

THE ROLE OF FINTECH IN SMALL BUSINESS LENDING*

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Abstract

What role does FinTech lending play in credit markets for small-to-medium-size firms (SMEs)? Using administrative data from France, we document three main findings. First, we find that FinTech platforms serve SMEs of similar age and size as those borrowing only from banks; These firms have less cash and tangible assets, but innovate and invest more. Second, following a FinTech loan grant, firms experience an increase in long-term bank loans compared to similar firms borrowing from banks around the same time. We propose a novel channel for this result: FinTech platforms help relax small firms' collateral constraints by offering unsecured medium-term loans. The unsecured Fintech loans enable firms to acquire tangible assets which they further pledge for subsequent bank loans. Last, we find that Fintech borrowers are more likely to experience bankruptcies, but conditional on surviving, they experience faster growth in firm size, sales, and employment. Our findings suggest that FinTech lending spur the growth of SMEs with risky projects.

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1 INTRODUCTION

Financing is crucial for small business growth, yet small and medium-sized enterprises (SMEs) routinely report difficulty in accessing credit. Since the 2008 financial crisis, increased regulatory burden and stricter scrutiny on bank lending have further exacerbated credit constraints of small businesses (Buchak et al., 2018; Cortés et al., 2020; Gopal and Schnabl, 2020) and hindered firm growth (Bord et al., 2015; Chen et al., 2017). In contrast, online lending has been rapidly growing in various regions including the UK and US, which partially fills in the gap left by banks.¹ While Fintech lending is relatively small in the EU, various regulatory measures have been taken to scale up this market for its potential positive impact on SMEs and job creations.² In light of the recent Pandemic of COVID-19, the French government unprecedentedly provides guarantees for new loans granted by crowd-funding intermediaries.³

Despite the expansion of Fintech small business lending and regulatory efforts to facilitate its development, we know very little about this market. Which firms borrow from Fintech platforms, and why? What are the relative benefits and costs of borrowing from a Fintech lender compared to borrowing from a bank? Answering those questions would help understand the effects of the development of Fintech lending on SME access to credit and growth. Existing work offers little insights on these issues, probably due to data limitations. Unlike banks that are usually required to disclose lending activities to regulators, online lenders are typically not subject to such mandate. Therefore, granular data on Fintech SME borrowers and loans are rare.

This paper exploits a unique administrative data collected by the Banque de France (French Central Bank). The dataset has the following advantages: First, we observe the near-universe of bank loans and fintech loans to SMEs. Second, we have detailed information

¹According to the US Federal Reserve’s 2019 Small Business Credit Survey Report on Employer Firms, 32% of small businesses that sought financing applied with a fintech or online lender, up from 19% in 2016. In comparison, 44% applied with small banks and 49% with large banks.

²This mission was raised in the EU commission’s action plan on Fintech: https://ec.europa.eu/info/business-economy-euro/banking-and-finance/digital-finance_en

³<https://www.economie.gouv.fr/covid19-soutien-entreprises/pret-garanti-par-letat?gclid=CKHs45yctukCFdEhGwod0sgAoQ>

about the terms of the loans and firm characteristics. Last, our data are a monthly firm-level panel which allows us to study the dynamics of firm credit and other outcomes. We start by providing a comprehensive description of firms borrowing from Fintech platforms. Comparing Fintech and non-Fintech borrowers, we then study whether Fintech credit serves as a complement or substitute for bank credit. In a final part, we investigate whether Fintech credit access has an impact on firm growth and survival.

Since very little is known about Fintech lending to SMEs, we start by providing a comprehensive description of its key features. The loans from the 10 Fintech platforms in our sample represent over 80% of the Fintech lending volume to SMEs in France. Between 2016-20, these platforms facilitated 2,109 projects by 1,586 unique firms for a total amount of 319 million euro. Compared to firms that borrow only from traditional banks, firms that borrow from Fintech platforms are similar in terms of size and age. At the same time, they are more leveraged, have less cash flows and tangible assets, but invest and innovate more. This implies that firms borrowing from Fintech platforms are likely to be underserved by banks. In terms of loan characteristics, the average Fintech loan features a principal of €150,000, a 9.1% annual cost of borrowing inclusive of fees, and a maturity of 38 months. Over 40% of Fintech loans are used to finance investments and 23% are used for commercial growth.

We then investigate whether firms use Fintech credit as a complement or a substitute to bank financing. Specifically, we examine the credit access of Fintech borrowers following the Fintech loan grant. We find that bank credit increases for Fintech borrowers. The first glance of the data, therefore, suggests that firms do not replace bank loans with Fintech loans. However, both credit demand and supply could explain this finding. On the one hand, firms that borrow from Fintech platforms may face investment opportunities and demand credit from Fintech platforms and banks simultaneously. On the other hand, banks may also be more willing to extend loans upon observing a successful Fintech loan grant. Therefore, we need to hold credit demand fixed to understand why access to bank credit improves after the firm obtains a Fintech loan.

To that end, we construct a control group consisting of firms that only borrow from banks and share similar characteristics and credit history as Fintech borrowers. Crucially, we require the control firms to obtain a similarly sized loan from a new bank around the

same time, so that the two groups of firms only differ in their lender types (Fintech versus bank). The results based on the matched sample are similar. After obtaining a Fintech loan, relatively to comparable bank borrowers, firms experience a 7% increase in total bank credit. This suggests that the increase in bank credit is not driven by credit demand.

Why would banks increase lending upon observing a successful Fintech loan grant? The first explanation is that a successful Fintech loan grant serves as a positive signal for firm quality, as the platform and hundreds of investors collectively exert efforts in screening firms (*the information channel*). The second possibility is that Fintech loans relax borrowers' collateral constraints. While having a three-to-five-year maturity, Fintech loans are uncollateralized. This allows firms to seize investment opportunities without posting collateral or personal guarantees. As a result, the newly acquired assets can be pledged to banks, thereby expanding firms' borrowing capacity (*the collateral channel*). Traditional banks, in contrast, impose stringent collateral requirements (Davydenko and Franks, 2008). This implies that compared to uncollateralized Fintech loans, bank loans are more likely to encumber assets, constraining future borrowing and investment (Donaldson et al., 2019).

We present several pieces of evidence that are consistent with the collateral channel. First, we find that the credit expansion is driven by long-term loans as opposed to credit lines. This goes in favor of the collateral channel, as long-term loans are more likely to be collateralized. In contrast, the information channel predicts an increase in credit lines as they are more sensitive to information and requires larger monitoring efforts (Berger and Udell, 1995).

Second, the effects are similar for rated and unrated firms, which is inconsistent with the information channel. Indeed, the information channel would suggest stronger effects for unrated firms, because a successful loan application is a more valuable signal of quality for firms with a thin credit file. In contrast, both rated and unrated firms are likely to be subject to collateral requirements. Moreover, we find that the effects vary with the purpose of the Fintech loan. As the collateral channel predicts, firms only experience an increase in bank lending when the Fintech loan is used to invest in tangible assets.

Our results so far suggest that Fintech platforms expand credit access of collateral-constrained SMEs. Specifically, Fintech platforms offer unsecured medium-term loans, which

firms can use to invest in tangible assets and expand borrowing capacity in subsequent bank loan applications. However, Fintech platforms' low collateral requirements are accompanied by higher borrowing costs.⁴ Therefore, to understand the overall impact of Fintech lending and the resulting credit expansion, we would need to analyse firm performance following the grant of the Fintech loan.

In the last part of the paper, we present results on firm growth, employment, investment, and survival. We find that Fintech borrowers, relative to the bank borrowers, are 7% and 5% more likely to enter a bankruptcy procedure and being liquidated two years after the loan grant. However, conditional on surviving, Fintech borrowers exhibit faster growth in total assets, sales, employment, and wage bill. Overall, our results suggest that regulatory measures aiming at spurring Fintech lending may benefit SMEs that pursue riskier and more innovative projects.

Literature This paper contributes to a nascent literature on the role of Fintech lending. Most of these papers have focused on consumer credit and find that Fintech is a substitute for traditional banking (Buchak et al., 2018; Chava et al., 2019; Di Maggio and Yao, 2018; Tang, 2019; Vallee and Zeng, 2019). Balyuk (2019) argue that there is some complementarity due to information spillover. Only a few paper examines the expansion of Fintech lending to small businesses. Gopal and Schnabl (2020) find that finance companies and Fintech lenders substitute banks in small business lending market after the Global Financial Crisis, while Balyuk et al. (2020) document the differential effects of banking lending on Fintech growth by banks' information technology.

To the best of our knowledge, our paper is among the first that provides a comprehensive description of the Fintech SME lending market using detailed loan-level data. By linking the Fintech loan dataset to the French credit registry, we are able to observe all types bank loans obtained by Fintech borrowers. Unlike the contemporaneous work, we document a *complementarity* between Fintech and bank credit, which indicates that the regulatory measures aiming at spurring Fintech lending are likely to be beneficial. Moreover, different from Gopal and Schnabl (2020) that examine the *secured* business loan market, we observe

⁴In a frictionless world, banks could offer similar loan products. It is not the case in practice, possibly because of stringent capital requirements and conservative risk management (Fraisie et al., 2020).

all types of bank loans of Fintech borrowers, which allows us to document a novel channel for the complementarity between Fintech and bank lending.

