Public credit guarantees and/or state-owned banks?*

Cecilia Dassatti†
Banco Central del Uruguay

Rodrigo Lluberas‡
Universidad ORT Uruguay

Jorge Ponce§
Banco Central del Uruguay

José-Luis Peydró¶
Imperial College London and
Universitat Pompeu Fabra

April 21, 2022

Abstract

Public credit guarantee (PCG) schemes attempting to support credit to affected firms were broadly used during the COVID-19 pandemic. We contribute empirical evidence about the importance of complementing this policy tool with lending by state-owned banks. The results show that the PCG ameliorates the potential credit crunch and effectively reached the most affected firms. Lending by a state-owned bank complements credit provision during the pandemic. Credit growth by the state-owned bank is higher than in private-owned ones, even for firms without a PCG and for firms with relatively higher credit risk. While we find no significant differences in terms of targeting firms in affected sectors, the state-owned bank starts more new banking relationships than private-owned banks.

JEL: G21, G28, E65.

Keywords: COVID-19, public credit guarantee, state-owned banks.

*The views expressed in this article are the sole responsibility of their authors and do not compromise the institutional position of the Banco Central del Uruguay. We are extremely grateful to the Central Bank of Uruguay for providing the data for this study. We thank Eugenia Andreasen (discussant) and Camelia Minoiu (discussant) for the helpful comments. We also want to thank Florencia López for her insights on the topic. A previous version of this paper was circulated with the title "Public credit guarantees: how big of a parachute do we need?".

†E-mail: cdassatti@bcu.gub.uy
‡E-mail: lluberas@ort.edu.uy
§E-mail: jponce@bcu.gub.uy
¶E-mail: jose.peydro@gmail.com

1 Introduction

Access to credit is widely recognized as problematic for small and medium-sized enterprises (SMEs). To address this challenge, public authorities around the globe intervene in SME credit markets through public credit guarantee (PCG) schemes. A PCG offers risk mitigation to lenders by bearing a share of the lenders' losses on SME loans in case of default. It may also facilitate the discovery of borrowers' riskiness by lenders that would prefer not to lend without such a guarantee scheme. Then, PCG can contribute to expand access to finance for SMEs. Yet, if poorly designed, they may introduce inefficiencies in credit allocation, target the incorrect firms and even foster opportunistic behavior by lenders and borrowers.

PCG schemes have been extensively used as one of the measures in the policy toolkit to respond to the economic impact of the COVID-19 pandemic and the associated lockdowns. In several cases, existing schemes were extended to provide a prompt response to the emerging risk, with the aim of ameliorating the credit crunch and reduce lenders' exposure to systemic risk. The COVID-19 pandemic, its effects and PCG schemes are ongoing. Yet, an increasing body of academic research is providing empirical evidence on favor of the usefulness of the PCG as a policy tool to support credit during a stressful period.

We contribute empirical evidence for the case of Uruguay, which may help to inform policymakers about the design of credit support policies during a stressful time. Specifically, publicly guaranteed credit grows more than the non-guaranteed one, particularly during the COVID-19 pandemic and to firms that where the most affected by the pandemic. As expected, given the design of the guarantee scheme, firms with poor debt performance are less likely to receive a loan backed with a public guarantee. We also find empirical evidence suggesting mild opportunistic behavior through substitution of illiquid guarantees.

More importantly, we explore the potential complementarity between PCG and lending by a state-owned bank during a stressful time like the COVID-19 pandemic. A relevant

question is which is the most effective channel to direct funds in order to support the most affected firms. Supporting lending through a well designed public credit guarantee scheme may be an avenue. Indeed, we provide empirical evidence on the positive impact of a PCG scheme on credit growth to affected firms. Another avenue is to rely on state-owned banks. Both policy tools may be complementary rather than substitutes as the empirical evidence presented in this paper suggests. More precisely, the results show that credit growth by the state-owned bank is higher than in private-owned ones, even to firms without a PCG and to firms with relatively higher credit risk. While we find no significant differences in terms of targeting firms in affected sectors, the state-owned bank starts more new banking relationships that private-owned banks, which may facilitate credit supply to these firms after the pandemic.

We use granular data from three databases compiled by the Banco Central del Uruguay in its role as banking regulator and supervisor. The sample covers the period between January 2015 and January 2021 with a monthly frequency. One database contains information about all the performing and non-performing loans granted by the financial system. A particular feature of this database is that it contains very detailed information about all the guarantees offered by borrowers, including the type of guarantee such as the liquidity of the assets offered as collateral. A second database contains specific information associated to the loan contracts that are backed by the PCG scheme, including information about the loan destination, the frequency of amortization, the amount, rate and currency of the loan, the period of grace, and the percentage of coverage. Third, we have balance sheet and income statement data of all the financial institutions. As a result, our dataset includes loans granted from 11 banking institutions to an average of approximately 35.000 different firms per year between 2015 and 2021.

Uruguay's banking system offers an excellent setup for our analysis because there is a state-owned bank that accounts for approximately 30% of the bank loan market among the 11 banking institutions that are currently operating in the Uruguayan banking system. The other banks are private-owned, international banks mainly organized as branches. Despite its differential ownership, all banks are subject to exactly the same regulation

and supervision.

Regarding the PCG scheme, the main results are as follows. Firstly, we estimate a linear probability model to provide evidence on who gets a PCG backed loan. Firms operating in sectors that were affected or moderately affected by the pandemic are more likely to receive a PCG. Interestingly, while the coefficient of moderately affected SMEs is positive and statistically significant through the whole sample, the coefficient of the most affected firms is only significant during the COVID-19 period. These results hold after controlling for firm-loan and bank characteristics, and are robust to considering other probability models, e.g. a Probit specification.

As one would expect from the design of the PCG scheme, we find empirical evidence that firms with a poor debt performance (high non-performing loan debt ratio, positive write-off ratio, positive debt-restructured ratio) are less likely to receive a PCG loan. Finally, we find that the probability of receiving a PCG loan is larger for a SME operating with the bank that owns the largest share of its debt and is increasing in the number of bank relationships of SMEs. Hence, previous engagement of firms with banks matter to improve the probability of being supported by a PCG loan.

Secondly, we assess what is the impact of the PCG program on credit growth. In so doing, we use the identification strategy suggested by Khwaja and Mian (2008). The results show that the PCG scheme has a positive impact on credit growth. Specifically, our estimates indicate that there is an average monthly growth of 1.2 percentage points higher in credit backed with a PCG in the whole sample. When we restrict the sample to the COVID-19 pandemic period, i.e. from April 2020 onward, we find a larger impact as a consequence of the expansion of the PCG scheme: monthly credit growth is 3 percentage points higher in credit backed with a PCG than in credit without PCG. Moreover, the impact is even larger for the case of the most affected firms that receive a PCG: monthly credit growth adds 1.9 percentage points for this group of SMEs. All these results hold after controlling for firm-loan and bank characteristics, reaching coefficients of greater magnitude in the most saturated specification.

Thirdly, we find empirical evidence suggesting that at the same time of obtaining a

PCG loan firms reduce the amount of other illiquid guarantees with the lender. This may represent an outcome of opportunistic behavior by banks. Nevertheless, looking closer to the data we find that the number of cases in which a SME displays a decline in the stock of non-liquid guarantees kept with a bank while simultaneously receiving a PCG for a loan with that bank is only around 5% of the total operations and involves just a small number of different firms.

Next we explore the relative performance of the state-owned bank along four dimensions: impact on credit growth, targeting of affected firms, risk-taking behavior, and the creation of new credit relationships. Firstly, regarding credit growth during the pandemic, the results show that the state-owned bank lends more, even without a PCG. More precisely, in absence of a PCG the state-owned bank exhibits a statistically significant higher credit growth than private-owned banks during the pandemic (i.e. 3.4 percentage points). In addition, the effect of a PCG in credit growth is also larger for the case of the state-owned bank: monthly credit growth is 3 percentage points higher in the state-owned bank than in the private-owned ones.

Secondly, our empirical evidence does not support the hypothesis of a better targeting technology of the state-owned bank with respect to private-owned ones. Conditional on having a PCG, the estimated coefficients of credit growth to affected and non-affected sectors are not statistically different inside each type of banks. Moreover, conditional on not having a PCG, we find no statistically significant effect on lending to both affected and non-affected sectors regardless of the ownership of the lending institution.

Thirdly, we find a statistically significant difference on the behavior of both groups of banks: in absence of a PCG guarantee, credit to firms that have poor credit rating decreases for the private-owned banks and increases for the state-owned one. Overall, during the pandemic, the state-owned bank lends more than the private-owned banks in general and regardless of firms having a good credit rating or not. Hence, the state-owned bank takes more credit risk than the private ones. This result stresses the differential behavior of the state-owned with respect to private-owned ones. During the COVID period, private banks lend only when the credit is backed by the PCG program. However,

the state-owned bank increases credit even to firms outside the PCG scheme and with relatively bad credit ratings.

Fourthly, there is empirical evidence supporting the hypothesis that the PCG scheme facilitates the creation of banking relationships. Moreover, we find a statistically significant different behavior between the new credit relations created by the state-owned and the private banks. Although private banks show a positive impact of the PCG scheme in terms of new banking relations, the magnitude of the coefficient is significantly higher for the state-owned bank. In addition, although we also find a positive coefficient for other loans not backed by a PCG granted by the state-owned bank, the size of the coefficient is significantly lower than the one associated to PCG backed loans. Overall, the results suggest that the PCG scheme facilitates the creation of new banking relationships and that, on top of that, the existence of the state-owned bank foster more banking relationships.

The rest of the paper is organized as follows. The next section presents a review of the related literature. Section 3 describes the data, its sources and provide descriptive statistics. Section 4 revise the main characteristics and design of the PCG scheme, as well as the empirical results about its performance. Section Section 5 focus on the analysis of the contribution and relative performance of the state-owned bank. Section 6 concludes with final remarks. Detailed tables contained the empirical results are in the Appendix.

2 Related literature

From a theoretical point of view, the introduction of a credit guarantee scheme might have ambiguous effects. If firms are not capable of complying with collateral requirements, a credit guarantee scheme may allow access to credit for these type of firms. For instance, Meyer and Nagarajan (1996) argue that credit guarantees can lead to a learning process, where banks discover that borrowers benefiting from the guarantee are not as risky and unprofitable as initially expected and become willing to provide loans to them in the future, even without a PCG. **Following this perspective, Abraham and Schmukler (2017) claim that public credit guarantees can be used to subsidize the**

initial costs of learning about new groups of borrowers. On the opposite side, a credit guarantee scheme might also lead to riskier behavior by both the borrower and the bank (see, for instance, Lelarge et al. (2010), Galetovic and Sanhueza (2006)). **Specifically, guarantees might lead to adverse selection, attracting riskier firms and worsening the overall pool of borrowers Core and De Marco (2021). In addition, banks could have lower incentives for asigning resources to screening and monitoring activities, which would eventually lead to future loan defaults de Blasio et al. (2018).**

According to Cowan et al. (2015), PCG reduce banks' exposure to systematic risk while also reducing banks' capital requirements in a moment in which these are binding. As a result, this softening of the capital constraint has a positive impact on the aggregate supply of credit. When compared to direct subsidies, the appeal of PCG is based on the fact that the screening and monitoring can be performed by private institutions that have more expertise in performing these tasks than the provider of the guarantees. The authors compare the performance of loans with and without guarantees, finding that for each additional unit of guarantees to a banking institution, its credit to SMEs increases by 0.65. Similarly, we provide empirical evidence on the positive impact of a PCG scheme over credit growth to SMEs during the COVID-19 pandemic. **Additional arguments in favor of PCG are based on the idea that, by delegating screening and monitoring to private banks, issuing public guarantees mitigates the risk of politically connected lending (Khwaja and Mian (2005)).**

Following a similar motivation, Gropp et al. (2014) analyze the impact of PCG on the risk-taking of banks in the context of a natural experiment in Germany. Specifically, they analyze the response of banks to a removal of a governmental guarantee program, comparing the behavior of banks subject to the program versus that of those not included in the scope of the program. They find that the removal of government guarantees resulted in a significant reduction in banks' exposure to credit risk relative to a control group of German banks that were never subject to the guarantee. They mention two effects of public guarantees on bank risk-taking that work in opposite directions. On the one hand,

government guarantees may reduce market discipline because creditors anticipate their bank's bail-out and therefore have fewer incentives to monitor the bank's risk-taking or to demand risk premia for higher observed risk-taking. As a consequence, the risk-taking of the protected banks' increases. On the other hand, government guarantees also affect banks' risk-taking through their effect on banks' margins and charter values. Hence, government guarantees may alternatively be viewed as an implicit subsidy that reduces banks' risk-taking through their future value. Their results appear to be in line with the first effect.

D'Ignazio and Menon (2020) state that despite the popularity of guarantee schemes, there are no conclusive theoretical findings on the net effect of these type of schemes on firms' finance. They try to fill this gap by estimating the casual effect of a credit guarantee scheme implemented in Italy during 2008. Their main results are the following: credit guarantee schemes are associated with an increase in firms' bank debt, an increase in the share of long-term debt, an increase in the firms' probability of default and an increase in firms' investments. In a similar study but exploiting the temporarily extension of the PCG program in Japan between 1998 and 2001, Uesugi et al. (2010) study the effect of the program not only on credit availability but also on firms' performance after participating in the program. On one hand, they find that the PCG program make credit available to otherwise credit constrained firms, but, access to the program resulted in firms being less profitable in the following years. Moreover, their results confirm that the program had an effect on the behavior of banks as undercapitalized banks substituted non-guaranteed loans with loans with collateral. **These results are in line with the *loan-portfolio substitution hypothesis* described in Uesugi et al. (2010), which could overcome the positive effect of the *loan availability hypothesis*. Our results show a relatively low substitution effect, leading to an overall positive effect of public credit guarantees.**

In addition to the risk-taking effects that credit guarantee schemes may introduce, another possible outcome from such schemes is that the loans might not go to the targeted firms. For example, when studying the effectiveness of a publicly funded guarantee scheme

for SMEs implemented in Italy, Zecchini and Ventura (2009) find that the PCG scheme did not necessarily targeted the most financially disadvantaged firms, since there was no screening to assess whether a loan proposed by a bank to the fund would have been granted even in the absence of a guarantee. We find the opposite result. More precisely, we find empirical evidence that the PCG scheme implemented in Uruguay during the COVID-19 pandemic reached the most affected SMEs and allowed bank credit to them to growth at higher rates than for other SMEs.

Another branch of the literature, currently in early stages, studies the availability of PCG programs during the COVID-19 pandemic. In that respect, the study of its effects on firms profitability and delinquency rates seems to be, at this stage, preliminary and incomplete as the overall effect is expected to be reached some time ahead. In that sense, our focus, as well as that of Core and De Marco (2021), is on the effect of the PCG program during the pandemic. Whilst we study credit availability and resources allocation, Core and De Marco (2021) study how the private sector allocated funds after the expansion of the PCG program in Italy during the COVID-19 pandemic focusing on the characteristics of borrowers and lenders.

3 Data

We use three datasets covering the period January 2015 to January 2021 with a monthly frequency. The first dataset is the credit registry compiled by the Banco Central del Uruguay, the financial regulator and supervisor. This registry contains an exhaustive record of all loans granted in the financial system. It includes detailed information at the loan level: the amount of the loan, the currency denomination of the loan, and its maturity, the identity of the borrower, its country of residence, the economic sector to which it belongs, and the identity of all the financial institutions with which it has loans and/or collateral.

A second dataset includes balance sheet and income statement information of all the financial institutions operating in the Uruguayan financial system. A third dataset

contains information about the portfolio of public credit guarantee: the percentage of loan's coverage, the destination of the guaranteed loan (e.g. working capital, investment and restructure of loans), its amount, its currency denomination and maturity (either local currency or US Dollar), as well as the grace period, the interest rate, and the frequency of amortization.

Combining these three datasets, we assemble an initial database that includes the whole universe of loans granted to firms. Financial institutions that are different from banks are excluded from the sample because they mainly lend to consumers. After re-shaping all the variables associated with the type of the loan, and collapsing the database at the bank-firm-currency denomination level, we exclude accounting codes associated to contingencies and credit cards, as well as observations with loan amounts lower than 1.000 Uruguayan pesos (USD 23 approximately). The final database contains 3 million observations, including loans granted from 11 banks to an average of approximately 35.000 different firms per year. A total of 60.347 firms appear at least once in the period January 2015 to January 2021.

