Compare Before You Choose: Just-in-Time Messages for Credit Shopping

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Acknowledgements and Disclaimers

Acknowledgements: This project is part of the CMF research initiative, that seeks to make CMF data available for external researchers working together with CMF staff.

Disclaimer: The results presented do not represent the official view of the CMF, the Central Bank of Chile or the Inter-American Development Bank.

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Motivation

- 51% of Chile's households have some form of formal debt (39% hold consumer debt) (EFH 2025).
- In basic financial literacy (time value of money, compound interest and risk), Chile ranks behind the OECD and the region (CAF/CMF 2023).
- The gaps are greatest in lower education and older groups.
- Significant dispersion in consumer loan interest rates: min 17% and max 32% (SERNAC, Dec. 2025, not risk adjusted).
- Large dispersion implies gains from comparison — but do borrowers act on available information? **We test whether a just-in-time nudge at the point of search changes the contracted loan terms**.

Summary: Setup

- When consumers access the web version of Chilean credit registry, some are randomly shown information explaining the value of comparing credit conditions and how to do it.
- Three groups: a **landing page** (LAN), a **short video** (VID) conveying identical content, and a pure control — allowing us to separate the role of information from the role of attention.
- Effects are measured using CMF proprietary loan-level data on the terms of the loan actually contracted.
- Causality comes from randomized assignment (RCT) between registry users who access the information before taking out a loan.

Summary: Findings

- **The landing page reduces contracted spreads by 1.5 to 2 percentage points** — roughly one-tenth of the average rate paid — but only for loans originated within seven working days of PCR access.
- The video, conveying identical content, has no detectable effect on rates: only a small share of assigned users watch enough to receive the message.
- Rate reductions do not coincide with lender switching, changes in loan size, or changes in maturity — pointing to within-lender adjustment (renegotiation or product selection) as the channel for lower rates.
- Effects concentrate among prime-age borrowers and among those with intermediate levels of prior debt and arrears.

Summary: Findings Cont.

- **Taken together, the results point to attention — not information availability** — as the binding constraint on disclosure efficacy at the point of credit shopping.
- These results have implications for policy and design of interventions:
  - **Channel**: public credit registries and credit bureau platforms are an effective, scalable, regulator-controlled tool.
  - **Timing matters**: salience at the moment of shopping increases consumers' ability to compare offers and pressures lenders to compete — even without lender switching.
  - **Design must be concise and targeted**: consumers seeking specific information won't invest time "learning," so longer formats fail, not on content but on attention.

Literature

- **Limited Search and Rate Dispersion**: low search efforts despite high potential gains from rate dispersion. Reason for low search include physical costs, high rejection rates, biased beliefs, or cognitive effort.
- **Product complexity and cognitive constraints**: financial products are complex, making it costly for households to compare and identify the most advantageous contract. This is in turn related to studies of standardized disclosure requirements.
- **Consumer financial education**: financial education impacts financial outcomes, identified via natural experiments or randomized trials. The RCTs include school, and non school settings, including the use of technology for delivery.
- **In Chile**: several RCTs relating to savings decisions, and recent studies by Montoya et al (2018) on the effects on rates APRs requirements and Truffa et al (2025) on disclosure and repayment.

