

Buy Now Pay (Less) Later: Leveraging Private BNPL data in Consumer Banking

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The views expressed here are those of the authors and do not necessarily reflect those of Norges Bank

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Opinion **Inside Business**

Buy now, pain later – the looming risks of BNPL

Prudential regulators should be monitoring both personal and systemic risks

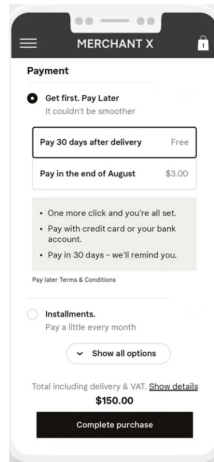
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Market leader Klarna generated 47 per cent more operating income in the first half of 2024 than two years earlier. © Hollie Adams/Bloomberg

Small loans where customers pay interest-free installment(s) after purchasing a product

- Customer → merchant → bank/BNPL provider
- Light regulation and light credit check; information about loan and repayment behavior often not shared with credit bureau
- Financing: fees merchants pay to operators of BNPL platform, charges resulting from late payments; some BNPL providers pay merchants



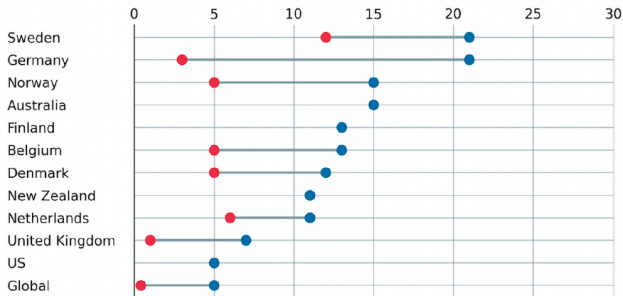
Adoption rates from 10-15 pct in emerging economies, >50 pct in some advanced economies
(Cornelli et al., 2023)

BNPL plans are gaining in popularity among customers

Top 10 countries (and US) by share of BNPL payments in all E-Commerce payment methods, in %

● 2016

● 2023



Source: Statista (2024)

- BNPL is an increasingly common form of credit through online shopping
- Evidence that BNPL hurts certain people, i.e., excessive increase in debt, high late fees
- Still, BNPL is very popular among consumers, little research on why
- We know very little to nothing about possible advantages of BNPL, and trade-offs involved
- Good data is scarce because BNPL is typically not or lightly regulated
- Many BNPL providers become banks, creating links between regulated-unregulated credit

What do we know (mostly based on "inferring" BNPL in bank and card data)?

- Users are typically riskier, younger, less educated and less well served in regular credit markets (Aidala et al., 2023; Cornelli et al., 2023; DiMaggio et al., 2022)
- BNPL stimulates sales
 - Users (mostly less creditworthy) 20% more likely to complete a purchase (Berg et al., 2024)
 - Especially lighter spenders more likely to purchase & spend more (Maesen and Ang, 2023)
 - Size of spending response very large, suggests a *liquidity flypaper* effect (DiMaggio et al., 2022)
- Contradictory findings on whether BNPL increases or alleviates financial stress:
 - + Guttman-Kenney et al. (2023); deHaan et al. (2024)
 - Bian et al. (2023); Papich (2022)

Data and setting:

- Proprietary data from a Nordic bank offering both BNPL and **unsecured bank loans**
- Large numbers of households use BNPL, their data is stored

Research question: How does BNPL usage and the availability of its data affect traditional consumer credit markets?

- How do BNPL data influence access to *bank* credit and loan terms?
- How is BNPL repayment data incorporated in banks' credit scoring and pricing?
- Who benefits from this data use: borrowers, banks, or both?
- Do past BNPL users "learn" and perform better on bank loans?

Internal BNPL applicants ...

- are 16 pp more likely to be accepted for a consumer loan.
- are offered a 1.2 pp interest rate discount on the comparable market rate
- but pay more than what corresponds to their internal risk profile
- display better repayment behavior.
- learn, which improves repayment behavior on top of lower rate effect

The bank ...

