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The Paycheck Protection Program Liquidity Facility

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Abstract

To bolster the effectiveness of the Small Business Administration's Paycheck Protection Program (PPP), the Federal Reserve, with the backing of the Secretary of the Treasury, established the Paycheck Protection Program Liquidity Facility (PPPLF). The facility was intended to supply liquidity to financial institutions participating in the PPP and thereby provide relief to small businesses and help them maintain payroll. In this article, we lay out the background and rationale for the creation of the facility, cover the salient features of the PPP and the PPPLF, and analyze the facility's loan take-up. Our findings suggest that the PPPLF played an important role in expanding the supply of credit to smaller banks and nondepository institutions and that these institutions were more likely to originate PPP loans to businesses on the smaller end of the scale.

Key words: PPP, PPPLF, SBA, CARES Act, Federal Reserve lending facilities

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Section 1 Introduction

The COVID-19 outbreak caused unprecedented widespread disruptions to economic activity starting in early Spring 2020 and has had a significant impact on businesses, state and local municipalities, as well as individuals. To mitigate some of these disruptions and provide relief to entities impacted by the economic fallout from the measures to contain COVID-19, Congress signed the Coronavirus Aid, Relief, and Economic Security Act (CARES Act) into law on March 27, 2020. Among other provisions, the CARES Act established funding for forgivable government-guaranteed small business loans under the Small Business Administration (SBA)'s Paycheck Protection Program (PPP).[1] The PPP was aimed at providing a lifeline to small businesses to help them maintain payroll and keep workers paid and employed. Small businesses could apply for loans through an extended list of lenders, which included formerly SBA-approved lenders and over time newly approved lenders, such as banks, credit unions, financial technology firms (fintechs) and online marketplaces. The program went through different phases, characterized by new batches of funding, deadline extensions and refinement and clarifications of rules and guidelines. The SBA reimbursed lenders with generous loan origination and processing fees and loans provided an attractive interest rate relative to the cost of funding for larger approved lenders. However, for some smaller lenders, community banks and fintechs the incentives were perceived to be insufficient to induce broad participation in the program. Furthermore balance sheet constraints were a further hindrance to lender participation.

To provide an impetus to the program, provide liquidity at attractive rates and incentivize smaller lender participation, the Federal Reserve, with the backing of the Secretary of the Treasury established the Paycheck Protection Program Liquidity Facility (PPPLF) on April 8, 2020.[2] Pursuant to section 13(3) of the Federal Reserve Act, the regional Federal Reserve Banks were authorized to extend non-recourse credit to eligible financial institutions participating in the SBA's PPP program, backed up by PPP loans as collateral. While the facility's direct aim was to bolster the effectiveness of the Paycheck Protection Program and thereby provide relief to small businesses affected by Covid-19, it more generally served a similar purpose to other 13(3) facilities in providing liquidity to credit markets, as per the Fed's role of lender of last resort when private liquidity becomes scarce. By extending much needed cheap liquidity provision to small PPP lenders, the PPPLF helped boost PPP loan origination across wide geographic areas and in underserved and underprivileged business communities, in line with the guidance in the CARES Act. In this article we lay out the background and main features of the PPPL Facility, discuss the intended aim of the program and analyze the facility's loan take-up and impact on lender participation in the PPP program and PPP loan disbursements.

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[1] Details on the program can be found here.

[2] An overview and details on the facility can be found here.

Section 2 The Paycheck Protection Program

The Coronavirus Aid, Relief, and Economic Security Act (CARES Act), signed into law on Friday March 27, 2020, was aimed at responding to the COVID-19 outbreak and addressing its economic impact. Among other provisions, it provided relief to small businesses impacted by COVID-19 by establishing funding for forgivable bridge loans and providing additional funding for grants and technical assistance. The Small Business Administration's Paycheck Protection Program (PPP), a section 7(a) loan program of the Small Business Act (15 U.S.C 636), was an important part of these efforts aimed at providing a lifeline to small businesses to help them maintain payroll, thereby keeping workers paid and employed during the COVID-19 crisis. Congress issued guidance to prioritize small business concerns in underserved and rural markets, and/or controlled by individuals from socially and economically disadvantaged communities, veterans and members of the military community. Initially $349 billion were authorized in PPP funds for forgivable government-guaranteed loans to small businesses to cover their costs related to payroll (including benefits) and employee salaries, as well as utilities, mortgage and rent payments. The general features of the program were laid out in the CARES Act and detailed further in the Interim Final Rule issued by the SBA in consultation with the Secretary of the Treasury. The first batch of the program was open from April 3 to June 30, 2020, however available funds were quickly exhausted. Given the program's popularity and the continuing need to support small businesses as the pandemic persisted, lawmakers replenished total available funds, refined rules and requirements and extended the life of the program until May 31, 2021. As of that date 11,823,594 loans were approved for a total of nearly $800 billion.

Eligible borrowers

To be eligible for PPP loans, businesses needed to have 500 or fewer employees[3] and be adversely impacted by COVID-19 and the measures enacted to contain its spread. Businesses had to be operational on February 15, 2020 in order to be eligible and must have had employees for whom they paid salaries and payroll taxes, or paid independent contractors.[4] The same loan terms applied to all applicants and full principal loan amounts qualified for forgiveness as long as employee and compensation levels were maintained (with some caveats). Businesses had to

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[3] These included nonprofits, sole proprietorships, eligible self-employed individuals, independent contractors, veterans organizations and Tribal business concerns. Freelancers, contract or gig economy workers could also apply. The term "employee" included individuals employed on a full-time, part-time, or other basis, and businesses in certain industries could have more than 500 employees (up to 1500 employees) conditional on meeting certain SBA criteria. The SBA applies complex affiliation criteria about parent companies and subsidiaries in order to determine the business's size, however these were waived for the purposes of PPP loans for certain businesses. The SBA's Interim Final Rule further specified that the business's employees must have principal place of residence in the United States.

[4] Applicants were ineligible for PPP loans if they were household employers, if any of the business's owners were delinquent or had defaulted on a loan from any Federal agency, if they engaged in illegal activity or were convicted of a felony in the last five years.

submit a PPP loan application to an SBA approved lender, along with documentation necessary to establish eligibility, including payroll records and tax filings, or income and expenses from a sole proprietorship.[5] As part of the application the borrower had to provide a good-faith certification that the current economic uncertainty makes the loan necessary for supporting ongoing operations and that the loan will be used to retain workers and maintain payroll or make mortgage, lease and utility payments. No collateral pledge and no personal guarantee was required. Loans were initially capped at one per applicant, however a second draw was later allowed. Loan applications were processed in the order they were received by the SBA, not by when the applications were submitted to lenders, which especially in the first round of the program had significant implications for loan allocations.

Terms of credit

The maximum PPP loan amount businesses could apply for was set to the lesser of $10 million and an amount equal to 2.5 times the average monthly payroll costs from the previous year.[6] The interest rate on the loan was set to 1% fixed rate, in order to provide low cost funding for borrowers and at the same time offer an attractive interest rate for lenders relative to the cost of funding for comparable maturities.[7] Borrowers were not required to pay PPP loan fees to either the lender or the SBA, and interest payments were deferred initially for 6 months (then extended to 10 months) after the covered period. The loans had a two year maturity after approval, extended to five year maturity for loans issued after June 5th, 2020, and prepayment was possible with no prepayment fees or penalties. For loans with remaining balance after a reduction based on loan forgiveness, the remaining balance was guaranteed by the SBA and forgiven loan amounts were tax-free for federal tax purposes. An important feature of the PPP was loan forgiveness. To qualify for forgiveness, borrowers had to show that they did not decrease their full-time employee headcount or reduce salaries and wages by more than 25% (later increased to 40%) for any employee that made less than $100,000 in 2019. They needed to maintain payroll levels and employee count for the covered period (between 8 and 24 weeks after the loan was originated). Firms that laid off employees or reduced salaries were given time to restore their full-time employment and salary levels to qualify for loan forgiveness. The eligible amount for loan forgiveness was conditional on the total loan amount and its use (i.e., the proportion of the loan used to finance eligible qualifying expenses, such as payroll, salaries, mortgage/rent payments and utilities as detailed above). At least 75% (lowered eventually to

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[5] Borrowers that do not have such documentation, must provide other supporting documentation such as bank records, to demonstrate qualifying payroll amount.