Contributions to the Literature

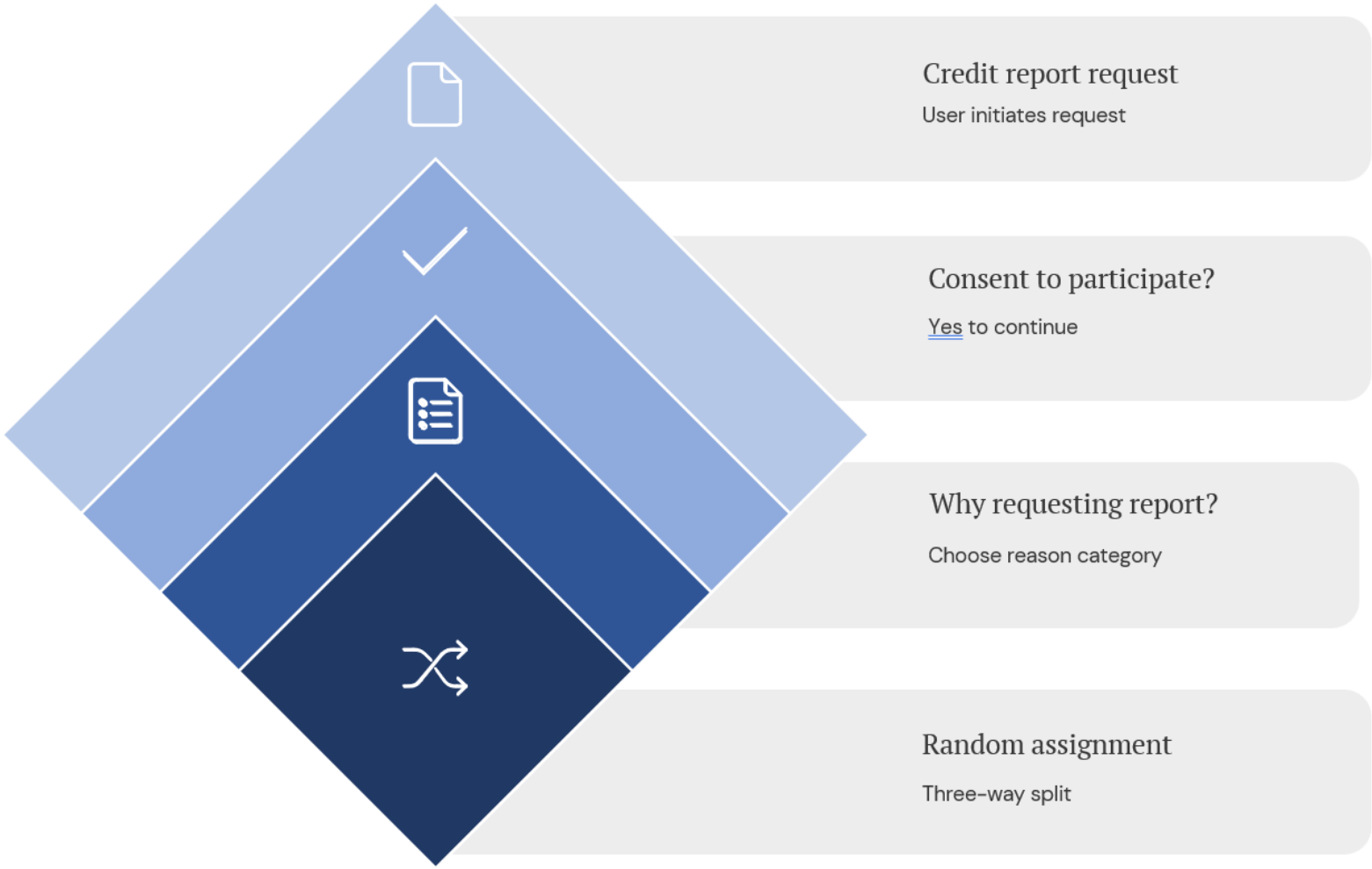
- **Novel experimental setting**: First RCT embedding just-in-time disclosure in a public credit registry. The use of the PCR allows us to study impact using administrative data on prices and contract terms.
- **Engagement is a binding constraint**: Holding content constant, lower cognitive-cost delivery (a brief landing page) reduces spreads, whereas a higher-cost format (video) does not—largely due to low consumption; results align with rational inattention: information only matters if actually used at the decision point.
- **Within-lender effects**: Rate reductions occur without increased switching, changes in loan size, or maturity. Treated borrowers stay with the same lender but obtain better terms, consistent with within-lender adjustments (e.g., renegotiation or product choice) driven by a credible threat of search rather than actual switching.

