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Analysis of France's State-Guaranteed Loan Scheme at End-2021

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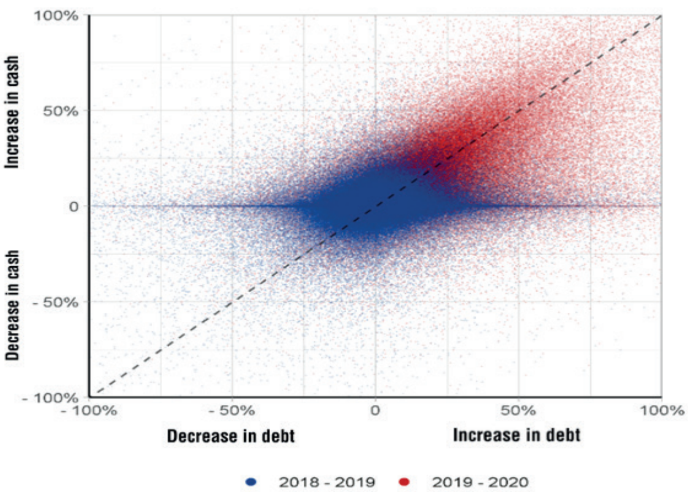
- At the onset of the COVID-19 crisis, France launched a State-guaranteed loan (*prêts garantis par l'État* – PGE) scheme to meet the urgent cash needs of firms. At end-2021, more than a year and a half after these loans were introduced, some €145bn had been lent out to more than 700,000 firms, with over three quarters of that volume disbursed between March and June 2020.
- The primary recipients of PGE loans were smaller firms and firms operating in the sectors hardest hit by the crisis. These loans mainly went to firms experiencing temporary cash flow needs, while uptake from firms already in difficulty before the crisis remained low.
- According to surveys on how firms used the loans, many borrowed funds as a precautionary measure and only tapped into a small portion of their credit. There has been no widespread substitution of PGEs for other bank debt.
- Although PGE recipients saw their debt levels rise, so did their cash levels, resulting in generally stable levels of net debt.
- Based on available surveys for 2021, it does not seem there will be any particular difficulties with repayment. Only 5% of firms foresee having difficulty making their payments. Current estimates produced in partnership with the *Banque de France* peg the anticipated gross loss ratio at 3%.

Changes in cash and debt levels among PGE recipients (as a percentage of total assets)



Source: DGFiP (tax documents), DG Trésor calculations.
How to read this chart: The firms above the diagonal line saw their level of net debt decline.
Scope: 433,000 PGE-recipient firms with financial data available for 2018, 2019 and 2020.

1. A one-off measure to meet immediate cash needs

The COVID-19 crisis caused economic activity to plummet abruptly, declining nearly 8% in 2020 according to INSEE,[1] France's national institute of statistics and economic studies. For firms, this caused a mismatch between current income and expenditure, exposing many of them to cash shortages. Furthermore, the high degree of uncertainty and bleak economic outlook threatened banks' ability to meet the steep increase in demand, and could have led some of them to limit their credit supply.[2] To prevent credit rationing and the consequences it would have on business financing[3] and employment[4] – and, more generally, to reassure firms about their cash levels – government intervention was called for.

Due to the sudden nature of the drop in business in many sectors, there was an urgent need for a simple and effective measure to be implemented on a large scale. A State-guaranteed bank loan scheme was chosen, as it would preserve the normal functioning of lending and use already established structures.

In designing the measure, the government needed to factor in several constraints: operational constraints tied to the urgency of the situation and the tight timetable for negotiations; legal constraints at both European level (need to comply with State aid regulations) and national level (need to adhere to the budget process); prudential constraints (need for the guarantee to be recognised as a risk mitigator for banks); and management constraints (need to ensure alignment of interests with lenders and to introduce safeguards to minimise the risk of fraud).

The final product was set up in the space of a week,[5] and banks began offering it in late March (see Chart 1). Eligibility was open to all non-financial firms regardless of size, legal form or business sector. Loans could be taken out for up to 25% of a firm's turnover, or two years of payroll for young firms or innovative start-ups, and firms could apply for multiple loans within this limit. Loans were granted at cost price and with a deferred repayment period of up to two years. To ensure an alignment of interests between the government-as-guarantor and the banks, the guarantee coverage ratio was set within a range of 70% to 90% of the loan amount depending on the size of the firm, and a waiting period was introduced to prevent the guarantee from being called on within two months of disbursement. To remain responsive as the situation developed, the government continued to fine-tune the measure after the initial launch: for example, there were multiple updates to the FAQ, a seasonal component was later introduced and the option of a second year of deferral was announced in 2021.