A more developed literature looks at credit availability for small businesses. Much of this literature focuses on the importance of relationships and soft information in providing adequate financing for small firms (Agarwal and Hauswald, 2010; Berger and Udell, 2002; Chakraborty and Hu, 2006; Petersen and Rajan, 2002; Strahan and Weston, 1998, etc.), with some emphasizing the role of collateral in multiple-bank relationships (Degryse et al., 2016; Donaldson et al., 2019)

This paper adds to this literature by showing that Fintech lenders expand credit access of SMEs by mitigating collateral constraints. To our knowledge, we are the first to identify this channel for Fintech SME loans. As most Fintech SME loans are unsecured, we believe our results have general implications and could inform policy makers of the value of Fintech lending.

The rest of the paper is organized as follows. Section 2 provides institutional details on the Fintech SME loan market in France. Section 3 describes our novel data sources. Section 4 provides a detailed description of Fintech loan and borrower characteristics and Section 5 presents the empirical results based on the matched sample, and Section 6 concludes.

2 FINTECH SME LOAN MARKET IN FRANCE

Since 1945, lending activities in France have been regulated under a “banking monopoly” (*monopole bancaire*) regime, which prohibits non-bank entities to carry out lending activities. This regulation was relaxed in 2014 to introduce a new lender category – crowdfunding intermediaries (hereafter “Fintech platforms”). Such platforms are subject to neither capital nor liquidity requirements as they are not classified as banks. However, they are only allowed to intermediate corporate loans of less than one million euro, with a €2,000 limit on investment amount per individual investor.⁵ By law, Fintech platforms can only originate loans used to finance specific projects (such as the purchase of fixed assets), which excludes the possibility of issuing working capital loans.⁶

⁵Effectively, this loan size cap restricts the borrower pool, which motivates our focus on SMEs.

⁶See article L548-1 of the Monetary and Financial Code (Code monétaire et financier).

The French Fintech lending market has been growing since its inception. As of 2020, there are 157 active Fintech platforms which collectively intermediate around €200 millions. However, Fintech platforms still accounts for a limited fraction of the small business lending market. Figure 1 shows the aggregate volume of loans under one million intermediated by banks and by Fintech platforms in our sample. We see that newly originated Fintech loans represent about 2% of similar-sized bank loans originated during the same period.

The application process is exclusively online. Borrowers have to meet some minimum requirements to apply, which vary between platforms. For example, firms have to be more than three years old, or to have more than €250,000 of sales. To qualify for a loan, firms submit a loan request specifying the project they are seeking funding for and the amount of funding. Upon receiving the application, platforms collect information on applicants and make a decision typically within 48 hours. Platforms in our sample have access to applicants' accounting data and credit history from the Banque de France. On average, platforms report on their website that they approve 2% of the submitted applications. Once accepted by the platform, the borrowers' project is displayed online to lenders.

Both individual and institutional investors can invest on Fintech platforms. Lenders have access to a short description of the project along with loan characteristics (e.g, loan amount, interest rate and maturity) and information on the firm (e.g., the credit score assigned by the platform and some basic accounting information). If the project is fully funded, borrowers receive funds within two weeks. Otherwise, the loan is not issued.

The borrowing costs typically have three components. The first part is a fixed application fee which is incurred upon submitting the application. The second part is an upfront origination fee which is proportional to the loan amount and ranges from 3% to 5% across platforms. This fee is paid only if the project is fully funded by the investors. Finally, similar to a traditional loan, borrowers pay interests to investors. The interest rate is set by Fintech platforms based on their internal credit scoring algorithm in most cases.⁷ Additional fees can be charged to borrowers in case of late or early repayments. Importantly, no collateral or personal guarantees are required on these loans.

⁷A few platforms use an auction mechanism to match investors and borrowers.

3 DATA SOURCES

We combine various databases provided by Banque de France (the French central bank) using a unique firm identifier. These databases provide firm-level information on Fintech loans, newly originated bank loans, credit history, financials, as well as bankruptcy status.

Fintech loan database The Banque de France collects monthly data on corporate loans intermediated by Fintech lending platforms. Fintech lending platforms report the information on a voluntary basis in exchange for access to the credit score created by the Banque de France. In total, we observe 10 platforms in the database which originated 83% of Fintech loans to SMEs in France as of 2020. Between 2016 and 2020, these platforms facilitated 2,109 projects by 1,586 unique firms for a total amount of 319 million euro.

New bank loans (M-Contran) The second database provides information on a sample of new loans originated by banks in the first month of each quarter. Bank branches are selected within a rotating panel so as to form a representative sample of corporate loans. On average, there are about 100,000 new loans each period. For each loan, we observe a wide range of characteristics, such as the loan amount, the loan type (e.g., revolving, overdraft), the loan purpose (e.g, investment, leasing), maturity, and whether it is secured or not.

Credit registry The French credit registry contains monthly information on the near universe of bank loans to non financial firms. Specifically, any firm with a credit exposure exceeding 25,000 euro to at least one bank will be included in the data. We observe both credit effectively granted to the firm and banks' credit commitments. Loan balance is reported by categories, such as long-term loans, credit lines, or leasing loans. In addition, we observe some firm characteristics, including industry, location, and internal firm size category. We use the internal firm size category to identify SMEs.

FIBEN and DIANE: Accounting data and credit score The third dataset, FIBEN, reports the credit score, accounting, and financial information for all companies with an annual turnover over €750,000 for the period 2015-20. The credit score is constructed by

the Banque de France to reflect a firm’s ability to meet its financial commitments in a three-year horizon. This score incorporates information on firms’ balance sheets, trade bill payment incidents, micro and macro economic environment, and the quality of business partners and managers. Firms that are below the turnover threshold do not receive a credit score. Appendix B.3 presents a description of each credit score category and the associated expected default probabilities.

We collect annual accounting data for the period 2015-19. The FIBEN dataset covers a smaller set of firms than the credit registry because of reporting turnover threshold. We therefore complement FIBEN with another dataset DIANE, which reports balance sheets and financial statements for a wider set of French firms. We are able to append missing accounting information for 56% of firms that are not included in FIBEN.

Bankruptcy information The last dataset, BODACC (Bulletin officiel des annonces civiles et commerciales), provides information on firm bankruptcy status based on commercial and civil court legal announcements. This dataset records the name of the firm, the date of the announcement, and the type of legal procedure. Out of 869 Fintech borrowers (in our matched sample as introduced in Section 5), we manually identify 70 firms that entered a bankruptcy procedure, and among those, 53 were liquidated. This represents 8% and 6% of Fintech borrowers in the sample, respectively. In contrast, 2% of the 2,411 firms in the matched sample that take a new bank loan in the same period entered a bankruptcy procedure and 2.3% have been liquidated.

4 FINTECH LOANS AND BORROWERS

Using the linked data, we first provide summary statistics on Fintech loans and borrowers, then we investigate the credit dynamics of Fintech borrowers.

4.1 Fintech loan characteristics

Table 1 Panel A presents descriptive statistics on the 2,109 Fintech loans in our sample. The average loan size is about €150,000, and median amount is €50,000. The average annual

percentage rate (APR), including fees, is 9.1% with a large variation: the maximum interest rate is 37.22%.⁸ Loan maturity is between 3 and 84 months with an average of 36 months. On the investor side, a project is on average financed by 506 individual investors. Individual investors provide 87% of total financing, the remaining 13% being supplied by institutional investors. Figure 2 shows the number and amount of loans by loan purpose. The top three purposes for Fintech loans, in terms of number of loans in each category, are intangible investment (27%), commercial development (26.5%) and tangible investment (19.9%). The distribution looks similar when we look at loan volume.

Using the credit registry, we identify firms that have a banking relationship in our sample period. Out of 1,586 Fintech borrowers, 21% of firms did not have a banking relationship before obtaining the Fintech loan. We refer to these firms as the *unbanked Fintech borrower*. Among them, 181 did not establish a banking relationship as of 2020. Table 2 provides summary statistics on the Fintech loans for unbanked and banked Fintech borrowers. We find that the Fintech loans granted to unbanked Fintech borrowers are 42% smaller than their banked peers. The average maturity of Fintech loans is 12 months longer, while the interest rates are 2.4% higher. Unbanked and banked firms receive a similar share of funding from institutional and individual investors.

4.2 Comparing Fintech and bank loans

In this section, we document how Fintech loans differ from traditional bank loans, and how Fintech firms compare to peer firms borrowing only from banks.

Loan characteristics As Fintech loans are uncollateralized fixed-term loans, we focus our analysis on the same type of bank loans originated in the sample period. Table 3 presents the characteristics of these two types of loans. Fintech and bank loans features different sizes and prices. First, the average size of unsecured Fintech loans are €60,000 larger. Second, bank loans on average have a 1.7% interest rate. In contrast, the average rate of Fintech loans is 7.43% higher. The price gap becomes smaller (6.31%) when we compare Fintech loans to short-term bank loans, which is consistent with short-term credit being more expensive

⁸We use interest rate and APR interchangeably in the following.

than long-term loans. The price gap may partly be driven by the fact that the Fintech rate includes fees while the bank rate does not. However, it is very likely that even after fees, bank rates are significantly lower.