Experimental Design: The CMF PCR

- Online access to the Public Credit Registry (PCR) was made easier during the pandemic.
- Individuals can view and download a certificate of their current debt with banks and credit card companies after authenticating with their tax ID (RUT) and *clave única*, a government-issued digital credential.
- The landing page and video were professionally designed and pre-tested with a UDD panel for clarity before deployment on the CMF site.
- Communication focused on why and how to compare, leveraging Chile's mandatory APR (CAE) disclosure regime.
- Loan period: 12/11/2024 – 12/03/2026

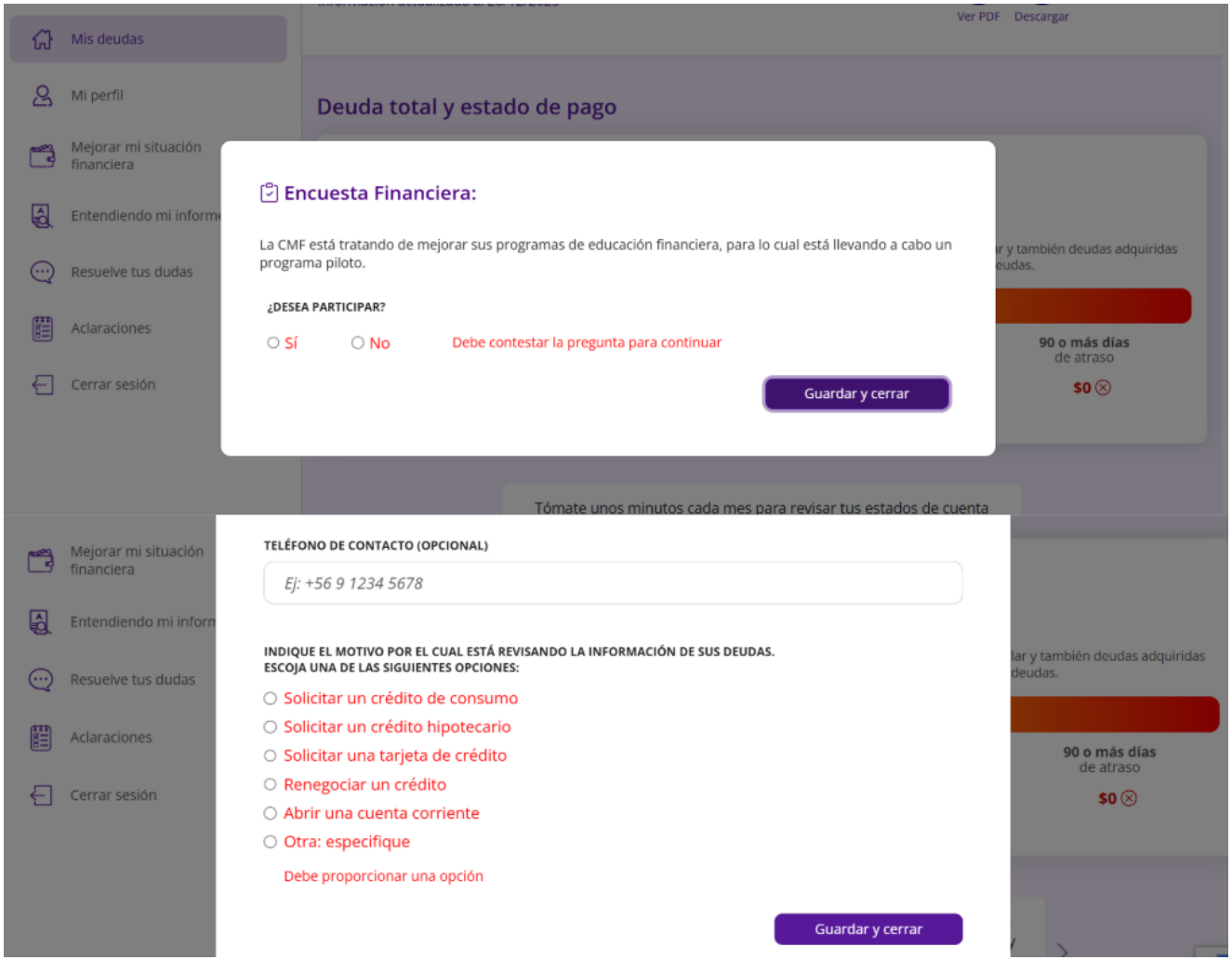
Experimental Design: Participation Steps

Participants who request their credit report from the CMF PCR are invited to join the study. Upon consent, they indicate their reason for requesting the report. Those seeking consumer loans are randomly assigned to one of three conditions.



