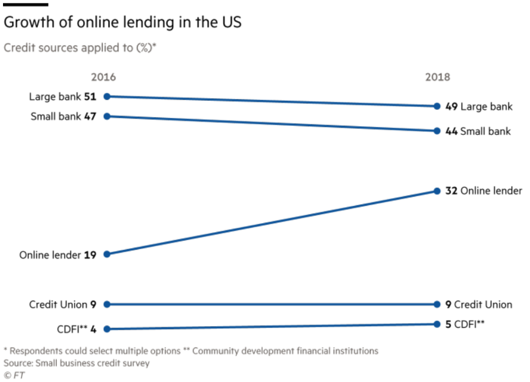
The Role of FinTech in Small Business Lending

Paul Beaumont* **Huan Tang**† Eric Vansteenberghe‡

*Desautels Faculty of Management, McGill University
†London School of Economics
‡Paris School of Economics; Banque de France - ACPR

The Emergence of FinTech in Small Business Lending

- **Emergence of FinTech financing**
  - Large US market: 32% of SMEs applied for FinTech financing in '19



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  - Large US market: 32% of SMEs applied for FinTech financing in '19
  - Small EU markets but fostered by regulators
    - Entry of FinTechs in French corporate loan market allowed by regulators in 2014
  - Boosted by Covid-19 crisis

US

UK

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- **Does the arrival of FinTech improve SMEs’ access to financing?**
  - Are FinTech lenders merely substituting banks?
  - Or do they improve firms access to bank credit?

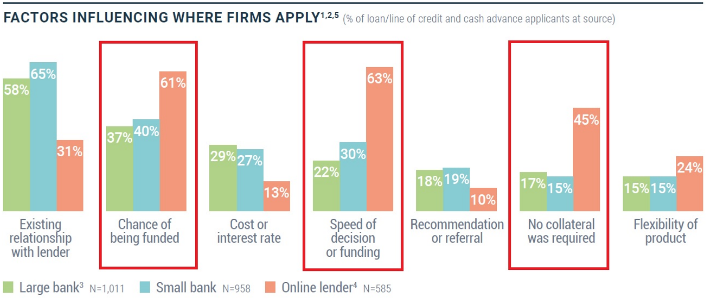
The Role of FinTech: this paper

- **Novel FinTech data linked to credit registry**
  - FinTech loans originated by **12** French lenders 2016-20 (**80%** market share)
  - Bank loans at monthly frequency
    - lending relationships, loan balances, loan type, maturity, interest rate
  - Firm-level information
    - credit score, accounting information
    - bankruptcy, trade credit defaults

The Role of FinTech: this paper

- **Comparing bank borrowers and FinTech borrowers:**
  - **Who?** ☞ FinTech borrowers less liquidity, less tangible assets, more innovation
  - **What?** ☞ FinTech borrowers experience better subsequent access to <u>bank</u> credit
  - **Why?**

Federal Reserve Banks' small business credit survey 2019



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  - **What?** ☞ FinTech borrowers experience better subsequent access to <u>bank</u> credit
  - **Why?**
    - less information asymmetry ✗
    - low collateral requirement ✓✓✓
    - speed ✓

Who borrow from FinTechs?

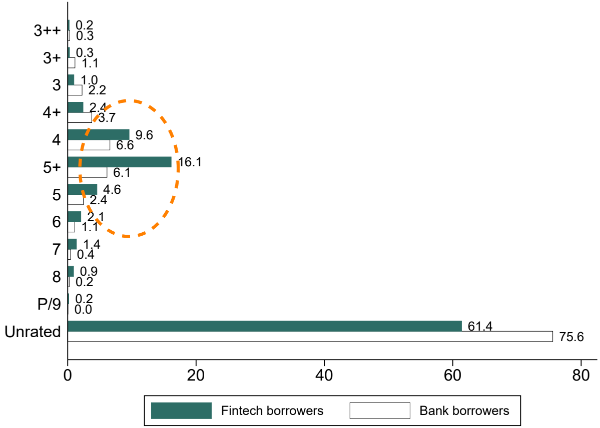
FinTech vs banks - Loans

- **FinTech loan terms**: Average size 100k, cost inclusive of fees 9%, maturity 3 years
- **FinTech vs. banks loans**: similar size, 5.5-p.p costlier, 2-year shorter maturity

