Development finance innovations and determinant factors: credit guarantees funds during the pandemic[1]

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Abstract

This article examines the role played by Brazilian public guarantee funds in successfully mitigating the financing challenges local SMEs faced during the pandemic and explores the reasons behind such policy effectiveness, by focusing in one of them, the Investment Guarantor Fund- Emergency Credit Access Program (FGI-PEAC, Portuguese acronym), operated by the Brazilian Development Bank (BNDES, Portuguese acronym). The article demonstrates that FGI-PEAC effectiveness lays on three fundamental conditions: (i) promptness to attend to a pressing demand for state support; (ii) accumulated experience and capabilities to innovate in the face of unexpected challenges (imposed by the pandemic) and, (iii) the existence of an appropriate intrastate policy coordination ambiance. As a result, BNDES timely mobilized internal competencies to implement process and product financial innovations, resulting in an increase in credit and additional job creation.

Keywords: Policy capacity, policy innovation, development finance, credit guarantees, SME

Introduction

This article explores the role played by Brazilian public guarantee funds in mitigating the financing challenges local SMEs faced during the pandemic and explores the reasons behind such policy effectiveness, by focusing in one of them, the Investment Guarantor Fund- Emergency Credit Access Program (FGI-PEAC, Portuguese acronym), operated by the Brazilian Development Bank (BNDES, Portuguese acronym). Through the FGI-PEAC case study the article brings about its innovative features and performance characterized, alongside the evolution of BNDES with guarantee funds, in time. The analysis will shed light on a set of determinants that contributed to the effectiveness of such initiative. The evidence brought by this article is a contribution to the increasing debate over the relevance of innovation in public policies as a fundamental pillar in bringing about policy effectiveness especially in the face of the need for immediate actions in the face of unexpected and urgent development challenges.

Relying on the policy capabilities literature, the study underscores the role development finance institutions play in securing appropriate financing (interest rates, maturity and collaterals) during moments of income restriction, market liquidity scarcity, and tightening financial conditions for SMEs. Influenced by factors such as a company's low bankability, risk associated with the financing object, and a country's economic cycle, SMEs often face limited access to third-party

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financial resources, prompting voluntary exclusion from the financial system. Financial institutions are cautious due to SMEs' low financial capacity and insufficient guarantees, which impede their development and competitiveness. Financial and economic crises further intensify the scarcity of funding, prompting the need for public interventions, such as credit guarantee instruments, to restore confidence in the banking sector and bolster support for businesses. In this context, Credit Guarantee Systems (SGCs) emerge as pivotal tools, enabling resource leverage, reducing costs, and mitigating risks.

The article demonstrates that BNDES mobilized competencies to timely implement changes in existing development finance instruments (credit guarantee funds), resulting in increased credit and job creation. Out of an allocated R$ 20 billion (USD 3.9 billion) budget, financial agents extended R$ 92 billion (USD 19.9 billion) in credit loans to SMEs between 2020 and 2022. This initiative benefitted 114,000 companies, impacting approximately 6 million employees across roughly 70% of Brazilian municipalities. Three fundamental conditions are highlighted as specific explanatory features of BNDES success: (i) promptness to attend to a pressing demand for state support; (ii) accumulated experience and capabilities to innovate in the face of unexpected challenges (imposed by the pandemic) and, (iii) the existence of an appropriate intrastate policy coordination ambiance.

The first section introduces the analytical framework. The second examines the role played by different public guarantee funds in mitigating the challenges Brazilian SMEs faced during the pandemic. Subsequently, the article focuses on analyzing the explanatory factors behind the effectiveness of one of these public guarantee funds, the FGI-PEAC, operated by the Brazilian Development Bank, BNDES. The last section concludes.

Policy capabilities and learning processes

Understanding the factors contributing to successful policy design and finding ways to improve and innovate in complex areas are crucial for enhancing policy effectiveness (Howlett, 2014a, 2014b; Howlett et al., 2017). Improving the ability of government institutions to fulfill their duties is a key topic in policy discussions. Effective state capabilities would lead to positive outcomes like sustainable economic development and welfare with the underlying understanding that legitimacy and accountability are essential components of these capabilities. Also, policy capabilities implies developing solutions and making effective choices involving values like coherence and decisiveness. It includes determining what is “ demanded”, “desirable” and “feasible” through political intra state and interactions with relevant policy stakeholders.

Skocpol (1985) highlights three main factors for the accomplishment of State capabilities: a qualified workforce committed to the public interest, ample financial resources, and operational autonomy. Autonomy, distinct from insulation, means the ability to shape policies based on collective interests, requiring institutions and professionals to be closely connected to the economic, social, and policy context (Evans 1995).