Experiment Implementation

Participants who request their credit report from the CMF PCR are invited to join the study. Upon consent, they indicate their reason for requesting the report.

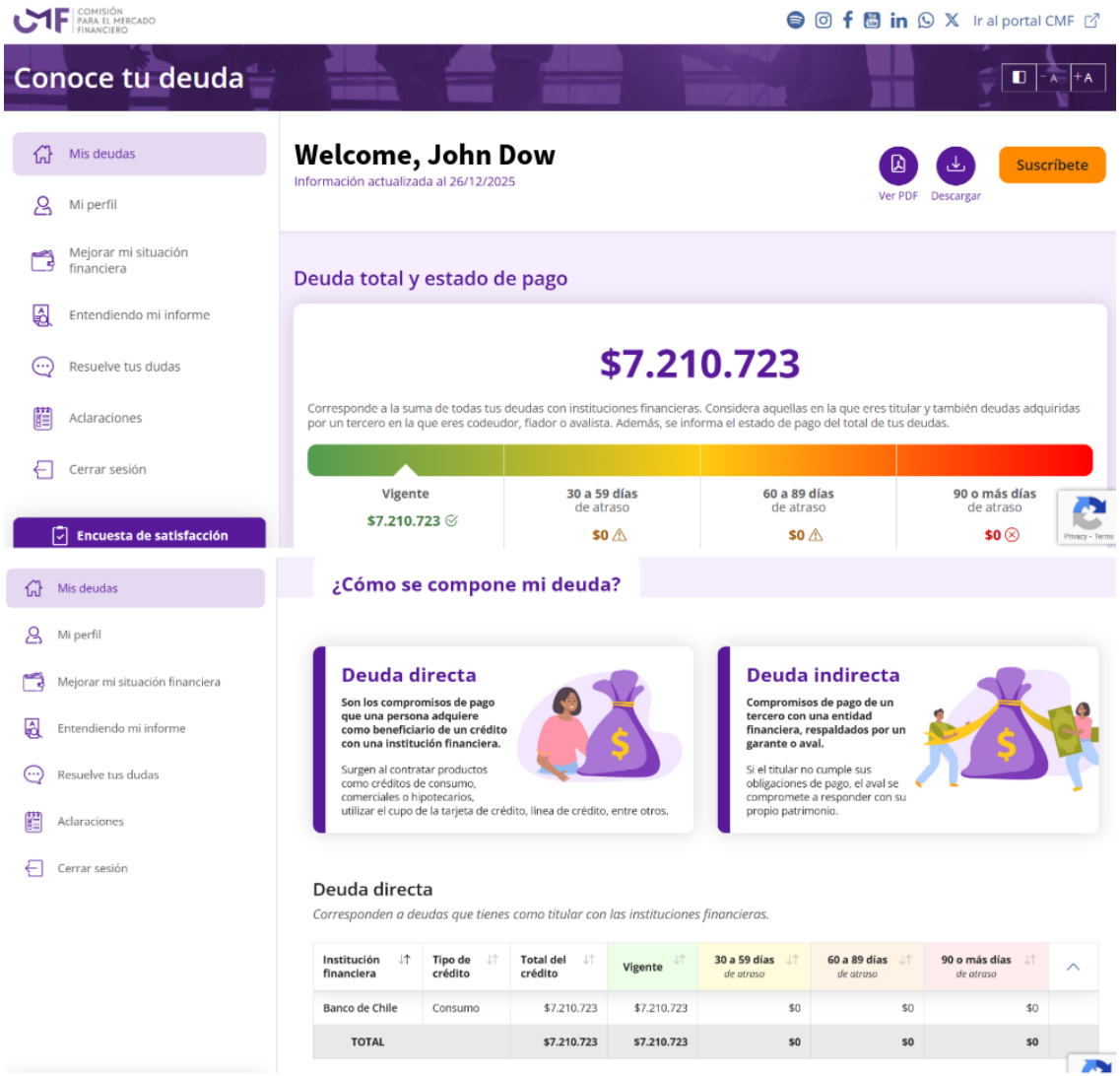


Experiment Implementation: Landing Page

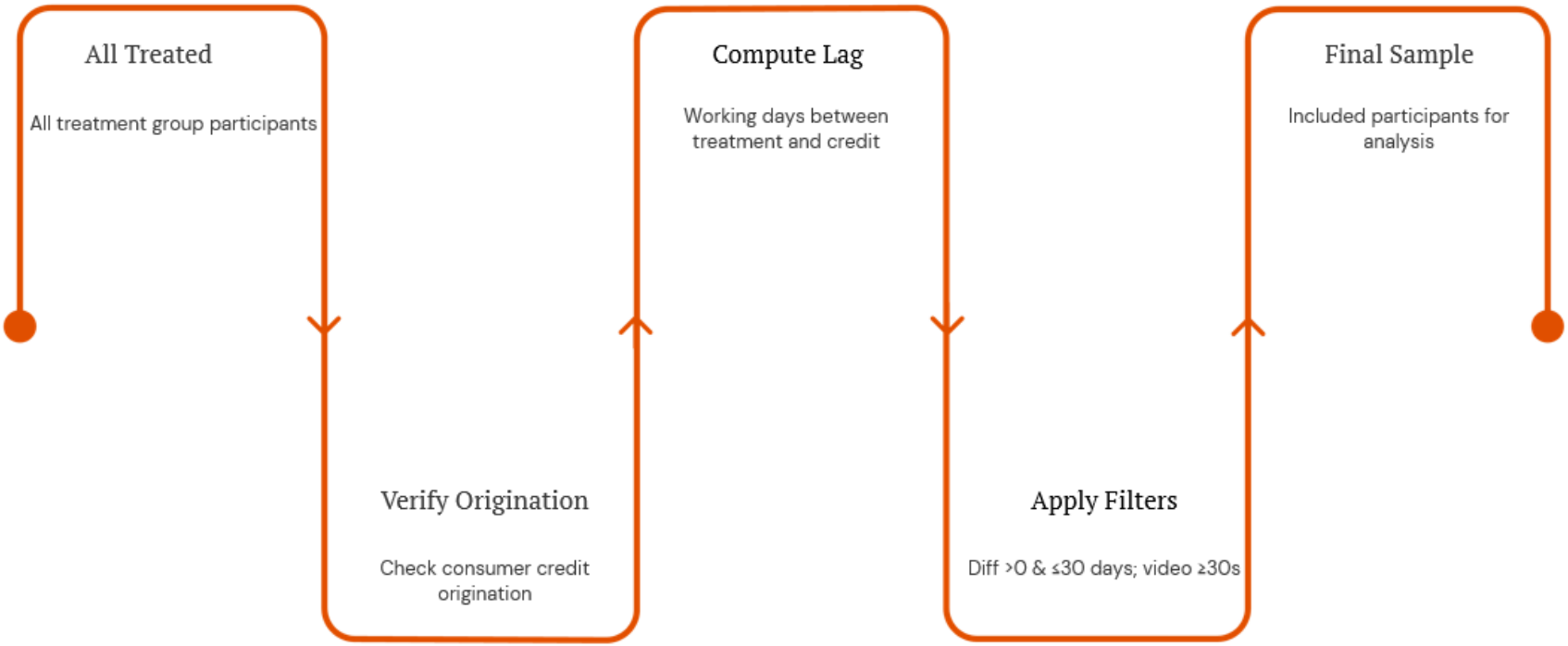
Experiment Implementation: Video

Debt report

Once participants are treated, they continue to get their debt report



Analysis Framework and Inclusion Criteria



Outcome Verification
Track consumer loan origination for all treatment group participants

Inclusion Window
Restrict analysis to loans originated 1–30 working days post-treatment

Temporal Validation
Calculate working days between treatment and loan origination

Exposure Threshold
Require minimum 27-second video exposure to ensure adequate message reception and valid treatment delivery

Sample Size and Description by Treatment Group

- Total Loans: **3,816,086**
- Total PCR requests: **3,310,747**
- Participants: **203,943**
- Declare to being searching for a loan: **29,773**

	Landing	Video	Control
Treated	37,343	37,522	37,530
With loan and Diff Working Days >= 0	9,781	10,033	9,959
Individual, controls and Diff Working Days >= 0	5,869	6,179	6,183
Individual, controls and Diff Working Days between [1;30]	**1,249**	**1,380**	**1,281**

Diff Working Days >= 0: individual obtained a consumer loan after treatment.