[6] The maximum loan amount calculation was subject to a cap of $100,000 annual salary per employee. For seasonal employers this was set to 2.5 times the average monthly payments for payroll during the 12-week period beginning February 15, 2019 or March 1, 2019.

[7] The CARES Act specifies that the interest rate on these loans shall not exceed 4%. The SBA and the Secretary of the Treasury initially set the interest rate to be 0.5%, however at the news conference on April 2nd, Secretary Mnuchin announced that the interest rate will be raised to 1% to encourage smaller lenders, including community banks, to participate in the program.

60%) of the loan proceeds had to be used for payroll expenses for the loan to be forgiven in the entirety of its principal. If a lesser amount was dedicated to payroll, the forgivable amount would be reduced proportionally.

Eligible lenders

While normally SBA-guaranteed loans are issued by an existing network of banks that are SBA-approved lenders, for the purposes of the PPP, the list of approved lenders with authority to make covered loans was extended to include additional lenders determined by the SBA and the Secretary of the Treasury to have the necessary qualifications to process, close, disburse and service SBA-guaranteed loans. Many banks, credit unions, fintech lenders, and online lending marketplaces willing to participate in the program that were not already SBA-approved lenders were encouraged to apply to become PPP lenders. In order to provide expeditious relief to small businesses, the SBA gave delegated authority to all approved PPP lenders and streamlined the requirements of the regular 7(a) loan programs. Existing SBA loan programs require lenders to assess the borrower's creditworthiness and require that the borrower posts collateral and issue a personal guarantee for the loan, as well as a certification that they couldn't secure credit elsewhere. These requirements and other regular 7(a) lending criteria were waived for PPP loans and lenders were allowed to rely instead on certifications of the borrower in order to determine borrower eligibility, as well as eligibility of loan amount, use of loan proceeds, and forgivable amount. Lenders had to comply with the applicable lender obligations set forth in the SBA's interim final rule, but were not held liable for borrowers' failure to comply with program criteria or for any misrepresentations made by borrowers in connection with a request for PPP loan forgiveness.

Incentives for lenders

The SBA reimbursed authorized lenders of covered loans for originating and processing loans at a rate based on the balance of the financing outstanding for the disbursement of loans[8], that ranges from 1% to 5%. In particular lenders originating PPP loans with a total loan outstanding of up to $350,000 would receive a fee of 5% of the principal, lenders with PPP loans outstanding from $350,000 to $2 million would receive a fee of 3% of the principal, and lenders with PPP loans outstanding above $2 million would receive a fee of 1% of the loan principal.

By originating and holding PPP loans on their balance sheet, banks could potentially be exposed to increased regulatory capital requirements.[9] While the CARES Act specified that PPP-covered loans originated by a banking organization would carry a zero percent risk weight and thereby not affect their risk-based capital requirements, PPP loans held on a bank's balance sheet could potentially affect the bank's leverage-based regulatory capital requirements and their liquidity coverage ratios (LCR). To alleviate this issue and incentivize lender participation, the regulatory

[8] The fee reimbursement was to be made no later than 5 days after the disbursement of the covered loan.

[9] Lenders could request that the SBA purchase the expected forgiveness amount of the PPP loan or pool of loans at the end of week 7 of the covered period of an originated PPP loan, but before that date, the lender has to either hold the loan on their balance sheet or sell it in the secondary market.

agencies (Fed, OCC, FDIC) further specified that PPP loans and the lines of credit extended under the PPPLF would be exempted from entering calculations from all regulatory capital requirements of banks and bank holding companies, including risk-based and leverage-based capital and for LCR purposes.

Federal financial institution regulatory agencies, generally require financial institutions to classify certain loan modifications as troubled debt restructurings (TDRs). The CARES Act and the interim final report issued by the SBA, in consultation with the Secretary of the Treasury, allowed financial institutions to suspend such requirements on PPP loan modifications. To further incentivize lender participation, covered PPP loans were eligible to be sold in the secondary market and the SBA would not collect fees for any guarantee sold into the secondary market. Covered loans sold on the secondary market would continue to receive a risk-weight of zero percent. Insured depository institutions and credit unions that would restructure PPP covered loans were given temporary relief from troubled debt restructuring (TDR) accounting standards and disclosures for the purposes of compliance with FDIC requirements.

Program implementation hurdles and overall success

Since the application volume for PPP loans was a multiple of the regular volume for SBA loans, a variety of technical implementation issues were faced in the initial phase of the program. In the first few days of the program the large volume of applications overwhelmed the SBA's application system and the computer system crashed (see here and here) raising the need to create a back-up system. Furthermore, similar constraints were faced by the internal processes of small banks and other approved small lenders to deal with the unprecedented volume of applications. Even larger banks like Wells Fargo and Bank of America ran into capacity problems (see here, here, and here). Other lenders reported similar hurdles. Uncertainty about the nature of accountability in borrower screening was reported by many lenders as another factor that delayed the processing of applications. In the initial phase of the program many of the details of the program implementation remained somewhat unclear.

Overall the PPP provided attractive incentives for both borrowers and lenders to participate in the program. Loans under the program had very generous terms compared to existing SBA-backed loans, with an interest rate substantially lower than that under regular 7(a) loan programs (which are commonly used as a lender of last resort), requiring no SBA and lender fees, and deferring interest and principal payments for at least 6 months. At the same time from the lenders' perspective the interest rate on the loans and the generous origination and processing fees were quite attractive in an environment of very low interest rates. The PPP provided significant flexibility along many dimensions, with a broad base of potential borrowers due to the reduced eligibility requirements and by not discriminating against applicants who had been denied credit previously, as well as the lack of collateral pledges or personal guarantees needed. Furthermore, the program significantly extended the base of potential lenders beyond existing SBA-approved lenders, including small banks, fintechs and online marketplaces.

Critical views regarding the program's design and effectiveness were raised along a few dimensions, including whether the program was sufficiently funded to meet demand for loans, whether credit allocation was in line with the intended aim of the program and whether the program had the intended effects on employment. While the allocated funds in the first round of the PPP were clearly insufficient, they were replenished in the following rounds. Liu and Volker (2020a) and Granja et al (2020) show that the geographical distribution of PPP loans in the first round of funding did not reflect the severity of the economic impact of the pandemic. This uneven distribution was later mitigated with the following rounds of funding. Liu and Volker (2020a) point to the importance of relationship lending for the allocation of PPP loans in the first round of the program and to the significant role played by community banks. James et al (2021) confirm these findings and suggest that the focus on relationship lending allowed community banks to respond faster to PPP loan requests than larger banks and allowed them to lend more than larger banks relative to their assets. Li and Strahan (2020) also find that bank relationships helped firms access PPP lending. When it comes to funding allocation, Barrios et al (2020) suggest that funds from the PPP have broadly been allocated according to the design distribution of eligible payroll. Granja et al (2020) suggest that the employment effects of the PPP program were small, while Autor et al (2020) and Barraza et al (2020) find that the PPP was somewhat successful in the objective of preserving jobs during the pandemic, with statistically and economically significant effects of the program on employment.

Section 3 The Paycheck Protection Program Lending Facility (PPPLF)

In order to provide quick relief to small businesses across all affected geographic areas, the SBA encouraged non-existing SBA-approved lenders to apply to participate in the PPP, pledging to an expeditious approval process should applicants be deemed to possess the necessary qualifications to issue SBA-guaranteed loans. There was some initial uncertainty about the criteria that potential lenders would have to meet, raising concerns about the breadth of participation among new small lenders. Furthermore, some smaller lenders, community banks and fintechs reported that given their higher funding costs relative to larger banks the loan terms were not attractive enough to encourage broad participation. Additionally, another concern for small lenders' incentives to participate in the PPP was their balance sheet capacity. For larger regulated bank holding companies, another disincentive was the potential effect that holding PPP loans on their balance sheet would have on their regulatory capital.