The way PGEs were structured entailed the involvement of French banks, which agreed to market the new product with their teams working remotely and to handle extremely high demand. The government worked closely with the banks, collecting feedback that helped to fine-tune the product. Bpifrance, France's public investment bank, was able to quickly launch an online platform to manage firms' applications for the loans, which allowed for smooth and secure processing with real-time tracking.

(1) "L'économie française en 2020 : une année de bouleversements", *Insee Analyses* no. 64, May 2021.

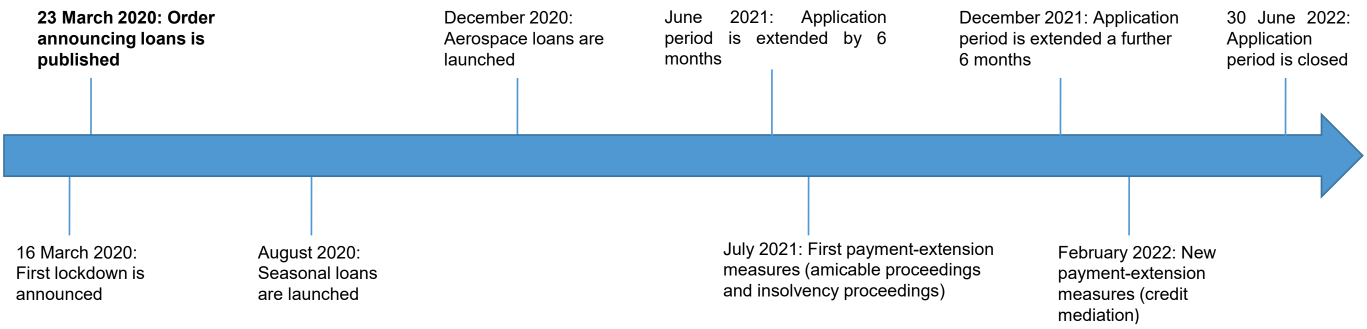
(2) On this topic, see: Wehinger G. (2014), "SMEs and the Credit Crunch: Current Financing Difficulties, Policy Measures and a Review of Literature", OECD Journal; and Brunnermeier M. K. (2009), "Deciphering the Liquidity and Credit Crunch 2007–2008", *Journal of Economic Perspectives*, vol. 23, no. 1.

(3) Orton P., Ansell J. and Andreeva G. (2014), "Exploring the Performance of Small- and Medium-Sized Enterprises Through the Credit Crunch", *Journal of the Operational Research Society*, vol. 66, no. 4; Whalen C. J. (2007), "The US Credit Crunch of 2007: A Minsky Moment", Public Policy Brief no. 92, Levy Economics Institute of Bard College.

(4) Berton F., Mocetti S., Presbitero A. and Richiardi M. (2018), "Banks, Firms, and Jobs", *The Review of Financial Studies*, vol. 31, no. 6; Buera F. J., Jaef R. and Shin Y. (2015), "Anatomy of a Credit Crunch: From Capital to Labor Markets", *Review of Economic Dynamics*, vol. 18, no. 1.

(5) Order of 23 March 2020 in application of Article 6 of 2020 Supplementary Budget Act 2020-289 of 23 March 2020.

Chart 1: PGE timeline

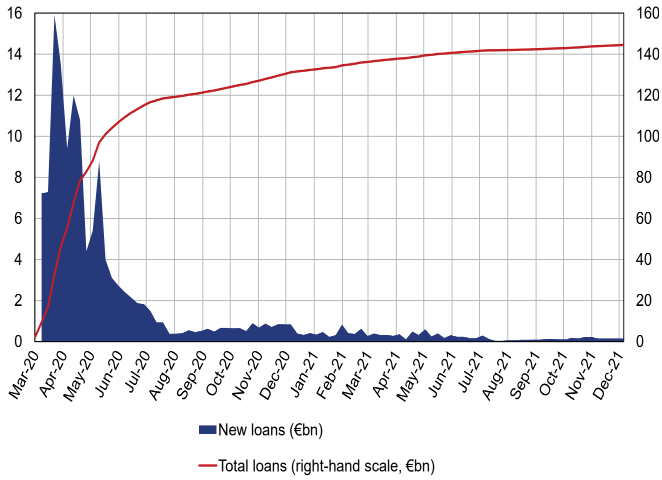


Source: DG Trésor.