Descriptive Statistics by Treatment Group

Variable	Group	Mean	Median	SD	N
		Outcomes			
Annual interest rate (%)	LAN	22.92	21.95	9.76	5,869
	VID (total)	23.13	22.42	9.65	6,179
	Control	23.08	22.28	9.67	6,183
Annual spread (pp)	LAN	-0.95	-1.65	8.79	5,869
	VID (total)	-0.77	-1.06	8.88	6,179
	Control	-0.87	-1.18	8.81	6,183
Loan amount	LAN	10,758,760	7,534,927	13,425,257	5,869
	VID (total)	10,669,105	7,614,067	13,504,539	6,179
	Control	10,757,916	7,562,500	13,499,114	6,183
Term (months)	LAN	37.21	37.57	18.48	5,869
	VID (total)	37.02	37.63	18.42	6,179
	Control	36.85	37.60	18.43	6,183
Institution switch (dummy)	LAN	0.25	0.00	0.43	5,645
	VID (total)	0.24	0.00	0.43	5,991
	Control	0.27	0.00	0.44	5,958
Business days post-report	LAN	118.45	105.00	90.66	5,869
	VID (total)	116.30	102.00	89.56	6,179
	Control	120.48	104.00	91.63	6,183

Descriptive Statistics by Treatment Group

Variable	Group	Mean	Median	SD	N
	Controls: PCR				
Total debt	LAN	76,331,376	31,055,854	115,322,137	5,732
	VID (total)	72,998,130	28,673,445	172,557,360	6,073
	Control	72,227,440	31,100,314	110,674,369	6,043
Maximum delinquency (level)	LAN	0.38	0.00	1.18	5,732
	VID (total)	0.38	0.00	1.17	6,073
	Control	0.41	0.00	1.22	6,043
More than one loan type (dummy)	LAN	0.96	1.00	0.19	5,732
	VID (total)	0.97	1.00	0.17	6,073
	Control	0.96	1.00	0.19	6,043
More than one institution (dummy)	LAN	0.94	1.00	0.24	5,732
	VID (total)	0.94	1.00	0.23	6,073
	Control	0.95	1.00	0.21	6,043
Number of institutions	LAN	4.32	4.00	2.08	5,732
	VID (total)	4.33	4.00	2.09	6,073
	Control	4.37	4.00	2.02	6,043
Number of loan records	LAN	7.70	7.00	3.98	5,732
	VID (total)	7.62	7.00	3.88	6,073
	Control	7.73	7.00	3.83	6,043

Descriptive Statistics by Treatment Group

Variable	Group	Mean	Median	SD	N
		Controls: Individual			
Age	LAN	40.55	39.00	9.06	5,869
	VID (total)	40.38	39.00	8.94	6,179
	Control	40.29	39.00	8.94	6,183
Imputed income	LAN	20,105,478	17,040,000	46,667,070	5,869
	VID (total)	19,572,033	17,220,000	13,825,414	6,179
	Control	19,280,816	17,259,504	13,121,830	6,183
Female (share)	LAN	0.40	0.00	0.49	5,869
	VID (total)	0.39	0.00	0.49	6,179
	Control	0.38	0.00	0.48	6,183

Methodology

We study the effect of informational treatments on the interest rate of consumer loans.