For any public institution to fulfill its tasks, it must possess the necessary skills and resources. Ferraz et al. (2022) suggest that policy capabilities involve a collection of skills and resources required for policy functions, aiming to achieve broad public goods. Karo and Kattel (2018) underscore the importance of policy functions, including agenda-setting, planning, adoption, implementation, evaluation, and revisions. Wu et al. (2018) suggest that effectively carrying out these functions requires the gradual development of specific skills over time. In essence, well-mobilized competencies are essential for efficiently meeting mandates and innovating procedures, processes, and operational tools.

Wu et al. (2015) organized these skills and resources as follows:

- Individual Level:
  - Analytical competences: knowledge of policy substance, analytical techniques, and communication skills at the individual level.
  - Managerial expertise: capacity in strategic management, leadership, communication, negotiation, conflict resolution, financial management, and budgeting.
  - Political acumen: understanding stakeholder needs, positions, judgment of political feasibility, and effective communication skills.
- Organizational Capabilities:
  - Organizational information capacity: Storing and disseminating information on client needs, service utilization, budgeting, human resource management, and e-services.
  - Administrative resource capacity: Involves funding, staffing, intra-and inter-agency communication, consultation, and coordination.
  - Organizational political capacity: Effective civil service bargaining, political support for agency programs, projects, inter-organizational trust, and communication.
- System Capabilities:
  - Knowledge: Presence of high-quality educational and training institutions, opportunities for knowledge generation, mobilization, and use.
  - Accountability and responsibility: Presence of rule of law, transparent adjudicative, and career systems.
  - Political-Economy: Presence of public legitimacy and trust, adequate fiscal system to fund programs and projects, and access to information.

In addition to political priorities and resource allocation, public policies, including productive development policies, when facing new challenges as outlined in the first paragraph of this text, impose the need to activate capacities and competencies for policy-executing institutions to be efficient, effective, innovative, and accountable. This increases the likelihood of inducing positive impacts on policy beneficiaries (Howlett, 2014; Wu et al., 2015; Kattel, 2022).

Established development finance institutions (DFI), in this realm, are likely to possess inherent strengths and comparative advantages including: (i) established procedures and instruments, (ii) trustworthiness, (iii) connections with local and international financing sources, and (iv) the ability to provide financing in local currencies. Operating under political guidance and policy directives, these institutions contribute to shaping and funding development projects. Due to their proximity to policy formulation and execution, DFI frequently play a role in policy design (Ferraz et al., 2022). In this sense, BNDES, set up in 1952, has a long history of serving Brazil´s development projects; a relative strong balance sheet; a diversified portfolio of products;

organized and segregated process procedures and qualified and dedicated employees (Ferraz and Coutinho 2019).

Public Guarantee Funds for SMEs

<u>Overcoming the SME financing gap</u>

Business investment processes are directly associated with the ability of companies to access adequate finance in terms of interest rates, maturity, and collaterals. This access capacity can be influenced by various factors, such as (i) the company's own bankability, (ii) the level of risk associated with the object of financing, and (iii) the characteristics of the economic cycle of a country. For these three factors, small and medium-sized enterprises (SMEs) face difficulties and have limited access to third-party finance resources. For these reasons financial institutions adopt cautious positions in financing these companies. Limited access to finance hinders the development of SMEs in terms of their ability to improve efficiency, competitiveness and growth. These constraints highlight a structural issue known as financing gap.

In times of economic crises, credit constraints and deteriorating credit terms worsen significantly. Addressing the financing gap demands public action through various instruments. Still given small-sized companies' structural characteristics- informal business models, short production lead times and rapidly changing client base demand agile financial instruments to receive, process, analyze, and respond to market needs. Providing adequate terms of credit then is crucial for competitive survival. It requires financial institutions anchored in technological platforms for low-cost operations and user-friendly interfaces, necessitating significant and ongoing investments in information and communication technologies, including networks, big data, and artificial intelligence systems (Ferraz and Ramos, 2018).

A fundamental financial tool is "credit guarantee" t. Particularly when of public origin, this instrument instills confidence in the banking sector, ensuring the generation of credit operations in the financial system for companies. A robust and predictable system of guarantees enables these companies to access resources in adequate terms, thereby providing the essential means to sustain activities and support their growth projects.

Compared to other financial instruments, guarantees offer significant leverage of resources while possessing positive a wide range of externalities such as employment and local development. Strictly the guarantee instrument is evident as it implies lowering the cost of credit for companies and increasing risk mitigation for lenders, in particular the banking sector. Typically associated with policies for financing productive development, this instrument is often embraced by institutions in various institutional formats. When operated effectively, these systems yield five important benefits (ECLAC, 2021):

1. Increase in the credit supply by the financial system. Financial institutions are more inclined to offer financing to companies they would otherwise consider riskier. With the support of public guarantees, financial institutions can expand their credit operations to companies that are classified as in suboptimal financing conditions, as they lack the

capacity to offer sufficient collaterals but that, in theory, would have sufficient cash flow to comply with obligations with third-party capital.