There are two main reasons why Fintech loans are more expensive than bank loans. First, the higher price may be the outcome of a riskier borrower pool. Second, the higher price of Fintech loans may reflect the fast speed and convenience of Fintech services. It typically takes the platforms less than a week, sometimes less than a day, to approve a Fintech loan application, while the processing time is more than one month with banks.

Firm characteristics The difference in loan terms may be driven by firms' characteristics. In order to understand which types of firms borrow from Fintech platforms and banks, we construct various corporate finance ratios and indicators. Furthermore, we define two categories of borrowers in our sample. The first category includes firms that borrow from both Fintech platforms and banks, or *Fintech-bank borrowers*, and the second one consists of firms borrowing only from banks, or *bank-only borrowers*.

We present descriptive statistics on the two groups of firms in Table 4. Fintech-bank borrowers are of the same size (as measured by total assets) and age than bank-only borrowers. However, they are less profitable, as evidenced by lower sales and net income. In addition, Fintech-bank borrowers are more levered, invest more, and generate lower working capital. Fintech-bank borrowers are more innovative (as measured by total R&D output or R&D expenditures) and have less tangible assets than bank-only borrowers. They also have less tangible assets, suggesting a lower capacity to pledge collateral. In sum, these statistics reveal the following. First, Fintech borrowers have stronger liquidity needs and a lower capacity to pledge collateral than bank-only borrowers. Second, they are likely to be underserved by banks (Fazzari et al., 1987; Hadlock and Pierce, 2010; Chaney et al., 2012). Third, the high investment levels and the Fintech loan purposes described above suggest that Fintech borrowers face more growth and investment opportunities. This suggests that the faster service and low collateral requirements are two key drivers of firm decisions to borrow from Fintech platforms. We test this hypothesis in the following sections by comparing the credit dynamics of Fintech and bank borrowers.

Before formally investigate credit dynamics, we first examine the aggregate borrowing pattern for the two groups of borrowers. Figure 3 presents the average bank lending volume of Fintech-bank and bank-only borrowers between 2015 and 2020. Fintech-bank borrowers clearly experience a faster growth in bank lending than bank-only borrowers. Towards the end of the sample period, i.e., during the Pandemic period of 2020, this difference becomes even sharper. This aggregate trend suggests that Fintech credit doesn't merely substitute away bank credit for Fintech-bank borrowers.

4.3 Credit dynamics of Fintech borrowers

In this section, we investigate how firms' bank credit evolves after the grant of the Fintech loan. Theoretically, it is not clear whether Fintech loans and bank loans should act as complements or substitutes. On the one hand, firms may value the streamlined process and speediness of Fintech services and switch from traditional lenders to Fintech lenders. In this case, Fintech and bank loans are substitutes. On the other hand, the low collateral requirement associated with Fintech loans may allow firms to acquire new assets that they could then pledge to borrow more from banks. Similarly, a successful Fintech application could serve as a positive signal on the firm quality, potentially mitigating asymmetries of information between banks and firms. While the first channel reflects firm's preferences over credit sources, or credit demand, the second two channels operate through credit supply by banks.

Since we are interested in bank credit outcomes, our analysis includes the group of Fintech borrowers with at least one active banking relationship at a certain point in the sample period. Fintech borrowers may therefore be banked or unbanked at the time of the first Fintech loan. When a firm borrows multiple times from Fintech platforms, we only keep the first Fintech loan, to ensure that we observe the impact of the initial Fintech loan on bank credit access.

We use the specification in equation 1 to study firm's credit dynamics around the Fintech loan grant. The dependent variable $y_{i,t}$ is the logarithm of one plus the total loan amount granted to firm i in month t relative to the Fintech loan grant ($t = 0$ when the Fintech loan is granted). For each firm, we keep 36 monthly observations, starting 12 months before the

grant of the loan and ending 24 months after. $\mathbb{1}_t$ are a series of indicators for the relative time between the calendar month and the month of the Fintech loan grant. The coefficients of interests are δ_t , which capture the amount of bank loan a firm obtains relative to the reference level at $t = 0$. The standard errors are clustered at firm level. Naturally, as we move further away from $t = 0$, the number of observations drops as fewer firms have a three-year continuous relationship with their banks.

$$y_{i,t} = \sum_{t=-12}^{24} \delta_t \mathbb{1}_t + \varepsilon_{i,t} \quad (1)$$

We start by showing firms’s overall credit dynamics around the Fintech loan grant. Figure 4 panel (a) plots the evolution of the total amount of bank loans. In the 12-month period prior to $t = 0$, there is no significant change in total loan amount. Following the Fintech grant, firms experience a significant increase in the total bank loan amount, which is persistent during the following 24 months. The aggregate pattern, however, does not inform us of the source of the credit expansion. We therefore perform the same analysis for different types of lending relationships. Panels (b) and (c) respectively show the amount of loans originated by new lenders, defined as banks that did not have a relationship with the firm prior to $t = 0$, and pre-existing lenders. We find that after obtaining a Fintech loan, firms borrow more from new bank lenders, and less from pre-existing lenders. The loans originated by new bank lenders are also larger than the drop in the borrowing amount from pre-existing lenders, therefore leading to a net increase in credit amount. Taking into account the additional Fintech loans in month 0, Fintech borrowers indeed experience a credit expansion in the medium run.

To understand better the type of credit firms obtain, we further break down total credit amount by credit usage and loan categories. The results are presented in Figure 5. Panels (a)-(b) show the results for drawn credit and undrawn credit, the latter defined as the amount of credit banks committed to provide and is still unused.⁹ We find that the amount of undrawn bank credit increases sharply in the month of the Fintech loan grant, while the amount of drawn credit gradually increases after $t = 0$ for one year and stays constant afterwards. We

⁹The distinction between drawn and undrawn credit is mostly relevant for credit lines, not for term loans.

interpret the increase in both drawn and undrawn credit as firms being able to improve and utilize their credit access.

Among the drawn credit, we focus on credit lines and long-term loans and report their patterns in panels (c) and (d), respectively. Based on panel (c), firms were building up their revolving credit balance in the 12 months prior to the Fintech loans, and use the Fintech loans to repay the credit lines immediately after they receive it. The reduction is however temporary, with the credit balance returning to its previous level within 6 months. Panel (d) shows that firms receive more long-term loans right after $t = 0$, the increase. These patterns combined suggest that firms are able to obtain more bank credit, in particular, long-term loans. One immediate use of the additional Fintech loans and bank loans is to repay credit lines. About 25% of firms experience a decline in their credit line balance at $t = 0$. For these firms, the size of the reduction at maximum accounts for 40% of the new credit obtained from Fintech platforms and banks, with the median being 20%. Therefore, repayment of revolving credit lines does not appear to be the main use of the new Fintech loans.

In sum, we observe that firms are able to expand their bank credit access after obtaining a Fintech loan. However, we cannot, at this point, conclude that this is a causal effect of a successful Fintech loan application. An alternative explanation is that, SMEs that face investment opportunities borrow from both Fintech platforms and banks simultaneously and obtain the Fintech loan shortly before the bank loans. In this case, the increase in bank lending merely reflects firm's unobserved credit demand, rather than credit supply.

To distinguish between the credit demand and supply channels, we construct a matched sample that consists of Fintech borrowers and similar firms that obtain a bank loan in the same month as the Fintech loan. The underlying assumption is that firms with similar observable characteristics and credit history, which operate in the same industry and have the same borrowing needs in the same month, face similar investment opportunities. Therefore, by comparing subsequent credit dynamics between the two groups, we can isolate the effect of obtaining a Fintech loan on bank credit supply. We detail our matching procedure in the next section.

5 CREDIT DYNAMICS BASED ON THE MATCHED SAMPLE

5.1 The matching procedure

Our goal is to analyze how a successful Fintech loan application affects firms' subsequent access to bank credit. To construct a control group, we select firms that have similar credit dynamics to Fintech borrowers but obtain loans from a *new* bank lender at the same time. This matched sample serves two goals. First, it controls for credit demand by firms. Control firms, by construction, also apply for a new loan around the same time as Fintech borrowers. Therefore, the subsequent credit dynamics of the two groups of firms are plausibly driven by credit supply. Second, matching firms on the condition that they obtain a loan from a new lender allows to neutralize the effects of the introduction of a new lending relationship on bank borrowing (Degryse et al., 2016). By comparing the two groups, we can therefore identify the effects on credit dynamics of a new Fintech loan (as opposed to any new loan).