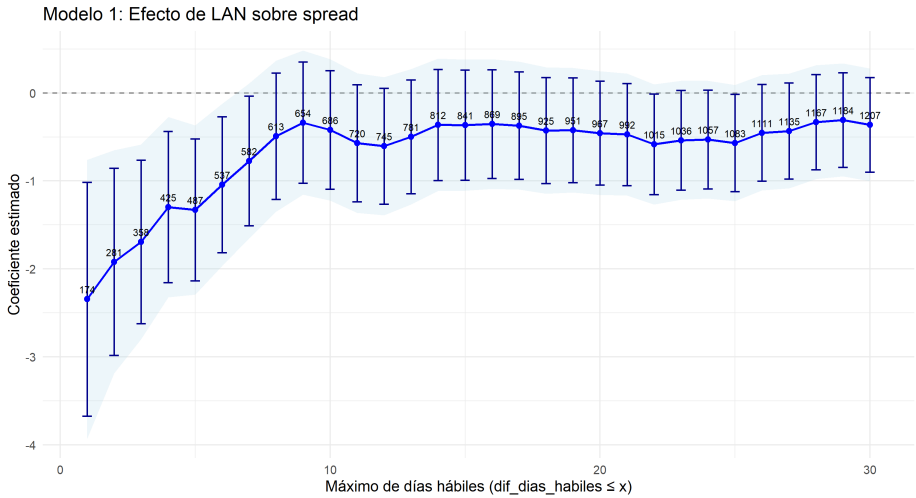
We measure the interest rates as the *annual spread* in periods up to f days after exposure to the interventions. The spread is defined as the difference between the interest rate of each loan and the prevailing market interest rate at origination, measured by the *tasa corriente* for the respective term and loan size.

All data are from CMF databases.

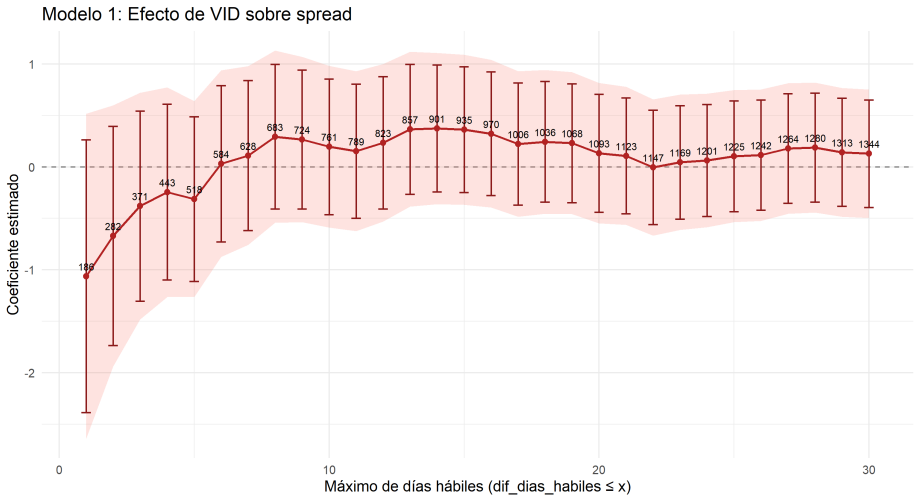
$$y_{i,f} = \beta_1 \cdot \mathbb{1}\{\text{LAN}_i\} + \beta_2 \cdot \mathbb{1}\{\text{VID}_i\} + X_i'\gamma + \varepsilon_{i,f}, \tag{1}$$

Notes: LAN_i are individuals who viewed the landing, *VID_i* indicates individuals who watched the informational video. $\mathbf{X}_i$ includes gender, age, nationality, civil status, income, delinquency status, total outstanding debt, number of credit records, an indicator for holding more than one type of loan, number of financial institutions. additionally we include fixed effects for month of loan origination. Standard errors are computed at the individual level.

Treatment effects on annual spread (window of 30 working days)



(a) Landing page (LAN)



(b) Video (VID)

Notes: Each point corresponds to the estimated coefficient from an OLS regression of *spread_anual* on treatment indicators and controls, using subsamples defined by *dif_dias_habiles* $\leq x$. Error bars show 95% confidence intervals.

