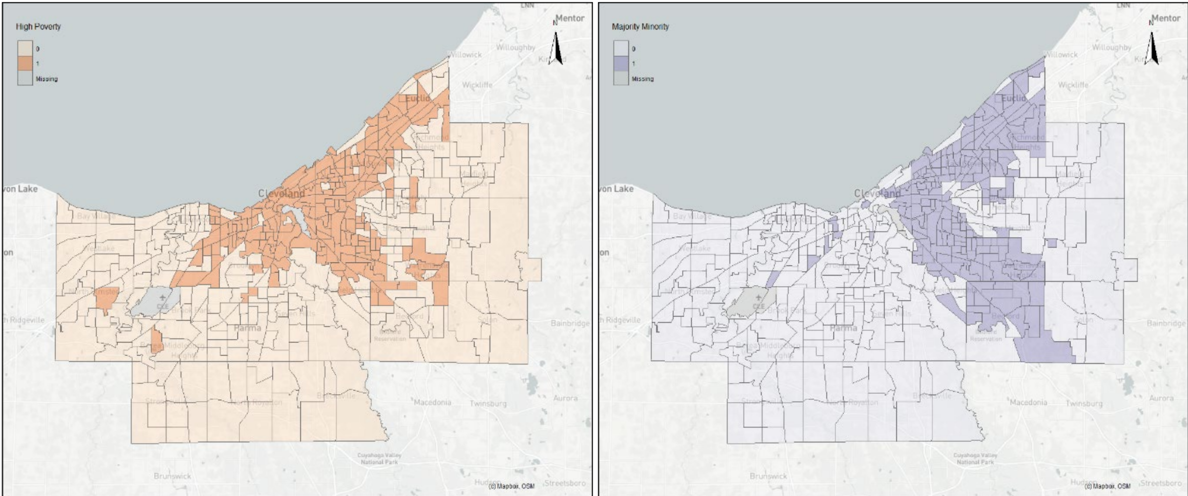
Complementing our statistical analyses, the research project also includes a qualitative component. The idea behind this is that comparative case studies of select urban areas help uncovering specific mechanisms that connect borrowers and lenders in historically marginalized and traditionally underserved communities. One of the imminent goals is to understand which practices might enable more inclusive lending, grant small businesses easier access to capital and, ultimately, foster economic development in the inner city and beyond. Cleveland, Ohio serves as our first case based on which we seek to test some of the key assumptions concerning the relationship between businesses, lender types and public policy. Two factors stand out which make the city an ideal test case: For one, Cleveland has a long-standing tradition of a well-established network of community organizations. Second, the area features some of the highest coverage rates in terms of PPP loans per business. In addition to analyzing the full sample of PPP loans made within the city of Cleveland, we have conducted more than 20 expert interviews so far – both online and in-person – and gathered further evidence on a field trip to the city in early October 2022. The following sections presents some initial results, describe the next steps forward and discuss further policy implications.

With its tumultuous history of socioeconomic development, Cleveland exemplarily stands for the fate of many former industrial epicenters in the Midwest and Great Lakes region. Following WWII, the fate of the city was marked by distress and decline – painting a picture that still resonates today, despite signs of urban renewal in recent years:

> "In the space of a few years [especially in the 1950-1965 period], it seemed, the fabric of the city, both physically and psychologically, was shredded. The much-vaunted Cleveland Public School system was declining. Department stores – among them W.M. Taylor & Son, the Bailey Co., and Sterling-Lindner – were closing, as were the theaters at Playhouse Square. Cleveland was losing population and jobs. The heaviest job losses were in the manufacturing sector, once the city's mainstay. Formerly sound neighborhoods, now the province of the poor, deteriorated rapidly, and on streets where people had once lived and shopped, only rows of empty, gutted buildings remained. The city was hard-pressed to provide even a minimum level of service. Crime worsened, vacant lots became dumping grounds, and the empty hulks of heavy industry were bitter reminders of a prosperous past. Cleveland was an aging city where nothing seemed to go right, where even the river caught fire: Cleveland not only shared America's urban crisis, it epitomized it" (CWRU 2022).