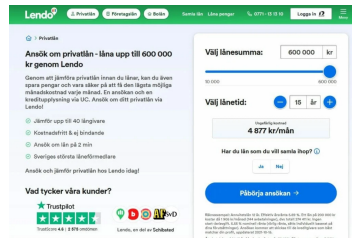
- uses private BNPL data from "unregulated" lending in "regulated" credit decisions
- improves credit risk assessments
- price discriminates in bank lending using the BNPL data
- earns margin that varies with asymmetry between internal and external risk assessment

Nordic financial institution that provides BNPL and has banking license

- **BNPL** payment histories
- 3 mln **consumer loan** applications 2018–2022: internal and external applicants
 - Income, marital status, no. children, housing type, employment status, external/internal credit scores
- Loan offers: interest rates, amounts; repayment behavior on accepted offers

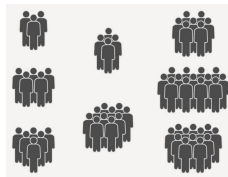
Sample

- 1,066,503 **first time** consumer loan applications through **online brokers** (13% of population)
- **Internal** applicants ⇔ at least three payments within last 12 months (2.8% of sample)
- Mean (median) application amount USD 15,500 (12,250), mean duration 110M
- Loan offers: 393,080, accepted offers: 8,052



The screenshot shows the Lendo website interface for a private loan application. The header includes the Lendo logo and navigation links for 'Privatån', 'Finansiering', and 'Betal'. The main content area is titled 'Ansök om privatån - låna upp till 600 000 kr genom Lendo'. It contains a form with the following fields: 'Välj lånesumma' (Loan amount) with a slider set to 600,000 kr, 'Välj lånetid' (Loan term) with a dropdown set to 15 years, and a calculated monthly payment of '4 877 kr/mån'. Below the form, there is a section 'Vad tycker våra kunder?' (What our customers think) featuring a Trustpilot rating of 4.8/5 and logos for 'Lendo' and 'Schibsted'. The footer contains small print about the company's registration and contact information.

- **Internal BNPL** customers: used BNPL at least three times in past 12 months
- **External BNPL** customers: previous BNPL customers at the bank not marked as internal: BNPL data available but ignored
- **External** customers: external BNPL applicants plus those without any BNPL experience



summary statistics

Are BNPL customers more likely to receive consumer loans, pay lower rates or behave better?

$$Y_{i,t} = \beta \text{InternalBNPLCustomer}_i + \alpha_x \mathbf{X}_i + \alpha_t + \epsilon_{i,t}, \quad (1)$$

- Y : 1 for loan applications accepted by the bank, interest rate or default indicator
- *Internal BNPL Customer* = 1 if customer had at least three BNPL transactions with bank within last 12M
- Control variables \mathbf{X} : amount and maturity of the loan, log income of the applicant, external credit score
- Sample: varying
- Daily time fixed effects α_t

How is access to consumer loans affected by using BNPL?

	(1)	(2)	(3)	(4)	(5)	(6)
	Whole Sample			BNPL Sample		
Internal BNPL	0.415*** (0.002)	0.376*** (0.002)	0.295*** (0.002)	0.177*** (0.003)	0.164*** (0.003)	0.172*** (0.003)
External Credit Score	-0.013*** (0.000)	-0.012*** (0.000)		-0.033*** (0.000)	-0.029*** (0.000)	
Constant	0.402*** (0.001)	-0.765*** (0.009)	0.019** (0.007)	0.697*** (0.002)	-0.738*** (0.035)	-0.136*** (0.032)
Observations	1,066,503	1,066,503	1,066,502	98,203	98,203	98,199
Adj. R^2	0.179	0.225	0.387	0.202	0.240	0.309
Mean dependent	0.310	0.310	0.310	0.667	0.667	0.667
SD dependent	0.462	0.462	0.462	0.471	0.471	0.471
Controls	No	Yes	Yes	No	Yes	Yes
Date FE	Yes	Yes	Yes	Yes	Yes	Yes
External Score FE	No	No	Yes	No	No	Yes