While most European countries introduced comparable measures, what makes France's PGE scheme unique is its favourable conditions in terms of eligibility criteria, maximum loan amount and interest rates.[6] The rates on offer – 0.25% in year 1 and 1% to 2.5% in subsequent years – are among the lowest in Europe. Access to support measures was restricted in some countries to firms that were deemed viable (in Germany, firms that posted an average profit between 2017 and 2019; in Belgium, firms that were not behind on any payments; in Italy, firms that had not had any debts written off). Others required additional guarantees (in the Netherlands, from the company's shareholders or CEO). In France, loan decisions were made according to banks' underwriting processes, and the sharing of risk between banks and the government allowed for a reasonable alignment of interests.

Soon after the loans hit the market, there was a rush of applications from firms: of the €145bn lent out to over 700,000 firms by end-2021 (in a country with over 4 million legal units), nearly €110bn was approved between late March and late June 2020 (see Chart 2) to more than 530,000 firms. The rejection rate, according to the French Banking Federation on the basis of eligible applications, stood at just 2.9%, illustrating the measure's wide scope of coverage.

Chart 2: PGE approvals



Source: Bpifrance, DG Trésor calculations.

(6) Anderson J., Papadia F. and Véron N. (2021), "COVID-19 Credit-Support Programmes in Europe's Five Largest Economies", *Working Paper* 03/2021, Bruegel.

2. Who were the recipients of PGEs?

The main recipients of PGEs were very small enterprises (VSEs) and small- and medium-sized enterprises (SMEs), which together represent 99% of the total number of recipients and 77% of loan volumes, although they only account for 40% of total value-added. Excluding large enterprises, the average loan amount stands at €180,000, with 77% of recipient firms borrowing less than €100,000. As for large enterprises, there were 48 that took out PGEs, for a total volume of €17bn. These companies agreed not to pay out dividends or buy back shares during the year they received their loan.

In terms of sector breakdown by loan volume, the top three recipient sectors were trade, manufacturing, and professional, scientific and technical activities (see Table 1). Going by number of recipients, the top three sectors were trade, accommodation and food service, and construction – the sectors hardest hit by the crisis. In terms of percentage of uptake, the accommodation and food service sector, which was particularly hard hit, stands out with more than one-third of firms taking out a PGE, for a total volume of 10% of the sector's annual pre-crisis turnover.

Table 1: PGE uptake by sector (% at end-2021)

Sector	Share in number of legal units	Share in loan volume	Share in number of firms in the sector that took out a loan	Share of PGE in the sector's turnover
Agriculture	3.3	1.2	*	*
Mining and quarrying	0.0	0.1	22.8	3.3
Manufacturing	6.9	16.0	23.2	2.1
Electricity and gas	0.0	0.1	0.8	0.1
Water supply, waste management and remediation	0.2	0.5	13.5	1.5
Construction	13.1	8.6	18.8	3.7
Trade	21.9	23.6	22.7	2.4
Transportation	3.4	6.4	16.4	4.1
Accommodation and food service	14.4	7.8	38.1	10.2
Information and communication	2.6	3.4	12.2	2.3
Finance	1.7	10.5	*	*
Real estate	2.5	1.2	7.8	2.2
Professional, scientific and technical activities	9.5	10.5	12.6	7.7
Administrative services	3.7	4.1	11.8	3.6
Education	1.9	0.9	8.7	7.9
Human health and social work	7.0	2.4	9.5	3.4
Arts, entertainment and recreation	2.1	1.7	9.8	7.7
Other services	5.7	1.0	16.8	6.3
	100	**100**	**15.8**	**3.4**

Source: Bpifrance, INSEE (2019 Annual Business Statistics Programme), DG Trésor calculations.
*: Data not available for some sectors.
Note: The particularly high loan volume in the finance sector is due to the fact that it includes holding companies.

Among firms that took out a PGE, most were not affected by the programme's cap of 25% of turnover. The median loan amount as a percentage of turnover stood at 16.6%, and only 38% of recipient firms took out a loan for more than 20% of their turnover. Most firms did not apply for the full amount of cash on offer.