	Loan size (Mns')	Loan size (Mns')	Maturity (yrs)	Maturity (yrs)	Rate (%)	Rate (%)	Rate (%)	Rate (%) - collateralized
FinTech	**-0.15****	**-0.11**	**-2.01*****	**-1.80*****	**5.42*****	**5.48*****	**5.43*****	**5.43*****
	(0.07)	(0.07)	(0.10)	(0.09)	(0.02)	(0.02)	(0.02)	(0.03)
Maturity						0.03***	0.02***	0.02***
						(0.00)	(0.00)	(0.00)
Loan size						-0.01***	-0.01**	-0.01***
						(0.00)	(0.00)	(0.00)
Constant	0.30***	0.29***	5.06***	5.04***	1.95***	1.79***	1.85***	2.01***
	(0.02)	(0.02)	(0.03)	(0.03)	(0.01)	(0.01)	(0.01)	(0.02)
Year FE	Y	Y	Y	Y	Y	Y	Y	Y
Firm FE	N	Y	N	Y	N	N	Y	Y
N	13,585	13,584	13,585	13,584	13,585	13,585	13,584	9,577
R-sq	0.01	0.02	0.05	0.27	0.84	0.84	0.85	0.84

FinTech vs banks - Credit ratings

- **Most FinTechs borrowers are unrated**
- **More likely to be "speculative-grade" than bank borrowers**



FinTech vs banks - Borrower characteristics

- **FinTech borrowers vs. bank borrowers:**
  - size, employment, investment ($\sim$)
  - age ($-$), sales ($-$), tangible assets ($-$)
  - leverage ($+$), R&D output and expenditures ($+$)
- **FinTech borrowers more likely to be under-served by banks**

How do FinTech loans impact firms?

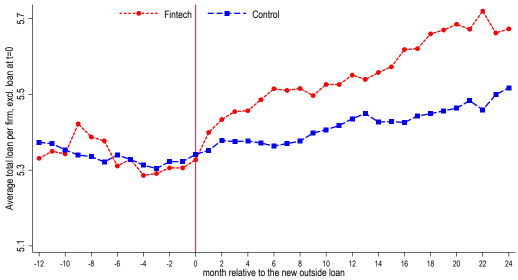
Match FinTech and bank borrowers

- **Credit dynamics driven by both demand and supply**
  - use propensity score matching to control for credit demand
- **For each FinTech borrower, select bank borrowers that**
  - borrow from a *new* bank the same year *(Degryse, Ioannidou and von Schedvin, 2016)*
  - borrow similar amount as the FinTech borrower
  - similar credit dynamics in month -3 and -1 (total, long-term, short-term loans)
  - same industry, similar firm size, credit rating, tangible assets

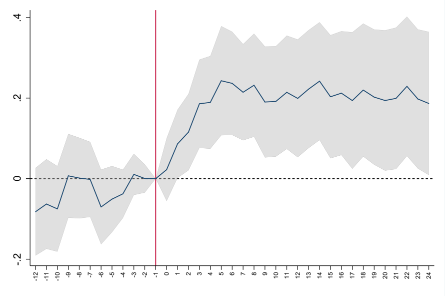
FinTech borrowers experience an increase in bank credit

- **Total bank loan increases more for FinTech borrowers**

Raw trend



DID coefficients



Note: new loans at $t = 0$ are excluded in the graphs

Why do bank loans increase?