A relevant feature of our database is that it includes detailed information about the characteristics of the collateral and other guarantees associated to loans, which allows us to identify those loans granted under the PCG scheme. In addition, the richness of the data enables us to classify firms' personal guarantees according to the liquidity of the assets offered as guarantee.

4 Public credit guarantee

4.1 The mechanism

As one element in the policy toolkit to respond to the economic impact of the COVID-19 pandemic in Uruguay, an existing public credit guarantee (PCG) scheme was enhanced in April 2020. Some of the restrictions of the original mechanism were softened with the aim of reaching the most affected firms and also providing good incentives to lenders in

order to avoid misuse and opportunistic behavior.

In particular, the possible destinations of guaranteed loans now include the restructure of past loans and the extension of their maturities, in addition to the already existing possible uses as working or investment capital. The coverage of the guarantee increases to cover up to 80% of the loan (before it was 60%).[1] The maximum loan amount that can be covered is UI 1.200.000 (approximately USD 150.000)[2], and the loan can be granted either in national currency (Uruguayan pesos or UI) or in US dollar. The maturity of the amortizing loan can vary from a minimum of 3 months to a maximum of 3 years, including a grace period of up to 6 months. In addition, the fees charged to banks decrease considerably and vary according to the currency denomination of the loan.[3] Finally, the interest rate of guaranteed loans are now subject to caps.[4]

While the decision-making on borrower eligibility and credit risk is left to the lender, there are still a series of pre-established requirements. First, the eligible firm needs to be formally established, with payment capacity and up to date with its tax obligations. Second, the firm's annual sales must be below UI 75.000.000 (approximately 8 million US dollar). Third, if the firm had already an active loan in February 2020, it must be less than 60 days past due in the payment of its loans as of February 29, 2020. Four, the firm must have a relatively good rating (i.e. "2B" or better[5]) in the credit registry as of February 2020. If the firm is below the 2B rating, it is still eligible as long as one of the following conditions hold: (i) its debt is lower than 100 US dollars or its equivalent in Uruguayan pesos as of February 2020, (ii) the firm has improved its rating and at the time of receiving the guarantee is at least 2B.

[1] The guarantee can cover up to 50% of the credit balance of a firm restructuring previous loans.

[2] UI stands for Unidad Indexada, a unit of value that is readjusted according to inflation measured by the Consumer Price Index.

[3] An annual fee of 0.6% for guarantees granted in domestic currency, and 0.8% in US dollar.

[4] For loans in Uruguayan Pesos the cap is ITLUP 4 years node + 450 basis points: 17.22% as for April, 2020. The *ITLUP Curve* is a spot yield curve of Uruguayan Securities with sovereign risk issued in current national currency (Uruguayan pesos). For loans in UI the cap is CUI 4 years node + 250 basis points: 5.65% as for April, 2020. The *CUI Curve* is the spot curve of Uruguayan sovereign securities issued in national currency indexed to inflation. For loans in US Dollar, the cap is CUD 4 years node + 250 basis points: 5.24% as for April, 2020. The *CUD Curve* is the spot yield curve of Uruguayan sovereign securities issued in US Dollar.

[5] See Appendix A.

4.2 Descriptive statistics

4.2.1 The banking system

Uruguay's banking system offers an excellent setup for our analysis because there is a state-owned bank that accounts for approximately 30% of the bank loan market among the 11 banking institutions that are currently operating in the Uruguayan banking system.[6] The other banks are private-owned, international banks mainly organized as branches. Despite its differential ownership, all banks are subject to exactly the same regulation and supervision. Moreover, the state-owned bank declares to behave as any other commercial bank, pursuing the objective of maximizing profits. Nevertheless, there are some observable differences with respect to private-owned banks. For instance, the board members of the state-owned bank are appointed by the government. In general, the proportion of members representing the government and opposition parties approximates the proportion of votes obtained by each party in the last national election. Another difference is that the state-owned bank has a broad physical net of branch offices throughout the country. It reaches areas with a relatively low density of population and possibly out of a cost-efficient range.

The banking system displays a healthy situation in terms of solvency and liquidity. Figure 1 shows the solvency ratio. The average capital adequacy ratio (CAR) is 13% during the period under analysis. All banks have a ratio above 10% during the period. In particular, the state-owned bank has a capital adequacy ratio well above the regulatory minimum —the bank's average CAR for year 2020 was 21%[7].

[6] We exclude from the analysis the other state-owned bank because its only line of business is mortgages loans.

[7] The increase observed in Panel (a) of Figure 1 is explained by a change in the accounting criteria of the information reported.

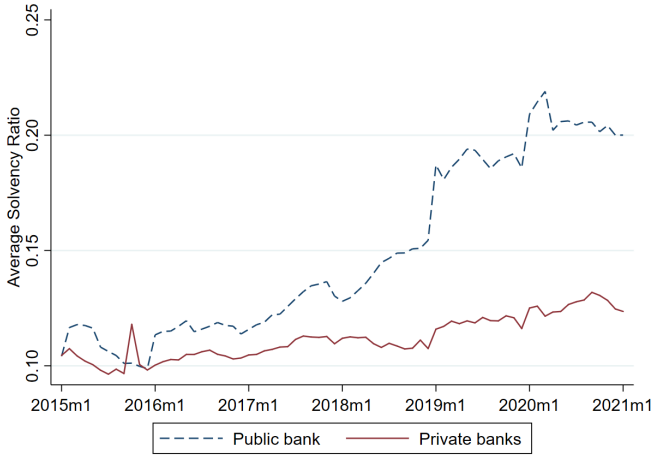


Figure 1: *Average Capital Adequacy Ratio*

In addition, the quality of the total portfolio of loans measured by the non-performing loans (NPL) ratio, may also be considered adequate: the average NPL ratio has been between 3-4% in the period under analysis (see Figure 2). The increase in the portion of NPL between 2017 and 2018, although departing from low levels, is mainly explained by the performance of loans associated to the primary sector. This sector suffered an idiosyncratic shock during that period. Although the ratio of NPL is slightly higher for the state-owned bank, both private and state-owned banks share a similar trend and the ratio is below 5% from 2019 onward.

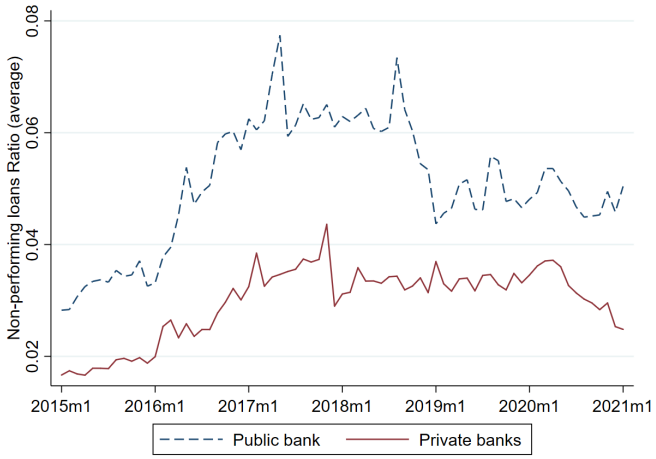


Figure 2: *Average Non-Performing Loans Ratio*

4.2.2 The PCG Scheme

Although the scheme started in September 2009, until 2019 it reached just a relatively small scale and was not widely used by financial institutions. The total stock of credit granted with a PCG was approximately USD 45 million in 2019, and the accumulated guaranteed credit between 2009 and 2019 reached USD 538 million. However, the total amount of guaranteed credit granted during the first waves of the COVID-19 pandemic (April 2020 to June 2021) was USD 780 million, approximately one and a half times the accumulated guaranteed credit in the previous ten years (see Figure 3). The total amount of guarantees granted was USD 550 million during the COVID-19 pandemic period, representing an average coverage ratio of 70%.

Figure 3: *Total credit with PCG (in million USD)*

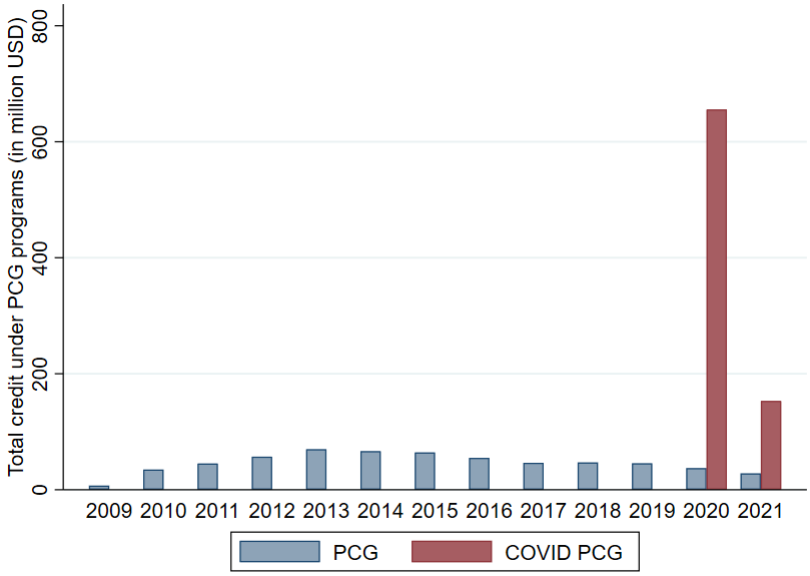
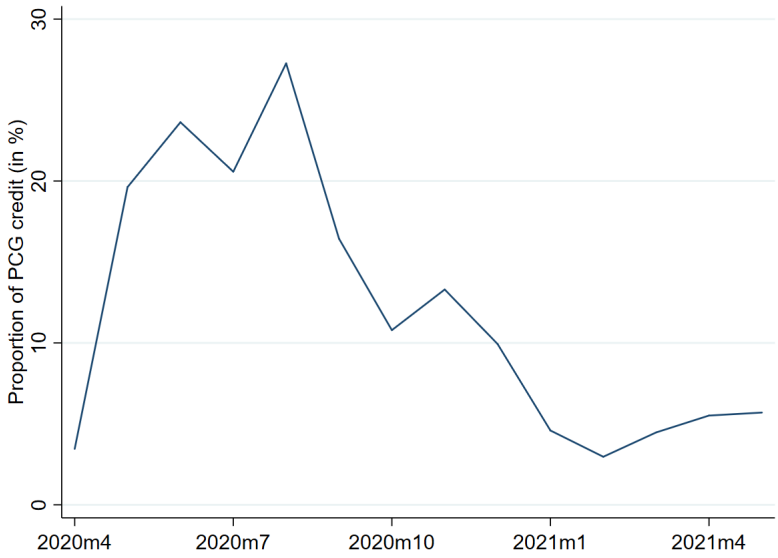


Figure 4 shows the proportion of credit granted with a PCG during the first wave of the pandemic. At its peak in August 2020, 27% of credit granted to SMEs was backed with a PCG.

Figure 4: *Proportion of credit to SMEs with PCG during the first wave of the pandemic (in %)*



When analyzing the participation in the PCG scheme by economic sector (see Table A.3 in the Appendix for details), we observe an increase in the participation of loans backed by a PGC to the "Services" sector, which is consistent with the significant negative impact of the pandemic on it. In contrast, there is a slight decrease in the participation of the "Agriculture" and "Manufacturing" sectors, while the share of "Trade" remains unchanged.

The PCG program was available before the pandemic, so we can classify indebted firms into four groups: those that never received a PCG loan, those that received a PCG loan before the pandemic, those that received a PCG loan during the pandemic, and those that received a PCG loan both before and during the pandemic. Figure 5 shows the average (in logarithm) debt for each of these four groups of firms. Average credit increased the most among firms that received a PCG loan during the pandemic, i.e. after March 2020. For that group of firms, average debt increased 66% between February 2020, the month immediately before the start of the pandemic in Uruguay, and January 2021. Average debt increased 40% among firms that already had a PCG loan before the pandemic and continue having one during the pandemic. Finally, average debt for those that never received a PCG, and those that received one only before the pandemic, increased 10%

and 14% respectively during that period.

Figure 5: *Average debt by firm type (in logarithm)*

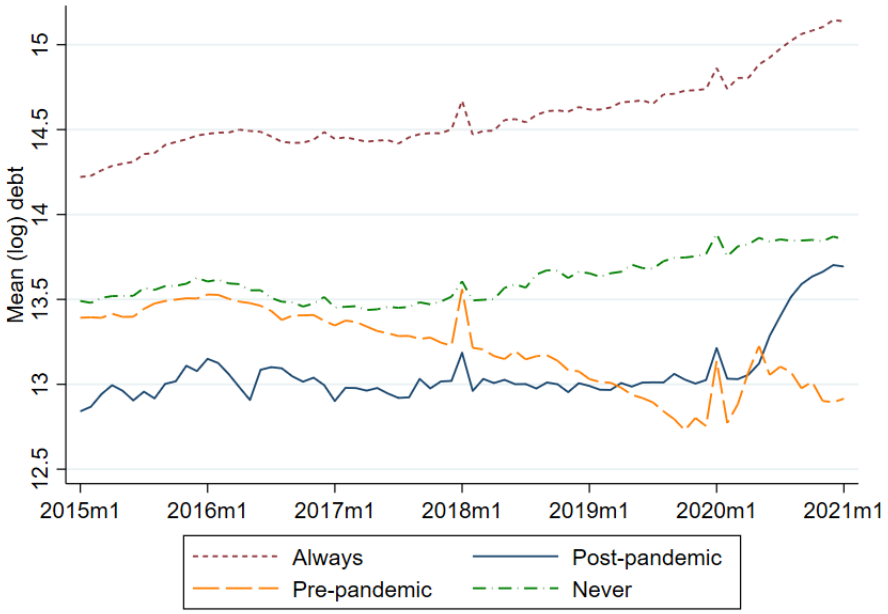


Table A.4 in the Appendix shows debt indicators of firms with PCG loans. The average loan amount and its dispersion are similar before and during the pandemic. However, it is still too early to conclude on the performance of these loans, as can be seen through the indicators on delinquency, write-off an debt restructuring. On average, PCG borrowers have more than one banking relationship and up to five banking products[8]. As expected, the mean amount of loans with a PCG is larger during the pandemic than before. There is also an increase in the mean amount of loans without a PCG, but the increase is smaller than for those with a PCG.

If we focus on banking relationships, approximately 91% of firms with a PCG granted during the pandemic period obtain the loan from the main bank with which they held a debt relationship before. When considering the unique bank-firm pairs (See Table A.5 in the Appendix), there is an increasing trend in the number of renewed relationships for the whole sample. However, when considering only firms with a PCG loan, there is no such trend. Interestingly, the number of renewed relationships increases significantly after the

[8]We exclude from the count of products the credit and checking accounts because they are universal to all firms.

outbreak of the pandemic. When considering the evolution of the number of new banking relationships, there is a decreasing trend until the emergence of the pandemic. However, there is a remarkable increase in the number of new borrowers during the first month of 2021, which is even more important among those firms with a PCG.[9]

4.3 The performance

4.3.1 Which firms get a PCG loan?

To assess which bank and firm characteristics are relevant to PCG backed lending we estimate the following linear probability model:

$$PCG_{f,b,t} = \delta_b + \gamma_t + \beta_1 X_{f,b,t} + \beta_2 H_{b,t} + \beta_3 A_f + \epsilon_{f,b,t}, \tag{1}$$

where $PCG_{f,b,t}$ is equal to 1 if firm f at time t is granted a PCG loan with bank b, and 0 if the loan is not backed by a PCG. Among firm characteristics, A_f, we include a variable provided by the Economic Statistics Division of the Banco Central del Uruguay, that classifies economic sectors according to the impact of the COVID-19 shock in: "Affected", "Moderately Affected", "Not affected", and "No Information"[10]. We present results for a simple specification without controls, and for more saturated specifications where we control for firm-loan characteristics ($X_{f,b,t}$), and for bank characteristics ($H_{b,t}$).[11]

The main results are in Table 1. Tables A.6 and A.7 in the Appendix show detailed results and a robustness check using a probit specification instead of a linear probabil-

[9] According to Lelarge et al. (2010), PCG may help start new relationships between banks and entrepreneurs which can be fruitful in the future. Meyer and Nagarajan (1996) argue that PCG can lead to a learning process, through which banks discover that borrowers benefiting from the guarantee are not as risky or unprofitable as they were thought.

[10] Other firm characteristics are captured by a set of variables describing the performance of firms' credit portfolio (*Firm NPL Ratio*, *Firm Write-Off Ratio*, and *Firm Debt Restructuring Ratio*), and the number of banking relationships of the firm.