The loans were made available to firms no matter their credit rating,[7] but those with ratings of 4 and 5+ accounted for more than half (52%) of all loans. At 43%, there was higher uptake among firms with average ratings (4+, 4, 5+, 5) compared to 26% for those with top ratings (3++, 3+, 3) and 30% for those with lower ratings (6, 7, 8, 9, P).[8] This suggests that the banks' underwriting processes served their purpose.

An analysis of firms' balance sheet data offers a more granular picture of the firms that took out PGEs (see Box below).

Box: Data and methodology

Analysis is based on individual-level data from Bpifrance on loan uptake and repayment choices, business tax documents from the Public Finances Directorate General (DGFiP), and data provided by the *Banque de France* on credit ratings and bank lending activity from the Central Credit Register.

The Bpifrance data covers all PGEs disbursed up to 31 December 2021, representing just over 700,000 firms and €140bn. The DGFiP data provides 2019 and 2020 financial details about more than 2 million firms. The *Banque de France* credit-rating data covers nearly 275,000 legal units. The Central Credit Register data covers all bank commercial lending in an amount of at least €25,000 and provides the monthly amount of outstanding bank credit for more than 1.5 million firms.

The sample size was limited to ensure the quality of the data. Specifically, it was limited to firms filing under the normal tax regime, and some sectors[a] were excluded, as were firms with outlier data points. The final sample for statistical analysis consisted of more than 750,000 legal units (composed of 74% VSEs, 25% SMEs and 1% large enterprises) of which more than 200,000 received PGEs.

For the econometric analysis, we used a probit model with the following specifications:

$$\Pr(PGE_i = 1) = F(\beta X_i)$$

where PGE_i is a binary variable identifying whether firm *i* received a PGE, X_i is a set of characteristics of firm *i*, and *F* is the standard normal distribution function. Observations with extreme values for certain variables were excluded (the final sample for the econometric analysis contains nearly 665,000 observations). The results of the econometric analysis are available online.[b]

a. Agriculture (NAF 21 classification code A), finance (K), public administration (O), education (P), activities of extraterritorial organisations and bodies (U), miscellaneous activities (X) and undetermined (Z).
b. Table of results

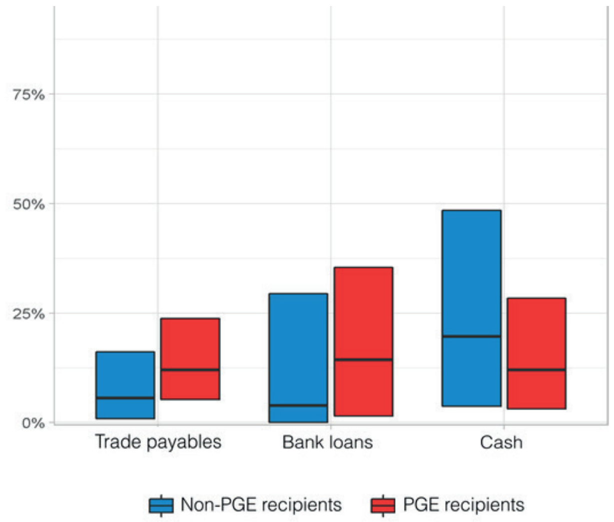
(7) The *Banque de France* issues credit ratings based on an assessment of firms' ability to meet their financial obligations over the next one to three years. Ratings range from 3++ (the firm is deemed to have excellent repayment capacity) to 9 (the firm is in jeopardy) and P (the firm has entered insolvency proceedings).
(8) This aligns with the findings of the Committee on the Monitoring and Evaluation of Financial Support Measures for Companies Confronted With the COVID-19 Epidemic.

The first observation is that the vast majority of firms that took out a PGE (85%) already had a bank loan on their balance sheet at year-end 2019.[9] This suggests that many PGEs were granted in the context of traditional commercial banking relationships, with banks having offered overdraft facilities to business clients in a context of heightened uncertainty.

Second, firms that took out PGEs tended to have lower levels of cash before the crisis. At year-end 2019, the median ratio of cash to assets was 12% for loan-recipient firms versus 16% for others in the sample (see Chart 3). This finding confirms that the loans helped to support firms at risk of a cash shortfall.

