
Public Guarantees and Private Banks' Incentives: Evidence from the COVID-19 Crisis

GABRIEL JIMÉNEZ, LUC LAEVEN, DAVID MARTÍNEZ-MIERA AND JOSÉ-LUIS PEYDRÓ

Summary of Banco de España Working Paper no. 2318

The COVID-19 crisis marked a before and after in terms of large-scale government interventions. Governments adopted sizeable fiscal packages to support firms and households. In this sense, it is worth highlighting both the pay protection programs, intended to keep firm employees after the shutdown orders; and the loan guarantee schemes, intended to alleviate the economic effects of the pandemic guaranteeing the liquidity of the self-employed and companies. In most cases, these public guaranteed schemes were implemented through third parties, i.e., the granting of public guaranteed loan (PGL) decisions were delegated to private banks. This delegation could lead to potential allocation problems in the presence of divergences between privately-owned banks incentives and social incentives.

In Jiménez et al. (2023), we analyze the effects of PGL on the allocation of bank credit by focusing on the role of private banks' incentives when credit decisions on PGL are delegated to banks. We rationalize and guide the results using a stylized model in which (private) bank incentives from existing bank-firm credit exposures shape the granting of loans. In particular, we find that PGLs are more likely to be granted to high-risk firms (in terms of ex-ante credit risk or that are in sectors more negatively affected by the pandemic) and by weak banks (in terms of non-performing loan ratio), and by banks that have a larger pre-COVID credit exposure with the firm, with opposite results for non-PGLs. We also find that PGL have larger credit volumes and lower loan interest rates than non-PGL, especially for firms with higher pre-COVID bank share, and in a more accentuated way for riskier firms and weaker banks. Therefore, our results suggest a supply-driven mechanism. Finally, we exploit an exogenous variation across similar firms with different PGL access and we find that, on top of corroborating our previous results, PGL increases both overall lending and the

share of credit to riskier firms, especially for weaker banks. We find that these results have relevant real effects at firm level in terms of firm survival and investment.

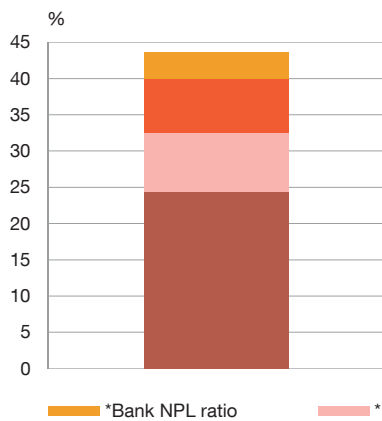
Our analysis is conducted using Spanish loan-level data at the firm-bank level over 2020 and 2021 and studies the Spanish PGL program that started after mid-March 2020. Spain represents an excellent setting for identification for several reasons. First, the Spanish scheme was one of the largest PGL programs, in terms of take-up amounts relative to GDP, compared to other schemes carried out in other countries (Falagiarda et al., 2020). Second, the Spanish scheme provided only a partial guarantee of up to 80% of the value of the loan, with residual credit risk being absorbed by the granting bank. This contrasts with many other PGL schemes which provides full guarantees to the loan. Therefore, in the Spanish case there is an important role for private banks' incentives in lending decisions. Third, we have access to the Spanish Central Credit Register maintained by the Banco de España (Central de Información de Riesgos del Banco de España, or CIRBE, in Spanish). This dataset contains information of almost all granted loans in Spain and all loan applications of firms to potential new lenders. Moreover, it allows us to uniquely identify loans with COVID-19 related public guarantees. Fourth, our identification of the effect of a PGL on firm total credit is based on the fact that the scheme offered differential PGL access to very similar firms. In particular, the program excludes firms having loans defaulted as of December 2019 of the set of eligible companies. However, firms could access the PGL if they had loans in arrears as of January or February 2020 (just before the COVID outbreak in Spain) and not in December 2019. As a second source of identification, we exploit firms with differential access to PGL arising from different coverage levels of the public guarantee. In this sense, among eligible firms for PGL, there are differential access to PGL because the guaranteed amount varies by firm size: the coverage level is 80% of the loan amount for small and medium sized firms versus 70-60% for larger firms.

Empirically, we first analyze the allocation of PGLs. We find that PGL are more likely to be granted to SMEs (with a higher coverage level), risky firms, to firms in more pandemic-affected sectors (e.g., tourism, transport, hospitality), and