[11] Regarding firm-loan characteristics, we introduce the following controls: *Duration*, the maturity of the loan (in months); *Firm USD Debt Ratio*, the share of total credit denominated in US dollars; *Firm ST. Debt Ratio*, the share of short-term debt, and *Share*, the participation of the bank b in firm's f total debt. Regarding bank characteristics, we include the following: *Solvency Ratio*, defined as the ratio of capital to risk weighted assets; *Credit/Asset Ratio*, given by the ratio between total loans to total assets; *Non-Performing Loan Ratio*, the ratio of non-performing loans over the total loan portfolio of the bank; *Provisioning Ratio*, defined as the ratio between total provisions to total loans; and *ROA*, a profitability measure given by the ratio of return-on-assets.

Table 1: *Affected firms get more PCG during the pandemic*

	(1) Whole	(2) Pre COVID	(3) COVID	(4) Whole	(5) Pre COVID	(6) COVID
Affected$_f$	0.033	0.026	0.069**	0.037	0.035	0.051*
	(0.023)	(0.026)	(0.034)	(0.023)	(0.025)	(0.030)
Moderately Affected$_f$	0.069***	0.068***	0.102***	0.069***	0.071***	0.086***
	(0.021)	(0.025)	(0.031)	(0.020)	(0.023)	(0.027)
No information$_f$	0.028	0.021	0.061*	0.029	0.027	0.040
	(0.027)	(0.031)	(0.036)	(0.024)	(0.027)	(0.031)
Firm FE	N	N	N	N	N	N
Bank FE	Y	Y	Y	Y	Y	Y
Time FE	Y	Y	Y	Y	Y	Y
Firm-loan Controls	N	N	N	Y	Y	Y
Bank Controls	N	N	N	Y	Y	Y
Observations	2,650,462	859,645	369,935	2,650,462	859,645	369,935
R-squared	0.054	0.045	0.075	0.060	0.050	0.089

This table presents the results of specification 1. The dependent variable is a dummy variable equal to 1 if firm f receives a PCG loan from bank b at month t. All regressions are estimated using ordinary least squares. Robust standard errors clustered at bank-broad sector level and reported in parentheses. ***: Significant at 1% level; **: significant at 5% level; *: significant at 10% level.

ity model, respectively. All estimations are performed for the whole period (January 2015-January 2021), the pre-pandemic period (January 2018-March 2020), and for the pandemic period (April 2020-January 2021). All regressions are estimated using ordinary least squares. Fixed-effects are included at the firm, bank and time level depending on the specification, and standard errors are clustered at the bank-industry level in order to account for potential correlation in the residuals.

Columns (1)-(3) in Table 1 show that firms operating in affected sectors are more likely to receive a PCG loan during the pandemic. This result is even stronger for those firms in the most affected sectors since the coefficient turns out to be statistically significant only during the pandemic (see column (3)). These results hold after controlling for firm-loan and bank characteristics (see columns (4)-(6)).

Some firm characteristics have a statistically significant, positive relationship with the probability of being granted a PCG loan. Specifically, firms (i) with a larger number of bank relationships and (ii) that hold a high proportion of its total debt concentrated in a single bank are more likely to receive a PCG loan during the pandemic. Moreover, as one would expect, firms with a poor debt performance (high non-performing loan debt ratio, positive write-off ratio, positive debt-restructured ratio) are less likely to receive a PCG loan (see column (6) in Table A.6 in the Appendix). This result is desirable from

a credit risk perspective, and it is also consistent with the design of the PCG mechanism (see Section 4).

4.3.2 What is the impact of the PCG program on credit growth?

To assess this question we estimate the following equation:

$$\triangle \ln C_{f,b,t+1} = \alpha_f + \delta_b + \gamma_t + \beta_1 PCG_{f,b,t} + \beta_2 X_{f,b,t} + \beta_3 H_{b,t} + \epsilon_{f,b,t}. \quad (2)$$

The dependent variable is the change in the logarithm of the total amount of loans of firm f in bank b between months t and $t+1$. The key explanatory variable is $PCG_{f,b,t}$, which indicates whether the firm received a PCG loan from bank b at time t. Other controls include firm-loan characteristics ($X_{f,b,t}$), and bank characteristics ($H_{b,t}$). Following Khwaja and Mian (2008), we restrict the sample to those firms with more than one banking relationships. Hence, identification of the effect of a PCG loan on credit growth comes from within firm variation. To be more specific, in order to be able to identify the effect of the PCG program on credit growth we need to have firms with a regular loan in one bank and a PCG backed loan in another bank.

The main results are shown in Table 2. Table A.8 in the Appendix shows detailed results. As before, all estimations are performed for the whole period (January 2015-January 2021), the pre-pandemic period (January 2018-March 2020), and for the pandemic period (April 2020-January 2021). Standard errors are clustered at the bank-industry level. Given that the number of firms with more than one banking relationship is approximately one third of the total number of firms with bank loans, there might be concerns about the external validity of the results. Table A.9 in the Appendix shows that the results remain robust when Equation 2 is estimated for the whole sample of firms.

Results show that the PCG program has a statistically significant, positive impact on credit growth, and that this impact is larger during the pandemic. Specifically, the results suggest that there is a monthly credit growth 1.2 percentage points higher among PCG loans than among the rest of loans (Columns (1) and (4)). When the sample is restricted

Table 2: *PCG have a positive impact on credit growth*

	(1) Whole	(2) Pre COVID	(3) COVID	(4) Whole	(5) Pre COVID	(6) COVID	(7) Whole	(8) Pre COVID	(9) COVID
$PCG_{f,b,t}$	0.012***	0.009***	0.035***	0.012***	0.010***	0.030***	0.026***	0.025***	0.053***
	(0.001)	(0.001)	(0.003)	(0.001)	(0.002)	(0.004)	(0.001)	(0.002)	(0.003)
$PCG_{f,b,t}\times$ Affec.$_f$				0.004	-0.002	0.019**			
				(0.003)	(0.004)	(0.007)			
$PCG_{f,b,t}\times$ Mod.Affec.$_f$				-0.001	0.001	0.005			
				(0.003)	(0.004)	(0.006)			
$PCG_{f,b,t}\times$ No Info.$_f$				0.001	-0.002	0.010			
				(0.003)	(0.004)	(0.009)			
Firm FE	Y	Y	Y	Y	Y	Y	Y	Y	Y
Bank FE	Y	Y	Y	Y	Y	Y	Y	Y	Y
Time FE	Y	Y	Y	Y	Y	Y	Y	Y	Y
Firm-loan Controls	N	N	N	N	N	N	Y	Y	Y
Bank Controls	N	N	N	N	N	N	Y	Y	Y
Observations	963,067	311,780	120,082	963,067	311,780	120,082	963,067	311,780	120,082
R-squared	0.027	0.047	0.053	0.027	0.047	0.053	0.032	0.053	0.058

The dependent variable is the change in the logarithm of the total amount of loans of firm f in bank b between months t and $t+1$. $PCG_{f,b,t}$ is a dummy variable equal to 1 if firm f receives a PCG loan from bank b at month t, 0 otherwise. All regressions are estimated using ordinary least squares. Robust standard errors clustered at bank-broad sector level are reported in parentheses. ***: Significant at 1% level; **: significant at 5% level; *: significant at 10% level.

to the period from April 2020 onward, the effect is larger, possibly as a consequence of the expansion of the PCG program. Columns (3) and (6) show that the PCG scheme results in a credit growth that is between 3.0 and 3.5 percentage points higher. Moreover, the effect is even larger (i.e. an additional increase of 1.9 percentage points) among firms operating in economic sectors that were the most affected by the pandemic. All these results hold after controlling for firm-loan and bank characteristics, reaching coefficients of greater magnitude in the most saturated specification.

4.3.3 Which is the impact of the PCG program on other guarantees?

It is likely that loans backed by a PCG entail lower credit risk than similar loans with other type of collateral. If this is the case, they are cheaper for banks in terms of capital requirements, so that banks may have an incentive to substitute non-liquid guarantees with a PCG (Uesugi et al., 2010). Indeed, we identify few cases in the data. To test for this kind of guarantee substitution, we estimate the following model:

$$\ln NonPCG_{f,b,t+1} = \alpha_f + \delta_b + \gamma_t + \beta_1 PCG_{f,b,t} + \beta_2 X_{f,b,t} + \beta_3 H_{b,t} + \epsilon_{f,b,t}. \quad (3)$$

The dependent variable is the logarithm of the total amount of guarantees that are

different from the PCG scheme for the pair of bank b and firm f in $t+1$. Again, the independent variable of interest is $PCG_{f,b,t}$ and, as before, $X_{f,b,t}$ and $H_{b,t}$ stand for firm-loan and bank characteristics respectively.

Table 3 shows the main results and Table A.10 in the Appendix show more detailed results. There is evidence of some degree of guarantee substitution during the pandemic. Nevertheless, this result should be taken with caution because the number of cases is small, as well as the number of firms potentially involved in this kind of substitution strategy.

Table 3: *There is mild evidence of guarantee substitution*

	(1) Whole	(2) Pre COVID	(3) COVID	(4) Whole	(5) Pre COVID	(6) COVID	(7) Whole	(8) Pre COVID	(9) COVID
$PCG_{f,b,t}$	0.027	0.026	-0.106**	-0.008	-0.007	-0.133**	-0.029	-0.022	-0.156**
	(0.029)	(0.035)	(0.043)	(0.045)	(0.055)	(0.060)	(0.044)	(0.055)	(0.060)
$PCG_{f,b,t}\times$ Affec.$_f$				-0.069	-0.056	-0.025	-0.062	-0.044	-0.002
				(0.102)	(0.114)	(0.108)	(0.101)	(0.112)	(0.106)
$PCG_{f,b,t}\times$ Mod.Affec.$_f$				0.124*	0.140	0.043	0.129*	0.148	0.056
				(0.070)	(0.091)	(0.110)	(0.067)	(0.090)	(0.110)
$PCG_{f,b,t}\times$ No Info.$_f$				0.158**	0.120	0.163	0.160**	0.122	0.182*
				(0.075)	(0.100)	(0.106)	(0.072)	(0.099)	(0.105)
Firm FE	N	N	N	N	N	N	N	N	N
Bank FE	Y	Y	Y	Y	Y	Y	Y	Y	Y
Time FE	Y	Y	Y	Y	Y	Y	Y	Y	Y
Firm-loan Controls	N	N	N	N	N	N	Y	Y	Y
Bank Controls	N	N	N	N	N	N	Y	Y	Y
Cluster	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry
Observations	714,893	239,779	92,177	714,893	239,779	92,177	714,893	239,779	92,177
R-squared	0.695	0.723	0.726	0.695	0.723	0.726	0.698	0.724	0.727

The dependent variable is the logarithm of the total amount of guarantees that are different from the PCG scheme for the pair of bank b and firm f in $t+1$. $PCG_{f,b,t}$ is a dummy variable equal to 1 if firm f receives a PCG loan from bank b at month t, 0 otherwise. All regressions are estimated using ordinary least squares. Robust standard errors clustered at bank-broad sector level are reported in parentheses. ***: Significant at 1% level; **: significant at 5% level; *: significant at 10% level.

5 PCG and/or state-owned banks?

When coping with shutdowns like the one experienced with the COVID-19 outbreak, a relevant question is which is the most effective channel to direct funds in order to support the most affected firms. Supporting lending through a well designed public credit guarantee scheme may be an avenue. Indeed, in the previous section we provide empirical evidence on the positive impact of a PCG scheme on credit growth to affected firms. But, we also show that it could also generate undesired behavior through loan substitution or missallocation. Another avenue is to rely on state-owned banks. Both policy tools may be complementary rather than substitutes. In this section we explore their relative performance along four lines: impact on credit growth, targeting of affected firms, risk-taking behavior, and the creation of new credit relationships.

5.1 Does the state-owned bank lend more?

We start the analysis by looking at the lending behavior of the state-owned bank, and comparing it with that of private banks. More precisely, we estimate the following equation:

$$\triangle \ln C_{f,b,t+1} = \alpha_f + \delta_b + \gamma_t + \beta_1 PCG_{f,b,t} \times State_{b,t} + \beta_2 X_{f,b,t} + \beta_3 H_{b,t} + \epsilon_{f,b,t}. \quad (4)$$

The dependent variable is the change in the logarithm of the total amount of loans of firm f in bank b between months t and $t+1$. The explanatory variable of main interest is the interaction term between $PCG_{f,b,t}$, which indicates whether the firm received a PCG loan, and $State_{b,t}$, which takes the value one when the bank granting the loan is the state-owned, and zero otherwise. As in previous models, other controls include firm-loan characteristics ($X_{f,b,t}$), and bank characteristics ($H_{b,t}$). Moreover, we include the size of the loan (its quintile) as control.

To estimate Equation 4 we further restrict our sample by focusing on firms with more than one banking relationship where one of the relationships is held with the state-owned one. We then check the external validity of the results by estimating Equation 4 in the same sample we have considered in Section 4.3.

The main results are in Table 4. Tables A.11 and A.12 in the Appendix show detailed results and external validity checks respectively. All estimations are performed for the whole period (January 2015-January 2021), the pre-pandemic period (January 2018-March 2020), and for the pandemic period (April 2020-January 2021); standard errors are clustered at bank-industry level. The omitted variable is the interaction term between non-PCG collateral and private-owned bank, and serves as a benchmark for the estimates of the other interactions.

The estimates show several interesting results. First, in absence of a PCG, the state-owned bank exhibits a statistically significant higher credit growth than private-owned

Table 4: *The state-owned bank lends more, even without PCG*

	(1) Whole	(2) Pre-COVID	(3) COVID	(4) Whole	(5) Pre-COVID	(6) COVID
$\text{Non\_PCG}_{f,b,t} \times \text{State}_{b,t}$	0.045***	0.051***	0.057***	0.048***	0.071***	0.034**
	(0.005)	(0.007)	(0.006)	(0.005)	(0.018)	(0.013)
$\text{PCG}_{f,b,t} \times \text{Private}_{b,t}$	0.034***	0.027***	0.066***	0.031***	0.027***	0.063***
	(0.004)	(0.004)	(0.006)	(0.003)	(0.003)	(0.006)
$\text{PCG}_{f,b,t} \times \text{State}_{b,t}$	0.082***	0.092***	0.120***	0.083***	0.110***	0.093***
	(0.007)	(0.010)	(0.006)	(0.006)	(0.020)	(0.015)
Firm FE	Y	Y	Y	Y	Y	Y
Loan Quintile FE	Y	Y	Y	Y	Y	Y
Bank FE	N	N	N	N	N	N
Time FE	Y	Y	Y	Y	Y	Y
Bank Controls	N	N	N	Y	Y	Y
Firm-loan Controls	N	N	N	Y	Y	Y
Cluster	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry
Observations	567,822	182,782	72,513	567,822	182,782	72,513
R-squared	0.037	0.055	0.070	0.038	0.059	0.075

The dependent variable is the change in the logarithm of the total amount of loans of firm f in bank b between months t and $t+1$. $\text{PCG}_{f,b,t}$ is a dummy variable equal to 1 if firm f receives a PCG loan from bank b at month t, 0 otherwise. $\text{State}_{b,t}$ is a dummy that indicates if the bank granting the loan is the state-owned bank. All regressions are estimated using ordinary least squares. Robust standard errors clustered at bank-broad sector level are reported in parentheses. ***: Significant at 1% level; **: significant at 5% level; *: significant at 10% level.

banks during the pandemic. More precisely, non-PCG monthly credit growth is 3.4 percentage points higher in the state-owned bank. Second, the existence of a PCG implies a larger credit growth for both types of banks, which confirms the results in the previous section. Third, the effect of a PCG loan is also larger for the case of the state-owned bank: monthly credit growth is 3 percentage points higher in the state-owned bank than in the private-owned ones. Interestingly, during the pandemic the coefficients for the differential on credit growth rates between the state-owned and the private-owned banks are larger among loans that are not backed by a PCG: 3.4 versus 3 percentage points.

5.2 Does the state-owned bank better target affected sectors?

The previous results show that the state-owned bank lent more. Another relevant question would be whether or not this increase in lending was allocated to those firms more in need of funds. In order to address this question and compare it with private banks' lending behavior, we estimate the following equation:

$$\triangle \ln C_{f,b,t+1} = \alpha_f + \delta_b + \gamma_t + \beta_1 PCG_{f,b,t} \times State_{b,t} \times Affected_f + \beta_2 X_{f,b,t} + \beta_3 H_{b,t} + \epsilon_{f,b,t}. \quad (5)$$

The dependent variable is the change in the logarithm of the total amount of loans of firm f in bank b between months t and $t+1$. The explanatory variable of main interest is the interaction term between $PCG_{f,b,t}$, which indicates whether the firm received a PCG loan, $State_{b,t}$, which indicates whether the bank granting the loan is the state-owned one, and $Affected_f$, which is a dummy variable that indicates whether or not the firm operates in a sector that was affected by the COVID-19 shock. Other controls include firm-loan characteristics ($X_{f,b,t}$), and bank characteristics ($H_{b,t}$). As in previous specifications, we include the size of the loan (its quintile) as control.