2. More companies accessing the formal financial system. With the support of the guaranteed instrument, companies without sufficient collateral or guarantees, emerging companies, new companies, or companies with little experience in meeting credit needs gain access to financing.

3. Improvement in credit conditions. The interest rate, amount, and term of loans can evolve positively due to risk mitigation for financial institutions facilitated by the guarantee instrument.

4. For companies of any size, investors in fixed, tangible, and intangible capital, the guarantee is a tool that allows for a positive attitude towards innovative projects and/or those with a long-term return perspective and, therefore, with a high level of uncertainty about their results.

5. In the face of economic crises of various nuances, public guarantee funds play a temporary and countercyclical role in keeping credit channels open to economically viable companies, albeit temporarily more fragile, increasing their chances of crossing and surviving extraordinary periods.

If well-structured and operated, the effectiveness of public credit guarantee funds is economically relevant. In fact, numerous studies demonstrate significant additionalities when credit guarantee schemes are used. According to Barboza et al. (2019:25), evaluations of BNDES Investment Guarantee Fund (FGI, the Portuguese acronym) indicate that each monetary unit (BRL) contributed by the Brazilian Federal Government to this fund leveraged approximately nineteen monetary units (BRL) in productive activities. Hennecke et al. (2017), in a study covering the period 1991-2015, found that the real GDP of some regions of Germany increased by around 1.2 monetary units (euros) for every monetary unit for guarantees, each year. Effectiveness studies conducted by the European Association of Guarantee Institutions (AECM) for the biennium 2009-2010 showed that companies supported by guarantee funds generated more jobs (between 0.28 and 1.42) and observed a 14.4% increase in employment and a 79% growth in investments compared to non-supported companies (AECM 2020). On the side of the financial system, based on a field survey, Chatzouz et al. (2017) report that, for around 40% of European banks using the instrument, smaller companies would not be eligible for loans without the support of guarantee funds. For these banks, it is in their interest to use credit guarantee schemes also to maintain the integrity of their capital base.

Public Credit Guarantee Funds in Brazil

The existing public guarantee funds for SMEs

Public guarantee funds have played a significant role in Brazil's financial landscape. The first guarantee fund, the Fund for Micro and Small Enterprises (FAMPE), administered by the Brazilian Service for Support to Micro and Small Enterprises (SEBRAE), was established in 1995. By 2019, it held an equity of R$ 500 million (US$ 127 million). Presently, two other guarantee funds are in operation: the Investment Guarantee Fund (FGI), managed by BNDES, and the Operations Guarantee Fund (FGO), managed by Banco do Brasil. Both were established in 2009 and, from 2010 to 2018, supported projects with approximately R$ 7.4 billion (US$ 2.8 billion) and R$ 104.5 billion (US$ 39.9 billion), respectively.

Resource expansion and access facilitation to face up the pandemic

During the sanitary crisis, guarantee instruments gained great relevance worldwide. According to World Bank estimates, public credit guarantee schemes (PCGSs) around the world amount to about $1.8 trillion, or 2% of global GDP (World Bank 2022). In European countries, the granted guarantees multiplied almost by 11, between the second half of 2019 and the first half of 2020, increasing from 15.9 billion euros to 171.6 billion euros (AECM 2021).

The Brazilian federal administration declared a state of emergency in response to the COVID-19 pandemic on February 4, 2020. The impact of the virus has been substantial, with approximately 37 million cases and around 700 thousand deaths reported since the outbreak in 2020, according to Johns Hopkins data. As anywhere else, the economic repercussions of COVID-19 were widespread. Real GDP declined by 4.1 percent in 2020. While recessions affect the entire economy, micro, small, and medium-sized enterprises (MSMEs) are particularly vulnerable. These businesses often rely on face-to-face interactions and have limited cash reserves, making them more susceptible to financial distress. Given that MSMEs are significant contributors to job creation, especially for low-income individuals, their plight has influenced Brazil's policy response to the COVID-19 crisis (World Bank, 2020a).

In Brazil, in the case of FAMPE, SEBRAE doubled the fund's equity, reaching R$ 1 billion (US$ 194.2 million) during the crisis. The Fund allowed leverage to increase from 8 to 12 times, and the stop-loss by financial institution from 7% to 8% of the portfolio. The FGO was revitalized as FGO PRONAMPE, with an initial budget of R$ 15.9 billion (US$ 3.1 billion), and the FGI evolved to become FGI-PEAC with a budget of R$ 20 billion (US$ 3.9 billion).