For each Fintech borrowing firm, we select firms from M-Contran that are comparable on several dimensions and obtain similar loans from new lenders in the same month. Specifically, the following filters are applied to select the control firms: (1) the firm receives at least one new loan from a new lender in the same quarter as a Fintech borrowing firm (2) the new loans are either credit lines or long-term loans. We exclude working capital loans and leasing loans because Fintech loans are in practice not backed by specific assets such as accounts receivable or assets on lease. (3) the firm has active banking relationships during the 13-month period $[-6, +6]$ around the new loan grant. After applying these filters, we further require firms to have similar loan balance to the Fintech borrowing firms in the three months preceding the new loan grant. Specifically, we select the 5 firms that are the closest in total bank credit amount L based on a distance measure $\sum_{t=-2}^0 \left(2 \times \frac{L_{Fintech,t} - L_{Control,t}}{L_{Fintech,t} + L_{Control,t}} \right)^2$. The final matched sample includes 29,309 firm-month observations for 869 Fintech borrowing firms and 2,411 control firms.

5.2 Credit dynamics in the matched sample

In this section, we compare the credit dynamics of the two groups of firms in a 36-month window around a Fintech or bank loan grant. We first analyze the aggregate patterns of their credit dynamics, then we quantify the impact of a Fintech loan grant on firm credit dynamics using a difference-in-difference (DID) approach.

Figure 6 displays the aggregate credit patterns. The top, middle and bottom panels plot the average loan amount granted by three groups of lenders: all lenders excluding the new lender/Fintech platform (thereafter “all lenders”), banks with which the firm has a lending relationship before the event (thereafter “existing lenders”), and new lenders without a lending relationship with the firm before $t = 0$ (thereafter “new lenders”).

Several observations are worth noting. First, by construction, the two groups of firms have similar credit dynamics between $[-2,0]$. Note, however, that this is true even before $t = -2$, which substantiates that the two groups are comparable. Second, following the new loan grant at $t = 0$, the total amount of loans increases for both groups at $t = 0$ but the increase is larger for Fintech borrowers. This suggests that Fintech loan access positively impact bank credit supply (panel a). Third, we observe a decline in credit supply by existing banks, the extent of which is less pronounced for Fintech borrowers (panel b). In addition, both bank and Fintech borrowers are able to establish relationships with new bank lenders, but the average loan amount is larger for Fintech borrowers.

To further quantify the effects, we perform a standard DID analysis, using the following specification:

$$y_{i,t} = \beta \text{treated}_i \times \text{post}_t + \gamma_{i,\text{year}} + \varepsilon_{i,t}. \quad (2)$$

The dependent variable $y_{i,t}$ is the logarithm of the loan amount or the number of banks. The coefficient of interest β is expected to be positive. We include firm \times year fixed effects to control for time-varying firm characteristics and for unobservable investment opportunities that vary at firm-year level. Therefore, our results are unlikely to be driven by credit demand. Standard errors are clustered at the firm level.

Table 5 reports the regression results. Columns 1-3, respectively, present the changes in the amount of loans by all lenders, new lenders, and existing lenders. Consistent with the aggregate patterns, relative to control firms, new and existing bank lenders increase lending to Fintech borrowers by 29% and 5%. Moreover, Fintech borrowers create 7% more new bank relationships than bank borrowers. In contrast, they do not seem to replace more existing banks than bank borrowers.

We also investigate the effects separately on various loan categories and present the results in Table 6. Following a new loan grant, relative to bank borrowers, Fintech borrowers obtain 5% and 14% more credit from new bank lenders in the form of credit line and long-term loans respectively. Fintech borrowers also experience an increase in credit supply by existing lenders, but exclusively in the long-term loan category.

We implement a version of equation 2 where we replace the *post* dummy with month dummies. This specification allows us to not only zoom into the effects at a monthly frequency, but also visualize the pre-trends and examine the parallel trend assumption. Regression coefficients are plotted in Figure 7. According to panel (a), before obtaining the new Fintech or bank loan, there is no significant difference in credit dynamics between Fintech borrowers and bank borrowers. After the new loan grant, relative to bank borrowers, Fintech borrowers experience an increase in total loan amount, which persists for 24 months. Breaking loans into credit lines and long-term loans respectively in panels (b) and (c), we observe that this increase is driven by long-term loans, which sharply rise in the first 3 months and stay relatively stable afterwards.

$$y_{i,t} = \sum_{t \in [-12, 24]} \beta_t \text{treated}_i \times D_t + \gamma_{i, \text{year}} + \varepsilon_{i,t}, \quad (3)$$

Taken together, our evidence suggests that both Fintech and control borrowers experience a credit expansion from non-relationship banks following the grant of the outside loan. However, the increase is stronger for Fintech borrowers, suggesting that getting a Fintech loan improves firms' subsequent access to bank credit.

5.3 Economic channels

Several mechanisms can explain why Fintech borrowers are able to expand subsequent access to bank credit relative to similar control firms. First, as Fintech platform and investors collectively exert efforts in screening firms, a successful application may signal good firm quality. Subsequent lenders, upon observing this signal, may be willing to extend credit that is otherwise unavailable. We refer to this as the *information channel*. A second channel relates to the fact that Fintech loans are unsecured. Fintech loans, therefore, allow firms to seize investment opportunities without posting collateral. As a result, the newly acquired assets can be pledged to banks, expanding firms' borrowing capacity. Control firms, in contrast, face stringent collateral requirements from traditional banks (Davydenko and Franks, 2008). Obtaining a Fintech loan would therefore improve access to bank credit by mitigating collateral constraints. We refer to this channel as the *collateral channel*.

To distinguish between the two channels, we exploit the heterogeneity in firm and loan features along three dimensions: loan category, credit history, and loan purpose. We present two pieces of evidence that are consistent with the collateral channel. First, as described in the previous section, Fintech borrowers experience an increase in long-term loans but not in credit lines. This is less consistent with the information channel, because credit lines are considered more sensitive to information than long-term loans (Berger and Udell, 1995).

Second, the treatment effect is concentrated among firms with a credit score. Firms with a turnover below €750,000 do not receive a credit score. As a result, banks have less information on the default probability of unrated firms than rated firms. The information channel would predict a *stronger* positive impact on credit access for firms without a credit score, as the signal from the new loan is more informative for firms with a thin history. In contrast, the collateral story should apply to both types of firms. Indeed, credit quality may affect the price of long-term loans, but the collateral requirements typically apply to all firms, regardless of their credit history (Chakraborty and Hu, 2006).

Table 7 reports the results for the two subsamples. 65% of the firms in the sample do not have a credit score, which is unsurprising as our sample mostly contains SMEs. Both rated and unrated Fintech borrowers experience a 10-12% increase in long-term credit, following

the new loan grant, compared to their respective groups of control firms. In addition, there is no significant impact on credit lines for both rated and unrated Fintech firms, which is again inconsistent with the information channel.

In panels d and e of Figure 7, we split the sample by whether the new Fintech/bank loan is used to finance investment in tangible assets or not. The collateral channel would predict a stronger impact for this type of loans. This is because by investing in new tangible assets, a firm expands the set of assets it can post as collateral. In addition, as opposed to bank loans, Fintech loans are uncollateralized. As a result, financing tangible assets with Fintech loans does not encumber the newly acquired assets, expanding firm borrowing capacity. Consistent with this prediction, we find that the effects are stronger in both the magnitude and the significance level for investment loans.

One alternative explanation for our results relates to the speed of online applications versus bank loan applications. More specifically, Fintech borrowers may apply for Fintech and bank loans simultaneously, while control firms only submit applications to banks. But because bank loan applications take longer to approve, control firms receive a new bank loan only after the Fintech loan is granted. The fact that the gap in bank loans between Fintech and bank borrowers persists for at least two years help mitigate this concern. Indeed, the gap should disappear over time if it is only due to a temporary delay in when bank borrowers receive additional credit.

Firm-level outcomes So far the findings suggest that Fintech lending indeed helps expand firms' credit access. However, it is not clear whether the increase in credit availability leads to positive real outcomes. In this section, we assess the impact of Fintech loans on firm outcomes, including bankruptcy, growth and employment, using the same specification in Equations 2 and 3.