As in the previous model, we estimate Equation 5 for the restricted sample of firms with more than one banking relations where one of the relations is with the state-owned bank. The main results are in Table 5, while Tables A.13 and A.14 in the Appendix show detailed results and external validity checks respectively. Again, all estimations are performed for the whole period (January 2015-January 2021), the pre-pandemic period (January 2018-March 2020), and the pandemic period (April 2020-January 2021); standard errors are clustered at bank-industry level. The omitted variable is the interaction term of non-PCG collateral with private-owned bank and not-affected industry.

Our estimations show that both private and state-owned banks increase lending when loans are backed-up with a PCG and that the coefficients are larger for the state-owned bank, confirming the results in the previous section. However, conditional on having a PCG, the estimated coefficients of credit growth to affected and non-affected sectors are not statistically different inside each type of banks. Moreover, conditional on no having a PCG, we find no statistically significant effect on lending to both affected and non-affected sectors regardless of the ownership of the lending institution. Hence, the empirical evidence does not support the hypothesis of a better targeting technology of the state-owned bank with respect to private-owned ones.

Table 5: *Non significant differences in targeting affected sectors*

	(1) Whole	(2) Pre-COVID	(3) COVID	(4) Whole	(5) Pre-COVID	(6) COVID
$PCG_{f,b,t}\times$ $Private_{b,t}\times$Not Affect.$_f$	0.018***	0.012***	0.037***	0.022***	0.018***	0.043***
	(0.003)	(0.004)	(0.005)	(0.003)	(0.003)	(0.006)
Non-$PCG_{f,b,t}\times$ $Private_{b,t}\times$Affect.$_f$	-0.016***	-0.017***	-0.017**	-0.006	-0.006	-0.007
	(0.004)	(0.005)	(0.008)	(0.004)	(0.006)	(0.008)
$PCG_{f,b,t}\times$ $Private_{b,t}\times$Affect.$_f$	0.017***	0.006	0.034***	0.029***	0.020***	0.047***
	(0.004)	(0.006)	(0.008)	(0.004)	(0.006)	(0.009)
Non-$PCG_{f,b,t}\times State_{b,t}\times$Not Affect.$_f$	0.022***	0.027***	0.029***	0.042***	0.060***	0.016
	(0.004)	(0.007)	(0.004)	(0.005)	(0.022)	(0.014)
$PCG_{f,b,t}\times State_{b,t}\times$Not Affect.$_f$	0.045***	0.049***	0.067***	0.068***	0.088***	0.059***
	(0.006)	(0.008)	(0.004)	(0.007)	(0.023)	(0.014)
Non-$PCG_{f,b,t}\times State_{b,t}\times$Affect.$_f$	0.000	-0.007	0.011**	0.020***	0.026	-0.004
	(0.004)	(0.007)	(0.005)	(0.005)	(0.021)	(0.013)
$PCG_{f,b,t}\times State_{b,t}\times$Affect.$_f$	0.031***	0.035***	0.064***	0.052***	0.069***	0.054***
	(0.005)	(0.008)	(0.007)	(0.005)	(0.020)	(0.014)
Firm FE	N	N	N	N	N	N
Loan Quintile FE	Y	Y	Y	Y	Y	Y
Industry FE	Y	Y	Y	Y	Y	Y
Bank FE	N	N	N	N	N	N
Time FE	Y	Y	Y	Y	Y	Y
Firm-loan Controls	N	N	N	Y	Y	Y
Bank Controls	N	N	N	Y	Y	Y
Cluster	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry
Observations	568,189	183,018	87,901	568,189	183,018	87,901
R-squared	0.012	0.017	0.012	0.016	0.023	0.015

The dependent variable is the change in the logarithm of the total amount of loans of firm f in bank b between months t and $t+1$. $PCG_{f,b,t}$ is a dummy variable equal to 1 if firm f receives a PCG loan from bank b at month t, 0 otherwise. $State_{b,t}$ is a dummy that indicates if the bank granting the loan is the state-owned bank. A_f is a dummy that takes the value of 1 if the firm operates in an industry affected by the COVID-19 shock, 0 otherwise. All regressions are estimated using ordinary least squares. Robust standard errors clustered at bank-broad sector level are reported in parentheses. ***: Significant at 1% level; **: significant at 5% level; *: significant at 10% level.

5.3 Does the state-owned bank take more credit risk?

Another relevant dimension of bank lending is credit risk. We assess the risk-taking behavior of the state-owned and the private-owned banks by looking at the rate of growth of their credit as a function of the credit rating of the borrowers. More precisely, we estimate the following equation:

$$\triangle \ln C_{f,b,t+1} = \alpha_f + \delta_b + \gamma_t + \beta_1 PCG_{f,b,t} \times State_{b,t} \times Rating_{f,b,t} + \beta_2 X_{f,b,t} + \beta_3 H_{b,t} + \epsilon_{f,b,t}, \quad (6)$$

where $Rating_{f,b,t}$ takes the value of 1 if the firm holds a "bad" rating, i.e. "2B" or worse, and 0 otherwise[12]. The rest of the explanatory variables and the sample are as in the previous section. More precisely, we only consider those firms with more than one banking relationship where one of the banks is the state-owned one. The omitted category is given

[12]See Appendix A for a detailed description of the credit risk ratings in Uruguayan regulation.

by the combination of non-PCG loans granted by private banks to firms with a bad rating.

Table 6: *The state-owned bank lends more, even to risky firms*

	(1) Whole	(2) Pre-COVID	(3) COVID
$PCG_{f,b,t}$×$Private_{f,b,t}$× Good $Rating_{f,b,t}$	0.031***	0.027***	0.052***
	(0.003)	(0.003)	(0.006)
$Non\_PCG_{f,b,t}$×$Private_{f,b,t}$× Bad $Rating_{f,b,t}$	0.001	0.001	-0.011*
	(0.005)	(0.005)	(0.006)
$PCG_{f,b,t}$×$Private_{f,b,t}$×Bad $Rating_{f,b,t}$	0.017**	0.004	0.063***
	(0.008)	(0.013)	(0.012)
$Non\_PCG_{f,b,t}$×$State_{f,b,t}$× Good $Rating_{f,b,t}$	0.042***	0.060***	0.056***
	(0.004)	(0.018)	(0.011)
$PCG_{f,b,t}$×$State_{f,b,t}$× Good $Rating_{f,b,t}$	0.086***	0.103***	0.125***
	(0.007)	(0.021)	(0.012)
$Non\_PCG_{f,b,t}$×$State_{f,b,t}$× Bad $Rating_{f,b,t}$	0.053***	0.077***	0.057***
	(0.006)	(0.020)	(0.011)
$PCG_{f,b,t}$×$State_{f,b,t}$× Bad $Rating_{f,b,t}$	0.098***	0.113***	0.108***
	(0.010)	(0.022)	(0.013)
Firm FE	Y	Y	Y
Loan Quintile FE	Y	Y	Y
Industry FE	Y	Y	Y
Bank FE	N	N	N
Time FE	Y	Y	Y
Bank Controls	Y	Y	Y
Firm-loan Controls	Y	Y	Y
Cluster	bank*industry	bank*industry	bank*industry
Observations	351,337	137,173	72,511
R-squared	0.038	0.057	0.062

The dependent variable is the change in the logarithm of the total amount of loans of firm f in bank b between months t and $t+1$. $PCG_{f,b,t}$ is a dummy variable equal to 1 if firm f receives a PCG loan from bank b at month t, 0 otherwise. $State_{b,t}$ is a dummy that indicates if the bank granting the loan is the state-owned bank. $Rating_{f,b,t}$ is a dummy that takes the value of 1 if the borrower holds a "bad" rating or worse, and 0 otherwise. All regressions are estimated using ordinary least squares. Robust standard errors clustered at bank-broad sector level are reported in parentheses. ***: Significant at 1% level; **: significant at 5% level; *: significant at 10% level.

The main results are in Table 6. Tables A.15 and A.16 in the Appendix show detailed results and external validity checks respectively. There is a statistically significant difference on the behavior of both groups of banks: in absence of a PCG guarantee, credit to firms that have poor credit rating decreases for the private-owned banks and increases for the state-owned one. Overall, during the pandemic the state-owned bank lends more than the private-owned banks in general and regardless of firms having a good credit rating or not. Hence, the state-owned bank takes more credit risk than the private ones.

The estimates confirm the previous result that a PCG scheme helps to support credit growth during the pandemic. They also stress the differential behavior of the state-owned with respect to private-owned ones. During the COVID period, private banks lend only

when the credit is backed by the PCG program. However, the state-owned bank increases credit even to firms outside the PCG scheme and with relatively bad credit ratings.

As a robustness check we look closer to the differences in risk-taking by classifying firms into three groups according to their credit record. More precisely, we consider the cutoff rating "2B" as a separated category. The results are included in Table A.17 in the Appendix. Confirming previous results, private-owned banks in the absence of a PCG scheme show positive credit growth only for borrowers with the best rating (i.e. 2B and better). The stated-owned bank, however, takes more risk by increasing credit regardless of firms' rating.

5.4 Does the state owned bank facilitate banking relationships?

According to Meyer and Nagarajan (1996), PCG schemes may contribute to a "learning process" through which banks discover that borrowers benefiting from the guarantee are not as risky or unprofitable as they were thought. As a consequence, these type of guarantee schemes may help start new banking relationships that may continue after the policy ends (Lelarge et al. (2010)). In this regard, we assess whether this is another dimension in which there are differences between the private and the state-owned bank. In order to analyze this, we estimate the following model:

$$NewRelation_{f,b,t} = \alpha_f + \gamma_t + \beta_1 PCG_{f,b,t} \times State_{b,t} + \beta_2 X_{f,b,t} + \beta_3 H_{b,t} + \epsilon_{f,b,t}, \qquad (7)$$

where the dependent variable is a dummy that indicates if a new banking relationship has been created in month t. This new relation may be either with a firm that did not participate in the bank loan market before or from a firm that is starting a relationship with a bank on top of one or more existing relationships. Again, our regressor of interest is the interaction term between the $\text{PCG}_{b,f,t}$ dummy and the $State_{b,t}$ dummy.

The main results are shown in Table 7. Tables A.18 and A.19 show detailed results and external validity checks respectively. There is empirical evidence supporting the

hypothesis that the PCG scheme facilitates the creation of banking relationships. More precisely, during the pandemic period the coefficients of the interaction terms are positive and statistically significant for both types of banks.

Moreover, we find a statistically significant different behavior between the new credit relations created by the state-owned and the private banks. Although private banks show a positive impact of the PCG scheme in terms of new banking relations, the magnitude of the coefficient is significantly higher for the state-owned bank. In addition, although we also find a positive coefficient for other loans not backed by a PCG granted by the state-owned bank, the size of the coefficient is significantly lower than the one associated to PCG backed loans. Overall, the results suggest that the PCG scheme facilitates the creation of new banking relationships and that, on top of that, the existence of the state-owned bank foster more banking relationships.

Table 7: *The state-owned bank starts more new relationships than private banks*

	(1) Whole	(2) Pre-COVID	(3) COVID	(4) Whole	(5) Pre-COVID	(6) COVID
Non-PCG$_{f,b,t}$×State$_{b,t}$	0.013***	0.011***	0.011***	0.016***	0.012***	0.012***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.004)
PCG$_{f,b,t}$×Private$_{b,t}$	0.001	-0.000	0.003**	0.001*	-0.000	0.003***
	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)	(0.001)
PCG$_{f,b,t}$×State$_{b,t}$	0.010***	0.005***	0.027***	0.014***	0.007***	0.027***
	(0.001)	(0.001)	(0.003)	(0.001)	(0.002)	(0.004)
Firm FE	Y	Y	Y	Y	Y	Y
Loan Quintile FE	Y	Y	Y	Y	Y	Y
Bank FE	N	N	N	N	N	N
Time FE	Y	Y	Y	Y	Y	Y
Cluster	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry
Observations	1,010,134	322,576	138,314	1,010,134	322,576	138,314
R-squared	0.084	0.129	0.141	0.091	0.140	0.160

The dependent variable is a dummy that indicates if a new bank-firm relationship is created. PCG$_{f,b,t}$ is a dummy variable equal to 1 if firm f receives a PCG loan from bank b at month t, 0 otherwise. State$_{b,t}$ is a dummy that indicates if the bank granting the loan is the state-owned bank. All regressions are estimated using ordinary least squares. Robust standard errors clustered at bank-broad sector level are reported in parentheses. ***: Significant at 1% level; **: significant at 5% level; *: significant at 10% level.

6 Final remarks

There is increasing empirical evidence on the effectiveness of public credit guarantee (PCG) schemes to support credit, in particular during stressful periods like the COVID-19 outbreak. We also contribute evidence on the effectiveness of another tool: lending by a

state-owned bank.

Our analysis suggests that both policy tools are complements rather than substitutes. On top of the positive effects on credit growth to the most affected firms implied by the PCG scheme, the state-owned bank extends more credit. It also reaches firms that are not at the center of interest of private-owned banks during the pandemic. In particular, the state-owned bank extend credit to firms that do not have a PCG and that are relatively more risky than those served by private counterparts. In addition to that, the state-owned bank foster the creation of new banking relationships. Hence, it reaches firms that do not have previous bank credit relationships, which paves the way towards credit supply after the pandemic.

References

Abraham, F. and S. L. Schmukler (2017). Are public credit guarantees worth the hype? *World Bank Research and Policy Briefs* (121486).

Core, F. and F. De Marco (2021). Public guarantees for small businesses in italy during covid-19.

Cowan, K., A. Drexler, and Á. Yañez (2015). The effect of credit guarantees on credit availability and delinquency rates. *Journal of Banking & Finance 59*, 98–110.

de Blasio, G., S. De Mitri, A. D'Ignazio, P. F. Russo, and L. Stoppani (2018). Public guarantees to sme borrowing. a rdd evaluation. *Journal of Banking & Finance 96*, 73–86.

D'Ignazio, A. and C. Menon (2020). Causal effect of credit guarantees for small-and medium-sized enterprises: Evidence from italy. *The Scandinavian Journal of Economics 122*(1), 191–218.

Galetovic, A. and R. Sanhueza (2006). Fogape: an economic analysis. *Santiago*.

Gropp, R., C. Gruendl, and A. Guettler (2014). The impact of public guarantees on bank risk-taking: Evidence from a natural experiment. *Review of Finance 18*(2), 457–488.

Khwaja, A. I. and A. Mian (2005). Do lenders favor politically connected firms? rent provision in an emerging financial market. *The Quarterly Journal of Economics 120*(4), 1371–1411.

Khwaja, A. I. and A. Mian (2008). Tracing the impact of bank liquidity shocks: Evidence from an emerging market. *The American Economic Review 98*(4), 1413–42.

Lelarge, C., D. Sraer, and D. Thesmar (2010). Entrepreneurship and credit constraints: Evidence from a french loan guarantee program. In *International differences in entrepreneurship*, pp. 243–273. University of Chicago Press.

Meyer, R. L. and G. Nagarajan (1996). Evaluating credit guarantee programs in developing countries.

Uesugi, I., K. Sakai, and G. M. Yamashiro (2010). The effectiveness of public credit guarantees in the japanese loan market. *Journal of the Japanese and International Economies 24*(4), 457–480.

Zecchini, S. and M. Ventura (2009). The impact of public guarantees on credit to smes. *Small Business Economics 32*(2), 191–206.

Appendix

A Definition of the variables

Table A.1: ***Loan-level variables***

Variable	Description
Share	Percentage of total firm credit granted by the banking institution
# Bank Rela.	Firm's number of banking relations
Firm NPL Ratio	Firm's ratio of non-performing loans over the total amount of loans
Firm Write-Off Ratio	Firm's ratio of written-off debt over the total amount of loans
Firm Debt Rest. Ratio	Firm's ratio of restructured debt over the total amount of loans
Firm USD Debt Ratio	Firm's ratio of USD denominated debt over the total amount of loans
Firm ST Debt Ratio	Firm's ratio of short-term debt over the total amount of loans
Switch Collaterals	Dummy that indicates whether a non-liquid guarantee has been substituted with a liquid (PCG) guarantee

Source: Authors' computation based on data from the Credit Registry of the Central Bank of Uruguay ("Central de Riesgos Crediticios").