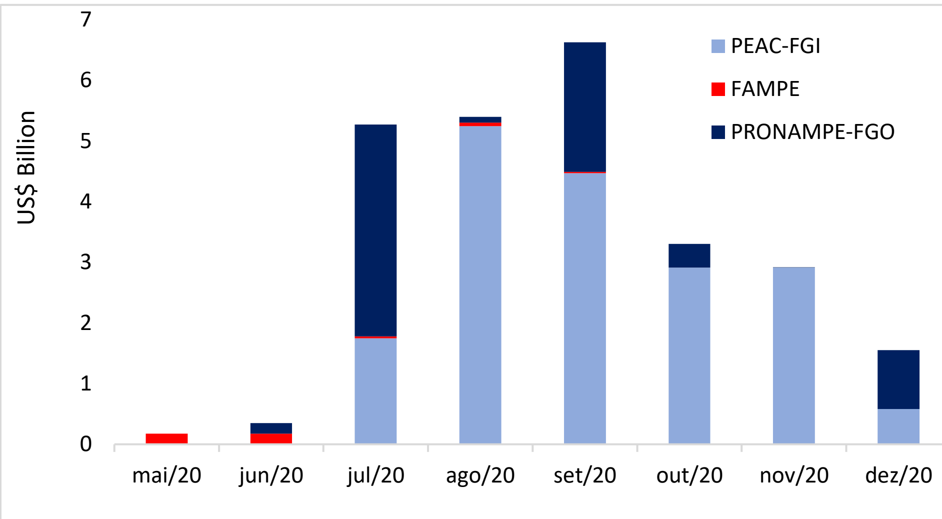
FGO PRONAMPE targeted micro and small businesses with an annual income limit of up to R$ 4,800,000.00 (US$ 932,000). The credit line, contracted with financial institutions that adhered to the program, could not exceed 30% of the annual gross income, calculated on the bases of 2019 records. The maximum annual interest rate would be equal to SELIC (the basic market rate), plus 1.25% on the granted amount, with a repayment term of 36 months and a grace period of 8 months. Financial institutions participating in the program operated with their own resources and could have the guarantee provided by FGO for up to 100% of the value of each guaranteed transaction. The resources allocated to default coverage would be limited to the maximum amount segregated by the FGO administrator for the guarantee of the portfolio of the participating institution in PRONAMPE and could not exceed 85% of the linked portfolio.

FGI-EAC was intended for small and medium-sized enterprises, with annual gross revenues between R$ 360,000 (US$ 69,900) and R$ 300 million (US$ 58.3 million). Only credit operations contracted between 30/06/2020 and 31/12/2020 with a grace period of at least six months and a maximum of twelve months and a credit term of at least twelve and a maximum of 60 months could opt for FGI-PEAC guarantee. As in the case of PRONAMPE, the guarantee secured 100% of the credit. The interest rate could be freely negotiated between the borrower and the financial institution granting the credit. However, the average rate in the portfolio for each financial institution could not exceed 1.0% per month. Of the allocated R$ 20 billion (US$ 3.9 billion) to FGI-PEAC to secure operations, financial agents lent R$ 92 billion (US$ 19.9 billion), with a 5.1 times leverage.

Guarantee funds in action

Figure 1 shows the strong acceleration of different credit guarantee instruments from June 2020 to September of the same year and the deceleration in the subsequent months. September 2020 was the month with the highest number of contracts, totaling 250 thousand, mobilizing an amount of R$ 34 billion (US$ 6.6 billion).

Figure 1: Brazil: Total guarantees contracted in 2020 by instrument



Source: SEBRAE (2022)

The post-implementation impact assessments conducted by the Brazilian Federal Court of Accounts (TCU 2021) estimate that the three credit guarantees programs – PRONAMPE, FGI-PEAC, and FAMPE – collectively generated approximately 180,000 additional jobs across the selected companies, as illustrated in Table 1.

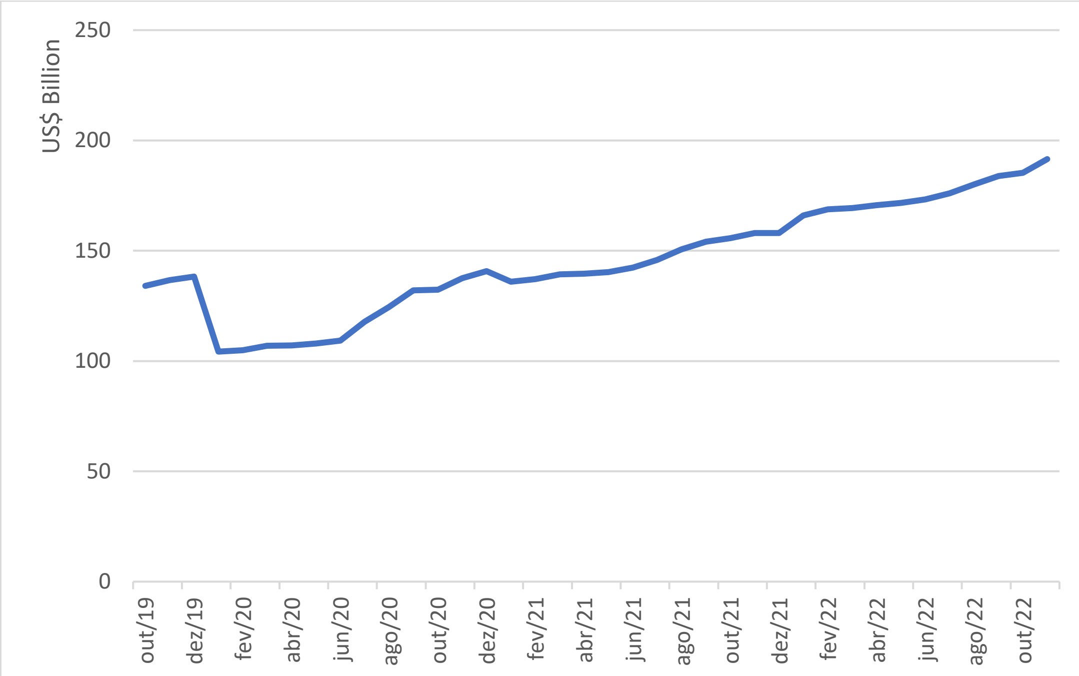
Table 1: Guarantee instruments and their additional job positions