Third, PGE-recipient firms tended to be slightly more indebted prior to the crisis. The median ratio of debt to liabilities was 61% in 2019 for recipient firms, compared to 56% for other firms. The combination of lower cash levels and higher gross loans means higher net debt levels for these firms: a median of 45% of liabilities, versus 34% for other firms. Furthermore, there are differences in debt composition: recipient firms had more bank debt (median share of liabilities of 17% versus 14% for other firms) and trade payables (16% versus 8%).

Chart 3: Weight distribution of cash and different types of debt in total assets 2019



Source: DGFiP (tax documents), DG Trésor calculations.
How to read this chart: The coloured bars extend to the lower and upper quartiles of the distribution, and the black horizontal line indicates the median. Data for a sample size of more than 750,000 firms.

Furthermore, a correlation was found between a decline in activity and PGE uptake: for firms that took out a loan, the median decline in turnover was 10% in 2020, compared to 4% for the rest of the sample. All of these findings – that the pre-crisis situation and the impact of the crisis were major determinants of a firm's decision to take out a loan, without excessive uptake from the most fragile firms – align with the results of other studies.[10]

These differences can be partly attributed to a particular set of shared characteristics among recipient firms, notably in terms of size and sector. An econometric approach can be used to account for all of these characteristics simultaneously and identify the main determinants of loan uptake.

An econometric analysis controlling for all of the abovementioned characteristics (size, sector, rating, financial characteristics, etc.) confirms the results from the descriptive statistics. PGEs were most popular among VSEs and SMEs, and it was the sectors hardest hit by the crisis (accommodation and food service, and arts, entertainment and recreation) that saw the highest uptake. The results also confirm the financial characteristics of loan recipients. The higher a firm's cash levels, the less likely it was to apply for a loan. In terms of debt levels, firms with significant trade payables were more likely to take out a loan. The econometric analysis confirms that uptake was highest among firms with average credit ratings (4 and 5) and reveals that the relationship between debt level and loan uptake is non-linear: firms with an average level of debt were more likely to take out loans than others. Lastly, the intensity of the economic shock does not appear to have been a particularly discriminating factor in terms of loan uptake, with the sign of the effect depending on econometric specification, but as the shock was highly endogenous, it is difficult to separate from the other characteristics of firms.

(9) Concerns just over 450,000 PGE recipients for which balance sheet data was available. Since those firms not included tend to be smaller businesses, this figure is an upper bound.
(10) See for example: "Rapport d'évaluation de la contrainte pour les entreprises du remboursement des prêts garantis par l'État (PGE)", *Institut des politiques publiques*, April 2021.

3. What were the loans used for?

Without attempting to measure the macroeconomic impact of the PGEs, the significant drop in the number of business failures in France in 2020[11] suggests that the loan scheme, combined with other emergency support measures, significantly helped to ease firms' cash flow problems. Studies have begun to analyse the effect of loan guarantees, in France and elsewhere, with findings pointing to a significant reduction in firms' cash flow problems during the crisis.[12]

An analysis of firms' 2020 financial statements can offer a more developed understanding of the effect of PGEs. At year-end 2020, PGE-recipient firms saw an increase in debt levels, but also in cash levels. While the median debt-to-liabilities ratio grew from 61% to 67%, the median cash-to-assets ratio grew from 12% to 24%. Specifically, half of PGE recipients saw their net debt decline in 2020. The median change in net debt in percentage points of pre-crisis turnover is less than one point, and only 10% of firms saw their net debt rise by more than 20% of their pre-crisis turnover. This means that the vast majority of PGE recipients were able to maintain their financial position, even if a not insignificant proportion have experienced difficulty.

An analysis of PGE-recipient firms' liabilities at year-end 2020 also reveals a partial substitution of trade payables for bank debt. While financial debt levels rose among recipient firms, there was also a decrease in trade payables among more than half of them (54%). The sudden economic shutdown caused by the crisis likely made it difficult to cover trade payables, and the PGEs offered the cash needed to do so. When business picked up again, these firms were likely able to build back cash reserves and pay their suppliers.