Robust restricted BNPL control

Robustness: tighter sample

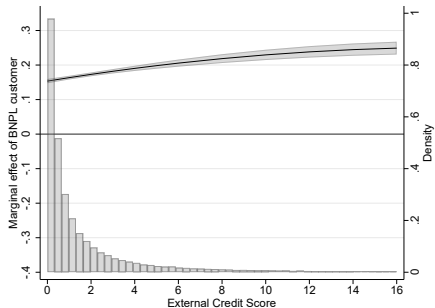
BNPL users have 17 pp. higher approval rates

Do all internal applicants benefit?

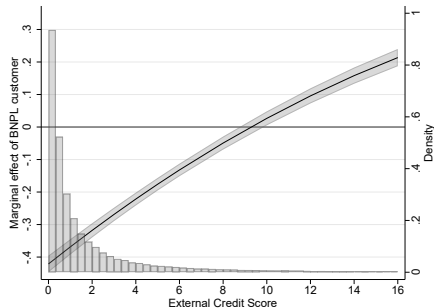
- Potentially more relevant for **young** and **low-income** individuals, who tend to have lower external credit scores.
- Loan acceptance rates depend on applicants' past **BNPL repayment behavior**; those with late BNPL payments are less likely to be approved.



Effect of BNPL data on credit access by score x BNPL repayment

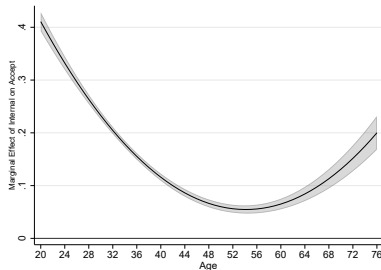


All

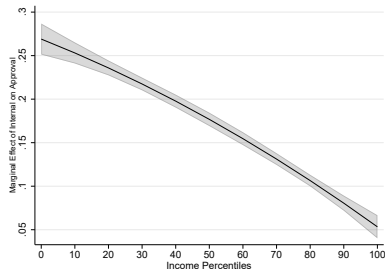


Late 60 days in BNPL

Effect of Internal BNPL status on loan approval by age/income



By Age



By Income

Younger and low-income applicants benefit more from BNPL history

	(1) All	(2) Never Late	(3) At Least 60 Days Late
Internal BNPL	0.172*** (0.003)	0.204*** (0.003)	-0.506*** (0.009)
Constant	-0.201*** (0.030)	-0.199*** (0.031)	-0.250*** (0.036)
Observations	98,199	90,144	69,526
Adj. R^2	0.309	0.327	0.339
Mean dependent	0.667	0.669	0.604
SD dependent	0.471	0.470	0.489
Controls	Yes	Yes	Yes
Date FE	Yes	Yes	Yes
External Score FE	Yes	Yes	Yes

Internal applicants with prior late payments are 51pp less likely to be approved than externals

How does BNPL use affect interest rate the bank offers?

	(1)	(2)	(3)	(4)	(5)	(6)
	Whole Sample			BNPL Control		
Internal BNPL	-1.483*** (0.012)	-1.427*** (0.012)	-1.434*** (0.011)	-1.227*** (0.014)	-1.205*** (0.014)	-1.230*** (0.014)
External Credit Score	0.327*** (0.002)	0.280*** (0.002)		0.451*** (0.006)	0.385*** (0.006)	
Constant	8.844*** (0.004)	16.843*** (0.092)	16.224*** (0.089)	8.211*** (0.009)	17.809*** (0.207)	17.751*** (0.201)
Observations	393,080	393,080	393,080	71,494	71,494	71,494
Adj. R^2	0.262	0.285	0.308	0.286	0.321	0.332
Mean dependent	9.232	9.232	9.232	8.277	8.277	8.277
SD dependent	2.407	2.407	2.407	2.087	2.087	2.087
Controls	No	Yes	Yes	No	Yes	Yes
Date FE	Yes	Yes	Yes	Yes	Yes	Yes
External Score FE	No	No	Yes	No	No	Yes

Internal BNPL applicants receive 1.2pp lower interest rates - a 15% discount relative to mean

Robust restricted BNPL control

Robust CEM

Robustness 3 transactions in 13M

How does credit pricing vary with the asymmetry between internal and external risk assessments?