Instrument	**Additional job positions**
FGI-PEAC	72.847
PRONAMPE	102.130
FAMPE	7.950

Source: TCU 2021

From mid-2020 onward, there was a noticeable shift in credit expansion, particularly favoring micro, small, and medium-sized enterprises (MSMEs) in Brazil. As depicted in Figure 2, guarantee instruments played an important role in increasing credit flows to smaller companies amid the COVID-19 sanitary crisis. These instruments effectively alleviated liquidity constraints and eased access to financing for such businesses. Consequently, amid the pandemic, guarantee instruments facilitated a 28% growth in credit extended to smaller enterprises (Braga et al., 2023).

Figure 2: Credit balance for micro, small, and medium-sized enterprises in Brazil from October 2019 to October 2022



Source: Banco Central de Brasil[2].

Another significant improvement is on credit terms. In comparison to pre-crisis data from the national financial system (in the fourth quarter of 2019), the interest rates offered by FGI-PEAC during the pandemic were up to 40% lower than the average rates for similar loans to small and medium-sized enterprises. Additionally, FGI-PEAC facilitated the extension of repayment periods, enabling loans with terms of up to 60 months and a minimum grace period of 6 months. Given the challenges encountered by SMEs during this period, extending loan repayment durations with longer financing terms was crucial to support the resumption of business activities. The loans obtained through FGI-PEAC had an average duration of 46 months.

In terms of delinquency rates for these instruments, data from 2022 indicates that within FGI-PEAC, there were 10,591 honor payments made to 28 different financial agents, totaling R$ 2.6 million (US$ 520,000). In comparison, in 2021, there were 1,148 honor payments benefiting 13 different financial agents, totaling R$ 344.3 million (US$ 67.5 million). Notably, no honor payments were made in 2020. The default rate reported for FGI-PEAC was 0.54%, while the default rate for traditional FGI was 3.0% (BNDES, 2022). Additionally, according to June 2022 data from Banco do Brasil, the delinquency rate for total PRONAMPE operations stood at 3.9% for microenterprises and 2.8% for small businesses (Braga et al, 2023).

In summary, the FGI-PEAC and FGO PRONAMPE instruments have collectively mobilized a total of R$ 156 billion (US$ 29.6 billion) up to December 2021, with R$ 93.5 billion (US$ 17.7

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[2] Central Bank of Brazil. Monetary and credit statistics

billion) and R$ 62.5 billion (US$ 11.9 billion) contracted, respectively. Specifically, in the case of FGI-PEAC, 136 thousand contracts were signed in 2020, primarily accessed by small and medium-sized enterprises, representing 99% of the operations and 90% of the financed amounts. This has benefited 114,000 companies, accounting for around 6 million employees in approximately 70% of Brazilian municipalities. However, a notable concentration of 71% of the operations and 74% of the financed amount is observed in the Southeast and South regions. The average value of PEAC contracts was R$ 678 thousand (US$ 131.4 thousand). Notably, three financial institutions—Bradesco, Caixa Econômica Federal, and Itaú—accounted for over 50% of this amount.

Receding to normality: the immediate post-pandemic period

Given their success during the pandemic and ongoing importance, both FAMPE and PRONAMPE, as well as FGI-PEAC, will continue operating. However, the financial conditions required to access the funds were adjusted.

PRONAMPE-FGO was converted into a permanent instrument in June 2021. Eligibility requirements continue to be for companies that have been in existence for more than a year and whose 2022 revenues do not exceed R$ 4.8 million (US$ 932 thousand). However, due to concerns about the financial sustainability of the fund, its risk management, and the macroeconomic environment, significant terms of the instrument have been modified. The grace period was extended to 11 months, and the interest rate was set at 6% per annum plus SELIC. In addition, the new program terms allow financing for up to 72 months, with maximum contracting limits of R$ 150 thousand (US$ 30 thousand) for micro and small businesses, and R$ 100 thousand (US$ 20 thousand) for independent professionals.