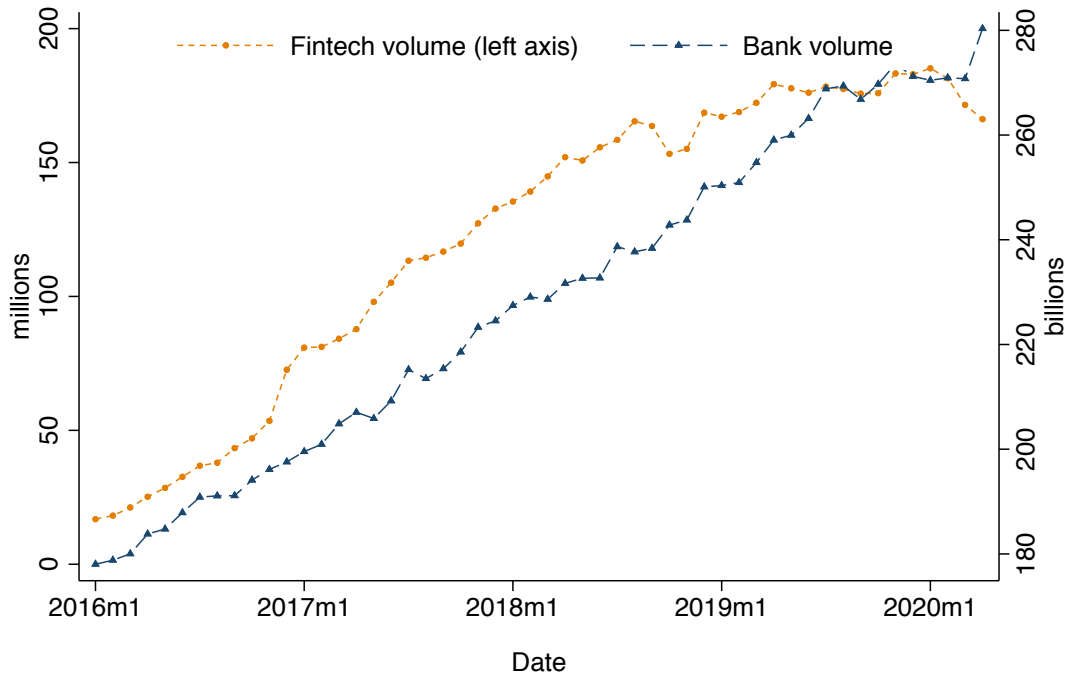
The information on firm activities is from FIBEN, while the information on default can be obtained from BODACC as mentioned in Section 3. Table 8 reports the results on firm growth and employment. The expanded credit access leads to a 7% increase in total assets and sales. Number of employees and average wages also goes up by 3% and 6% respectively. This result, however, only applies to surviving firms. It may be that Fintech

and bank borrowers differ in terms of survival rate after obtaining the new loan. In line with this explanation, we find an adverse impact on the probabilities of entering a bankruptcy procedure and eventually being liquidated. Figure 8 shows that Fintech borrowers are 7% more likely to file for bankruptcies and 3.5% more likely to be liquidated. Taken together, this suggests that the regulatory measures aiming at spurring Fintech lending may allow SMEs to pursue riskier, potentially more innovative projects.

6 CONCLUSION

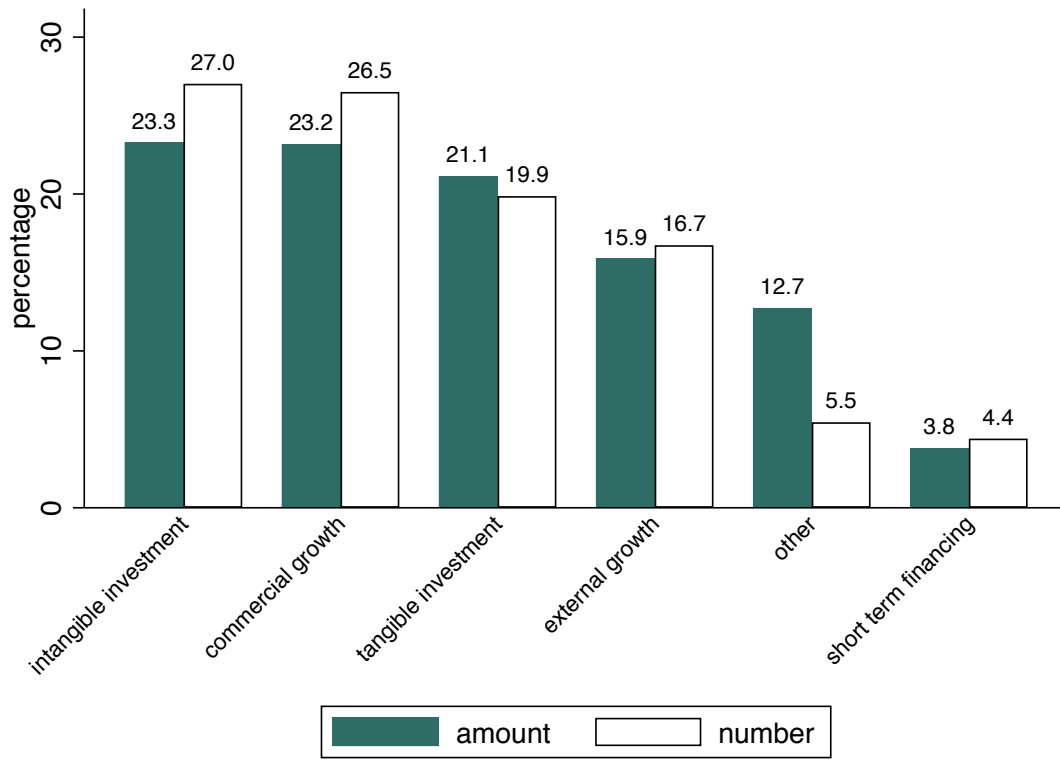
The decline in bank lending to SME and the emergence of Fintech lending poses several questions about the SME credit market. This paper provides a comprehensive description of the Fintech SME loan market, using administrative data from France. Despite being small, the French market is growing steadily and has received unprecedented support from regulators. To understand the role of Fintech credit for firms, we investigate the credit dynamics of Fintech borrowers. We find that Fintech loans serve as complements for bank loans and expand credit access for SMEs. We also present evidence consistent with Fintech platforms alleviate financial constraint of innovative firms with limited collateral.

FIGURE 1
 Aggregate lending volume by banks and FinTech platforms



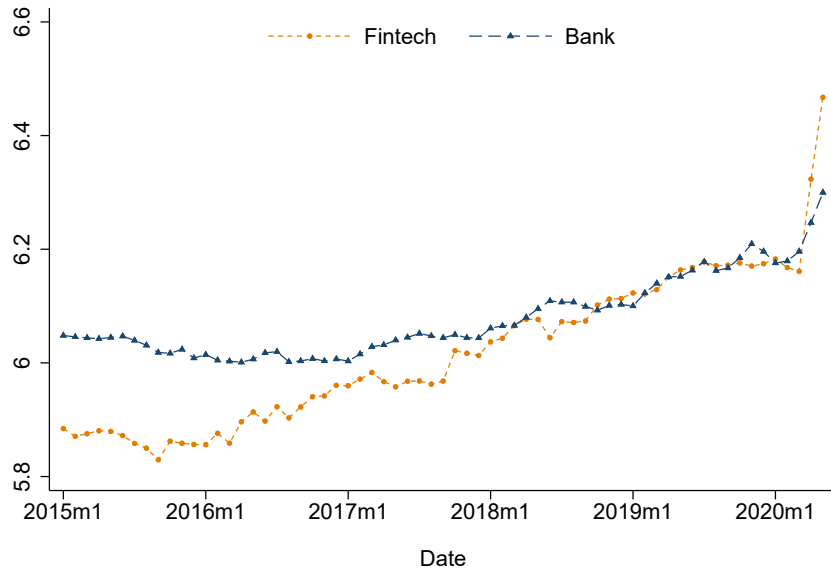
Notes: This figure presents the aggregate lending volume by banks and FinTech platforms to non-financial companies. We focus on loans under one million euro, which is the regulatory limit for the maximum amount of a FinTech loan.

FIGURE 2
Loan purpose



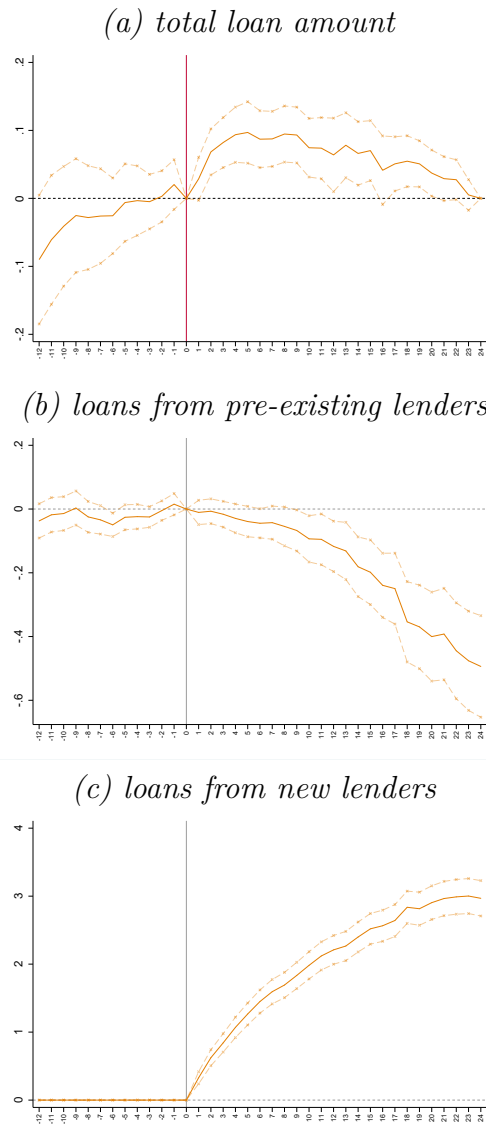
Notes: This figure presents the percentage of loans in each purpose category by the number loans and loan amount.

FIGURE 3
Average bank lending for firms in the unmatched sample



Notes: This figure presents the average bank lending at firm level for FinTech and bank borrowers. The orange dots represent FinTech borrowers, while the blue triangles represent bank borrowers. The loan amounts are in logarithms.