Table A.2: ***Bank-level variables***

Variable	Description
Solvency Ratio	Capital over risk-weighted assets
Credit/Assets Ratio	Total credit (net of provisions) over total assets
NPL Ratio	Non-performing loans over total loans
RoE	Annualized return on equity

Source: Supervisory data from the Central Bank of Uruguay.

A Credit Ratings in Uruguay

According to Uruguayan regulation, borrowers are classified with a rating scale that reflects their payment capacity[13].

- Rating 1A: back-to-back loans, that is, loans fully covered by very liquid collateral.
- Rating 1C: borrowers with strong payment capacity (i.e. less than 10 days past due).
- Rating 2A: borrowers with an adequate payment capacity (i.e. less than 30 days past due).
- Rating 2B: borrowers with potential problems in their payment capacity (i.e. less than 60 days past due).
- Rating 3: borrowers with a compromised payment capacity (i.e. less than 120 days past due).
- Rating 4: borrowers with a very compromised payment capacity (i.e. less than 180 days past due).
- Rating 5: unrecoverable borrowers (more than 180 days past due).

[13]For more detail see Comunicación N^o 2019/001 from Superintendencia de Servicios Financieros, BCU: https://www.bcu.gub.uy/Comunicados/seggco19001.pdf.

B Summary statistics

Table A.3: *Sectoral participation in the PCG scheme*

	2015-2019		2020-2021	
Sector	**N**	**%**	**N**	**%**
Agriculture	3.513	29%	4.065	28%
Manufacturing	1.783	15%	1.957	14%
Services	2.473	21%	3.320	23%
Construction	490	4%	558	4%
Trade	3.583	30%	4.295	30%
Others	102	1%	113	1%
Total	11.944	100%	14.308	100%

Table A.4: *Debt indicators of firms with PCG*

	2015-2019					2020-2021				
Variable	**N**	**mean**	**sd**	**min**	**max**	**N**	**mean**	**sd**	**min**	**max**
Debt Amount (log)	20.038	13,58	1,90	7	22	22.155	13,51	1,89	7	22
Delinquency Ratio	20.038	-	0,06	0	1	22.155	-	0,04	0	1
Write-off Ratio	20.038	-	0,03	0	1	22.155	-	0,03	0	1
Restructure Ratio	20.038	0,01	0,07	0	1	22.155	-	0,05	0	1
Debt USD/Ratio	20.038	0,66	0,46	0	1	22.155	0,61	0,47	0	1
Non PCG Collateral (log)	11.430	14,52	2,28	-5	23	10.992	14,60	2,24	-4	23
PCG Collateral (log)	4.535	12,49	1,09	0	16	5.613	12,86	1,19	8	17
# of Bank Relations	20.038	1,96	1,05	1	8	22.155	1,79	1,01	1	8
Max # of Bank Products	20.038	4,92	4,42	1	30	22.155	4,19	4,19	1	30
Max. Durat. Relation (months)	20.038	38,25	23,73	1	73	22.155	34,02	25,19	1	73

Table A.5: *Firm-bank relationships*

	Whole sample			With PCG		
Year	**# of renewed relation**	**# of new relation**	**# of new borrowers**	**# of renewed relation**	**# of new relation**	**# of new borrowers**
2015	372	86	3	20	2	0
2016	563	99	3	12	2	0
2017	696	89	3	11	1	0
2018	732	86	7	11	0	0
2019	690	72	2	12	2	0
2020	807	184	8	63	74	2
2021	92	45	34	5	18	11

Renewed relationship takes the value of 1 when a firm takes a loan from an institution with which it already held a relationship in the past; New relationship takes the value of 1 when a firm starts a relationship from scratch with a new banking institution; New borrower takes the value of 1 when a firm starts a banking relationship for the first time during the period considered.

C Detailed tables, robustness and external validity checks

Table A.6: *Detailed results: Which firms get a PCG?*

	(1) Whole	(2) Pre-COVID	(3) COVID	(4) Whole	(5) Pre-COVID	(6) COVID	(7) Whole	(8) Pre-COVID	(9) COVID	(10) Whole	(11) Pre-COVID	(12) COVID	(13) Whole	(14) Pre-COVID	(15) COVID
Affected$_f$	0.033	0.026	0.069**	0.037	0.035	0.051*	0.024	0.018	0.060	0.037	0.035	0.051*			
	(0.023)	(0.026)	(0.034)	(0.023)	(0.025)	(0.030)	(0.029)	(0.031)	(0.037)	(0.023)	(0.025)	(0.030)			
Moderately Affected$_f$	0.069***	0.068***	0.102***	0.070***	0.071***	0.086***	0.059**	0.057**	0.090***	0.069***	0.071***	0.086***			
	(0.021)	(0.025)	(0.031)	(0.020)	(0.023)	(0.027)	(0.024)	(0.026)	(0.031)	(0.020)	(0.023)	(0.027)			
No information$_f$	0.028	0.021	0.061*	0.030	0.027	0.040	0.013	0.013	0.053	0.029	0.027	0.040			
	(0.027)	(0.031)	(0.036)	(0.024)	(0.027)	(0.031)	(0.031)	(0.029)	(0.033)	(0.024)	(0.027)	(0.031)			
Share$_{f,b,t}$				0.032	0.035	0.074***				0.032	0.035	0.074***	0.174***	0.186***	0.270***
				(0.020)	(0.028)	(0.023)				(0.020)	(0.028)	(0.023)	(0.009)	(0.013)	(0.012)
# Bank Rela.$_{f,b,t}$				0.029***	0.034***	0.046***				0.029***	0.034***	0.046***	0.026***	0.023***	0.070***
				(0.008)	(0.011)	(0.011)				(0.008)	(0.011)	(0.011)	(0.002)	(0.004)	(0.006)
Firm NPL Ratio$_{f,b,t}$				-0.050**	-0.058***	-0.138***				-0.051**	-0.058***	-0.137***	-0.026***	-0.028***	-0.039**
				(0.020)	(0.019)	(0.031)				(0.021)	(0.019)	(0.031)	(0.004)	(0.008)	(0.017)
Firm Write-Off Ratio$_{f,b,t}$				-0.136***	-0.109***	-0.223***				-0.136***	-0.109***	-0.223***	-0.075***	-0.024	-0.061*
				(0.023)	(0.027)	(0.035)				(0.023)	(0.027)	(0.035)	(0.014)	(0.023)	(0.033)
Firm Debt Rest. Ratio$_{f,b,t}$				-0.077***	-0.074***	-0.096***				-0.078***	-0.074***	-0.095***	-0.045***	-0.041***	-0.060***
				(0.015)	(0.018)	(0.032)				(0.016)	(0.018)	(0.032)	(0.004)	(0.009)	(0.017)
Firm USD Debt Ratio$_{f,b,t}$				-0.004	0.009	-0.055***				-0.004	0.009	-0.055***	-0.003	0.009	-0.020
				(0.014)	(0.017)	(0.017)				(0.014)	(0.018)	(0.017)	(0.006)	(0.008)	(0.016)
Firm ST. Debt Ratio$_{f,b,t}$				-0.000	-0.000	-0.000**				-0.000	-0.000	-0.000**	0.000	0.000	-0.000***
				(0.000)	(0.000)	(0.000)				(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Switch Collaterals$_{f,b,t}$				0.677***	0.743***	0.599***				0.675***	0.742***	0.599***	0.206***	0.163***	0.173***
				(0.026)	(0.027)	(0.033)				(0.026)	(0.027)	(0.033)	(0.029)	(0.029)	(0.028)
Bank Solvency Ratio$_{b,t}$							1.757***	2.958***	3.847***	0.279	0.170	-0.387	-0.087	0.131**	-0.217*
							(0.514)	(0.803)	(1.093)	(0.186)	(0.151)	(0.245)	(0.085)	(0.055)	(0.123)
Bank Credit/Assets Ratio$_{b,t}$							0.391**	0.813***	1.731***	-0.077	-0.043	0.796*	-0.112***	0.008	0.136
							(0.173)	(0.287)	(0.490)	(0.076)	(0.054)	(0.459)	(0.038)	(0.033)	(0.192)
Bank NPL Ratio$_{b,t}$							0.421	1.461**	2.422**	-0.161	-0.031	1.166	-0.132	-0.036	0.339
							(0.431)	(0.581)	(1.154)	(0.171)	(0.090)	(0.734)	(0.129)	(0.048)	(0.362)
Bank ROE$_{b,t}$							0.350***	0.171	0.858***	0.060	-0.029	0.002	0.052**	-0.040**	-0.022
							(0.116)	(0.140)	(0.304)	(0.039)	(0.039)	(0.091)	(0.021)	(0.017)	(0.051)
Constant	0.190***	0.194***	0.259***	0.122***	0.106**	0.176***	-0.231*	-0.593***	-1.198***	0.116**	0.107*	-0.084	0.091***	0.017	-0.029
	(0.015)	(0.017)	(0.026)	(0.040)	(0.051)	(0.049)	(0.125)	(0.222)	(0.345)	(0.057)	(0.061)	(0.180)	(0.022)	(0.023)	(0.079)
Firm FE	N	N	N	N	N	N	N	N	N	N	N	N	Y	N	Y
Bank FE	Y	Y	Y	Y	Y	Y	N	Y	N	Y	Y	Y	Y	Y	Y
Time FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Cluster	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry
Observations	2,650,462	859,645	369,935	2,650,462	859,645	369,935	2,650,462	859,645	369,935	2,650,462	859,645	369,935	2,647,191	856,706	367,802
R-squared	0.054	0.045	0.075	0.059	0.050	0.089	0.027	0.023	0.054	0.060	0.050	0.089	0.702	0.759	0.781

This table presents the results of specification 1. The dependent variable is a dummy variable equal to 1 if firm f receives a PCG loan from bank b at month t. All regressions are estimated using ordinary least squares. Robust standard errors clustered at bank-broad sector level and reported in parentheses. ***: Significant at 1% level; **: significant at 5% level; *: significant at 10% level.

Table A.7: *Robustness: Which firms get a PCG using a Probit model*

	(1) Whole	(2) Pre-COVID	(3) COVID	(4) Whole	(5) Pre-COVID	(6) COVID	(7) Whole	(8) Pre-COVID	(9) COVID	(10) Whole	(11) Pre-COVID	(12) COVID	(13) Whole	(14) Pre-COVID	(15) COVID
PCG_{fbt}	0.012***	0.009***	0.035***	0.012***	0.010***	0.030***	0.026***	0.025***	0.053***	0.012***	0.009***	0.036***	0.026***	0.025***	0.053***
	(0.001)	(0.001)	(0.003)	(0.001)	(0.002)	(0.004)	(0.001)	(0.002)	(0.003)	(0.001)	(0.001)	(0.003)	(0.001)	(0.002)	(0.003)
$PCG_{fbt}\times$ Affec.$_f$				0.004	-0.002	0.019**									
				(0.003)	(0.004)	(0.007)									
$PCG_{fbt}\times$ Mod.Affec.$_f$				-0.001	0.001	0.005									
				(0.003)	(0.004)	(0.006)									
$PCG_{fbt}\times$ No Info.$_f$				0.001	-0.002	0.010									
				(0.003)	(0.004)	(0.009)									
$Share_{fbt}$							-0.099***	-0.107***	-0.094***				-0.100***	-0.106***	-0.094***
							(0.008)	(0.009)	(0.007)				(0.008)	(0.009)	(0.007)
# Bank Rela.$_{fbt}$							-0.017***	-0.021***	-0.026***				-0.017***	-0.021***	-0.026***
							(0.002)	(0.003)	(0.006)				(0.002)	(0.003)	(0.006)
Firm NPL $Ratio_{fbt}$							-0.075***	-0.040*	0.029				-0.075***	-0.039*	0.028
							(0.016)	(0.021)	(0.024)				(0.016)	(0.021)	(0.025)
Firm Write-Off $Ratio_{fbt}$							0.025	0.035	0.024				0.025	0.032	0.023
							(0.025)	(0.039)	(0.032)				(0.026)	(0.039)	(0.032)
Firm Debt Rest. $Ratio_{fbt}$							-0.003	0.009**	0.023***				-0.003	0.011**	0.022***
							(0.005)	(0.004)	(0.006)				(0.004)	(0.004)	(0.006)
Firm USD Debt $Ratio_{fbt}$							0.003	0.004	-0.001				0.003	0.006	-0.001
							(0.002)	(0.003)	(0.005)				(0.002)	(0.004)	(0.005)
Firm ST. Debt $Ratio_{fbt}$							0.000***	0.000	0.000				0.000***	0.000	0.000
							(0.000)	(0.000)	(0.000)				(0.000)	(0.000)	(0.000)
Switch $Collaterals_{fbt}$							0.005	-0.055	0.008				0.004	-0.054	0.007
							(0.015)	(0.033)	(0.019)				(0.015)	(0.033)	(0.019)
Bank Solvency $Ratio_{bt}$										0.124**	-1.806***	-0.013	0.105**	-1.770***	-0.022
										(0.049)	(0.512)	(0.227)	(0.050)	(0.508)	(0.228)
Bank Credit/Assets $Ratio_{bt}$										0.043*	-0.428	-0.716***	0.047**	-0.413	-0.719***
										(0.022)	(0.311)	(0.174)	(0.023)	(0.307)	(0.176)
Bank NPL $Ratio_{bt}$										-0.223***	-0.347	0.246	-0.258***	-0.359	0.261
										(0.053)	(0.408)	(0.679)	(0.055)	(0.405)	(0.684)
Bank ROE_{bt}										0.009	-0.005	-0.042	0.014	-0.002	-0.042
										(0.010)	(0.151)	(0.054)	(0.010)	(0.151)	(0.054)
Constant	-0.017***	-0.014***	-0.025***	-0.017***	-0.014***	-0.025***	0.064***	0.080***	0.076***	-0.043***	0.407**	0.242***	0.041***	0.489***	0.346***
	(0.000)	(0.001)	(0.001)	(0.000)	(0.001)	(0.001)	(0.007)	(0.010)	(0.016)	(0.014)	(0.178)	(0.081)	(0.014)	(0.176)	(0.084)
Firm FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Bank FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Time FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Cluster	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry
Observations	963,067	311,780	120,082	963,067	311,780	120,082	963,067	311,780	120,082	963,067	311,780	120,082	963,067	311,780	120,082
R-squared	0.027	0.047	0.053	0.027	0.047	0.053	0.032	0.052	0.058	0.027	0.048	0.054	0.032	0.053	0.058

This table presents the results of specification **??**. The dependent variable is the change in the logarithm of the total amount of loans of firm f in bank b between months t and $t+1$. $PCG_{f,b,t}$ is a dummy variable equal to 1 if firm f receives a PCG loan from bank b at month t, 0 otherwise. All regressions are estimated using ordinary least squares. Robust standard errors clustered at bank-broad sector level are reported in parentheses. ***: Significant at 1% level; **: significant at 5% level; *: significant at 10% level.