In order to address funding cost issues, improve liquidity and create the right incentives for the broadest possible base of PPP-participating lenders, the Federal Reserve with the backing of the Secretary of the Treasury announced on April 6, 2020, that it would establish a new 13(3) facility to facilitate lending to small businesses via the SBA's PPP program. Section 13(3) of the Federal Reserve Act allows the Federal Reserve, with prior approval of the Secretary of the Treasury, to extend lending in unusual and exigent circumstances to individuals, partnerships and corporations through programs with broad-based eligibility. The new facility, the Paycheck Protection Program Lending Facility (PPPLF), was aimed at bolstering the SBA's PPP program by supplying liquidity to financial institutions participating in the program in the form of term financing on a non-recourse basis backed by the SBA's PPP loans. Liu and Volker (2020b) provide an overview of the intended aim of the facility. Ultimately the new facility would serve a broadly similar purpose to that of other 13(3) Federal Reserve facilities, that is, to provide liquidity to credit markets and balance sheet relief to financial institutions with the aim of supporting economic activity, in line with both the Fed's role as a lender of last resort and its monetary policy mandate. While other emergency facilities the Fed set up in response to Covid-19 potentially exposed taxpayers to some small risk of losses due to potential borrowers' default or a fall in the market value of the securities, the full principal of PPPLF credit extensions was backed by PPP loans as collateral, which have a full SBA-guarantee on their principal value. This lack of credit risk exposure allowed the Fed to charge borrowers no PPPL facility participation fees and a low interest rate, encouraging relatively high take-up rates and acting as a significant booster to the PPP.

Eligible borrowing institutions

On April 7, 2020, the Federal Reserve Board, with the approval of the Secretary of the Treasury, authorized each of the regional Federal Reserve Banks to participate in the PPPLF, pursuant to section 13(3) of the Federal Reserve Act. Initially, the Board announced that eligible borrowers under the PPPLF would be all depository institutions originating PPP loans, with the plan to quickly expand eligibility to all other non-depository institutions participating in the PPP. On April 30, 2020 access to the PPPLF was extended to all PPP lenders that had a corresponding banking relationship with a depository institution with a master account at the Federal Reserve. These included banks, credit unions, community development financial institutions (CDFIs), members of the Farm Credit System, small business lending companies and financial technology firms. Eligible PPPLF borrowers that are depository institutions or credit unions would participate in the facility through the regional Federal Reserve Bank in whose District they are located. Community development financial institutions[10] would apply for a PPPLF credit line extension through the Federal Reserve Bank of Cleveland, members of the Farm Credit System as well as small business lending companies that are not depository institutions or credit unions, would apply through the Federal Reserve Bank of Minneapolis, and all other eligible borrowers would apply through the Federal Reserve Bank of San Francisco. The initial announcement stated that the facility would be operational for extending new lines of credit until September 30, 2020. However, due to the extension of the PPP after the initial phases, the PPPLF termination date for new lines of credit was extended in conjunction and was ultimately set at July 30, 2021.

Terms of credit

Financial institutions participating in the PPP could finance themselves for issuing PPP loans through the PPPLF, at attractive low rates of 35 bps (65 bps below the 1% fixed interest on PPP loans) and with no facility participation fees. Only SBA-guaranteed PPP loans would be eligible to

[10] These are financial institutions as defined in article 12 U.S.C. section 4702, that are not depository institutions or credit unions.

serve as collateral for borrowing under the PPPLF, with the principal amount of an extension of credit equal to the principal amount of the PPP loan pledged as collateral.[11] There is no cap to the amount of credit that could be extended to eligible financial institutions, except that the principal cannot exceed that of the PPP loans pledged as collateral. Eligible borrowers could pledge PPP loans that they had originated or purchased in the secondary market. Eligible borrowers pledging PPP loans purchased on the secondary market need to document that they are the beneficiary institution of the SBA guarantee for the loan in order to get PPPLF credit extension backed by the purchased PPP loans. Extensions of credit under the facility would be made without recourse to the borrower, given that the PPP loans pledged as collateral are fully SBA-guaranteed. The maturity date of an extension of credit under the facility was set to equal the maturity date of the PPP loan pledged to secure the extension of credit, and it would be accelerated if the underlying PPP loan would go into default and the eligible PPPLF borrower would sell the PPP loan to the SBA to exercise the SBA guarantee. Similarly, the maturity date of the extension of credit would be accelerated to the extent of any loan forgiveness reimbursement received by the PPPLF borrower from the SBA. The PPPLF credit line would be extinguished should a borrower sell their PPP loans in the secondary market.

Impact of loans on institutions' balance sheets and their regulatory capital

One concern for many lenders' ability to participate in the PPP was their balance sheet capacity. The federal regulatory agencies' (the Federal Reserve, the OCC and the FDIC) capital rules for supervised banking organizations require them to comply with risk-based capital requirements (based on risk-weighted assets) and leverage capital requirements (based on average total assets or total leverage exposure). By virtue of originating PPP loans and holding them on their balance sheet, banks participating in the PPPLF could potentially be subject to increased regulatory capital requirements. Since PPP loans pledged at the PPPLF do not expose the bank pledging them to any credit or market risk (given the non-recourse nature of the extension of credit under the PPPLF), the regulatory agencies determined it appropriate to exclude the effects of PPP covered loans from banks' regulatory capital. In particular, banks could exclude exposures pledged as collateral to the PPPLF from their total leverage exposure, the average total consolidated assets, advanced approaches-total risk-weighted assets, and standardized total risk-weighted assets. Similarly, PPP loans would be excluded from calculations pertinent to the community bank leverage ratio. The interim final rule issued by the Fed in conjunction with the OCC and the FDIC codified these exemptions by specifying that banks originating PPP loans relying on financing under the Fed's PPPLF would be exempted from the regulatory capital requirements applied to banking holding companies. These exemptions, combined with the attractive interest rate, loan origination fees and the liquidity provided under the PPPL facility, helped incentivize lenders to participate in the PPP. The additional liquidity obtained from PPP lenders through the PPPLF helped increase their capacity to originate additional PPP loans and satisfy the large demand from small businesses for such loans. The lifeline to small businesses

[11] PPP loans pledged as collateral would be valued at the full principal amount of the PPP loans, given the full SBA-guarantee.

that the PPP provided and the boost to the PPP through the PPPLF liquidity injections helped limit small business failures, keep workers employed and the economy going.

Community Development Financial Institutions (CDFIs)

A group of PPP-lenders that was highly encouraged to participate in the PPP and that particularly benefited from access to the PPPLF was community development financial institutions (CDFIs). CDFIs are mission-oriented lenders certified by the Treasury Department that focus on financing small businesses and individuals in low economic opportunity areas, and communities with minority or underprivileged backgrounds. The cost of funding for CDFIs is generally higher than that for traditional banks, which can access the Fed's discount window and can borrow at reasonably low rates in credit markets in the current low-rate environment. Circa half of the existing CDFIs are depository community banks, while the rest are loan funds and other non-depository institutions. CDFIs that are depository institutions and have a master account at a Federal Reserve Bank have access to the Fed's discount window, while loan funds do not. For loan funds access to the PPPLF constituted a major incentive to participate in the PPP, by providing a cheap funding source to finance origination of PPP loans. Access to the PPPLF was very useful also for depository CDFIs that may have not been in "generally sound financial condition" and therefore did not qualify for the Fed's discount window (DW)'s primary credit. The rate for DW's secondary credit, at 50 bps plus the primary credit rate, is significantly higher than extensions of credit under the PPPLF. Initially there were hurdles for CDFI loan funds to access credit through the PPPLF, due to the need to have a corresponding banking relationship with a depository institution that has a master account at the Fed, due to the latter's operational complexities and capacity limits for approvals, as well as perceived risk. In early summer 2020 and in the second round of PPP, the issue ameliorated significantly as many depository institutions agreed to establish correspondent banking relationships with loan funds and other non-depository institutions participating in the PPP program (Eggleston, 2021). Broad participation of CDFI's in the PPP was highly encouraged, given their mission-oriented nature in serving underprivileged communities which have typically a harder time accessing credit through traditional financial institutions. The CARES Act specifically instructed the SBA to issue guidance to lenders to prioritize small business concerns in undeserved and rural markets, and controlled by individuals in socially and economically disadvantaged communities, veterans and members of the military community.