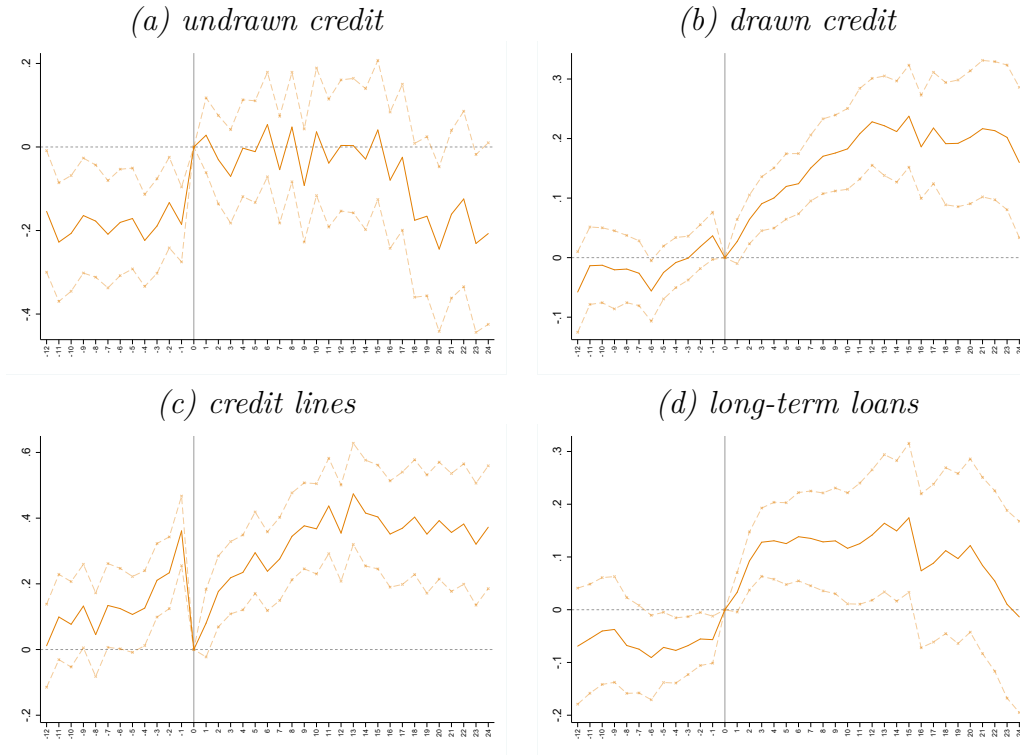
FIGURE 4
Credit dynamics of FinTech borrowers



Notes: This figure presents the total amount of bank loans for FinTech borrowers in the 36-month window around the FinTech loan grant. The top, middle and bottom panels display the total loan amount, the amount of loans from pre-existing lenders, and that from new lenders, respectively. Loan amounts are measured in logarithms.

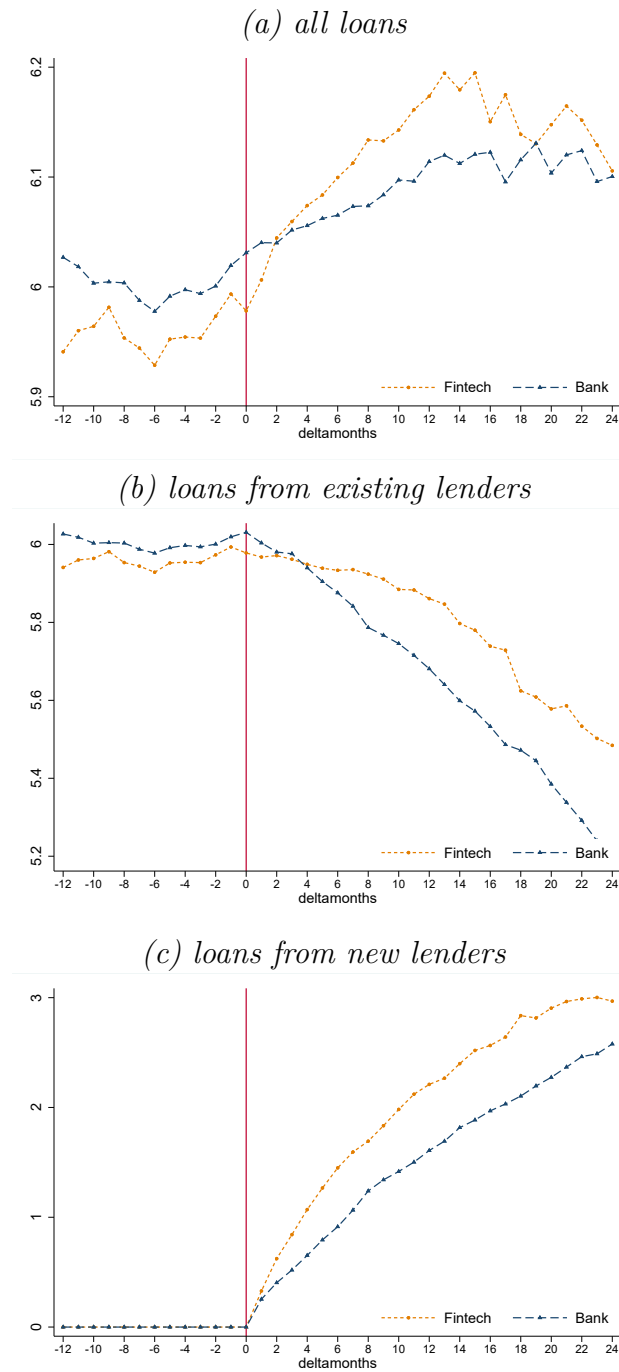
FIGURE 5

Credit dynamics of FinTech borrowers by usage and loan category



Notes: This figure presents the credit dynamics of FinTech borrowers by loan categories in the 36-month window around the FinTech loan grant. The top two panels present total amount of drawn credit, and total amount of undrawn credit, respectively. The bottom two panels present the patterns of credit line balance and long-term loans. Loan amounts are measured in logarithms.

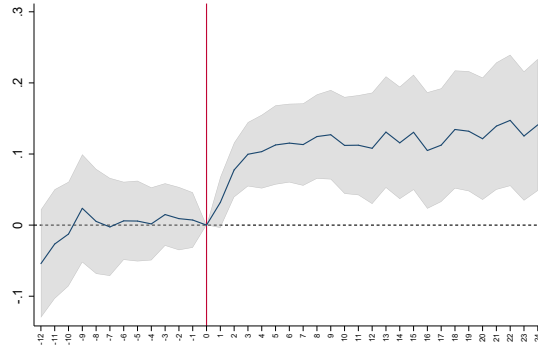
FIGURE 6
Credit dynamics by lender type



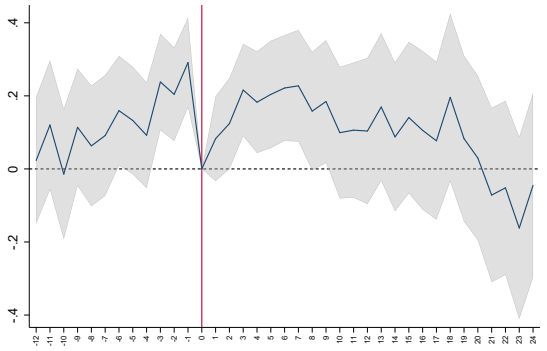
Notes: This figure presents the total loan amount by lender type in the *matched* sample. The top, middle and bottom panels present the amount of loans by all lenders, pre-existing, and new lenders, respectively. The orange dots represent the FinTech borrowers, while the blue triangles represent the control group—bank borrowers. In all panels, the loan amount is measured in logarithms.