Table A.8: *Detailed results: Impact of the PCG scheme on credit growth*

	(1) Whole	(2) Pre COVID	(3) Post COVID	(4) Whole	(5) Pre COVID	(6) Post COVID	(7) Whole	(8) Pre COVID	(9) Post COVID	(10) Whole	(11) Pre COVID	(12) Post COVID	(13) Whole	(14) Pre COVID	(15) Post COVID
$PCG_{f,b,t}$	0.012***	0.009***	0.035***	0.012***	0.010***	0.030***	0.026***	0.025***	0.053***	0.012***	0.009***	0.036***	0.026***	0.025***	0.053***
	(0.001)	(0.001)	(0.003)	(0.001)	(0.002)	(0.004)	(0.001)	(0.002)	(0.003)	(0.001)	(0.001)	(0.003)	(0.001)	(0.002)	(0.003)
$PCG_{f,b,t}\times$ Affec.$_f$				0.004	-0.002	0.019**									
				(0.003)	(0.004)	(0.007)									
$PCG_{f,b,t}\times$ Mod.Affec.$_f$				-0.001	0.001	0.005									
				(0.003)	(0.004)	(0.006)									
$PCG_{f,b,t}\times$ No Info.$_f$				0.001	-0.002	0.010									
				(0.003)	(0.004)	(0.009)									
$Share_{f,b,t}$							-0.099***	-0.107***	-0.094***				-0.100***	-0.106***	-0.094***
							(0.008)	(0.009)	(0.007)				(0.008)	(0.009)	(0.007)
# Bank Rela.$_{f,b,t}$							-0.017***	-0.021***	-0.026***				-0.017***	-0.021***	-0.026***
							(0.002)	(0.003)	(0.006)				(0.002)	(0.003)	(0.006)
Firm NPL $Ratio_{f,b,t}$							-0.075***	-0.040*	0.029				-0.075***	-0.039*	0.028
							(0.016)	(0.021)	(0.024)				(0.016)	(0.021)	(0.025)
Firm Write-Off $Ratio_{f,b,t}$							0.025	0.035	0.024				0.025	0.032	0.023
							(0.025)	(0.039)	(0.032)				(0.026)	(0.039)	(0.032)
Firm Debt Rest. $Ratio_{f,b,t}$							-0.003	0.009**	0.023***				-0.003	0.011**	0.022***
							(0.005)	(0.004)	(0.006)				(0.004)	(0.004)	(0.006)
Firm USD Debt $Ratio_{f,b,t}$							0.003	0.004	-0.001				0.003	0.006	-0.001
							(0.002)	(0.003)	(0.005)				(0.002)	(0.004)	(0.005)
Firm ST. Debt $Ratio_{f,b,t}$							0.000***	0.000	0.000				0.000***	0.000	0.000
							(0.000)	(0.000)	(0.000)				(0.000)	(0.000)	(0.000)
Switch $Collaterals_{f,b,t}$							0.005	-0.055	0.008				0.004	-0.054	0.007
							(0.015)	(0.033)	(0.019)				(0.015)	(0.033)	(0.019)
Bank Solvency $Ratio_{b,t}$										0.124**	-1.806***	-0.013	0.105**	-1.770***	-0.022
										(0.049)	(0.512)	(0.227)	(0.050)	(0.508)	(0.228)
Bank Credit/Assets $Ratio_{b,t}$										0.043*	-0.428	-0.716***	0.047**	-0.413	-0.719***
										(0.022)	(0.311)	(0.174)	(0.023)	(0.307)	(0.176)
Bank NPL $Ratio_{b,t}$										-0.223***	-0.347	0.246	-0.258***	-0.359	0.261
										(0.053)	(0.408)	(0.679)	(0.055)	(0.405)	(0.684)
Bank $ROE_{b,t}$										0.009	-0.005	-0.042	0.014	-0.002	-0.042
										(0.010)	(0.151)	(0.054)	(0.010)	(0.151)	(0.054)
Constant	-0.017***	-0.014***	-0.025***	-0.017***	-0.014***	-0.025***	0.064***	0.080***	0.076***	-0.043***	0.407**	0.242***	0.041***	0.489***	0.346***
	(0.000)	(0.001)	(0.001)	(0.000)	(0.001)	(0.001)	(0.007)	(0.010)	(0.016)	(0.014)	(0.178)	(0.081)	(0.014)	(0.176)	(0.084)
Firm FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Bank FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Time FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Cluster	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry
Observations	963,067	311,780	120,082	963,067	311,780	120,082	963,067	311,780	120,082	963,067	311,780	120,082	963,067	311,780	120,082
R-squared	0.027	0.047	0.053	0.027	0.047	0.053	0.032	0.052	0.058	0.027	0.048	0.054	0.032	0.053	0.058

This table presents the results of specification 2. The dependent variable is the logarithm of the total amount of guarantees that are different from the PCG scheme for the pair of bank b and firm f in $t+1$. $PCG_{f,b,t}$ is a dummy variable equal to 1 if firm f receives a PCG loan from bank b at month t, 0 otherwise. All regressions are estimated using ordinary least squares. Fixed-effects are included ("Yes"), spanned by other fixed-effects ("-"), or not included. Robust standard errors clustered at bank-broad sector level are reported in parentheses. ***: Significant at 1% level; **: significant at 5% level; *: significant at 10% level.

Table A.9: *External validity: Impact of the PCG scheme on credit growth*

	(1) Whole	(2) Pre-COVID	(3) COVID	(4) Whole	(5) Pre-COVID	(6) COVID	(7) Whole	(8) Pre-COVID	(9) COVID	(10) Whole	(11) Pre-COVID	(12) COVID	(13) Whole	(14) Pre-COVID	(15) COVID
$PCG_{f,b,t}$	0.010***	0.005***	0.013*	0.010***	0.006***	0.019***	0.019***	0.017***	0.027***	0.010***	0.005***	0.014*	0.019***	0.018***	0.027***
	(0.002)	(0.001)	(0.007)	(0.001)	(0.002)	(0.005)	(0.001)	(0.002)	(0.008)	(0.002)	(0.001)	(0.007)	(0.001)	(0.002)	(0.008)
$PCG_{f,b,t}\times$ Affec.$_f$				0.003	-0.003	-0.010									
				(0.004)	(0.005)	(0.019)									
$PCG_{f,b,t}\times$ Mod.Affec.$_f$				-0.002	-0.001	-0.005									
				(0.003)	(0.004)	(0.010)									
$PCG_{f,b,t}\times$ No Info.$_f$				-0.001	-0.003	-0.017									
				(0.003)	(0.004)	(0.021)									
$Share_{f,b,t}$							-0.084***	-0.096***	-0.083***				-0.084***	-0.096***	-0.083***
							(0.007)	(0.008)	(0.007)				(0.007)	(0.008)	(0.007)
# Bank Rela.$_{f,b,t}$							-0.031***	-0.040***	-0.037***				-0.031***	-0.040***	-0.038***
							(0.002)	(0.004)	(0.004)				(0.002)	(0.004)	(0.004)
Firm NPL Ratio$_{f,b,t}$							-0.058***	-0.035	0.019				-0.059***	-0.034	0.019
							(0.016)	(0.023)	(0.024)				(0.016)	(0.023)	(0.024)
Firm Write-Off Ratio$_{f,b,t}$							0.015	0.018	0.036				0.015	0.018	0.036
							(0.029)	(0.062)	(0.059)				(0.029)	(0.063)	(0.059)
Firm Debt Rest. Ratio$_{f,b,t}$							-0.007**	0.009**	0.007				-0.007**	0.011**	0.006
							(0.003)	(0.004)	(0.010)				(0.003)	(0.004)	(0.009)
Firm USD Debt Ratio$_{f,b,t}$							0.000	0.001	0.008				-0.001	0.003	0.008
							(0.003)	(0.005)	(0.007)				(0.003)	(0.005)	(0.007)
Firm ST. Debt Ratio$_{f,b,t}$							0.000***	0.000	0.000***				0.000***	0.000	0.000***
							(0.000)	(0.000)	(0.000)				(0.000)	(0.000)	(0.000)
Switch Collaterals$_{f,b,t}$							0.019**	0.036	-0.011				0.018**	0.039	-0.011
							(0.009)	(0.031)	(0.011)				(0.008)	(0.031)	(0.011)
Bank Solvency Ratio$_{b,t}$										0.279***	-1.638***	-0.227	0.273***	-1.636***	-0.232
										(0.046)	(0.566)	(0.332)	(0.046)	(0.563)	(0.334)
Bank Credit/Assets Ratio$_{b,t}$										0.079***	-0.585*	-0.497*	0.081***	-0.578*	-0.503*
										(0.021)	(0.337)	(0.295)	(0.021)	(0.334)	(0.295)
Bank NPL Ratio$_{b,t}$										-0.222***	-0.113	-0.309	-0.236***	-0.125	-0.299
										(0.061)	(0.440)	(0.586)	(0.063)	(0.443)	(0.587)
Bank ROE$_{b,t}$										-0.007	0.053	-0.048	-0.004	0.058	-0.048
										(0.013)	(0.147)	(0.088)	(0.013)	(0.147)	(0.088)
Constant	-0.028***	-0.025***	-0.023***	-0.028***	-0.025***	-0.023***	0.087***	0.112***	0.093***	-0.084***	0.414**	0.206*	0.032**	0.546***	0.325***
	(0.000)	(0.000)	(0.002)	(0.000)	(0.000)	(0.002)	(0.009)	(0.011)	(0.010)	(0.012)	(0.191)	(0.112)	(0.013)	(0.192)	(0.114)
Firm FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Bank FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Time FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Cluster	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry
Observations	2,499,315	819,008	317,671	2,499,315	819,008	317,671	2,499,315	819,008	317,671	2,499,315	819,008	317,671	2,499,315	819,008	317,671
R-squared	0.036	0.067	0.093	0.036	0.067	0.093	0.038	0.070	0.095	0.036	0.068	0.093	0.038	0.070	0.095

This table presents the results of estimating 2 for the whole sample of firms. The dependent variable is the logarithm of the total amount of guarantees that are different from the PCG scheme for the pair of bank b and firm f in $t+1$. $PCG_{f,b,t}$ is a dummy variable equal to 1 if firm f receives a PCG loan from bank b at month t, 0 otherwise. All regressions are estimated using ordinary least squares. Robust standard errors clustered at bank-broad sector level are reported in parentheses. ***: Significant at 1% level; **: significant at 5% level; *: significant at 10% level.

Table A.10: *Detailed results: Impact of the PCG scheme on other guarantees*

	(1) Whole	(2) Pre-COVID	(3) COVID	(4) Whole	(5) Pre-COVID	(6) COVID	(7) Whole	(8) Pre-COVID	(9) COVID
$PCG_{f,b,t}$	0.027	0.026	-0.106**	-0.008	-0.007	-0.133**	-0.029	-0.022	-0.156**
	(0.029)	(0.035)	(0.043)	(0.045)	(0.055)	(0.060)	(0.044)	(0.055)	(0.060)
$PCG_{f,b,t}\times$ Affec.$_f$				-0.069	-0.056	-0.025	-0.062	-0.044	-0.002
				(0.102)	(0.114)	(0.108)	(0.101)	(0.112)	(0.106)
$PCG_{f,b,t}\times$ Mod.Affec.$_f$				0.124*	0.140	0.043	0.129*	0.148	0.056
				(0.070)	(0.091)	(0.110)	(0.067)	(0.090)	(0.110)
$PCG_{f,b,t}\times$ No Info.$_f$				0.158**	0.120	0.163	0.160**	0.122	0.182*
				(0.075)	(0.100)	(0.106)	(0.072)	(0.099)	(0.105)
$Lcred_{f,b,t}$	0.411***	0.435***	0.448***	0.411***	0.435***	0.448***	0.292***	0.304***	0.313***
	(0.011)	(0.014)	(0.018)	(0.011)	(0.015)	(0.018)	(0.016)	(0.024)	(0.035)
$Share_{f,b,t}$							0.661***	0.645***	0.618***
							(0.052)	(0.075)	(0.112)
# Bank Rela.$_{f,b,t}$							-0.037**	-0.004	-0.008
							(0.016)	(0.018)	(0.019)
Firm NPL Ratio$_{f,b,t}$							0.209***	0.051	0.218*
							(0.060)	(0.085)	(0.122)
Firm Write-Off Ratio$_{f,b,t}$							-0.237	-0.654**	-0.640
							(0.194)	(0.301)	(0.425)
Firm Debt Rest. Ratio$_{f,b,t}$							0.169***	0.134	0.185*
							(0.041)	(0.085)	(0.094)
Firm USD Debt Ratio$_{f,b,t}$							0.090**	0.071	0.190**
							(0.044)	(0.064)	(0.071)
Firm ST. Debt Ratio$_{f,b,t}$							0.000**	0.001	0.004**
							(0.000)	(0.001)	(0.002)
Switch Collaterals$_{f,b,t}$							0.010	0.030	0.105**
							(0.054)	(0.101)	(0.047)
Bank Solvency Ratio$_{b,t}$							-4.420***	-0.304	0.353
							(0.952)	(0.789)	(1.157)
Bank Credit/Assets Ratio$_{b,t}$							-0.299	0.760**	0.088
							(0.303)	(0.346)	(0.374)
Bank NPL Ratio$_{b,t}$							-2.353*	1.541	-6.389***
							(1.370)	(1.434)	(1.742)
Bank ROE$_{b,t}$							0.516***	-0.236	0.602***
							(0.127)	(0.168)	(0.171)
Constant	9.272***	8.960***	8.923***	9.270***	8.956***	8.919***	11.493***	10.323***	10.642***
	(0.173)	(0.227)	(0.283)	(0.173)	(0.229)	(0.284)	(0.345)	(0.433)	(0.593)
Firm FE	N	N	N	N	N	N	N	N	N
Bank FE	Y	Y	Y	Y	Y	Y	Y	Y	Y
Time FE	Y	Y	Y	Y	Y	Y	Y	Y	Y
Debt-Firm Controls	N	N	N	N	N	N	Y	Y	Y
Bank Controls	N	N	N	N	N	N	Y	Y	Y
Cluster	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry
Observations	714,893	239,779	92,177	714,893	239,779	92,177	714,893	239,779	92,177
R-squared	0.695	0.723	0.726	0.695	0.723	0.726	0.698	0.724	0.727

This table presents the results of specification 3. The dependent variable is the logarithm of the total amount of guarantees that are different from the PCG scheme for the pair of bank b and firm f in $t+1$. $PCG_{f,b,t}$ is a dummy variable equal to 1 if firm f receives a PCG loan from bank b at month t, 0 otherwise. All regressions are estimated using ordinary least squares. Robust standard errors clustered at bank-broad sector level are reported in parentheses. ***: Significant at 1% level; **: significant at 5% level; *: significant at 10% level.

Table A.11: *Detailed results: Does the state-owned bank lend more?*

	(1) Whole	(2) Pre-COVID	(3) COVID	(4) Whole	(5) Pre-COVID	(6) COVID
$\text{Non\_PCG}_{f,b,t} \times \text{State}_{b,t}$	0.045***	0.051***	0.057***	0.048***	0.071***	0.034**
	(0.005)	(0.007)	(0.006)	(0.005)	(0.018)	(0.013)
$\text{PCG}_{f,b,t} \times \text{Private}_{b,t}$	0.034***	0.027***	0.066***	0.031***	0.027***	0.063***
	(0.004)	(0.004)	(0.006)	(0.003)	(0.003)	(0.006)
$\text{PCG}_{f,b,t} \times \text{State}_{b,t}$	0.082***	0.092***	0.120***	0.083***	0.110***	0.093***
	(0.007)	(0.010)	(0.006)	(0.006)	(0.020)	(0.015)
$\text{Share}_{f,b,t}$				0.057***	0.108***	0.139***
				(0.007)	(0.009)	(0.013)
$\text{\# Bank Rela.}_{f,b,t}$				-0.005	-0.009**	-0.018**
				(0.003)	(0.005)	(0.008)
$\text{Firm NPL Ratio}_{f,b,t}$				-0.094***	-0.050*	0.043
				(0.022)	(0.027)	(0.030)
$\text{Firm Write-Off Ratio}_{f,b,t}$				0.014	0.020	0.015
				(0.024)	(0.039)	(0.021)
$\text{Firm Debt Rest. Ratio}_{f,b,t}$				-0.015**	0.003	0.022***
				(0.006)	(0.007)	(0.008)
$\text{Firm USD Debt Ratio}_{f,b,t}$				0.008***	0.006	0.009*
				(0.003)	(0.006)	(0.005)
$\text{Firm ST. Debt Ratio}_{f,b,t}$				-0.000	0.000	0.000**
				(0.000)	(0.000)	(0.000)
$\text{Switch Collaterals}_{f,b,t}$				0.002	-0.080*	-0.001
				(0.016)	(0.044)	(0.019)
$\text{Bank Solvency Ratio}_{b,t}$				0.031	-1.185***	0.045
				(0.040)	(0.245)	(0.218)
$\text{Bank Credit/Assets Ratio}_{b,t}$				0.023	-0.064	-0.103**
				(0.020)	(0.072)	(0.049)
$\text{Bank NPL Ratio}_{b,t}$				-0.304***	0.082	-0.666***
				(0.057)	(0.205)	(0.229)
$\text{Bank ROE}_{b,t}$				0.020	0.136*	0.023
				(0.016)	(0.075)	(0.037)
Constant	-0.141***	-0.152***	-0.176***	-0.189***	-0.086	-0.216***
	(0.006)	(0.008)	(0.008)	(0.020)	(0.070)	(0.055)
Firm FE	Y	Y	Y	Y	Y	Y
Bank FE	N	N	N	N	N	N
Time FE	Y	Y	Y	Y	Y	Y
Cluster	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry
Observations	963,067	311,780	120,082	963,067	311,780	120,082
R-squared	0.026	0.045	0.053	0.032	0.052	0.058

This table presents the results of specification 4. The dependent variable is the change in the logarithm of the total amount of loans of firm f in bank b between months t and $t+1$. $\text{PCG}_{f,b,t}$ is a dummy variable equal to 1 if firm f receives a PCG loan from bank b at month t, 0 otherwise. $\text{State}_{b,t}$ is a dummy that indicates if the bank granting the loan is the state-owned bank. All regressions are estimated using ordinary least squares. Robust standard errors clustered at bank-broad sector level are reported in parentheses. ***: Significant at 1% level; **: significant at 5% level; *: significant at 10% level.