FinTech loans $\Rightarrow$ bank loans $\uparrow$

- **Information channel**:

  Superior screening technology of FinTechs $\longrightarrow$ successful FinTech loan grant signals good firm quality $\longrightarrow$ bank loans $\uparrow$

- **Collateral channel**:

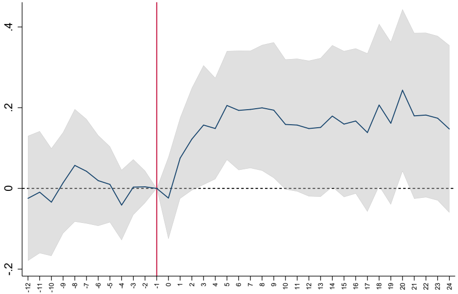
  FinTech loans are unsecured $\longrightarrow$ allow borrowers to acquire new assets (i.e., invest) without pledging collateral $\longrightarrow$ pledgeable assets $\uparrow$ $\longrightarrow$ bank loans $\uparrow$

- **Speed channel**:

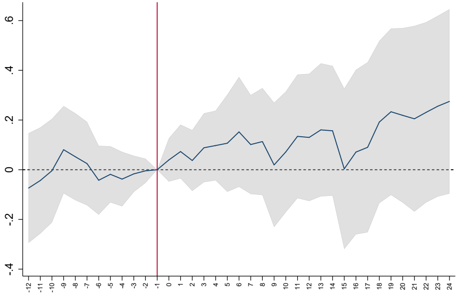
  Firms apply FinTech loans first to meet urgent liquidity needs, then use cheaper but slower bank loans to reimburse FinTech loans $\longrightarrow$ bank loans $\uparrow$

Evidence *against* the information channel

- **No evidence on the following predictions:**
  - New lenders are more sensitive to the good signal in a successful FinTech loan ✗
  - Unrated firms benefit more from the good signal ✗



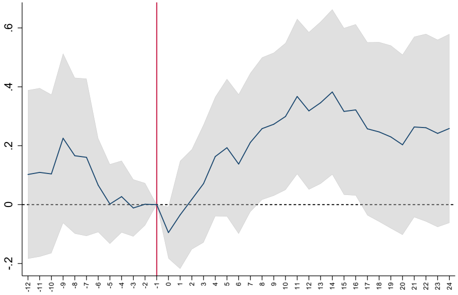
Rated



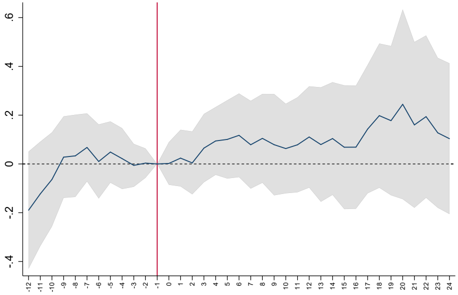
Unrated

Evidence *in favor of* the collateral channel

- ***Larger* increase in bank loans for FinTech borrowers when**
  - FinTech loans are used for investments
  - matched bank borrowers are borrowing against collateral
  - the loan product typically requires more collateral (i.e., long-term loans vs. leases)



Investment loans



Non-investment loans

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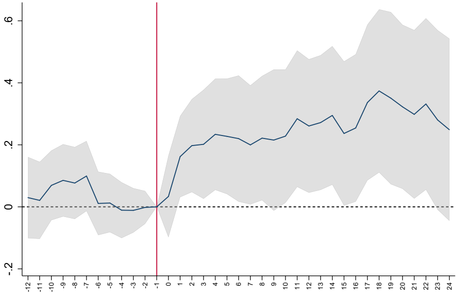
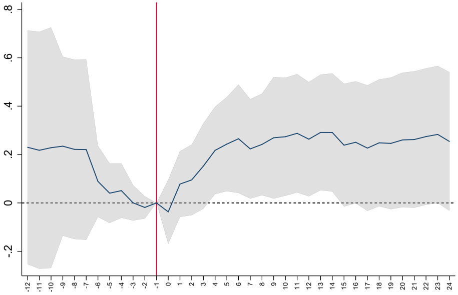