FIGURE 7
Credit dynamics by loan types

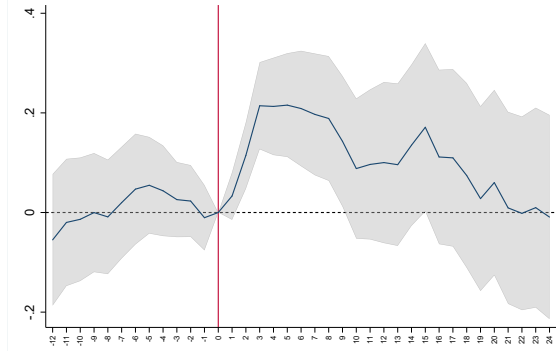
(a) total amount



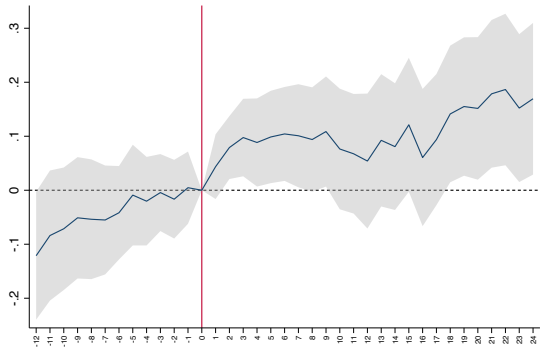
(b) credit lines



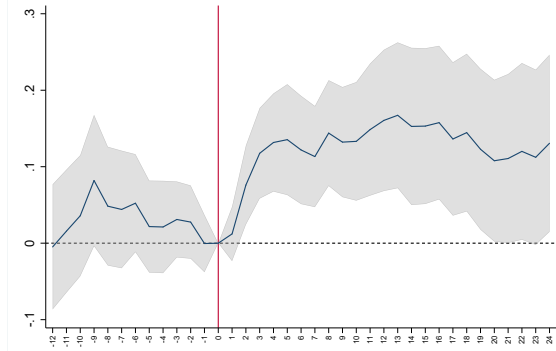
(c) long-term loans



(d) non-investment loans



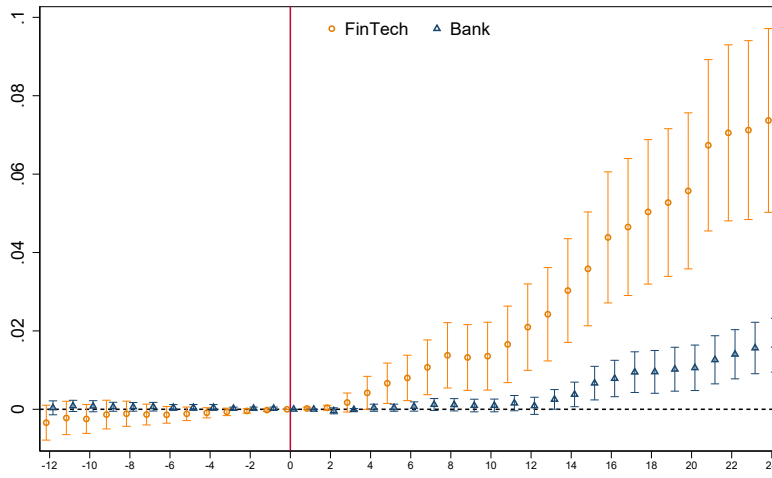
(e) investment loans



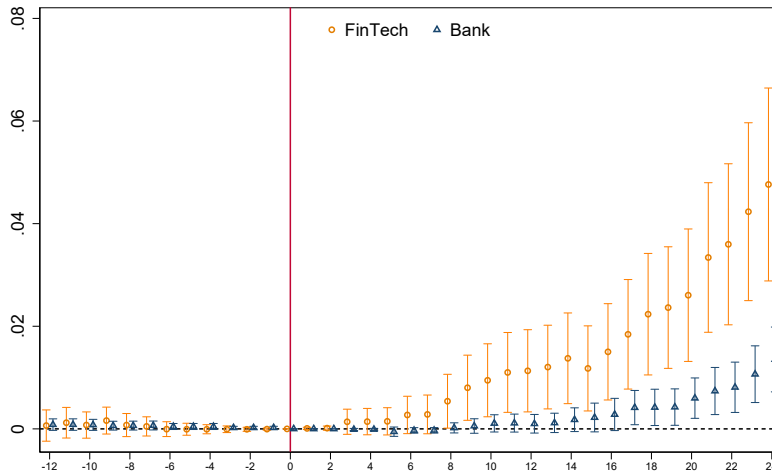
Notes: This figure presents the regression coefficient from equation 3. Panel (a) shows the total bank lending. Panels (b) and (c) show the regression coefficients for credit lines and long-term loans, respectively. Panels (d) and (e) present the regression coefficients for when the new loan is for non-investment and investment purposes, respectively. In all panels, the loan amount is measured in logarithms.

FIGURE 8
Firm liquidations

(a) bankruptcy filings



(b) liquidations



Notes: This figure presents the probability of entering bankruptcy procedures (panel a) and that of final liquidations (panel b). The orange dots represent the FinTech borrowers, while the blue triangles represent the control group—bank borrowers.

TABLE 1
FinTech loans characteristics

	Min	Mean	p50	Max	S.D.	Count
<i>Loan terms</i>						
Loan amount (000' euro)	1.00	151.24	50.00	100.00	342.08	2,109
Interest rate (%)	0.00	9.13	8.10	37.22	4.24	2,109
Maturity (months)	3	38	36	84	16	2,109
<i>Investors</i>						
Number of banks	0	0	0	1	0	2,109
Share of banks	0.00	11.30	0.00	100.00	25.27	2,109
Number of legal entities	0	2	0	37	5	2,109
Share of legal entities	0.00	1.62	0.00	100.00	7.68	2,109
Number of individuals	0	506	322	5141	559	2,109
Share of individuals	0.00	87.07	100.00	100.00	25.71	2,109

NOTE.—This table presents the descriptive statistics of FinTech loans. Loan amount is in thousands of euro. Interest rate is annualized and expressed in percentage points and is annualized. Loan maturity is in month. Investors can be individuals, banks, or other legal entities such as FinTech platforms themselves.

TABLE 2
FinTech loans characteristics by borrower type

	Banked	Unbanked	Difference	<i>t</i> -statistic
<i>Loan terms</i>				
Loan size (000' euro)	159.53	92.32	-67.21	-2.97**
Interest rate (%)	9.42	7.05	-2.37	-8.60***
Maturity (months)	37	49	12.22	12.13***
<i>Investors</i>				
Number of banks	0	0	-0.03	-1.02
Share of banks	11.46	10.12	-1.35	-0.81
Number of legal entities	2	1	-1.75	-5.73***
Share of legal entities	1.74	0.73	-1.00	-1.98*
Number of individuals	536	294	-241.67	-6.59***
Share of individuals	86.78	89.14	2.36	1.39

NOTE.—This table presents the descriptive statistics on loans characteristics obtained by FinTech borrowers with and without banking relationship at the time of the FinTech application. Loan amount is in thousands of euro. Interest rate is expressed in percentage points. Loan maturity is in months.

TABLE 3
Comparing FinTech and bank loans

	(1)	(2)	(3)	(4)	(5)
	Loan size (000')	Maturity (months)	Rate (%)	Short-term rate(%)	Long-term rate(%)
FinTech	60.00*** (27.32)	0.61 (0.58)	7.43*** (421.01)	6.31*** (118.43)	7.45*** (339.48)
Maturity			0.00*** (43.76)	-0.00*** (-3.00)	0.00*** (5.43)
Loan size			-0.00*** (-42.16)	-0.00*** (-14.45)	-0.00*** (-31.83)
Constant	40.00*** (289.30)	37.27*** (451.40)	1.72*** (975.18)	1.71*** (690.92)	1.84*** (380.71)
Year FE	Y	Y	Y	Y	Y
N	514,884	332,137	332,137	184,547	147,590
R-sq	0.01	0.00	0.40	0.21	0.47

NOTE.—This table shows the difference in average loan size, interest rate and maturity between FinTech loans and bank loans. The regression sample only includes uncollateralized, fixed-term loans originated between 2016-2020.

TABLE 4
Comparing FinTech and Bank Borrowers

	(a) FinTech & Bank (1)	(b) Bank-only (2)	(a)-(b) (3)	<i>t</i> -statistic (4)
Asset	8.019	7.910	0.109	1.483
Age	10.980	12.022	-1.042	-1.566
Working capital	0.239	0.267	-0.029	-2.820**
EBIT	0.051	0.054	-0.003	-0.677
Sales	1.313	1.426	-0.113	-2.130*
Debt	0.410	0.355	0.055	5.274***
Net income	0.038	0.050	-0.011	-2.991**
Fixed assets	0.201	0.184	0.017	1.795
Cash flow	0.071	0.069	0.002	0.480
Wage	0.892	0.726	0.166	0.895
R&D expenditure	0.007	0.003	0.004	3.633***
R&D output	0.008	0.003	0.004	4.099***
Collateral	0.227	0.295	-0.068	-5.648***
Employment	2.709	2.690	0.019	0.308
Investment	4.127	3.638	0.489	2.973**
Salaries	6.405	6.308	0.097	1.167
Added value	6.791	6.803	-0.012	-0.199
Turnover	7.944	7.821	0.123	1.596
N	413	2,910	3,323	3,323

NOTE.—This table presents firm characteristics for FinTech-bank borrowers and bank-only borrowers as defined in Section 4. *Assets* are measured in logarithm. *Working capital*, *EBIT*, *Debt*, *Net income*, *Investment*, *Fixed assets*, *Cash flow*, *R&D*, and *Collateral* are all normalized by total assets.

TABLE 5
Credit by lender type

	All Lenders	New Lenders	Existing Lenders
<i>Panel A. Loan amount</i>			
FinTech \times Post	0.07*** (3.40)	0.29*** (3.85)	0.05** (2.13)
Post	0.00 (0.37)	0.53*** (14.64)	-0.07*** (-5.26)
R-sq	0.98	0.57	0.97
<i>Panel B. Number of banks</i>			
FinTech \times Post	0.09*** (3.15)	0.07*** (4.12)	0.02 (0.76)
Post	0.07*** (5.22)	0.11*** (14.27)	-0.04*** (-3.84)
R-sq	0.98	0.57	0.98
Firm-Year FE	Y	Y	Y
N	39,309	39,309	39,309

NOTE.—This table presents the evolution of the total amount of loans (Panel A) and number of banks (Panel B) by lender type for firms in the matched sample. Both variables are in logarithms ($\log(1+x)$). Column 1 presents the regression coefficient of Equation 2, using total loan amount as the outcome variable. Columns 2 and 3 use the amount of loans extended by pre-existing and new lenders as outcome variables. t statistics in parentheses. Significance levels 10%, 5%, and 1% are denoted by *, **, and ***, respectively.