Table A.12: *External validity: Does the state-owned bank lend more?*

	(1) Whole	(2) Pre-COVID	(3) COVID	(4) Whole	(5) Pre-COVID	(6) COVID
Non_PCG$_{f,b,t}$× State$_{b,t}$	0.051***	0.065***	0.097***	0.060***	0.076***	0.092***
	(0.007)	(0.010)	(0.010)	(0.005)	(0.022)	(0.018)
PCG$_{f,b,t}$× Private$_{b,t}$	0.037***	0.033***	0.084***	0.033***	0.026***	0.068***
	(0.003)	(0.003)	(0.006)	(0.002)	(0.003)	(0.006)
PCG$_{f,b,t}$× State$_{b,t}$	0.094***	0.122***	0.146***	0.099***	0.124***	0.133***
	(0.008)	(0.014)	(0.017)	(0.007)	(0.025)	(0.026)
Share$_{f,b,t}$				0.041***	0.137***	0.257***
				(0.008)	(0.014)	(0.021)
# Bank Rela.$_{f,b,t}$				-0.001	0.008	0.028***
				(0.003)	(0.005)	(0.007)
Firm NPL Ratio$_{f,b,t}$				-0.075***	-0.053***	0.009
				(0.014)	(0.018)	(0.021)
Firm Write-Off Ratio$_{f,b,t}$				-0.010	0.001	0.006
				(0.021)	(0.041)	(0.036)
Firm Debt Rest. Ratio$_{f,b,t}$				-0.025***	0.006	0.016*
				(0.005)	(0.008)	(0.009)
Firm USD Debt Ratio$_{f,b,t}$				0.001	0.005	0.005
				(0.004)	(0.004)	(0.006)
Firm ST. Debt Ratio$_{f,b,t}$				0.000***	0.000	0.000**
				(0.000)	(0.000)	(0.000)
Switch Collaterals$_{f,b,t}$				0.030***	0.051	0.004
				(0.008)	(0.031)	(0.011)
Bank Solvency Ratio$_{b,t}$				0.189***	-1.103***	-0.170
				(0.043)	(0.302)	(0.266)
Bank Credit/Assets Ratio$_{b,t}$				0.078***	-0.055	-0.041
				(0.013)	(0.078)	(0.064)
Bank NPL Ratio$_{b,t}$				-0.416***	-0.115	-0.693**
				(0.060)	(0.272)	(0.277)
Bank ROE$_{b,t}$				0.016	0.168**	-0.036
				(0.012)	(0.083)	(0.081)
Constant	-0.181***	-0.241***	-0.303***	-0.266***	-0.277***	-0.588***
	(0.007)	(0.009)	(0.013)	(0.020)	(0.075)	(0.061)
Firm FE	Y	Y	Y	Y	Y	Y
Bank FE	N	N	N	N	N	N
Time FE	Y	Y	Y	Y	Y	Y
Cluster	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry
Observations	2,499,315	819,008	317,671	2,499,315	819,008	317,671
R-squared	0.050	0.092	0.129	0.051	0.097	0.139

This table presents the results of specification 4 for the whole sample of firms. The dependent variable is the change in the logarithm of the total amount of loans of firm f in bank b between months t and $t+1$. PCG$_{f,b,t}$ is a dummy variable equal to 1 if firm f receives a PCG loan from bank b at month t, 0 otherwise. State$_{b,t}$ is a dummy that indicates if the bank granting the loan is the state-owned bank. All regressions are estimated using ordinary least squares. Robust standard errors clustered at bank-broad sector level are reported in parentheses. ***: Significant at 1% level; **: significant at 5% level; *: significant at 10% level.

Table A.13: *Detailed results: Targeting of affected firms*

	(1) Whole	(2) Pre-COVID	(3) COVID	(4) Whole	(5) Pre-COVID	(6) COVID
$PCG_{f,b,t}\times$ $Private_{b,t}\times$Not Affect.$_f$	0.018***	0.012***	0.037***	0.022***	0.018***	0.043***
	(0.003)	(0.004)	(0.005)	(0.003)	(0.003)	(0.006)
Non-$PCG_{f,b,t}\times$ $Private_{b,t}\times$Affec.$_f$	-0.016***	-0.017***	-0.017**	-0.006	-0.006	-0.007
	(0.004)	(0.005)	(0.008)	(0.004)	(0.006)	(0.008)
$PCG_{f,b,t}\times$ $Private_{b,t}\times$Affec.$_f$	0.017***	0.006	0.034***	0.029***	0.020***	0.047***
	(0.004)	(0.006)	(0.008)	(0.004)	(0.006)	(0.009)
Non-$PCG_{f,b,t}\times State_{b,t}\times$Not Affect.$_f$	0.022***	0.027***	0.029***	0.042***	0.060***	0.016
	(0.004)	(0.007)	(0.004)	(0.005)	(0.022)	(0.014)
$PCG_{f,b,t}\times State_{b,t}\times$Not Affect.$_f$	0.045***	0.049***	0.067***	0.068***	0.088***	0.059***
	(0.006)	(0.008)	(0.004)	(0.007)	(0.023)	(0.014)
Non-$PCG_{f,b,t}\times State_{b,t}\times$Affec.$_f$	0.000	-0.007	0.011**	0.020***	0.026	-0.004
	(0.004)	(0.007)	(0.005)	(0.005)	(0.021)	(0.013)
$PCG_{f,b,t}\times State_{b,t}\times$Affec.$_f$	0.031***	0.035***	0.064***	0.052***	0.069***	0.054***
	(0.005)	(0.008)	(0.007)	(0.005)	(0.020)	(0.014)
$Share_{f,b,t}$				-0.069***	-0.070***	-0.054***
				(0.004)	(0.005)	(0.006)
# Bank Rela.$_{f,b,t}$				0.002**	0.003**	0.005***
				(0.001)	(0.001)	(0.002)
Firm NPL $Ratio_{f,b,t}$				-0.084***	-0.067***	-0.034**
				(0.018)	(0.019)	(0.017)
Firm Write-Off $Ratio_{f,b,t}$				0.010	0.013	-0.014
				(0.019)	(0.021)	(0.015)
Firm Debt Rest. $Ratio_{f,b,t}$				-0.010	-0.009	-0.009*
				(0.006)	(0.009)	(0.005)
Firm USD Debt $Ratio_{f,b,t}$				0.012***	0.014***	0.010**
				(0.003)	(0.005)	(0.005)
Firm ST. Debt $Ratio_{f,b,t}$				0.000*	0.000***	0.000
				(0.000)	(0.000)	(0.000)
Bank Solvency $Ratio_{b,t}$				-0.002	-1.207***	0.134
				(0.042)	(0.252)	(0.163)
Bank Credit/Assets $Ratio_{b,t}$				-0.001	-0.071	-0.137***
				(0.018)	(0.088)	(0.046)
Bank NPL $Ratio_{b,t}$				-0.240***	0.295	-0.624***
				(0.047)	(0.197)	(0.206)
Bank $ROE_{b,t}$				0.048***	0.201**	0.028
				(0.016)	(0.087)	(0.032)
Constant	-0.044***	-0.042***	-0.052***	-0.034**	0.099	-0.004
	(0.004)	(0.007)	(0.006)	(0.014)	(0.069)	(0.032)
Firm FE	N	N	N	N	N	N
Loan Quintile FE	Y	Y	Y	Y	Y	Y
Industry FE	Y	Y	Y	Y	Y	Y
Bank FE	N	N	N	N	N	N
Time FE	Y	Y	Y	Y	Y	Y
Cluster	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry
Observations	568,189	183,018	87,901	568,189	183,018	87,901
R-squared	0.012	0.017	0.012	0.016	0.023	0.015

This table presents the results of specification 5. The dependent variable is the change in the logarithm of the total amount of loans of firm f in bank b between months t and $t+1$. $PCG_{f,b,t}$ is a dummy variable equal to 1 if firm f receives a PCG loan from bank b at month t, 0 otherwise. $State_{b,t}$ is a dummy that indicates if the bank granting the loan is the state-owned bank. A_f is a dummy that takes the value of 1 if the firm operates in an industry affected by the COVID-19 shock, 0 otherwise. All regressions are estimated using ordinary least squares. Robust standard errors clustered at bank-broad sector level are reported in parentheses. ***: Significant at 1% level; **: significant at 5% level; *: significant at 10% level.

Table A.14: *External validity: Targeting of affected firms*

	(1) Whole	(2) Pre-COVID	(3) COVID	(4) Whole	(5) Pre-COVID	(6) COVID
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
$PCG_{f,b,t} \times Private_{b,t} \times NotAffec._f$	0.017***	0.011***	0.037***	0.022***	0.018***	0.043***
	(0.004)	(0.004)	(0.006)	(0.003)	(0.003)	(0.006)
$Non\_PCG_{f,b,t} \times Private_{b,t} \times Affec._f$	-0.009*	-0.007	-0.010	-0.003	-0.000	-0.004
	(0.005)	(0.007)	(0.008)	(0.004)	(0.007)	(0.009)
$PCG_{f,b,t} \times Private_{b,t} \times Affec._f$	0.021***	0.011	0.040***	0.032***	0.024***	0.051***
	(0.005)	(0.008)	(0.007)	(0.004)	(0.008)	(0.009)
$Non\_PCG_{f,b,t} \times State_{b,t} NotAffec._f$	0.003	0.005	0.015***	0.044***	0.064***	0.015
	(0.004)	(0.007)	(0.005)	(0.005)	(0.024)	(0.013)
$PCG_{f,b,t} \times State_{b,t} NotAffec._f$	0.033***	0.035***	0.058***	0.073***	0.094***	0.059***
	(0.005)	(0.007)	(0.005)	(0.006)	(0.024)	(0.013)
$Non\_PCG_{f,b,t} \times State_{b,t} Affec._f$	-0.017**	-0.023**	0.003	0.030***	0.043*	0.008
	(0.007)	(0.009)	(0.007)	(0.005)	(0.023)	(0.013)
$PCG_{f,b,t} \times State_{b,t} Affec._f$	0.018***	0.018**	0.046***	0.061***	0.078***	0.050***
	(0.005)	(0.007)	(0.006)	(0.004)	(0.022)	(0.012)
Share				-0.062***	-0.070***	-0.043***
				(0.004)	(0.005)	(0.005)
# Bank Rela.				0.001	-0.000	0.004**
				(0.001)	(0.002)	(0.002)
Firm NPL Ratio				-0.051***	-0.042**	-0.019
				(0.019)	(0.018)	(0.014)
Firm Write-Off Ratio				0.010	0.011	-0.005
				(0.010)	(0.014)	(0.008)
Firm Debt Rest. Ratio				0.002	0.008	-0.006***
				(0.005)	(0.006)	(0.002)
Firm USD Debt Ratio				0.018***	0.023***	0.018***
				(0.003)	(0.004)	(0.004)
Firm ST. Debt Ratio				0.000***	0.000***	0.000***
				(0.000)	(0.000)	(0.000)
Switch Collaterals				0.020	-1.064***	0.118
				(0.040)	(0.298)	(0.144)
Bank Solvency Ratio				0.014	-0.060	-0.134**
				(0.021)	(0.094)	(0.053)
Bank Credit/Assets Ratio				-0.236***	0.161	-0.529***
				(0.044)	(0.193)	(0.197)
Bank NPL Ratio				0.048***	0.162*	0.054
				(0.017)	(0.093)	(0.034)
Bank ROE	-0.039***	-0.034***	-0.051***	-0.045***	0.092	-0.019
	(0.004)	(0.007)	(0.006)	(0.015)	(0.081)	(0.036)
Firm FE	N	N	N	N	N	N
Loan Quintile FE	Y	Y	Y	Y	Y	Y
Industry FE	Y	Y	Y	Y	Y	Y
Bank FE	N	N	N	N	N	N
Time FE	Y	Y	Y	Y	Y	Y
Cluster	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry
Observations	1,146,540	370,875	187,421	1,146,540	370,875	187,421
R-squared	0.010	0.012	0.011	0.013	0.017	0.014

This table presents the results of specification 5. The dependent variable is the change in the logarithm of the total amount of loans of firm f in bank b between months t and $t+1$. $PCG_{f,b,t}$ is a dummy variable equal to 1 if firm f receives a PCG loan from bank b at month t, 0 otherwise. $State_{b,t}$ is a dummy that indicates if the bank granting the loan is the state-owned bank. A_f is a dummy that takes the value of 1 if the firm operates in an industry affected by the COVID-19 shock, 0 otherwise. All regressions are estimated using ordinary least squares. Robust standard errors clustered at bank-broad sector level are reported in parentheses. ***: Significant at 1% level; **: significant at 5% level; *: significant at 10% level.

Table A.15: *Detailed results: Risk-taking behavior*

	(1) Whole sample	(2) Pre-COVID	(3) COVID
$PCG_{f,b,t}$×$Private_{f,b,t}$× Good $Rating_{f,b,t}$	0.031***	0.027***	0.052***
	(0.003)	(0.003)	(0.006)
$Non\_PCG_{f,b,t}$×$Private_{f,b,t}$× Bad $Rating_{f,b,t}$	0.001	0.001	-0.011*
	(0.005)	(0.005)	(0.006)
$PCG_{f,b,t}$×$Private_{f,b,t}$×Bad $Rating_{f,b,t}$	0.017**	0.004	0.063***
	(0.008)	(0.013)	(0.012)
$Non\_PCG_{f,b,t}$×$State_{f,b,t}$× Good $Rating_{f,b,t}$	0.042***	0.060***	0.056***
	(0.004)	(0.018)	(0.011)
$PCG_{f,b,t}$×$State_{f,b,t}$× Good $Rating_{f,b,t}$	0.086***	0.103***	0.125***
	(0.007)	(0.021)	(0.012)
$Non\_PCG_{f,b,t}$×$State_{f,b,t}$× Bad $Rating_{f,b,t}$	0.053***	0.077***	0.057***
	(0.006)	(0.020)	(0.011)
$PCG_{f,b,t}$×$State_{f,b,t}$× Bad $Rating_{f,b,t}$	0.098***	0.113***	0.108***
	(0.010)	(0.022)	(0.013)
$Share_{f,b,t}$	0.045***	0.108***	0.106***
	(0.008)	(0.009)	(0.012)
# $Bank\ Rela._{f,b,t}$	0.001	-0.000	-0.027***
	(0.002)	(0.004)	(0.009)
Firm NPL $Ratio_{f,b,t}$	-0.064**	-0.046	0.032
	(0.025)	(0.031)	(0.025)
Firm Write-Off $Ratio_{f,b,t}$	0.012	0.057	0.002
	(0.023)	(0.056)	(0.021)
Firm Debt Rest. $Ratio_{f,b,t}$	-0.013*	-0.004	0.014*
	(0.007)	(0.008)	(0.007)
Firm USD Debt $Ratio_{f,b,t}$	0.010**	0.001	0.009
	(0.004)	(0.006)	(0.007)
Firm ST. Debt $Ratio_{f,b,t}$	-0.000***	0.000	0.000
	(0.000)	(0.000)	(0.000)
Bank Solvency $Ratio_{b,t}$	0.257***	-0.935***	-0.144
	(0.061)	(0.242)	(0.161)
Bank Credit/Assets $Ratio_{b,t}$	0.047**	-0.014	-0.087**
	(0.022)	(0.068)	(0.041)
Bank NPL $Ratio_{b,t}$	-0.438***	0.066	-0.501***
	(0.071)	(0.202)	(0.187)
Bank $ROE_{b,t}$	-0.004	0.144*	-0.033
	(0.017)	(0.073)	(0.038)
Constant	-0.225***	-0.152**	-0.109**
	(0.024)	(0.069)	(0.047)
Firm FE	Y	Y	Y
Loan Quintile FE	Y	Y	Y
Industry FE	Y	Y	Y
Bank FE	N	N	N
Time FE	Y	Y	Y
Cluster	bank*industry	bank*industry	bank*industry
Observations	351,337	137,173	72,511
R-squared	0.038	0.057	0.062

This table presents the results of specification 6. The dependent variable is the change in the logarithm of the total amount of loans of firm f in bank b between months t and $t+1$. $PCG_{f,b,t}$ is a dummy variable equal to 1 if firm f receives a PCG loan from bank b at month t, 0 otherwise. $State\_bank_{b,t}$ is a dummy that indicates if the bank granting the loan is the state-owned bank. $Rating_{f,b,t}$ is a dummy that takes the value of 1 if the borrower holds a "bad" rating or worse, and 0 otherwise. All regressions are estimated using ordinary least squares. Robust standard errors clustered at bank-broad sector level are reported in parentheses. ***: Significant at 1% level; **: significant at 5% level; *: significant at 10% level.