Table 1: *

Classification of Internal BNPL Customers Based on Credit Scores

	Internal Score < Median	Internal Score > Median
External Score < Median	<i>Low Risk</i>	<i>Revealed High Risk</i>
External Score > Median	<i>Revealed Low Risk</i>	<i>High Risk</i>

Revealed low risk: Bank considers applicant safe, market sees as risky

Revealed high risk: Bank considers applicant risky, market sees as safe

Whether the BNPL bank offers lower or higher rates depends on:

- whether it receives good or bad BNPL information about an applicant
- what other banks "know" about the applicant (ECS by credit bureau)

Revealed low risk (risky-safe) customers pay 232-237 bps less than risky-risky applicants - but 11-31 bps *more* than safe-safe applicants

- If only BNPL bank knows you are safe, there is less competition from other banks

Revealed high risk (safe-risky) applicants pay 140-150 bps more than safe customers, but 74-94 bps less than risky-risky ones

- Other banks will offer lower rate when they think a riskier customer is safe, but some of those riskier customers will still be profitable

⇒ Private BNPL data allow the bank to fine-tune pricing in ways other banks cannot

Does easier access to bank loans lead BNPL users to struggle with repaying debt?

- BNPL users have 10 pp lower probability of late payments at 30 days (mean=38), 6 pp at 120 days (default)(mean=15)
- Compared to *external BNPL users*, they have lower likelihood of late payment at 30 days but similar default rates (mean=7)
- Reduction in late payment rates is not driven by lower interest rates
- Suggests BNPL users learn from doing small BNPL transactions
- Learning effect occurs quickly and/or is somewhat persistent

Results 30 days

Results default

Why are Internal BNPL customers better at repayments?

- Better loan terms or do they actually acquire financial discipline?
- Better screening, or behavioral?
- Compare External BNPL customers to control group without BNPL experience.
 - They receive the same treatment from the bank as external customers **and pay the same interest rate**
 - We control for both external and internal credit scores.
 - The remaining difference should be driven by BNPL experience.
- Does repeated BNPL use reinforce repayment habits and make consumers more financially disciplined when managing bank loans?

Learning by external BNPL applicants

- Households with a traceable track record of good BNPL payment behavior have better access to consumer credit and pay lower interest rates.
- Banks can generate benefits from collecting BNPL histories for large numbers of customers; this improves their screening ability above what shared credit registers permit
- Banks can offer lower rates than competitors that only use public information, but earn a rent on private BNPL information by price discriminating
- Participation in the market for BNPL payments can thus open up for benefits to both the demand and supply side of regular credit markets through new information collection and reputation building
- We disregard, for now, the share of BNPL users with BNPL repayment issues

EXTRA

Trade-offs involved in use of BNPL

- Expands market and financial inclusion
- Potential for price discrimination
- Costs related to BNPL (not addressed here)

Balance consumer protection vs credit market innovation?