TABLE 6
Credit by loan category

	Credit Lines		Long-term Loans	
	Existing Lenders	New Lenders	Existing Lenders	New Lenders
	(1)	(2)	(3)	(4)
FinTech \times Post	-0.02 (-0.52)	0.05** (2.21)	0.09** (2.19)	0.14** (2.47)
Post	-0.06*** (-3.27)	0.05*** (4.50)	-0.04* (-1.83)	0.26*** (9.69)
Firm-Year FE	Y	Y	Y	Y
N	39,309	39,309	39,309	39,309
R-sq	0.83	0.41	0.96	0.56

NOTE.—This table presents the evolution of the loan amount ($\log(1+\text{loan amount})$) in various categories for firms in the matched sample. Columns 1-2 present the impact on subsequent credit lines by either pre-existing lenders (column 1) or new lenders (column 2), while columns 3-4 present the impact on long-term loans. t statistics in parentheses. Significance levels 10%, 5%, and 1% are denoted by *, **, and ***, respectively.

TABLE 7
Credit by credit score category

	Credit lines (1)	Long-term loans (2)
<i>Panel A. Firms without a credit score</i>		
FinTech \times Post	-0.03 (-0.52)	0.10** (2.03)
Post=1	0.01 (0.34)	0.03 (1.23)
Firm-Year FE	Y	Y
N	23,206	23,206
R-sq	0.78	0.96
<i>Panel B. Firms with a credit score</i>		
FinTech \times Post	0.02 (0.24)	0.12* (1.78)
Post	-0.08** (-2.07)	0.07* (1.71)
Firm-Year FE	Y	Y
N	15,834	15,834
R-sq	0.83	0.95

NOTE.—This table presents credit dynamics for firms with and without a credit score in the matched sample. Columns 1 presents the dynamics of credit lines, and column 2 presents that of long-term loans. Firm-year fixed effects are included. t statistics in parentheses. Significance levels 10%, 5%, and 1% are denoted by *, **, and ***, respectively.

TABLE 8
Firm Growth and Employment

	Assets (1)	Investments (2)	Sales (3)	Employment (4)	Wage (5)
FinTech \times Post	0.07*** (4.21)	0.16 (1.19)	0.07*** (3.45)	0.03* (1.77)	0.06** (2.32)
Post	-0.01* (-1.87)	-0.03 (-0.46)	-0.02*** (-2.73)	-0.01 (-1.12)	-0.01 (-1.27)
Firm FE	Y	Y	Y	Y	Y
Industry-Year FE	Y	Y	Y	Y	Y
N	45,992	21,542	45,992	45,010	45,992
R-sq	0.99	0.85	0.98	0.97	0.97

NOTE.—This table presents firm outcomes, measured at annual frequency in the four-year window around the new loan grant. All outcome variables are measured in logarithms. t statistics in parentheses. We include firm fixed effect and industry-year fixed effects in all columns. Significance levels 10%, 5%, and 1% are denoted by *, **, and ***, respectively.

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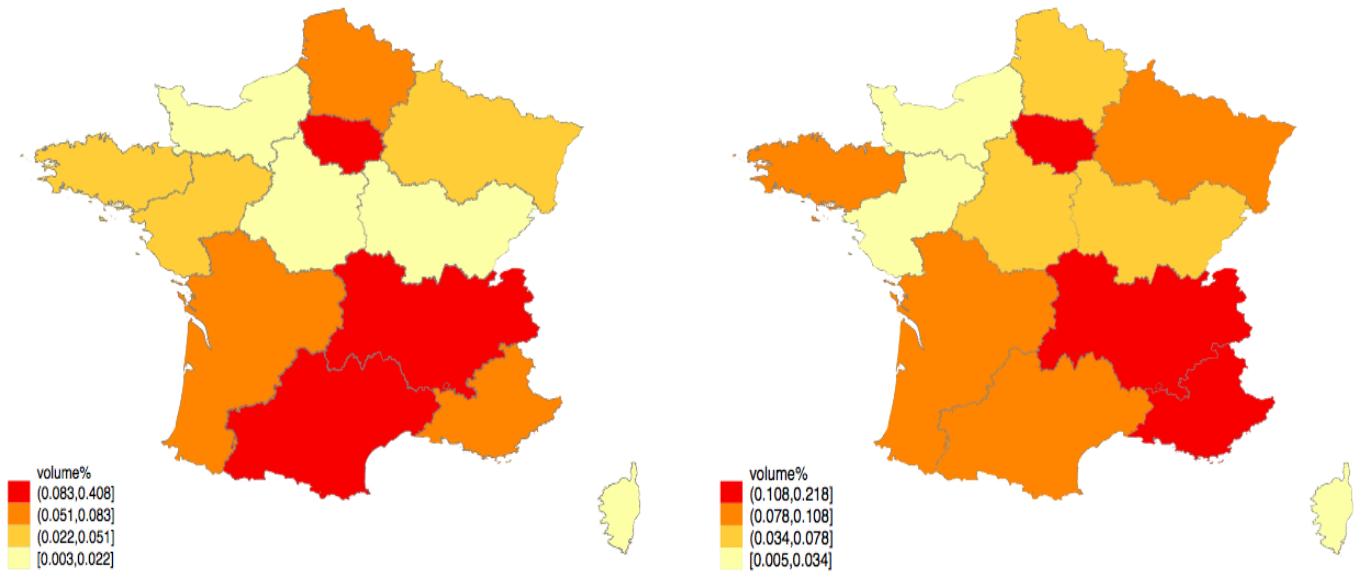
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I ADDITIONAL FIGURES

FIGURE A.1
Origination volume by Region

FinTech loans

Bank loans



Notes: This figure shows the geographical distribution of FinTech and bank lending volume, for loans below one million euro.

I ADDITIONAL TABLES

TABLE B.1
List of FinTech lending platforms in the sample

Platform	loan size	APR	maturity	# lender per project	# borrowers	# loans
A	488	9.12	47	029	330	398
B	110	6.89	38	349	480	558
C	62	13.27	32	628	367	458
D	78	10.35	45	531	134	157
E	52	7.40	27	162	126	197
F	31	7.52	44	156	88	215
G	40	7.93	28	222	84	97
H	211	4.00	5	192	4	4
I	48	9.12	53	154	14	14

Notes: This table present descriptive statistics on the 10 platforms in our sample. Information on their market share, total loan amount, the dates of the first and last loans, and average loan characteristics are presented.

TABLE B.2
Decompose credit growth by lender type

	All lenders	New lenders	Existing lenders
FinTech \times Post	0.04** (2.29)	0.01* (1.83)	0.03* (1.86)
Post	-0.05*** (-3.52)	0.02*** (8.61)	-0.07*** (-5.11)
Firm-Year FE	Y	Y	Y
N	35,745	35,745	35,745
R-sq	0.18	0.16	0.18

NOTE.—This table presents the decomposition of the growth in total credit amount. Column 1 present the monthly growth rates in total credit amount. Columns 2 and 3 present that for loans by new and existing lenders, respectively. Significance levels 10%, 5%, and 1% are denoted by *, **, and ***, respectively.

TABLE B.3
FIBEN credit score categories

Credit score	Description	Procedure probability
3++	The company's ability to meet its financial commitments is deemed excellent	0.04%
3+	The company's ability to meet its financial commitments is deemed very good	0.08%
3	The company's ability to meet its financial commitments is deemed good	0.16%
4+	The company's ability to meet its financial commitments is deemed to be quite good given the absence of major financial imbalances. There are however moderate factors of uncertainty or fragility	0.52%
4	The company's ability to meet its financial commitments is deemed to be fair given the absence of financial imbalances. There are however moderate factors of uncertainty or fragility	1.37%
5+	The company's ability to meet its financial commitments is deemed to be fairly good	3.46%
5	The company's ability to meet its financial commitments is deemed to be poor	8.18%
6	The company's ability to meet its financial commitments is deemed to be very poor	12.42%
7	The company's ability to meet its commitments is a specific cause for concern. At least one reported trade bill payment incident	25.95%
8	The company's ability to meet its financial commitments is at risk given the trade bill payment incidents reported	33.50%
9	The company's ability to meet its financial commitments is compromised as the reported trade bill payment incidents point severe cash flow problems	41.80%
P	The company is the subject of insolvency proceedings (recovery or judicial liquidation proceedings)	-
0	The rating is given to firms that have not been analysed by Banque de France rating team over the observation period	-

Notes: This table provides a description of the credit score categories and their associated projected entry into a collective procedure over a three-year horizon, based on Banque de France data over the years 2017-2019