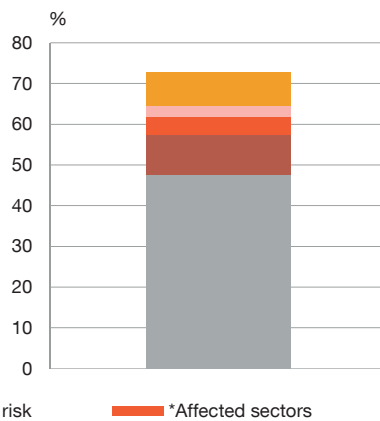
Figure 1

Exposure to technology and changes in employment shares, by skill and age

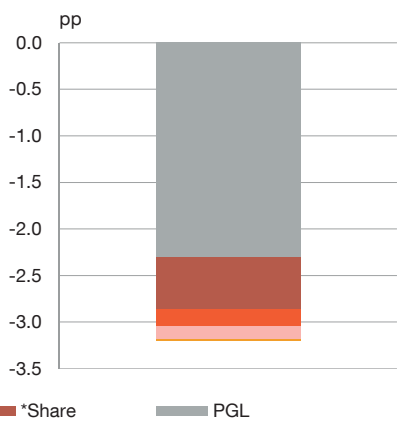
1.1 On the likelihood to obtain a PGL



1.2 On the loan amount of PGL w.r.t. non-PGL



1.3 On the loan interest rate of PGL w.r.t non-PGL



Notes: This figure reports the economic effects based on the models estimated in the work. The * symbol indicates the effect of adding the indicated variable progressively. Thus, for example, in Figure 1.1 the effect of "Share" is first showed, then that of "Share*Firm risk", then that of "Share*Firm risk*Affected sectors" and finally that of "Share*Firm risk *Affected sectors*Bank NPL ratio". The same structure is repeated for Figures 1.2 and 1.3 but starting with the variable "PGL". Figure 1.1 is based on the estimation results of a linear probability model at firm-bank level of the probability of a firm to get a PGL between 2020:03 and 2020:12. Figures 1.2 and 1.3 are based on a Poisson model (for the loan amount) or a linear model (for interest rate) at firm-bank-type of loan (PGL or not) level of the newly granted loans between 2020:03 and 2020:12. PGL is a dummy equal to 1 if the firm received a public guaranteed loan and 0 otherwise. "Share" is the share of a firm's total credit obtained from the bank, computed at the firm-bank level using committed loan amounts as of 2019:12. "Firm risk" is a scoring variable which captures the credit risk of the firm (higher values implies higher risk). "Affected sectors" is a dummy variable defined as sectors in which firm turnover on average decreased by more than 15% in 2020 with respect 2019. Bank NPL ratio is the ratio of non-performing loans (doubtful and 90 days overdue) over total loans of the bank.

firms with higher prior to COVID share of total credit with the bank. In terms of the economic impact, the probability of obtaining a PGL increases by 29%, 10%, 10%, and 24%, respectively (for an increase from the first to the third quartile of the distribution of the continuous variables, and from 0 to 1 of the discrete ones). Moreover, this latter effect is stronger for riskier firms (33%), for those firms that are in sectors more negatively affected by the COVID (40%), and even stronger for less strong banks, in terms of higher ex-ante NPLs (44%). Figure 1.1 shows this incremental effect once the variables are interacted.

We also study the loan amount and interest rates of newly granted PGLs versus non-PGLs. Comparing different type of loans granted to the same firm by the same bank we find that PGL is on average larger in magnitude, 46% higher than non-PGL, and that that the amount granted for PGL is even higher among firms with higher ex-ante credit dependency with the bank (the granted PGL amount for a given firm increases by 57.2%). This effect increases to

64.4% for firms in sectors more affected by the pandemic and to 72.7% when the bank has a higher NPL (see Figure 1.2). In terms of the interest charged to the loan, we get similar results: PGL also tend to have lower interest rates than non-PGL (2.3pp less). We also find that this effect is amplified for higher levels of pre-share (2.9 pp less) and for riskier firms working with less strong banks (3.2 pp). See Figure 1.3. These volume and pricing results are therefore not consistent with a borrower (demand)-driven channel, but instead are consistent with a credit supply(lender)-driven channel.

Finally, we analyze the implications of PGL existence for bank credit exploiting, mainly, the exclusion criteria in the PGL program. Based on this restriction, firms having loans defaulted as of December 2019 were not eligible for the PGL while firms defaulted between January and February 2020, but not before, were eligible. Focusing on this feature of the regulation related with the firm's loan performance, we first show that firms in these two groups (excluded vs.

not excluded for the PGL scheme) are very similar in observables, but with completely different access to PGL. Then, we find that firm-bank pairs with PGL increase their total loans (at least by a 49%) as well as their share. At the same time, non-PGL credit is reduced (up to a 56%), evidencing that the public guarantee scheme resulted in a credit substitution between PGL and non-PGL credit. These effects are stronger for less strong banks. Moreover, we also document important positive real effects (in terms of firm survival and investment) at the firm level for those eligible companies. We find similar results exploiting the differential access to PGL of firms that emerge from different levels of coverage of the public guarantee system.

REFERENCES

Falagiarda, M., Prapiestis, A., and Rancoita, E. (2020), "Public Loan Guarantees and Bank Lending in the COVID-19 Period," ECB Economic Bulletin, Issue 6/2020.

Jiménez G., L. Laeven, D. Martínez-Miera, and J. Peydró (2023), "Public guarantees and private banks' incentives: evidence from the COVID-19 crisis", Banco de España – Documentos de Trabajo 2318.