Fintechs

Media coverage reported that as soon as the CARES Act was announced, and especially once the PPPLF announcement created attractive incentives for small lenders, several fintech companies lobbied the Treasury Department to allow them to participate in the PPP (see for example here). On April 9, 2020 the Treasury announced it would allow fintech companies to apply for approval with the SBA. In the first few weeks of the PPP's launch, the SBA approved the applications of a few fintech companies to become PPP lenders, including PayPal, Intuit, and Square. PayPal announced it received approval on April 10 and as of the following Monday it had already received and approved PPP loans. Similarly, on April 13 Square Capital and

Intuit's QuickBooks Capital announced they received approval to become PPP lenders. QuickBooks Capital launched a new free website "Intuit Aid Assist" to help small businesses and self-employed individuals assess their eligibility to borrow under the PPP program and their eligible loan amount. Square Capital announced it would operate in partnership with Celtic Bank. In the later days of phase one of the PPP and in phase two several other fintech lenders were approved and disbursed loans, some in collaboration with established traditional bank holding companies. The expansion of the approved PPP lenders pool to fintech companies sped up and simplified the loan application and loan disbursement process for many small businesses, given their broad geographic coverage, their automated application process and their relatively more rapid and flexible innovation capabilities compared to the more bureaucratic traditional banks. The presence of fintech lenders may have also helped expand the pool of potential applicants in the first phase of the PPP program, since traditional bank lenders prioritized borrowers with existing banking relationships due to the lesser need for extensive screening.

Program Effectiveness

Overall there is evidence that the PPPLF has been successful in bolstering the effectiveness of the PPP program by enhancing the ability of small lenders to originate additional PPP loans. The liquidity provision through the PPPLF was a boost for many small lenders to originate PPP loans and PPPLF take-up increased significantly in the second half of 2020 and early 2021. This arguably mitigated many of the initial setbacks of the first round of the PPP when the demand by small businesses for PPP loans was significantly higher than the capacity of lenders to originate and process loans and the velocity at which the insufficient PPP funds in place were exhausted. For example, Anbil et al. (2021), using an instrumental variables approach find that commercial banks that accessed PPPLF funding originated over twice as many PPP loans relative to their total assets, compared to banks that did not access PPPLF funding. Lopez and Spiegel (2021) find that both the PPP and the PPPLF had a positive effect on the growth in small business and farm lending in the first half of 2020, with the PPPLF having a significant impact on increasing small- and medium-sized bank lending. The results in the next section are in line with these findings, with smaller depository institutions and non-depository institutions relying more on PPPLF funding to finance PPP loan origination.

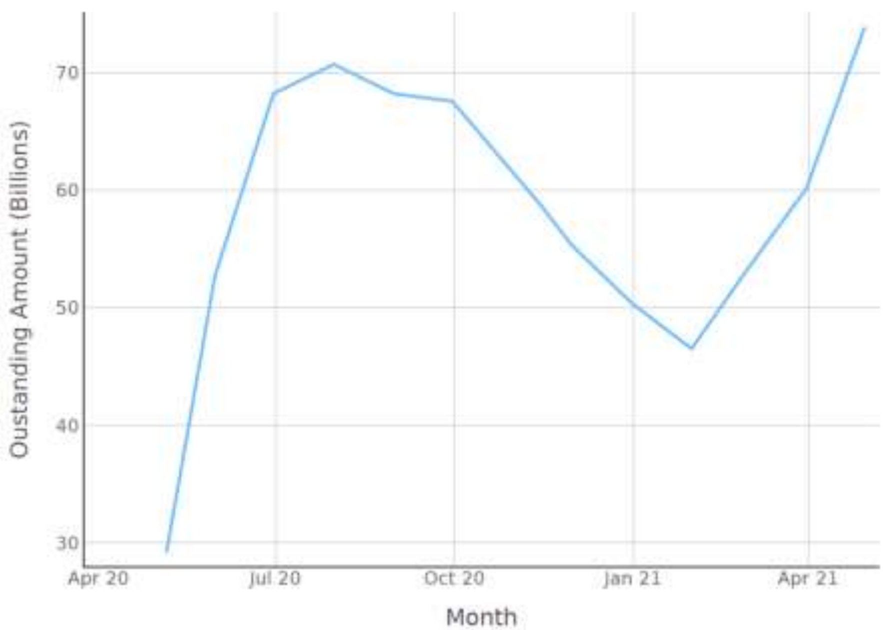
Section 4 PPPLF Take Up

As required by section 13(3) of the Federal Reserve Act, the Fed has disclosed weekly PPPLF credit extensions on a nationwide aggregated basis to the public. In this section, we examine the distribution of PPPLF loans over time by PPPLF borrower / PPP lender size and industry.

Aggregate Lending

To begin with, Chart 1 shows the total outstanding balance of PPPLF loans over time. We can see that the aggregate balance jumped sharply in the first few months the PPPLF became operational, it then gradually declined before rebounding again. The aggregate balance of PPPLF credit extensions can decline for the following reasons: (1) forgiveness of the underlying PPP loans pledged as collateral by the borrowing financial institution, (2) repayment of the underlying PPP loans, or (3) if the underlying PPP loans are sold by the borrowing institution in the secondary market or to the SBA to realize the full principal guarantee. As small businesses beneficiary of PPP loans apply for and are granted forgiveness, the PPP lenders with a PPPLF credit extension backed by those loans need to draw down the PPPLF balance accordingly, because the collateral needs to match the disbursement. For a similar reason, PPPLF balance declines when the underlying PPP loans pledged as collateral are repaid by small businesses.

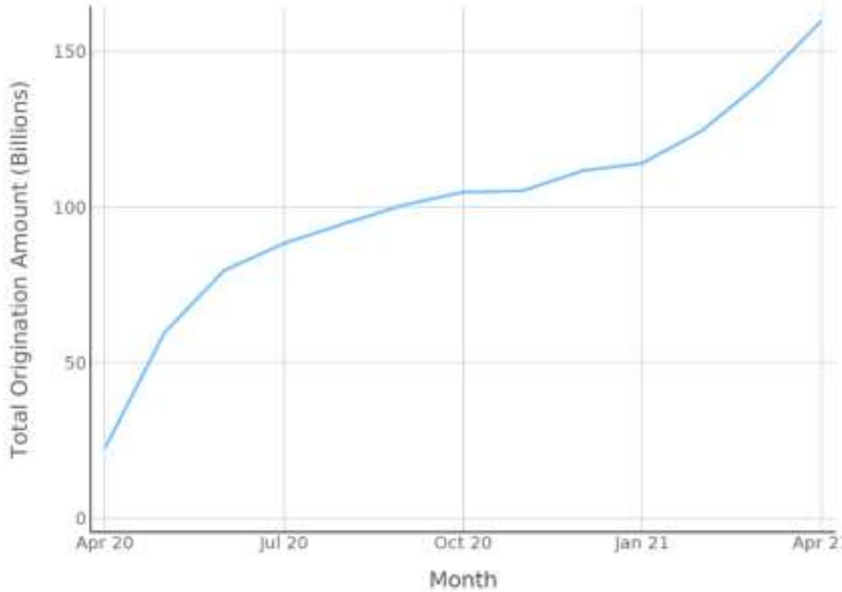
Chart 1, PPPLF Aggregate Loans Outstanding



Notes: This graph reports the total outstanding amount of active PPPLF loans from each monthly report for the PPPLF

Chart 2 shows total cumulative PPPLF loans disbursed over time. We can see that the cumulative balance gradually increases over the life of the program, with steeper climbs around the early months of PPPLF becoming operational in spring 2020 and in the beginning of 2021. The later jump in PPPLF can be explained by a rule in the Economic Aid Act, passed on December 27, 2020. The rule allowed both first-draw loans for small businesses that did not borrow in the first and second rounds of the PPP and second-draw loans for those that had existing PPP loans and applied for new loans given continuing exigence. This stimulated another wave of PPP lending, followed up by PPPLF applications for credit extensions by PPP lenders.