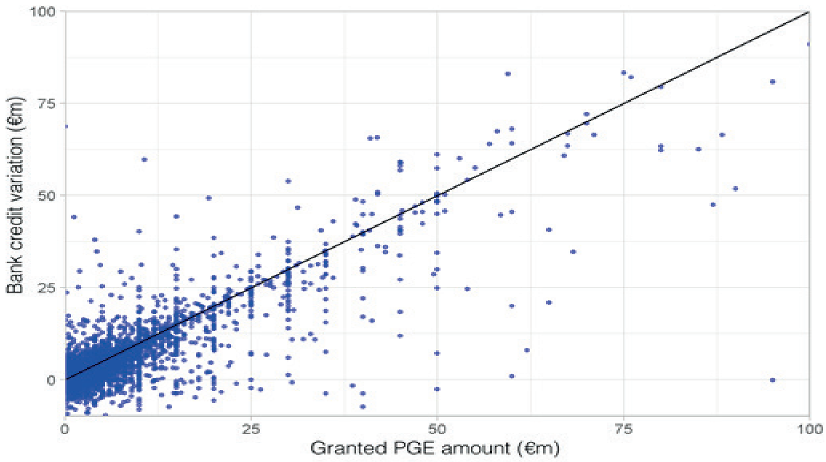
Surveys of VSEs and SMEs conducted by Bpifrance Le Lab in partnership with Rexecode provide an overview of how the PGEs were used once disbursed to firms. According to the May 2021 survey,[13] 48% of respondent firms used their loan as cash reserves, 47% used it to fund working capital requirements, 21% used it to pay off pre-existing debts and 14% used it to fund investment.

In the November 2021 survey, 52% of PGE-recipient firms reported having used less than half of their loan, with 29% having used substantially all of it.[14] A December 2021 survey of mid-size firms by Palatine (a bank) and METI (a group representing mid-size firms)[15] revealed that 46% of firms that took out a PGE had not used it, and roughly a quarter had used more than 75% of it.

The loan scheme's favourable lending terms and broad eligibility criteria also raised the question of whether PGEs were being used to substitute for other bank debt, with firms potentially taking advantage of the more favourable repayment terms to refinance an existing loan. Based on the available data, this was not a common occurrence. For one thing, the increase in overall bank debt during the crisis is closely related to the amount of PGEs disbursed. According to the *Banque de France*, net flows of bank loans to non financial companies stood at €141bn in 2020, compared to €52bn in 2019, whereas the volume of PGEs extended to these companies was €131bn. Furthermore, firm-level credit data[16] indicates that the increase in outstanding bank credit among PGE recipients is strongly correlated to PGE amount (see Chart 4). For most firms, PGEs represented an additional debt, sometimes even the only one. This suggests that there was limited substitution of PGEs for other types of debt.[17]

(11) Maadini M. and Hadjibeyli B. (2022), "Business Failures in France During the COVID-19 Crisis", *Trésor-Economics* no. 298.
(12) Demmou L. and Franco G. (2021), "From Hibernation to Reallocation: Loan Guarantees and Their Implications for Post COVID 19 Productivity", *OECD Economics Department Working Papers* no. 1687.
(13) "Trésorerie, investissement et croissance des PME", quarterly survey, May 2021 – Bpifrance Le Lab/Rexecode.
(14) The survey asked the question "If you took out a State-guaranteed loan, how much of it have you already used?" and gave the following options: not much or none at all; less than half; more than half; substantially all.
(15) Palatine-METI survey #4 on mid-size firm financing, December 2021.
(16) Data from the Central Credit Register provided by the *Banque de France* and processed by DG Trésor.
(17) Although, strictly speaking, comparison should be made against the debt that the firm would have incurred in a non-crisis scenario.

Chart 4: Increase in firms' bank credit according to PGE amount



Source: Central Credit Register (Banque de France), Bpifrance's PGE database, DG Trésor calculations.
Note: Change in bank credit between March and December 2020 and PGEs granted in 2020, for a sample of 250,000 PGE-recipient firms with available credit data.

4. The cost to public finances

4.1. Repayment terms

One year after receiving their PGEs, firms must establish repayment terms with their bank. They can choose whether to take the additional one-year payment deferral (during which time only interest payments are due) and decide on a repayment period (of up to five years, with the State Aid Temporary Framework limiting loans to six years in total).

On a monthly basis, banks share their customers' repayment options with Bpifrance. At year-end 2021, out of 647,000 loans with available repayment option data, 11% were fully repaid within the first year, and 72% had been spread over a five-year repayment term. In total, 57% of borrowers opted for an additional year of deferral. These figures are confirmed by banks[18] and firms.[19] In particular, only 5% of firms responding to the Bpifrance VSE-SME survey reported being concerned they would not be able to repay their PGE.