- Shielding some BNPL borrowers likely limits credit market access for good borrowers
- Information sharing could improve competition
- But weaken incentives to collect information on marginal borrowers
- people may use BNPL less once they risk being reported to credit registers over a small loan



Internal Credit Scores

	(1)	(2)	(3)	(4)	(5)	(6)
	Whole Sample			BNPL Control		
Internal BNPL	-14.300*** (0.028)	-12.604*** (0.037)	-10.020*** (0.049)	-8.422*** (0.046)	-8.142*** (0.045)	-8.318*** (0.045)
External Credit Score	0.478*** (0.002)	0.478*** (0.001)		0.720*** (0.013)	0.636*** (0.013)	
Constant	15.243*** (0.016)	26.740*** (0.311)	0.353 (0.275)	8.670*** (0.039)	31.796*** (0.754)	18.728*** (0.687)
Observations	1,066,503	1,066,503	1,066,502	98,203	98,203	98,199
Adj. R^2	0.187	0.282	0.473	0.330	0.371	0.457
Mean dependent	18.621	18.621	18.621	7.902	7.902	7.901
SD dependent	16.107	16.107	16.107	10.094	10.094	10.094
Controls	No	Yes	Yes	No	Yes	Yes
Date FE	Yes	Yes	Yes	Yes	Yes	Yes
External Score FE	No	No	Yes	No	No	Yes

Summary statistics

	(1)	(2)	(3)	(4)	(5)	(6)
	Applicant group			Customer group		
	Internal BNPL	External	External BNPL	Internal BNPL	External	External BNPL
Accept	0.78 (0.41)	0.30 (0.46)	0.62 (0.49)	1.00 (0.00)	1.00 (0.00)	1.00 (0.00)
Interest Rate	7.32 (2.61)	6.90 (4.68)	8.01 (3.04)	8.51 (2.04)	9.71 (2.24)	9.05 (1.79)
Late 30 days				0.272 (0.445)	0.395 (0.489)	0.286 (0.452)
Late 60 days				0.123 (0.329)	0.235 (0.424)	0.133 (0.340)
Default				0.068 (0.251)	0.163 (0.369)	0.072 (0.259)
Internal Credit Score	2.25 (3.58)	19.10 (16.08)	10.40 (11.00)	2.81 (2.66)	7.46 (3.58)	6.16 (3.52)
External Credit Score	2.70 (5.77)	8.06 (12.50)	2.44 (5.38)	3.76 (3.44)	3.58 (3.52)	2.99 (3.15)
Application Amount	13,416 (10,737)	15,556 (12,290)	13,789 (10,999)	14,045 (13,761)	11,974 (13,024)	11,940 (13,201)
Maturity	96 (49)	111 (51)	96 (50)	103 (58)	102 (58)	97 (58)
Observations	30,115	1,036,388	68,088	754	7,298	609

[return to Groups](#)

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Summary statistics - full table

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External Credit Score	2.70 (5.77)	8.06 (12.50)	2.44 (5.38)	3.76 (3.44)	3.58 (3.52)	2.99 (3.15)		
Female	0.443 (0.497)	0.408 (0.492)	0.428 (0.495)	0.530 (0.499)	0.426 (0.495)	0.516 (0.500)		
Age	51 (15)	47 (15)	46 (14)	49 (17)	50 (16)	51 (18)		
Married or Co-habiting	0.627 (0.484)	0.510 (0.500)	0.582 (0.493)	0.458 (0.499)	0.393 (0.488)	0.449 (0.498)		
Having Children	0.506 (0.500)	0.356 (0.479)	0.451 (0.498)	0.407 (0.492)	0.280 (0.449)	0.322 (0.468)		
Homeowner	0.632 (0.482)	0.361 (0.480)	0.579 (0.494)	0.397 (0.490)	0.404 (0.491)	0.478 (0.500)		
Employed	0.893 (0.309)	0.879 (0.326)	0.889 (0.315)	0.809 (0.393)	0.670 (0.470)	0.700 (0.459)		
Co-applicant	0.143 (0.350)	0.075 (0.263)	0.123 (0.329)	0.065 (0.247)	0.063 (0.243)	0.077 (0.267)		
Taxable Income	32,712 (16,888)	26,862 (15,974)	31,327 (18,083)	24,429 (14,553)	22,984 (16,570)	22,447 (15,276)		
Application Amount	13,416 (10,737)	15,556 (12,290)	13,789 (10,999)	14,045 (13,761)	11,974 (13,024)	11,940 (13,201)		
Maturity	96 (49)	111 (51)	96 (50)	103 (58)	102 (58)	97 (58)		
Observations	30,115	1,036,388	68,088	754	7,298	609		