FGI-PEAC currently operates in an undermined time frame, resuming on new terms in August 2022. The instrument expanded its target audience, including guarantees for micro-entrepreneurs. The interest rate is still freely negotiated between the borrower and the financial institution granting the loan. Still, each financial institution's average rate on the FGI PEAC portfolio cannot exceed 1.75% per month. The grace period for loan repayment must be at least 6 months and a maximum of 12 months, covering both principal and interest. The total financing period, including the grace period, must be at least 12 months and a maximum of 60 months, and the guaranteed coverage was reduced to 80%. The maximum financing limit was reduced to R$ 5 million (US$ 1 million), previously R$ 10 million (US$ 2 million), and a minimum limit of R$ 1,000 (US$ 200) was established.

In addition, post-pandemic FGI-PEAC has modified the stop-loss by entity. Currently, a stop-loss of 30% of the sum of the amounts released for credit operations granted to microenterprises by the financial agent has been established, while for small and medium-sized enterprises, it is 10% and 7%, respectively. This adjustment safeguards financial agents against potential losses in their credit operations.

FAMPE continues to complement up to 80% of the requested loan. The conditions of the provided guarantee vary depending on the size of the company and the amount of the requested financing. The maximum guaranteed value per company ranges from R$ 12.5 thousand to R$

125 thousand. The grace period for loan repayment can be from 9 to 12 months, while the amortization period is from 24 to 36 months. The monthly interest rate for the program is 2.40% or 1.89%, depending on the case.

Determinant factors behind FGI-PEAC effectiveness

As previously described, during a critical juncture, the reconfiguration of the then existing FGI into the FGI-PEAC facilitated a swift and effective expansion of access to financing by SMEs during the pandemic. This section provides analysis the determinant factors behind the evident success of BNDES FGI-PEAC. Three fundamental conditions are examined below: (i) attention to a pressing demand for state support; (ii) the accumulated experience with credit guarantees coupled with the capabilities to promote changes and, (iii) the existence of an appropriate interstate policy coordination ambiance.

Attention to the nature of the demand

As mentioned above, smaller companies encounter structural challenges in accessing financing. The absence of the capacity to offer collateral can impede their ability to secure bank credit. Such financing gap represents a significant structural issue and given the socio-economic importance of small and medium-sized enterprises (SMEs), state intervention through credit guarantees is justifiable and advisable.

In Latin America, Brazil stands out for its high level of individual banking access relative to its peers, reaching 84% of the population in 2022 (Demirgüç-Kunt et al., 2022). However, in an international comparison conducted in 2017/2018, Brazil ranked 92nd in the overall development index of the financial system by the World Economic Forum, among 137 countries analyzed. The country's performance is particular problematic in criteria such as accessibility to financial services (130th) and availability of venture capital (105th). Furthermore, according to the World Bank's Enterprise Survey from 2009, 45% of Brazil's SMEs identify access to financing as a significant constraint, placing Brazil among the highest compared to peer countries. Despite improvements in bankability, the financing gap remains a major hurdle for smaller businesses in Brazil (World Bank 2020b).

The challenges for SMEs were exacerbated by the pandemic, leading to reduced income and virtually no working capital availability nor access to liquidity. An analysis of quarterly central bank surveys on credit conditions across emerging and advanced economies reveals that most of these economies have witnessed several quarters of tightening credit standards since the beginning of the COVID-19 crisis (World Bank, 2022). Data from the Brazilian Central Bank indicates that credit decreased by 33% in January and February 2020 compared to January 2019. This underscored the urgent need for credit lines with minimal restrictions to help companies sustain their operations and navigate the crisis.

An investigation by SEBRAE (2020a) revealed that since the start of the crisis, 30% of Brazilian SMEs sought credit from banks, with only 11.3% successfully obtaining the requested loan. Reasons for bank denials included the company being in arrears with negative records for previous debts, high interest rates, and a lack of guarantees or guarantors. Many companies also claimed not to know the reason for the credit denial (12.4%).

By November 2021, after national government support programs were implemented, 61% of SMEs had applied for credit, and 70% obtained it. Data also indicate that in 2021, micro and small businesses sought more bank credit than in 2020 (SEBRAE, 2022). Another SEBRAE survey reveals that between 2019 and 2020, more than half (55%) of the demand for new loans had been met by PRONAMPE, mainly from public commercial banks (SEBRAE, 2020b).

It became clear that the pandemic exacerbated the prevailing financing gap and that timely actions were of essence. The focus of attention was on how to put in action measures that would, simultaneously, alleviate the demand and liquidity squeeze SME were facing while inducing them to keep business running and ensure the banking system that a potent instrument was in place so that they could avoid curbing down lending and even expand their credit operations with the segment.

<u>Experience and capabilities to adapt and change</u>

The FGI-PEAC benefited from BNDES's previous experience in the design and operation of two predecessors: the FGI (created in 2009) and the FGPC (Guarantee Fund for Promoting Competitiveness), launched in 1997.