Chart 2, Aggregate Cumulative Origination of PPPLF Loans



Notes: This graph reports the total cumulative amount of PPPLF loans originated over time.

PPPLF Loan Distribution by PPPLF Borrower / PPP Lender Category

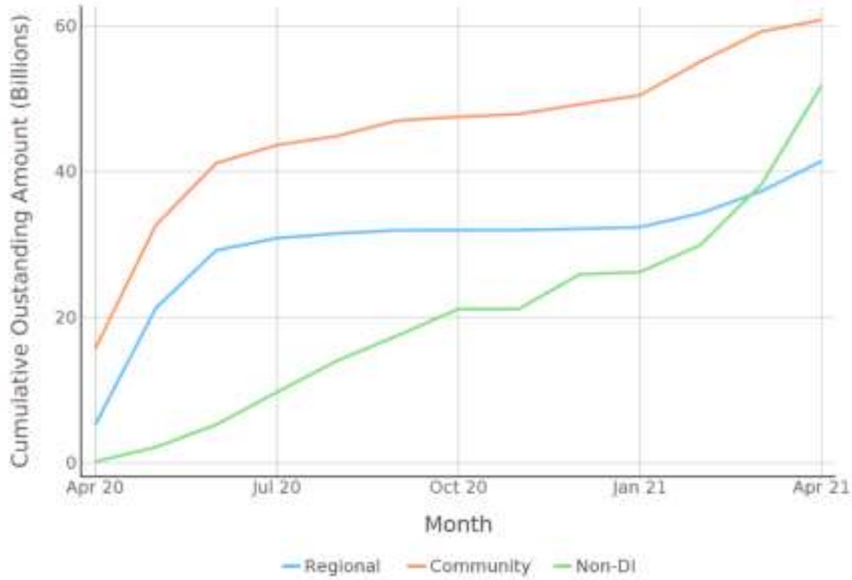
To understand the distribution of PPPLF credit lines by borrowing financial institutions, Charts 3 and 4 break down outstanding balance and cumulative origination by borrower type.

We determine PPPLF borrower / PPP lender type by merging PPPLF data with RSSD attributes and bank asset sizes (based on RSSD or ABA number) as per the disclosure summary of December 2020 of the Federal Financial Institution Examination Council Central Data Repository's Public Data Distribution, which contains call reports and uniform bank performance reports for most FDIC-insured institutions.

Chart 3, PPPLF Loans Outstanding by PPPLF Borrower

Notes: This graph reports the total outstanding amount of active PPPLF loans, by PPPLF borrower.

Chart 4, Cumulative PPPLF Loan Origination by PPPLF Borrower



Notes: This graph reports the total cumulative amount of PPPLF loans originated over time, by PPPLF borrower.

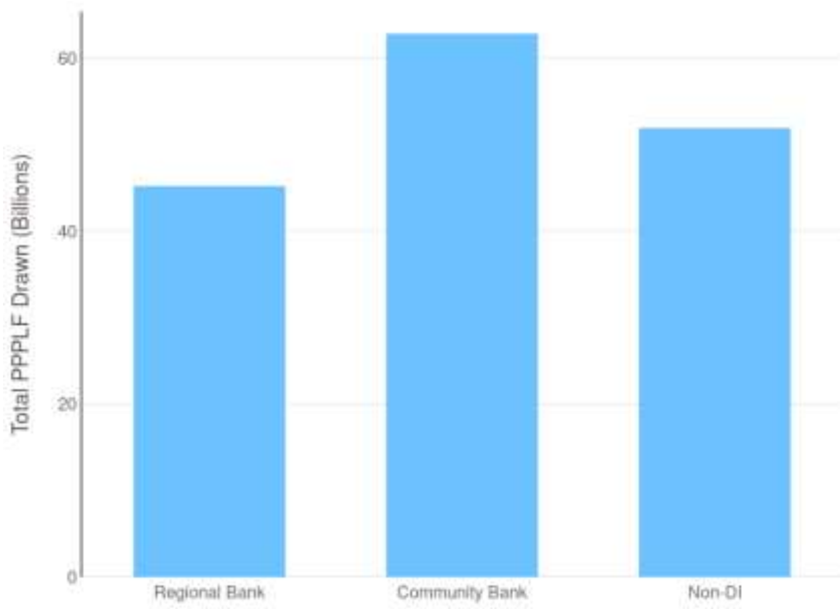
We classify regional banks (including national banks) as participating institutions with more than $10 billion in total assets, community banks (including CDFIs that are depository institutions) as those having less than $10 billion in assets, and we classify the remaining institutions for which assets and attributes are not available based on the FFIEC repository as non-depository institutions. All PPPLF participating financial institutions are classified into the above three categories.

From Charts 3 and 4, we can see that at the beginning of PPPLF increases in balance were mainly driven by national, regional and community banks. The second surge in PPPLF balance in early 2021 largely came from non-depository institutions.

To shed more light on the distribution of PPPLF loans by PPPLF borrower /PPP lender category relative to PPP loan originations, we merged the above data (PPPLF disclosures, RSSD attributes and asset size from the FFIEC reports) with the PPP data disclosed by the SBA. The main difficulty in merging the data is that the SBA's PPP disclosures do not provide the ABA or RSSD of the lending financial institutions. Participating institutions originating PPP loans are instead identified in the data based on their unique name and the city and state they are located in. While the matching is not perfect, we follow a detailed data cleaning process to match the reported names and locations with the information available from the PPPLF disclosures and manually confirming that the maximum number of lenders are matched across datasets.

Next, we study further the reliance on the PPPLF by institution type. Chart 5 illustrates cumulative PPPLF credit lines by institution category following the adopted classification delineated above. Community banks and CDFIs that are depository institutions, borrowed the most from the PPPLF, followed by non-depository institutions with national and regional banks taking relatively the least from the PPPLF.

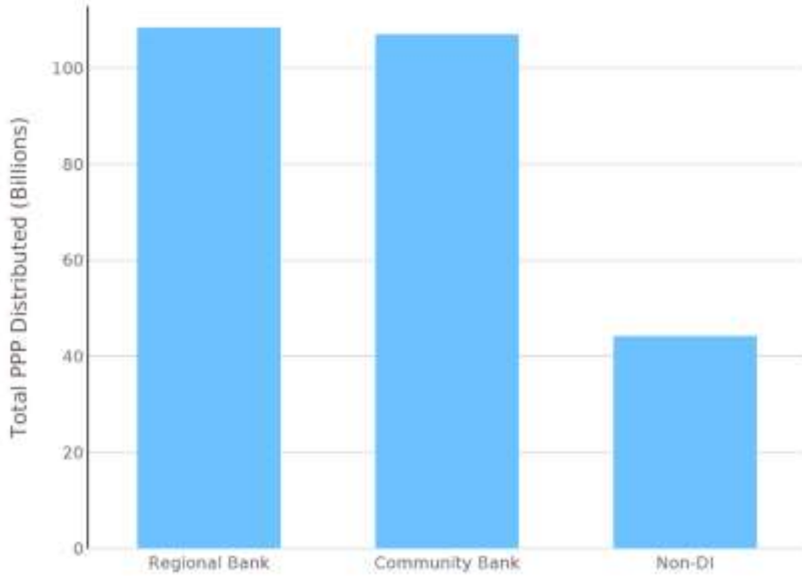
Chart 5, Total PPPLF Borrowed by Institution Type



Notes: Cumulative PPPLF amount borrowed by institution type.