Summary statistics loan applications

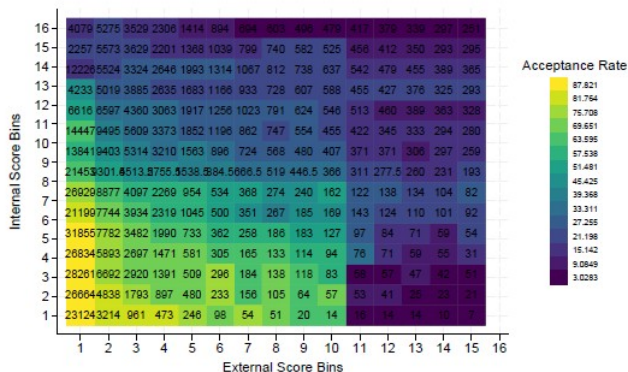


Figure 2 Acceptance Rate by External and Internal Credit Scores

This figure shows bins of external and internal credit scores, the number of applications per bin, as well as the acceptance rate. Applicants have been grouped into 1-point intervals (0-1, 1-2, 2-3, etc.). The brighter a box is, the higher the acceptance rate. The sample includes only first time applicants for an unsecured bank loan who apply through an online broker.

Internal Credit Scores

	(1)	(2)	(3)	(4)	(5)	(6)
	Whole Sample			BNPL Control		
Internal BNPL	-14.300*** (0.028)	-12.604*** (0.037)	-10.020*** (0.049)	-8.422*** (0.046)	-8.142*** (0.045)	-8.318*** (0.045)
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Mean dependent	18.621	18.621	18.621	7.902	7.902	7.901
SD dependent	16.107	16.107	16.107	10.094	10.094	10.094
Controls	No	Yes	Yes	No	Yes	Yes
Date FE	Yes	Yes	Yes	Yes	Yes	Yes
External Score FE	No	No	Yes	No	No	Yes

Approvals for Applicants with 3 Transactions < 13M From Loan Application

	(1)	(2)	(3)	(4)
Internal BNPL	0.275*** (0.022)	0.252*** (0.021)	0.236*** (0.021)	0.222*** (0.021)
External Credit Score	0.031*** (0.003)	0.026*** (0.003)		
Female				-0.013 (0.021)
Age				0.004*** (0.001)
Constant	-2.427*** (0.251)	-3.602*** (0.294)	-0.573** (0.261)	-0.499* (0.264)
Observations	2,239	2,239	2,226	2,226
Adj. R^2	0.242	0.280	0.333	0.342
Mean dependent	0.698	0.698	0.702	0.702
SD dependent	0.459	0.459	0.457	0.457
Controls	No	Yes	Yes	Yes
Date FE	Yes	Yes	Yes	Yes
External Score FE	No	No	Yes	Yes

Interest rate bank offers compared to market rate

	(1) Sample: ECS > median	(2) Sample: ECS > median	(3) Sample: ECS < median	(4) Sample: ECS < median
Revealed Low Risk	-2.367*** (0.031)	-2.316*** (0.031)		
Revealed High Risk			1.398*** (0.023)	1.495*** (0.023)
External Credit Score	0.232*** (0.008)		1.295*** (0.054)	
Constant	13.057*** (0.352)	13.596*** (0.346)	12.292*** (0.311)	13.540*** (0.319)
Observations	13,115	13,115	13,111	13,111
Adj. R2	0.412	0.417	0.517	0.491
Mean dependent	8.629	8.629	6.595	6.595
SD dependent	2.245	2.245	1.168	1.168
Controls	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes
External Score FE	No	Yes	No	Yes