Matched firms borrow against collateral



Matched firms borrow without collateral

Evidence *in favor of* the collateral channel

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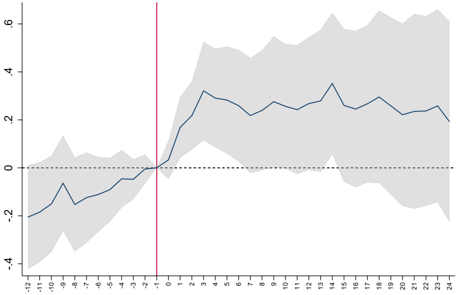
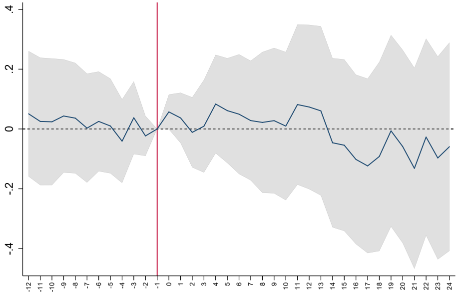


Long-term loans



Leases

Additional evidence *in favor of* the collateral channel

- **Information**: *lower* ex-post default rate for FinTech borrowers ✗
- **Collateral**: *higher* default rates if banks' collateral requirements were justified ✓

	(1) Default on suppliers	(2) Bankruptcy procedure	(3) Liquidation
FinTech × Post	0.014	0.003**	0.004*
	(0.010)	(0.001)	(0.002)
Post	0.007	0.001	-0.000
	(0.007)	(0.001)	(0.001)
Firm FE	Y	Y	Y
Industry-Year FE	Y	Y	Y
N	53,680	53,680	53,680
R-sq	0.24	0.06	0.08

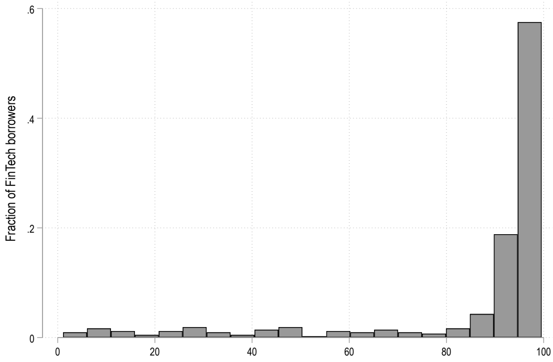
Evidence on the speed channel

- **Firms are more likely to use FinTech credit when facing liquidity needs**
  - customer defaults on trade bills as shocks to liqudity needs

	All default motives			Customer illiquidity	Others
FinTech × Customer default$_q$	**0.02****			**0.02****	0.01
	(0.01)			**(0.01)**	(0.01)
Customer default$_q$	0.00			-0.00	-0.00
	(0.00)			(0.00)	(0.00)
FinTech × Customer default$_{q-1}$		**0.02****			
		(0.01)			
Customer default$_{q-1}$		-0.00			
		(0.00)			
FinTech × Customer default$_{Before\ q-2}$			-0.00		
			(0.01)		
Customer default$_{Before\ q-2}$			0.00		
			(0.00)		
N	184,690	176,295	151,110	184,690	184,690
R-sq	0.00	0.01	0.01	0.00	0.00

The speed channel alone cannot explain our results

- Very few firms repay their FinTech loans early
- Inconsistent with firms borrowing later from banks to repay expensive FinTech loans



Timing of repayment (as % of loan maturity)

The Role of FinTech lending?

- **FinTech credit improves firms access to bank credit by**
  - relaxing collateral constraints ✓ ✓ ✓
  - reducing information asymmetry ✗
- **Faster speed help firms cope with urgent liquidity needs** ✓
- **Future of FinTech depends on whether high default rates are sustainable**