The FGPC was a public guarantee fund with resources from the National Treasury. Transfers relied on budget allocation with explicit authorization for release. Lopes et al. (2007) demonstrates that the constant budgetary contingency practiced by the Treasury over the years implied delays in repayments to financial agents for unpaid credits by companies thus compromised the fund's credibility and banks´ interest in its use.

Lopes et al. (2007) note that, in the case of the FGPC, the complexity of the management process was underestimated, leading to insufficient and decentralized allocation of resources, such as human, financial, and information technology resources. This, in turn, hindered the implementation of essential processes for the fund's proper functioning, such as extending the guarantee period and evaluating judicial agreements for the payment of fees/debts.

The registration and monitoring of events related to the FGPC contract were not fully developed, hindering the implementation of planned procedures, such as extending the guarantee period and debt payment agreements. In addition to system inadequacies, other problems arose, such as the lack of definition of responsibilities among different BNDES units and a shortage of human and financial resources. Financial agents repeatedly pointed out operational bottlenecks in the FGPC manager as factors that discouraged operations with the fund.

FGI, in contrast, was created as a private entity with segregated assets and resources and independent of Treasury funds. Therefore, the FGI was designed with resource predictability, reflecting the lessons learned from the limitations of the FGPC, ensuring stability, autonomy, and credibility. Regarding financial income, balancing security, profitability, and liquidity, BNDES FGI's asset management aimed to create a secure base for its commitments. Since 2012, FGI's investment policy prioritized the allocation of resources in low risk fixed-income products (Braga et al., 2023).

As of December 31, 2019, BNDES FGI's net worth was R$ 1.2 billion (USD 304.6 million). The fund had 29 quotas, two of which were institutional quotas, with "Class A" shares (Federal Government and BNDES), and 28 had financial agents with "Class B" shares (including BNDES). BNDES FGI's capital structure was composed of the National Treasury as the majority shareholder (having internalized the capital), with 79.89% of the shares ("Class A" only), followed by BNDES, with a 15.09% stake, of which 14.83% corresponded to "Class A" shares and 0.26% to "Class B" shares. The remaining 5.02% was distributed among other shareholders, all of whom were financial intermediaries with "Class B" shares. With this structure, 94.72% of the fund's capital consisted of "Class A" shares, and 5.28% consisted of "Class B" shares.

The group of financial intermediaries include commercial banks, cooperatives and regional development banks and development agencies (Lanz and Macedo, 2014). The participation of financial intermediaries as operators and shareholders allowed greater interdependence and alignment of interests between parties, contributing to permanent information exchange. Another aspect considered in the FGI was the quantity and volume of fund resources, as it was understood that the availability and number of resources for instrument execution were essential. Since financial intermediaries must make a considerable initial investment to access funds, this generates a growing interest in using the instrument.

In terms of access conditions, the guaranteed limit per FGI beneficiary was set at R$ 10 million (USD 1.9 million), whereas there was no specified limit in the previous fund (FGPC). To mitigate potential opportunistic behavior by financial institutions, a stop-loss mechanism of 7% per contracted tranche with each financial agent was introduced. Additionally, the leverage limit was raised from eight to twelve times the value of shareholders' net worth (Lanz and Macedo, 2014). As highlighted by Lanz and Tomei (2014), the restructuring of BNDES's guarantee funds was driven by the necessity to bolster confidence in the financial system, shielding it from fluctuations in macroeconomic policy decisions and budgetary instabilities. Consequently, the bank aimed to enhance FGI's credibility and reputation to ensure the participation of private institutions in SME financing.

To face up the immediate and unexpected demand impose by the pandemic and to expedite the creation of FGI-PEAC, a change was made in FGI capital structure. A distinct capital segment was established within FGI, the "Class C" shares, with segregated assets, rights, and obligations. to serve an specific purpose: to face up the pandemic emergency. Such change was legally supported (Law 14.042, dated August 19, 2020). Under such institutional umbrella, the Brazilian Treasury assumed responsibility for "Class C" shares through four issuances of R$ 5 billion (USD 970.9 million). With the Federal Government as the sole holder of "Class C" shares, it also became the sole shareholder of FGI-PEAC's net worth.

Beyond such unique changes in capital structure, the core operational, technological, risk management, and technical teams of FGI-PEAC remain the same as those of FGI, ensuring a continued focus on the fund financial sustainability and the timely fulfillment of commitments.

To uphold effectiveness and stringent monitoring of operations while mitigating risks, operational safeguards and internal and external audits were retained.