Interest rate bank offers compared to customer's internal risk score

	(1) Sample: ICS < median	(2) Sample: ICS < median	(3) Sample: ICS > median	(4) Sample: ICS > median
Revealed Low Risk	0.111*** (0.009)	0.313*** (0.012)		
Revealed High Risk			-0.936*** (0.030)	-0.751*** (0.029)
Internal Credit Score	1.832*** (0.022)		0.696*** (0.014)	
Constant	8.257*** (0.129)	10.563*** (0.186)	8.717*** (0.328)	10.298*** (0.298)
Observations	13,062	13,062	13,155	13,154
Adj. R2	0.692	0.460	0.457	0.539
Mean dependent	6.274	6.274	8.941	8.941
SD dependent	0.719	0.719	2.097	2.096
Controls	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes
Internal Score FE	No	Yes	No	Yes

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Results: Payment delays 30 days

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Whole Sample				BNPL Control			
Internal BNPL	-0.104*** (0.0174)	-0.118*** (0.0175)	-0.105*** (0.0176)	-0.105*** (0.0177)	-0.056** (0.0259)	-0.067** (0.0263)	-0.061** (0.0267)	-0.055** (0.0269)
External Credit Score	0.013*** (0.0016)	0.011*** (0.0018)	0.009*** (0.0018)		0.016*** (0.0039)	0.012*** (0.0043)	0.009** (0.0045)	
Interest Rate			0.016*** (0.0028)	0.017*** (0.0028)			0.015* (0.0078)	0.016** (0.0079)
Constant	0.347*** (0.0078)	0.224** (0.0964)	-0.042 (0.1057)	-0.006 (0.1055)	0.253*** (0.0214)	0.268 (0.2138)	0.022 (0.2487)	0.043 (0.2521)
Observations	8,052	7,841	7,841	7,841	1,363	1,342	1,342	1,342
Adj. R ²	0.074	0.107	0.111	0.111	0.056	0.080	0.082	0.083
Mean dependent	0.384	0.383	0.383	0.383	0.278	0.276	0.276	0.276
SD dependent	0.486	0.486	0.486	0.486	0.448	0.447	0.447	0.447
Controls	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Year-Month FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
External Score FE	No	No	No	Yes	No	No	No	Yes

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Results: Payment delays 120 days (Default)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Whole Sample				BNPL Control			
Internal BNPL	-0.080*** (0.0104)	-0.085*** (0.0104)	-0.067*** (0.0105)	-0.062*** (0.0105)	-0.018 (0.0152)	-0.029* (0.0149)	-0.022 (0.0149)	-0.019 (0.0145)
External Credit Score	0.008*** (0.0014)	0.007*** (0.0014)	0.004*** (0.0015)		0.005** (0.0025)	0.004 (0.0028)	0.001 (0.0029)	
Interest Rate			0.023*** (0.0023)	0.024*** (0.0023)			0.016*** (0.0050)	0.017*** (0.0048)
Constant	0.134*** (0.0061)	0.036 (0.0695)	-0.342*** (0.0786)	-0.311*** (0.0786)	0.062*** (0.0127)	0.023 (0.1158)	-0.248* (0.1444)	-0.250* (0.1411)
Observations	8,052	7,841	7,841	7,841	1,363	1,342	1,342	1,342
Adj. R^2	0.058	0.081	0.096	0.100	0.026	0.038	0.048	0.069
Mean dependent	0.154	0.154	0.154	0.154	0.070	0.068	0.068	0.068
SD dependent	0.361	0.361	0.361	0.361	0.255	0.252	0.252	0.252
Controls	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Year-Month FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
External Score FE	No	No	No	Yes	No	No	No	Yes

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Restricted BNPL Control - BNPL within last year