Chart 6 shows the total PPP distributed loan amounts by lender type, for the matched sample with PPPLF-borrowing institutions. As shown, since not all PPP lenders applied for PPPLF credit lines, the total PPP loan amounts reported in the graph are only a fraction of the entire PPP loan disbursements. Furthermore, the limited coverage can also be due (although to a lesser extent) to the inherent issues with matching the data given that the reported classifications of PPP lenders and PPPLF borrowers in the data disclosures aren't perfectly aligned.

Chart 6, Total Dollar Amount of PPP Loans Disbursed by PPP Lender



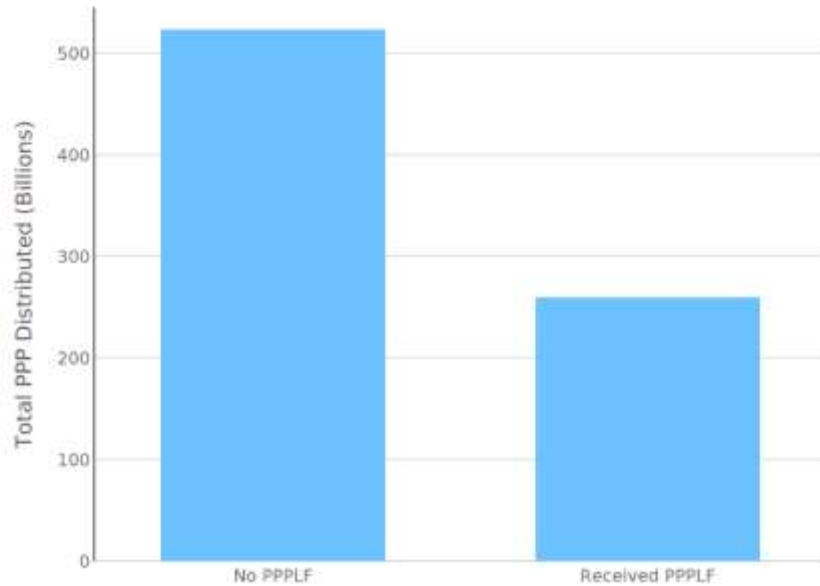
Notes: Total PPP loans originated by each lender type for the matched sample of PPP-lenders with PPPLF-borrowers.

The matched data suggests that regional and national banks, as well as community banks (including CDFIs that are depository institutions) were the largest PPP loan originators, lending at similar levels in terms of dollar amount among the matched PPPLF borrower/PPP lender group. Non depository institutions on the other hand originated less than half of the dollar amount of PPP loans originated by regional and community banks as per our classification.

There are several reasons why this may be the case. Firstly, non-DIs are more likely to lend to the smallest of small businesses relative to depository institutions, since larger and more established small businesses are more likely to have existing banking relationships than smaller ones. The maximum principal dollar amount of PPP loans is based on payroll numbers (over a representative month in the previous year), therefore smaller businesses can apply for smaller loans relative to larger businesses with higher payroll numbers.
Secondly, non-depository institutions had a slower start in participating in both the PPP and the PPPLF given the requirement to be an SBA-approved lender for the former, and the delayed eligibility as well as the need to have a correspondent banking relationship with a depository institution with a master account at the Fed for the latter.
Lastly, again the limitations inherent in the data matching and classification given the data constraints in the disclosures imply that some misclassification of institutions or matched PPP lender/PPPLF borrower pair cannot be ruled out.

Looking at this issue from a different angle, Chart 7 shows the total PPP distributed loan dollar amounts for PPP lenders with PPPLF credit lines versus those that relied on other funding sources to finance PPP loan origination.

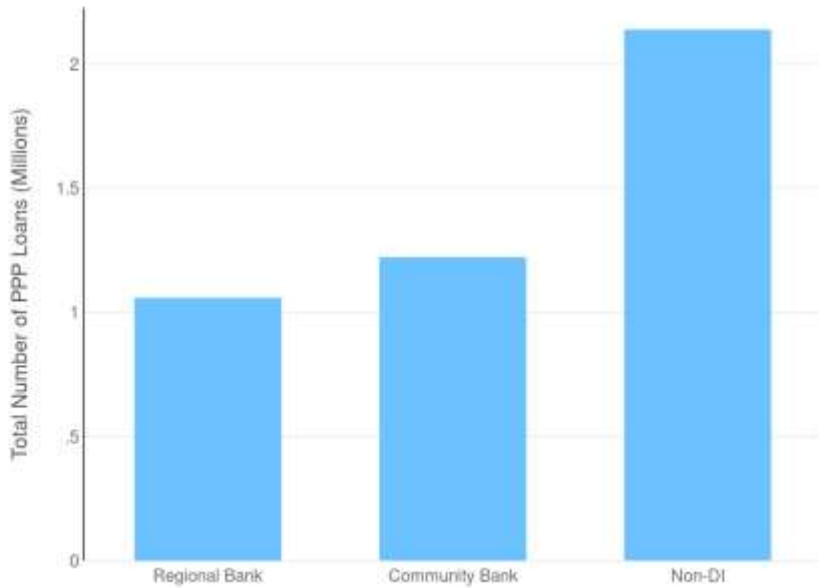
Chart 7, Total PPP Loan Dollar-Amount Disbursed



Notes: This graph shows the total dollar amount of PPP loans disbursed by PPP lenders who received PPPLF credit extensions and those that did not.

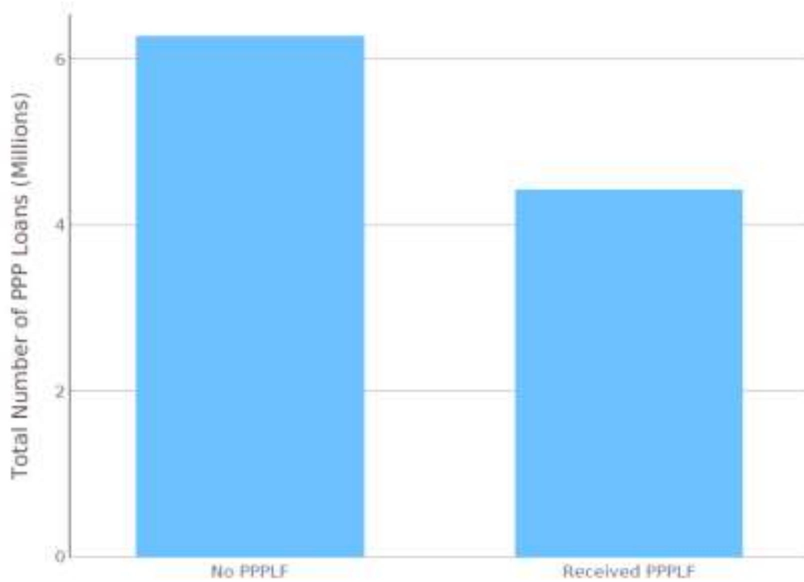
As we can see, PPP lenders that borrowed from the PPPLF to finance PPP loan origination had issued a significantly smaller PPP loan dollar amount. Since PPP loans are proportional to the small businesses' payroll numbers, the dollar amount of PPP loans originated depends on the average size of small business served by the PPP lender. A lender could originate many PPP loans and still have a relatively low total dollar amount of PPP loans outstanding depending on its PPP clientele base. This is confirmed by Charts 8 and 9. Chart 8 shows the total number of PPP loans originated by each lender category for the matched PPP lender/PPPLF borrower sample. Non-DIs originated a disproportionally large number of loans relative to the total disbursed dollar amount. Chart 9 shows total PPP loans disbursed by PPP lenders that received PPPLF credit extensions and those that did not. The difference in the number of PPP loans disbursed by PPPLF participating and non-participating institutions is a lot smaller than that based on dollar-amount disbursed. These results taken together are in line with the conjecture that smaller PPP lenders and non-depository institutions are more likely to attract small businesses at the lower end of the size scale, which have fewer employees and lower payroll costs.

Chart 8, Total Number of PPP Loans Disbursed by Lender Type



Notes: This graph shows total PPP loans originated by each lender type for the matched sample of PPP-lenders with PPPLF-borrowers.