Sector and firm size are determinants of repayment choices: 19% of PGEs were repaid in the first year in the human health and social work sector, compared to 7% in the arts, entertainment and recreation sector; 11% of firms with fewer than 50 employees repaid their loan in the first year, compared to 16% of firms with more than 50 employees.

4.2. A moderate cost to the State

There are three types of fiscal flows associated with PGEs:

- inflows in the form of guarantee premiums paid by the banks to the State, the amount of which is based on the size of the firm and the loan term
- outflows in the form of indemnities paid by the State to credit institutions when there is a credit event and a guarantee is called on
- inflows or outflows, depending on the amount ultimately recovered by the credit institution from firms that experienced a credit event at the outcome of the reorganisation or liquidation process

The *Banque de France* and DG Trésor keep an up-to-date estimate of the potential PGE-related losses for the State. This estimate is based on a breakdown of PGE recipient firms by *Banque de France* rating, to estimate the probability of default over the loan term. The most recent estimate, produced in January 2022, indicates a 3.1% gross loss ratio, or €4.6bn in losses with an anticipated final outstanding amount of €150bn. These gross losses are offset by gains from the payment of commissions on the State guarantee. These gains are forecasted to amount to €3.2bn, giving a net loss of €1.4bn for a final outstanding amount of €150bn (see Table 2). According to Bpifrance data, there has not been a significant volume of guarantee calls to date, standing at €312m at end-2021.

(18) Infographic, "Choix du remboursement des PGE", French Banking Federation.
(19) Survey, "Trésorerie, investissement et croissance des PME", Bpifrance Le Lab/Rexecode.

Table 2: Estimated cost of PGEs to France's public finances

	Estimate (January 2022)
Final outstanding amount (1)	€150bn
Gross loss ratio (2)	3.1%
Anticipated gross loss (3) = (1) × (2)	€4.6bn
Guarantee commissions (4)	€3.2bn
Anticipated net loss (3) − (4)	**€1.4bn**

Source: Banque de France and DG Trésor.

4.3. Very few cases of fraud

To ensure a quick rollout and wide-ranging coverage, the government did not impose systematic screening for PGEs, but this did not encourage fraudulent use of the scheme. In July 2021, France's financial intelligence unit, TRACFIN,[20] reported having identified just six cases of fraud out of all the loans that were approved (five of which were in 2021). This is a much lower rate than in some other countries,[21] proving the effectiveness of the scheme's safeguards: a two-month waiting period before the guarantee could be called on and an indemnity cap of 90% of the loan amount. While there may have been concern that more cases would appear as most loans entered their repayment phase, there was no rise in fraud with the first cohort of payments in spring 2021.

4.4. Solutions for firms in distress

Although the available data and feedback from banks and firms do not point to a substantial risk of PGE repayment problems, repayment terms have been made more flexible to help particularly cash-strapped firms preserve their capacity to make payments. The government decided to allow payments to be extended beyond the maximum six-year loan term, at no additional cost to firms and without forfeiting the government guarantee in the event the decision to spread out payments is associated with amicable proceedings or insolvency proceedings involving a judge (arbitration, safeguard procedure, court ordered reorganisation, etc.). This flexibility will allow affected firms to restructure their debts, including their PGEs, under the conditions ordered or approved by the judge. SMEs should have easier access to this payment-extension option with the May 2021 introduction of simplified insolvency proceedings, under which, up to June 2023, firms unable to make their payments will have a shorter observation period (three months as opposed to a twice-renewable six-month period) and simplified procedures. For smaller firms (SMEs, VSEs and self-employed workers with less than €50,000 in PGEs), payment-extension options were expanded on 19 January 2022 by a market-wide agreement to create an ad hoc reorganisation procedure through the *Banque de France*'s credit mediation service. The new procedure, which is free and confidential, will allow firms that can prove financial hardship to spread out their PGE payments over a period of up to ten years and, in some cases, get an additional six-month deferral before the first payment comes due.

(20) 2021 annual report.

(21) In a December 2021 report, the UK's National Audit Office estimated that £4.9bn in fraudulent loans had been taken out under the country's Bounce Back Loan Scheme.

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