	(1) Loan Accepted	(2) Interest Rate	(3) Late 30 days	(4) Default
BNPL Customer	0.220*** (0.004)	-1.370*** (0.023)	-0.002 (0.043)	-0.011 (0.022)
Interest Rate			0.015 (0.009)	0.015*** (0.005)
Constant	-0.058 (0.043)	18.219*** (0.292)	0.287 (0.320)	-0.242 (0.180)
Observations	45,961	35,709	873	873
Adj. R^2	0.322	0.374	0.070	0.055
Mean dependent	0.696	7.948	0.270	0.065
SD dependent	0.460	2.154	0.444	0.247
Controls	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes
UC Score FE	Yes	Yes	Yes	Yes

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Same results with CEM matched sample

	(1) Interest rate	(2) Late 30 days	(3) Late 60 days	(4) Default
BNPL Customer	-1.348*** (0.012)	-0.091*** (0.021)	-0.076*** (0.016)	-0.067*** (0.013)
External Credit Score	0.250*** (0.004)	0.009** (0.003)	0.009*** (0.003)	0.007** (0.003)
Interest Rate		0.016*** (0.005)	0.025*** (0.004)	0.019*** (0.004)
Constant	16.309*** (0.133)	-0.257 (0.202)	-0.701*** (0.168)	-0.370** (0.153)
Observations	390,701	5,911	5,911	5,911
Adj. R^2	0.273	0.113	0.122	0.111
Mean dependent	9.223	0.373	0.220	0.154
SD dependent	2.401	0.484	0.414	0.361
Controls	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes

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Robustness Interest Rate: Applicants with 3 Transactions Within Last 13 Months From Loan Application

	(1)	(2)	(3)	(4)
Internal BNPL	-1.532*** (0.101)	-1.494*** (0.099)	-1.519*** (0.097)	-1.439*** (0.093)
External Credit Score	-0.495*** (0.040)	-0.440*** (0.040)		
Female				0.053 (0.100)
Age				-0.029*** (0.005)
Constant	57.612*** (3.922)	61.215*** (3.788)	17.112*** (1.329)	16.413*** (1.308)
Observations	1,480	1,480	1,478	1,478
Adj. R^2	0.402	0.443	0.453	0.478
Mean dependent	7.831	7.831	7.830	7.830
SD dependent	1.883	1.883	1.883	1.883
Controls	No	Yes	Yes	Yes
Date FE	Yes	Yes	Yes	Yes
External Score FE	No	No	Yes	Yes

Impact of Having BNPL Experience on Offered Interest Rates

	(1)	(2)	(3)
BNPL External	-0.019*** (0.006)	-0.010* (0.006)	0.003 (0.006)
External Credit Score	0.019*** (0.001)	0.018*** (0.001)	
Internal Credit Score	0.522*** (0.001)	0.520*** (0.001)	0.515*** (0.001)
Constant	6.026*** (0.004)	6.634*** (0.059)	6.472*** (0.058)
Observations	366,757	366,757	366,757
Adj. R^2	0.734	0.735	0.736
Mean dependent	9.348	9.348	9.348
SD dependent	2.389	2.389	2.389
Controls	No	Yes	Yes
Time FE	Yes	Yes	Yes
External Score FE	No	No	Yes

Learning: External BNPL applicants also have lower default rates

	(1)	(2)	(3)	(4)
External BNPL	-0.051*** (0.0114)	-0.038*** (0.0114)	-0.034*** (0.0113)	-0.036*** (0.0113)
External Credit Score	0.004*** (0.0015)	0.003** (0.0016)	0.004** (0.0016)	
Internal Credit Score	0.012*** (0.0014)	0.013*** (0.0015)	0.003 (0.0022)	0.003 (0.0022)
Interest Rate			0.020*** (0.0037)	0.021*** (0.0037)
Constant	0.062*** (0.0108)	-0.145* (0.0771)	-0.319*** (0.0845)	-0.284*** (0.0842)
Observations	7,298	7,102	7,102	7,102
Adj. R^2	0.066	0.091	0.096	0.100
Mean dependent	0.163	0.164	0.164	1.000
SD dependent	0.369	0.370	0.370	0.000
Time FE	Yes	Yes	Yes	Yes
External Score FE	No	No	No	Yes

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