Table A.16: *External validity: Risk-taking behavior*

	(1) Whole sample	(2) Pre-COVID	(3) COVID
$PCG_{f,b,t}$×$Private_{f,b,t}$× Good $Rating_{f,b,t}$	0.033***	0.029***	0.055***
	(0.004)	(0.004)	(0.006)
$Non\_PCG_{f,b,t}$×$Private_{f,b,t}$× Bad $Rating_{f,b,t}$	0.005	0.006	0.004
	(0.006)	(0.006)	(0.010)
$PCG_{f,b,t}$×$Private_{f,b,t}$×Bad $Rating_{f,b,t}$	0.022***	0.011	0.078***
	(0.008)	(0.012)	(0.015)
$Non\_PCG_{f,b,t}$×$State_{f,b,t}$× Good $Rating_{f,b,t}$	0.049***	0.068***	0.076***
	(0.005)	(0.021)	(0.011)
$PCG_{f,b,t}$×$State_{f,b,t}$× Good $Rating_{f,b,t}$	0.090***	0.114***	0.123***
	(0.007)	(0.024)	(0.015)
$Non\_PCG_{f,b,t}$×$State_{f,b,t}$× Bad $Rating_{f,b,t}$	0.062***	0.088***	0.074***
	(0.006)	(0.022)	(0.012)
$PCG_{f,b,t}$×$State_{f,b,t}$× Bad $Rating_{f,b,t}$	0.105***	0.128***	0.120***
	(0.010)	(0.027)	(0.014)
$Share_{f,b,t}$	0.039***	0.125***	0.190***
	(0.009)	(0.019)	(0.030)
# Bank $Rela._{f,b,t}$	0.005	0.012	-0.011
	(0.004)	(0.008)	(0.019)
Firm NPL $Ratio_{f,b,t}$	-0.076***	-0.068***	0.017
	(0.022)	(0.020)	(0.035)
Firm Write-Off $Ratio_{f,b,t}$	-0.060***	-0.062*	-0.035
	(0.016)	(0.034)	(0.028)
Firm Debt Rest. $Ratio_{f,b,t}$	-0.026***	-0.006	0.003
	(0.005)	(0.007)	(0.006)
Firm USD Debt $Ratio_{f,b,t}$	0.015***	0.004	0.014
	(0.004)	(0.007)	(0.009)
Firm ST. Debt $Ratio_{f,b,t}$	-0.000*	-0.000	0.000***
	(0.000)	(0.000)	(0.000)
Bank Solvency $Ratio_{b,t}$	0.244***	-0.913***	-0.226
	(0.054)	(0.290)	(0.166)
Bank Credit/Assets $Ratio_{b,t}$	0.068***	0.015	-0.053
	(0.022)	(0.075)	(0.052)
Bank NPL $Ratio_{b,t}$	-0.395***	0.047	-0.334
	(0.083)	(0.214)	(0.204)
Bank $ROE_{b,t}$	0.001	0.131	-0.000
	(0.018)	(0.079)	(0.043)
Constant	-0.273***	-0.275***	-0.364***
	(0.029)	(0.085)	(0.090)
Firm FE	Y	Y	Y
Loan Quintile FE	Y	Y	Y
Industry FE	Y	Y	Y
Bank FE	N	N	N
Time FE	Y	Y	Y
Cluster	bank*industry	bank*industry	bank*industry
Observations	774,246	291,701	155,396
R-squared	0.042	0.069	0.089

This table presents the results of specification 6 for the whole sample of firms. The dependent variable is the change in the logarithm of the total amount of loans of firm f in bank b between months t and $t+1$. $PCG_{f,b,t}$ is a dummy variable equal to 1 if firm f receives a PCG loan from bank b at month t, 0 otherwise. $State\_bank_{b,t}$ is a dummy that indicates if the bank granting the loan is the state-owned bank. $Rating_{f,b,t}$ is a dummy that takes the value of 1 if the borrower holds a "bad" rating or worse, and 0 otherwise. All regressions are estimated using ordinary least squares. Robust standard errors clustered at bank-broad sector level are reported in parentheses. ***: Significant at 1% level; **: significant at 5% level; *: significant at 10% level.

Table A.17: *Robustness check: Risk-taking behavior*

	(1) Whole sample	(2) Pre-COVID	(3) COVID
Priv._bank$_{f,b,t}$× Good Rating$_{f,b,t}$× PCG$_{f,b,t}$	0.033***	0.032***	0.053***
	(0.004)	(0.004)	(0.006)
Priv._bank$_{f,b,t}$×Rating2B$_{f,b,t}$× Non_PCG$_{f,b,t}$	0.014***	0.020***	0.001
	(0.004)	(0.004)	(0.006)
Priv._bank$_{f,b,t}$×Rating2B$_{f,b,t}$× PCG$_{f,b,t}$	0.038***	0.029***	0.048***
	(0.006)	(0.006)	(0.009)
Priv._bank$_{f,b,t}$× Bad Rating$_{f,b,t}$× Non_PCG$_{f,b,t}$	0.006	0.009	-0.011
	(0.006)	(0.005)	(0.007)
Priv._bank$_{f,b,t}$× Bad Rating$_{f,b,t}$× PCG$_{f,b,t}$	0.022**	0.011	0.063***
	(0.009)	(0.013)	(0.013)
State_bank$_{f,b,t}$× Good Rating$_{f,b,t}$× Non_PCG$_{f,b,t}$	0.044***	0.058***	0.058***
	(0.004)	(0.017)	(0.011)
State_bank$_{f,b,t}$× Good Rating$_{f,b,t}$× PCG$_{f,b,t}$	0.083***	0.100***	0.121***
	(0.007)	(0.021)	(0.012)
State_bank$_{f,b,t}$×Rating2B$_{f,b,t}$× Non_PCG$_{f,b,t}$	0.044***	0.070***	0.051***
	(0.006)	(0.020)	(0.011)
State_bank$_{f,b,t}$×Rating2B$_{f,b,t}$× PCG$_{f,b,t}$	0.096***	0.113***	0.131***
	(0.008)	(0.021)	(0.012)
State_bank$_{f,b,t}$× Bad Rating$_{f,b,t}$× Non_PCG$_{f,b,t}$	0.058***	0.082***	0.058***
	(0.006)	(0.020)	(0.011)
State_bank$_{f,b,t}$× Bad Rating$_{f,b,t}$× PCG$_{f,b,t}$	0.103***	0.118***	0.108***
	(0.010)	(0.022)	(0.013)
Share$_{f,b,t}$	0.045***	0.108***	0.106***
	(0.008)	(0.009)	(0.012)
# Bank Rela.$_{f,b,t}$	0.001	-0.000	-0.027***
	(0.002)	(0.004)	(0.009)
Firm NPL Ratio$_{f,b,t}$	-0.064**	-0.046	0.033
	(0.025)	(0.031)	(0.025)
Firm Write-Off Ratio$_{f,b,t}$	0.009	0.054	0.001
	(0.023)	(0.056)	(0.021)
Firm Debt Rest. Ratio$_{f,b,t}$	-0.013*	-0.004	0.013**
	(0.007)	(0.008)	(0.007)
Firm USD Debt Ratio$_{f,b,t}$	0.010**	0.001	0.009
	(0.004)	(0.006)	(0.007)
Firm ST. Debt Ratio$_{f,b,t}$	-0.000***	0.000	0.000
	(0.000)	(0.000)	(0.000)
Bank Solvency Ratio$_{b,t}$	0.262***	-0.920***	-0.145
	(0.061)	(0.241)	(0.161)
Bank Credit/Assets Ratio$_{b,t}$	0.049**	-0.011	-0.088**
	(0.022)	(0.068)	(0.041)
Bank NPL Ratio$_{b,t}$	-0.427***	0.092	-0.503***
	(0.069)	(0.199)	(0.187)
Bank ROE$_{b,t}$	-0.001	0.151**	-0.033
	(0.016)	(0.073)	(0.039)
Constant	-0.231***	-0.162**	-0.109**
	(0.024)	(0.068)	(0.048)
Firm FE	Y	Y	Y
Loan Quintile FE	Y	Y	Y
Industry FE	Y	Y	Y
Bank FE	N	N	N
Time FE	Y	Y	Y
Cluster	bank*industry	bank*industry	bank*industry
Observations	351,337	137,173	72,511
R-squared	0.038	0.058	0.062

This table presents the results of specification 7. The dependent variable is the change in the logarithm of the total amount of loans of firm f in bank b between months t and $t+1$. PCG$_{f,b,t}$, State_bank$_{b,t}$, and Rating$_{f,b,t}$ are the already explained dummies. Rating_2B$_{f,b,t}$ is a dummy that takes the value of 1 if the borrower holds a rating of exactly 2B, and 0 otherwise. All regressions are estimated using ordinary least squares. Robust standard errors clustered at bank-broad sector level are reported in parentheses. ***: Significant at 1% level; **: significant at 5% level; *: significant at 10% level.

Table A.18: *Detailed results: New banking relationships*

	(1) Whole	(2) Pre-COVID	(3) COVID	(4) Whole	(5) Pre-COVID	(6) COVID
Non-PCG$_{f,b,t}$×State$_{b,t}$	0.013***	0.011***	0.011***	0.016***	0.012***	0.012***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.004)
PCG$_{f,b,t}$×Private$_{b,t}$	0.001	-0.000	0.003**	0.001*	-0.000	0.003***
	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)	(0.001)
PCG$_{f,b,t}$×State$_{b,t}$	0.010***	0.005***	0.027***	0.014***	0.007***	0.027***
	(0.001)	(0.001)	(0.003)	(0.001)	(0.002)	(0.004)
Share$_{f,b,t}$				-0.007***	-0.006***	-0.010***
				(0.000)	(0.001)	(0.002)
# Bank Rela.$_{f,b,t}$				-0.004***	-0.004**	-0.005***
				(0.002)	(0.002)	(0.001)
Firm NPL Ratio$_{f,b,t}$				-0.000	0.003	-0.004
				(0.002)	(0.004)	(0.006)
Firm Write-Off Ratio$_{f,b,t}$				-0.003**	-0.003**	-0.004***
				(0.001)	(0.001)	(0.001)
Firm Debt Rest. Ratio$_{f,b,t}$				-0.004***	-0.002***	-0.005***
				(0.001)	(0.001)	(0.002)
Firm USD Debt Ratio$_{f,b,t}$				-0.000	-0.000	-0.000***
				(0.000)	(0.000)	(0.000)
Firm ST. Debt Ratio$_{f,b,t}$				-0.010**	0.000	-0.018***
				(0.004)	(0.002)	(0.006)
Switch Collaterals$_{f,b,t}$				0.003	-0.020	0.037
				(0.012)	(0.014)	(0.056)
Bank Solvency Ratio$_{b,t}$				0.011**	-0.000	-0.001
				(0.005)	(0.004)	(0.011)
Bank Credit/Assets Ratio$_{b,t}$				-0.019	-0.004	-0.087*
				(0.015)	(0.017)	(0.051)
Bank NPL Ratio$_{b,t}$				-0.003	-0.000	-0.012
				(0.002)	(0.003)	(0.011)
Bank ROE$_{b,t}$	-0.008***	-0.006***	-0.014***	-0.003	0.004	0.001
	(0.001)	(0.001)	(0.002)	(0.004)	(0.004)	(0.009)
Constant	-0.008***	-0.008***	-0.014***	0.056***	0.050***	0.089***
	(0.001)	(0.001)	(0.002)	(0.008)	(0.008)	(0.011)
Firm FE	Y	Y	Y	Y	Y	Y
Loan Quintile FE	Y	Y	Y	Y	Y	Y
Bank FE	N	N	N	N	N	N
Time FE	Y	Y	Y	Y	Y	Y
Cluster	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry
Observations	1,010,134	322,576	138,314	1,010,134	322,576	138,314
R-squared	0.084	0.129	0.141	0.091	0.140	0.160

The dependent variable is a dummy that indicates if a new bank-firm relationship is created. PCG$_{f,b,t}$ is a dummy variable equal to 1 if firm f receives a PCG loan from bank b at month t, 0 otherwise. State_bank$_{b,t}$ is a dummy that indicates if the bank granting the loan is the state-owned bank. All regressions are estimated using ordinary least squares. Robust standard errors clustered at bank-broad sector level are reported in parentheses. ***: Significant at 1% level; **: significant at 5% level; *: significant at 10% level.

Table A.19: *External validity: New banking relationships*

	(1) Whole	(2) Pre-COVID	(3) COVID	(4) Whole	(5) Pre-COVID	(6) COVID
Non-PCG$_{f,b,t}$×State$_{b,t}$	0.010***	0.010***	0.011***	0.015***	0.011***	0.019***
	(0.001)	(0.001)	(0.002)	(0.001)	(0.002)	(0.004)
PCG$_{f,b,t}$×Private$_{b,t}$	-0.001	-0.001*	0.002	0.000	-0.000	0.002**
	(0.001)	(0.000)	(0.001)	(0.000)	(0.000)	(0.001)
PCG$_{f,b,t}$×State$_{b,t}$	0.008***	0.005***	0.023***	0.013***	0.007***	0.031***
	(0.001)	(0.001)	(0.003)	(0.001)	(0.001)	(0.003)
Share$_{f,b,t}$				-0.013***	-0.009***	-0.014***
				(0.001)	(0.001)	(0.001)
Firm NPL Ratio$_{f,b,t}$				-0.002***	-0.002*	-0.004***
				(0.001)	(0.001)	(0.001)
Firm Write-Off Ratio$_{f,b,t}$				-0.001	0.002	-0.003
				(0.001)	(0.002)	(0.004)
Firm Debt Rest. Ratio$_{f,b,t}$				-0.001*	-0.002	-0.004***
				(0.001)	(0.001)	(0.001)
Firm USD Debt Ratio$_{f,b,t}$				-0.002***	-0.002***	-0.004***
				(0.000)	(0.001)	(0.001)
Firm ST. Debt Ratio$_{f,b,t}$				-0.000	-0.000	-0.000***
				(0.000)	(0.000)	(0.000)
Switch Collaterals$_{f,b,t}$				-0.004***	0.000	-0.008***
				(0.002)	(0.001)	(0.003)
Bank Solvency Ratio$_{b,t}$				0.033**	0.024	-0.058
				(0.016)	(0.015)	(0.047)
Bank Credit/Assets Ratio$_{b,t}$				0.011***	0.000	0.012
				(0.004)	(0.004)	(0.010)
Bank NPL Ratio$_{b,t}$				-0.023**	-0.042**	0.044
				(0.010)	(0.019)	(0.044)
Bank ROE$_{b,t}$				-0.005**	-0.007**	-0.004
				(0.002)	(0.004)	(0.006)
Constant	-0.010***	-0.009***	-0.019***	-0.005	-0.000	0.001
	(0.001)	(0.001)	(0.002)	(0.003)	(0.003)	(0.007)
Firm FE	Y	Y	Y	Y	Y	Y
Loan Quintile FE	Y	Y	Y	Y	Y	Y
Bank FE	N	N	N	N	N	N
Time FE	Y	Y	Y	Y	Y	Y
Cluster	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry	bank*industry
Observations	1,203,580	383,980	179,190	1,203,580	383,980	179,190
R-squared	0.090	0.150	0.148	0.092	0.151	0.150

This table presents the results of specification 7 for the whole sample of firms. The dependent variable is the change in the logarithm of the total amount of loans of firm f in bank b between months t and $t+1$. PCG$_{f,b,t}$, State_bank$_{b,t}$, and Rating$_{f,b,t}$ are the already explained dummies. Rating_2B$_{f,b,t}$ is a dummy that takes the value of 1 if the borrower holds a rating of exactly 2B, and 0 otherwise. All regressions are estimated using ordinary least squares. Robust standard errors clustered at bank-broad sector level are reported in parentheses. ***: Significant at 1% level; **: significant at 5% level; *: significant at 10% level.