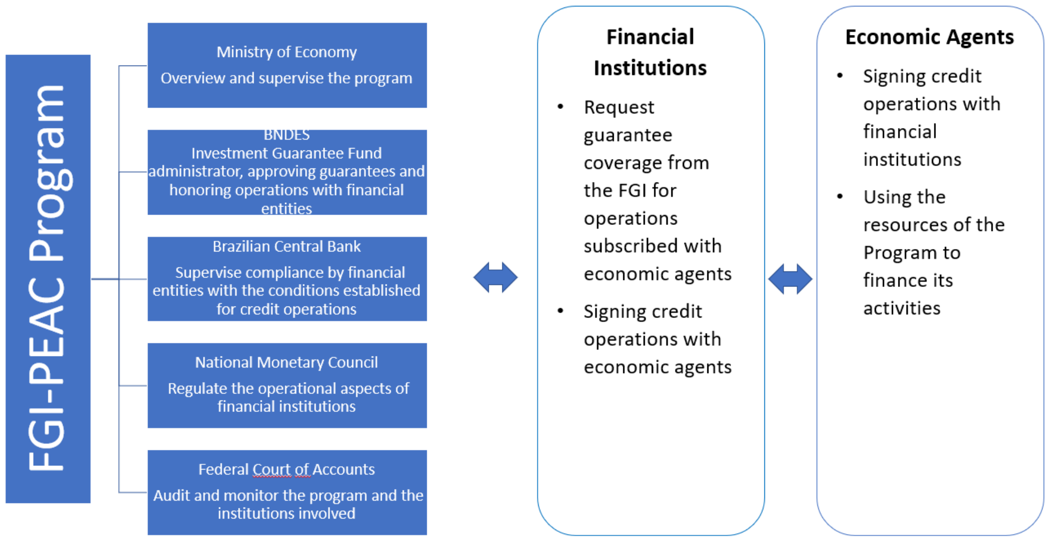
Such evolution was made possible due to BNDES's long history as a development institution and the experience and learning accumulated with FGPC and FGI. BNDES took steps to address existing challenges and improve the effectiveness of the FGI. These measures included investing in the training of technical staff, implementing digital technologies, and centralizing fund management. Additionally, existing parameterization models (developed for the FGI), were adapted to become a credit guarantee platform from which marginal variants can be timely implemented to meet up unexpected, urgent and exponential demand from SME and banks. Digital platforms and process digitization played a crucial role in enabling the participation of new financial operators and expanding the instrument's reach, accelerating the payment of guarantees, and transmitting information in case of default between operators and BNDES. It also contributed to reducing compliance costs. These measures allowed the institution internal resources to create a large-scale and effective instrument in a short period and amid high economic instability.

Intrastate coordination

The FGI-PEAC represents a significant advancement from its predecessor/original, the FGI while both are a substantial progress compared to the FGPC. FGI's private nature, coupled with accounting segregation and the involvement of public and private partners, facilitated capital injection, and ensured the availability of resources for timely fee payments. Continuous improvements were made to the technological platform while retaining skilled technical teams, and investments were made in enhancing their training.

Interorganizational coordination primarily occurred within the FGI's governance framework, ensuring a broad and effective response within a limited time window. The FGI-PEAC's governance was largely based on the FGI's existing structure, with innovations introduced in its institutional design. The Ministry of Economy (Special Secretariat for Productivity, Employment, and Competitiveness) and BNDES collaboratively determined the instrument's parameters and eligibility criteria (Figure 3).

Figure 3: FGI-PEAC Governance Framework



Source: TCU 2021

To expedite fee payments and streamline the transmission of default information between operators and BNDES, the Central Bank shared its Credit Information System (SCR), reducing both time and costs for fee requests by financial operators and lowering compliance costs. Finally, the instrument underwent rigorous auditing and monitoring by the Brazilian Federal Court of Accounts (TCU 2021) to validate the processes and decisions made.

The flexibility in the instrument's parameters and eligibility criteria, coupled with the distinct approach to honoring and qualifying financial intermediaries, facilitated the involvement of smaller and specialized banks. Furthermore, enhancements in cross-state design, process simplifications, and improved coordination among the institution's operational, legal, and information technology departments were evident.

Conclusions

This article examined the role played by Brazilian public guarantee funds in successfully mitigating the financing challenges local SMEs faced during the pandemic and explores the reasons behind such policy effectiveness, by focusing in one of them, the Investment Guarantor Fund- Emergency Credit Access Program (FGI-PEAC, Portuguese acronym), operated by the Brazilian Development Bank (BNDES, Portuguese acronym).

The article demonstrated that FGI-PEAC effectiveness lays on three fundamental conditions: (i) promptness to attend a pressing demand for state support; (ii) accumulated experience and capabilities to innovate in the face of unexpected challenges (imposed by the pandemic) and, (iii) the existence of an appropriate intrastate policy coordination ambiance.

As a result, BNDES timely mobilized internal competencies to implement process and product financial innovations, resulting in an increase in credit and additional job creation. It is hoped that the insights from this article can contribute to the further understanding of how policy innovations come about and to inspire policymakers and practitioners in facing up unexpected and urgent development challenges.

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