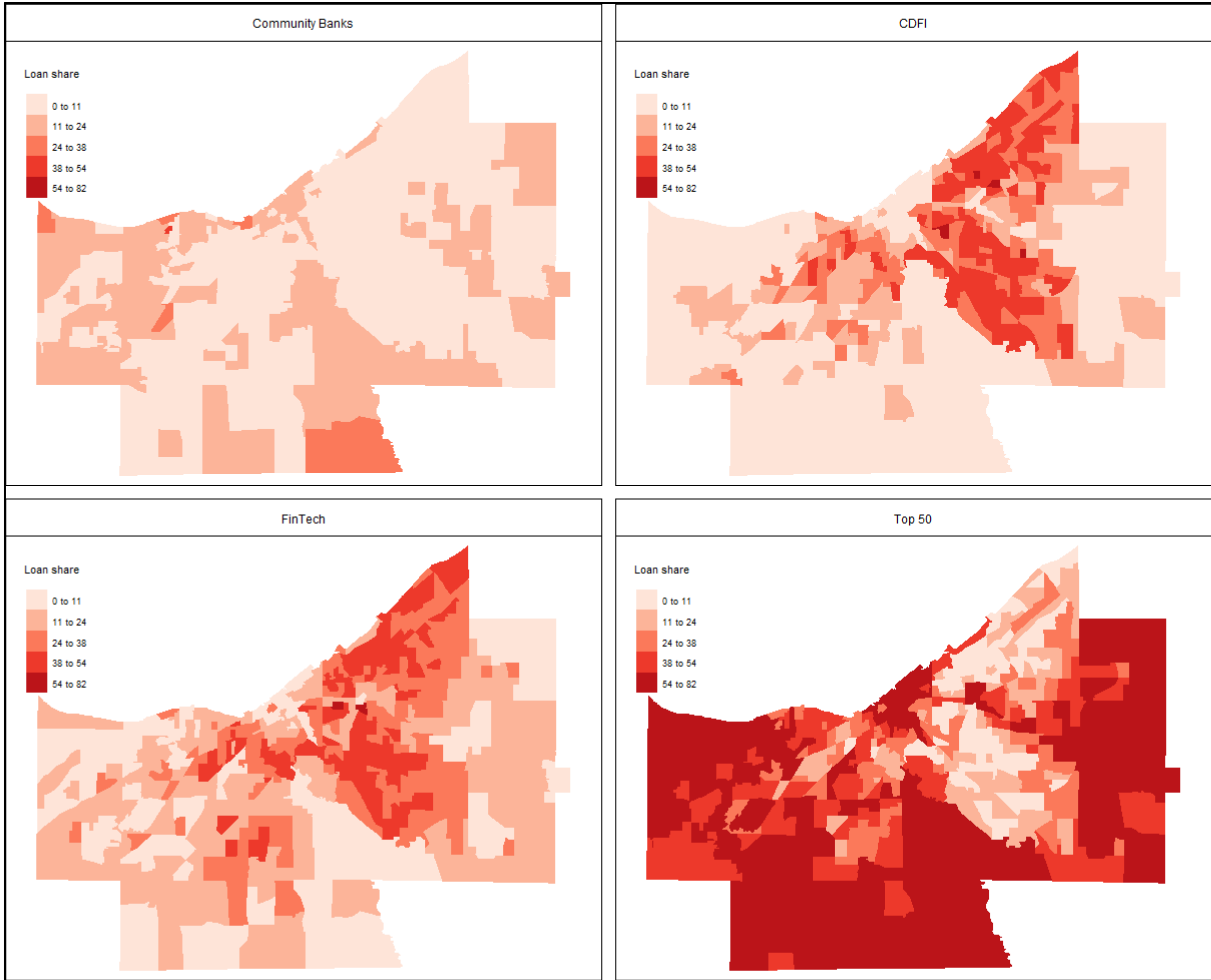
These developments, which were reinforced by extremely high foreclosure rates in the shadow of the Global Financial Crisis of 2007-2009, contributed to a particular urban economic geography of racial segregation, income polarization and increased suburbanization typical for many post-industrial agglomerations across the United States. With a population of roughly 372,000 the city now stands at 40 percent of its 1950 peak of 914,000. Contrary to the inner city suffering from massive de-population, neighboring communities, Cuyahoga county as a whole and the broader Cleveland-Elyria Metropolitan area ("Greater Cleveland") have either grown or, at least, have largely stayed constant. Figure 3 maps the results of this trend and breaks down 2019 census tracts in Cuyahoga county by poverty and race.