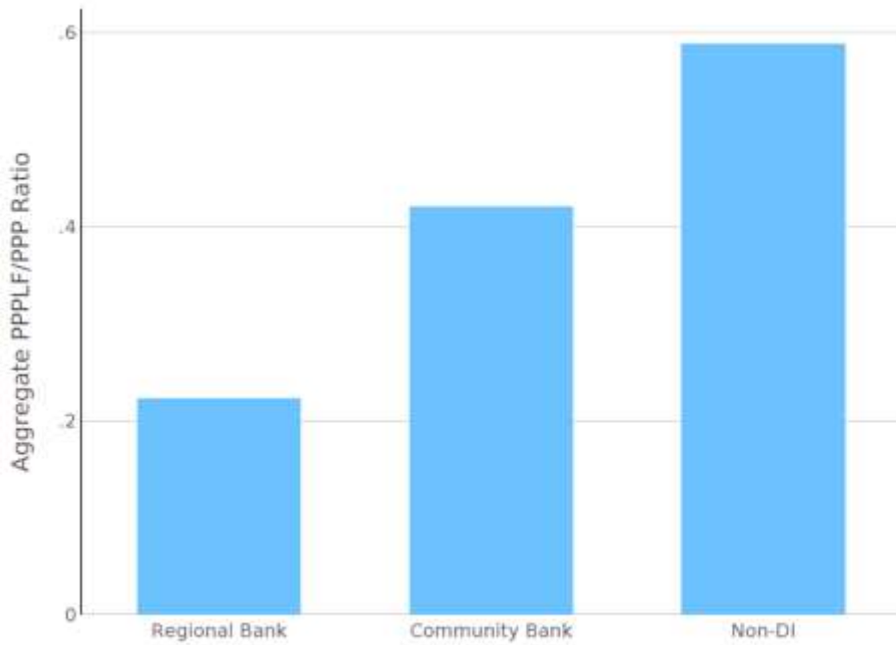
Chart 9, Total Number of PPP Loans Disbursed by PPPLF Participation Status



Notes: This graph shows total PPP loans disbursed by PPP lenders who received PPPLF credit extensions and those that did not.

Chart 10 adds to these findings by showing the ratio of the PPPLF credit line balance to the dollar amount of PPP loans extended for each institution type in the matched PPPLF borrower/PPP lender sample. We can see that reliance on PPPLF borrowing to finance PPP loan origination declines with the asset size of the financial institution. National and regional banks (with more than $10 billion in assets) rely the least on the PPPLF to finance PPP loans, with about 20% of the PPP loans financed by liquidity obtained through the PPPLF.

Chart 10, Fraction of PPP Loans funded with PPPLF borrowing



Notes: This graph shows the fraction of PPP loans originated funded by PPPLF borrowing by lender type.

Community banks and non-depository institutions on the other hand have more heavily relied on PPPLF financing, with about 40% and 60% of their PPP loan originations funded through the PPPLF. One explanation for the lower usage of PPPLF by national and regional banks is that during the course of the pandemic there was a large inflow of deposits from both consumers and corporate clients, providing an alternative funding source. This is in line with the pattern of PPPLF usage in Chart 5.

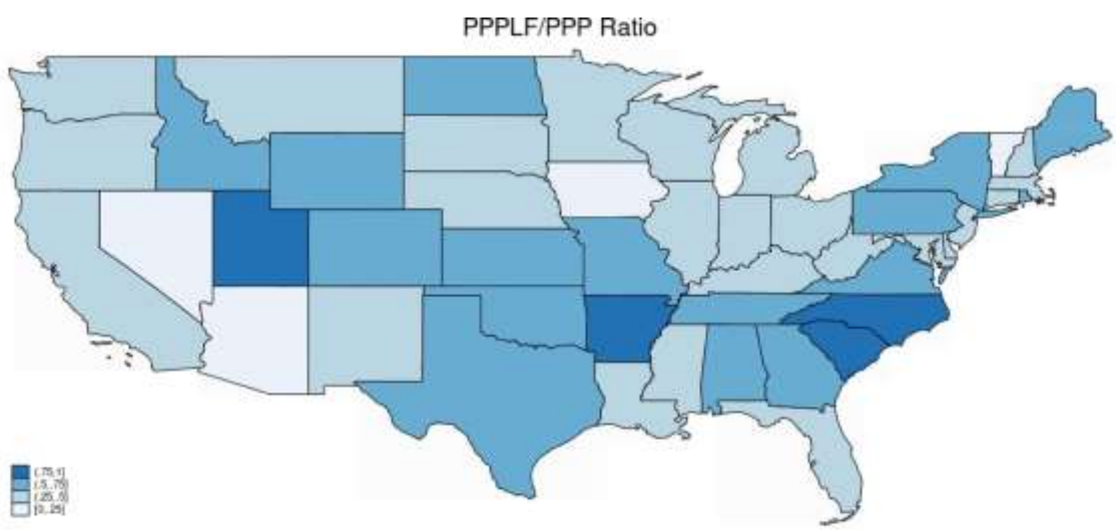
Erel and Liebersohn (2020) find that fintechs were disproportionately used in ZIP codes with fewer bank branches, lower incomes, and a larger minority share of the population, as well as in industries with little ex ante small-business lending, suggesting that fintechs expanded the overall supply of PPP lending rather than substituting away traditional banks. Our results suggest that Non-DI's (which include fintechs) took a disproportionate advantage of the PPPLF to fund PPP loans, and were likely to have served smaller businesses. Taken together with the evidence in

Erel and Liebersohn (2020), these results indicate that the PPPLF played an important role in expanding the supply of credit to PPP lenders, allowing the origination of more PPP loans in underserved areas.

Geographical Distribution of Loans for Community Banks

Chart 11 looks at the ratio of the cumulative dollar amount of PPPLF borrowing to the cumulative dollar amount of PPP loans originated by community banks by state. Community banks here are defined as depository financial institutions with less than $10 billion in total assets, including CDFIs that are depository institutions. While the geographical distribution of PPPLF borrowing for PPP loan originating community banks is fairly equal across states, community banks located in the Great Plains, the south and northeast seem to have borrowed relatively more from the PPPLF to finance PPP loan origination.

Chart 11, PPPLF-borrowing/PPP-lending Ratio for Community Banks by State



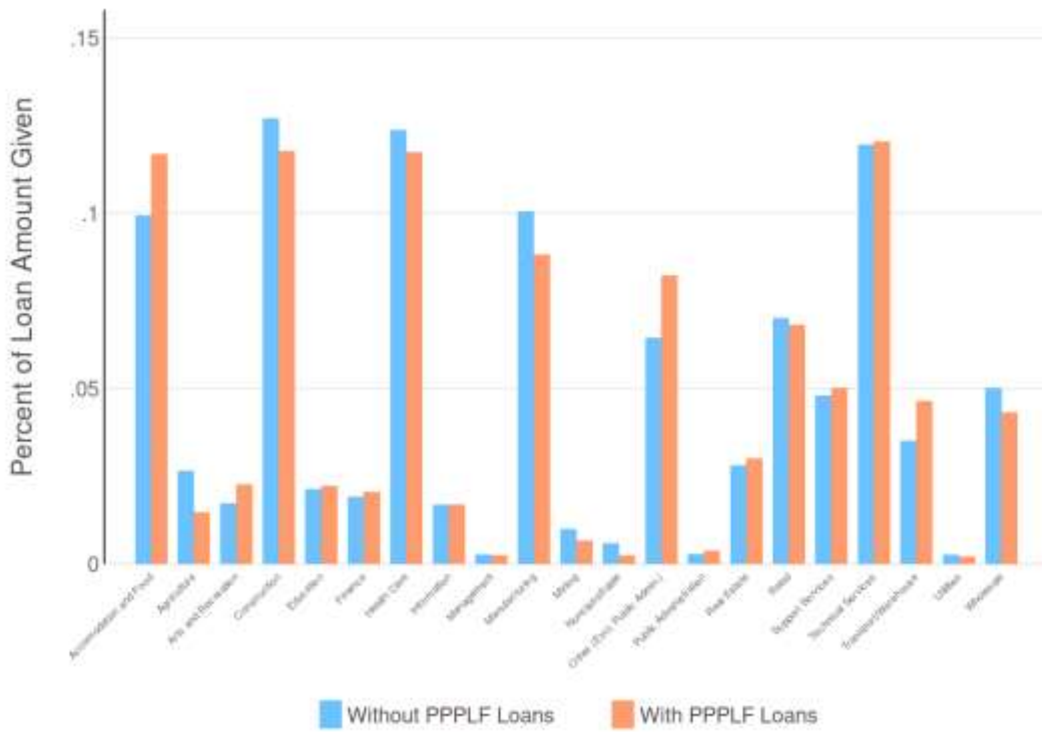
Notes: The graph shows the ratio of cumulative PPPLF borrowing to PPP loans originated for community banks, by the state where the community bank is located.