Figure 3 *Cuyahoga County, Ohio. Census tracts with high poverty (left) and minority status (right).*



Two things stand out. First, almost the entire city of Cleveland is marked by high poverty neighborhoods. Census tracts exceeding the threshold of more than 20% all individuals living below the poverty line nearly completely align with city limits (left). Second, minority tracts almost exclusively concentrate on the East Side with the Cuyahoga River serving as a line of demarcation. Facing multiple challenges, neighborhoods like Hough and Glenville in the Northeast, and Slavic Village or Union-Miles in the Southeast exemplify the aforementioned developments. How does PPP lending by lender type play out in Cleveland? Can we detect distinct distributions and do they match the national patterns? Figure 4 presents a grid of four different maps of Cuyahoga county census tracts, each detailing PPP loan shares of a different lender type. As we can see, there are clearly identifiable patterns of community banks, CDFIs, fintechs and top 50 derivative bank holding corporations.

Figure 4 *Cuyahoga County, Ohio. Paycheck Protection Program loan shares by lender type.*



Starting in the first quadrant on the top left side, it becomes evident that community banks only play a relatively minor role both in the city and the entire county. While nationally, community banks have made 28 out of 100 PPP loans, their loan share in Cuyahoga county is less than 8% with only a few tracts with double-digit contributions scattered across the county. The opposite is true for the largest derivative bank holding corporations that record loans shares of 24% nationally, compared to a staggering 38% in Cuyahoga county. As the map in the bottom-right quadrant in figure 4 illustrates, Top 50 banks focus on two main areas in which they lend most heavily: the city center of Cleveland with neighborhoods like Downton or Detroit-Shoreway, and, even more so, wealthier suburbs such as Westlake, Parma or Shaker Heights. Given the presence of larger banks like Huntington, Fifth Third and KeyBank in the state of Ohio, the pronounced activity of Top 50 banks seems plausible. The third and final lending profile is composed of CDFIs and fintech lenders (cf. top-right and bottom-left quadrants

in figure 4). Both have a strong focus on the high poverty and minority neighborhoods on the crescent-shaped East Side of Cleveland. Overall, Community Development Financial Institutions exhibit a narrower, much more coherent lending pattern than fintechs as the latter also lend in the suburbs and basically cover the entire county.

Outlook and policy implications

While community development financial institutions seem to have lived up to the task, the underperformance by other alternative banks – e.g. community banks and credit unions – present a puzzle. Moreover, top 50 derivatives banks are inclusive along racial lines, and FinTech lenders exhibit a large degree of inclusivity. As this deserves further attention and scrutiny, we would like to highlight three major implications for future research and policy debates:

1. Bank types clearly matter. Relying on a pre-existing system of different institutions for the distribution of public loans might make use of distinct specializations, such as the connection between farm credit lenders and agricultural firms. Yet, it also can exacerbate existing divisions that reinforce the underserving of communities of color and high poverty. While specific mechanisms leading to lending decisions are yet to be fully understood—including loans to different businesses and of different sizes—a more focused program design could alleviate some of the shortcomings and prevent them from happening in the future. One of the adjustments in phase 3, starting with the Biden administration, for example, led to a dedicated amount of PPP money to be distributed exclusively via CDFIs.
2. Due diligence, monitoring, and oversight might have to be improved. During the first phase, mainly top 50 banks handed out large loans, very often to bigger firms. Since applicants only had to certify in good faith that they needed a loan and banks cashed in on set fees with no risk of default, fraudulent practices occurred. During the third phase, this shifted to self-employed and independent contractors that were largely served by FinTech lenders. This takes away some of their inclusivity benefits and poses new questions of how to effectively regulate their loan generating business model.

3. Eventually, a look across the Atlantic might encourage further policy learning. Streamlining the program with a clear focus on liquidity provision for mortgage and utility payments, while setting up an employment retention scheme similar to the German *Kurzarbeit* could increase the effectiveness of PPP lending and simultaneously de-incentivize fraudulent applications. Ideally, this would go hand in hand with the establishment of a set of public development banks such as the German *Kreditanstalt für Wiederaufbau* (KfW). Currently, North Dakota is the only U.S. state with such an institution, while others, including New Jersey under Governor Murphy, have developed concrete plans. This could help foster private-public bank relationships as well as direct relations between private businesses or even households and a public lender, which, in the end, would foster mutual trust, economic security, risk sharing, and monitoring capacities.

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