Loan Distribution by Industry

In what follows we look at the breakdown by industry of the small businesses receiving PPP loans for loans originated by PPP lenders that received PPPLF funding, versus those that did not receive PPPLF funding. To do this, we first calculate the cumulative PPP loans received by small businesses in a given industry (based on NAICS codes) that were originated by each type of financial institution (using our three-category classification for lender type based on total assets). In a second step we link these to the matched PPPLF borrowing/PPP lending financial institutions to obtain the industry breakdown of PPP loans originated for financial institutions that received PPPLF funding.

Chart 12 shows this breakdown. As we can see PPP lenders that did receive PPPLF funding disbursed PPP loans to small businesses across different industries in a largely similar way to PPP lenders that did not receive PPPLF funding.

Chart 12, Industry Breakdown of PPP loans Originated by Financial Institutions that received and did not receive PPPLF Funding

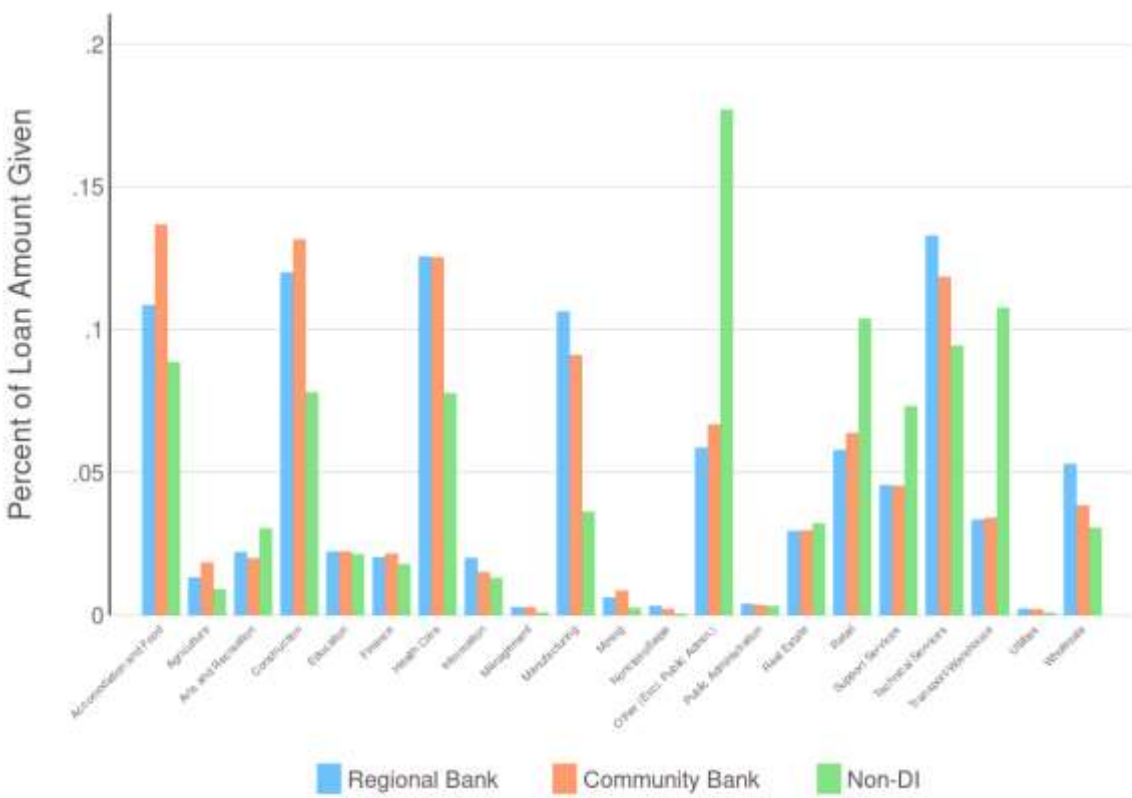


Notes: This graph reports share of PPP loans given to small businesses in different industries by institutions which received PPPLF funding and those who did not receive PPPLF funding.

We take a deeper look at this issue and show the breakdown by industry (of the small businesses receiving PPP loans) for PPP lenders that did receive PPPLF funding by lender type. We proceed as above and calculate total PPP loans by industry for each financial institution type, then we merge the PPP lenders to PPPLF borrowers and categorize based on institution type (according to our categorization based on total assets: regional bank, community bank, and non-DI) conditioned on having received PPPLF funding. We then show the (dollar amount) ratio of PPP loans disbursed by industry for each institution type relative to their total PPP loans disbursed.

Chart 13 shows this breakdown. Regional and community banks behaved similarly in terms of disbursing PPP loans to small businesses across sectors. However, non-depository institutions that borrowed from the PPPLF seemed to have financed a slightly different clientele of small businesses with PPP loans, with a higher concentration in Transport and Warehouse Services, Support Services, Retail and “Other” (which includes all other sectors not categorized excluding Public Administration).

Chart 13, Industry Break-Down of PPP-loans Originated by Type of Financial Institution Conditional on Receiving PPPLF funding



Notes: This graph shows the breakdown by industry of PPP loans originated for PPP lenders that did receive PPPLF funding by lender type.

Overall the evidence presented in this section suggests that PPPLF take up has been significant. Furthermore, it suggests that smaller PPP lenders (including non-depository institutions) relied more heavily on PPPLF financing to originate PPP loans and that they were likely to serve smaller businesses with fewer employees and lower payroll costs. When it comes to loan distribution by industry, there are no major differences between PPPLF-participating and non-participating institutions.

Section 5 Conclusion

In this article we lay out the background and rationale for the creation of the Federal Reserve's Paycheck Protection Program Liquidity Facility (PPPLF). We cover the salient features of the PPP and the PPPLF, discuss the intended aim of the facility and analyze the facility's loan take-up and impact on lender participation in the PPP program and PPP loan disbursements.

Empirical evidence based on the available data suggests that the PPPL Facility helped bolster the Paycheck Protection Program's effectiveness. By facilitating access to credit to all PPP lenders at low rates and with duration matching that of the underlying PPP loans, it incentivized lender participation in the PPP. The affordable access to credit was of particular relevance for smaller institutions with less than $10 billion in total assets and for non-depository institutions, increasing these lenders' ability to originate PPP loans. We show that smaller PPP lenders (including non-depository institutions) relied more heavily on PPPLF financing to originate PPP loans. Given that they are generally more likely to reach communities underserved by traditional banks the facility may have helped satisfy the guidance of the Senate in the CARES Act, to especially focus on providing relief to small businesses in underprivileged communities.

Furthermore, by giving beneficial regulatory capital treatment to PPP loans pledged as collateral to the facility by supervised depository institutions and creating the necessary conditions for a liquid secondary market for PPP loans, the PPPLF may have helped give further impetus to broader PPP lender participation. Even though PPPLF participation is lower for larger banks relative to smaller banks and non-depository institutions, the assurance of having available backstop PPPLF funding to finance PPP loan origination is likely to have positively impacted PPP loan origination by larger banks as well. The positive impact of the establishment of the PPPLF comes with no expected loss to the Federal Reserve and hence taxpayers. Access to PPPLF credit is fully collateralized by pledged PPP loans, with the same principal amount and maturity as the extended loans, and PPP loans enjoy a full SBA guarantee with respect to both principal and interest.

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