Methodology

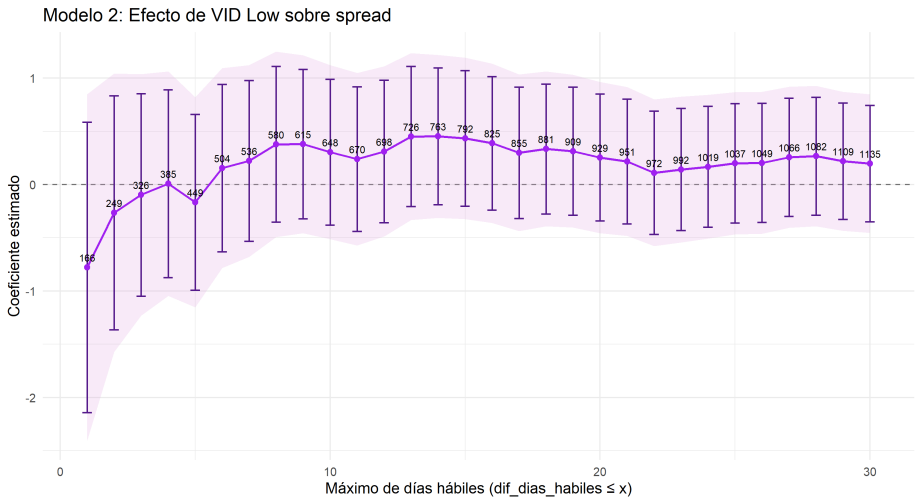
Attention span for the video can be a relevant determinant of impact.

To analyse this effect we generate a dummy variable for those borrowers that watch the video for at least 30 seconds.

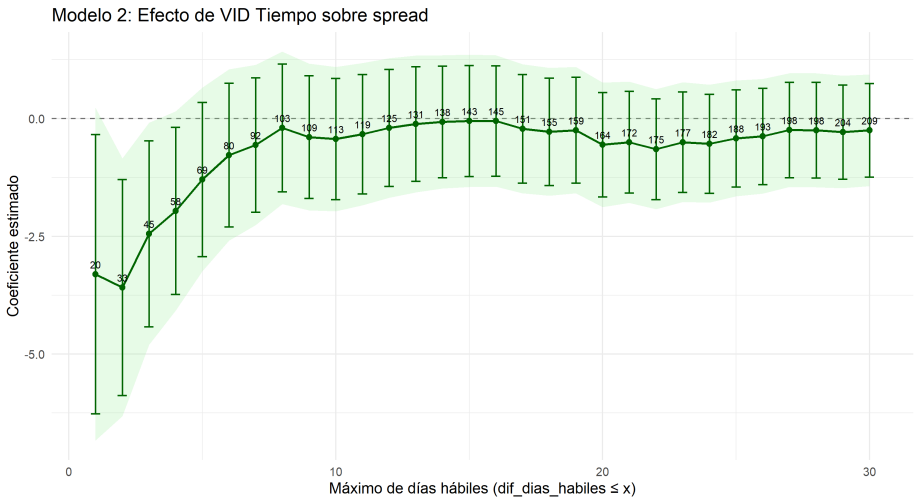
$$y_{i,f} = \beta_1 \cdot \mathbb{1}\{\text{LAN}_i\} + \beta_2 \cdot \mathbb{1}\{\text{VID\_}Short_i\} + \beta_3 \cdot \mathbb{1}\{\text{VID\_}Long_i\} + X_i'\gamma + \varepsilon_{i,f}, \quad (2)$$

Notes: *VID_Long*, indicates individuals who watched the informational video for at least 27 seconds. *VID_Short*, indicates individuals who watched the informational video for less than 27 seconds. $\mathbf{X}_i$ includes gender, age, nationality, civil status, income, delinquency status, total outstanding debt, number of loan records, an indicator for holding more than one type of loan, number of financial institutions. Additionally we include fixed effects for month of loan origination. Standard errors are computed at the individual level.

Treatment effects on annual spread related to attention span (Long vs Short



(a) Video Short



(b) Video Long

Notes: Each point corresponds to the estimated coefficient from an OLS regression of *spread_anual* on treatment indicators and controls, using subsamples defined by *dif_dias_habiles* $\leq x$. The specification includes VID_Short and VID_Long. Error bars show 95% confidence intervals.

Other Loan Outcomes: size and tenor

Neither intervention affects loan size or tenor

	LAN (β_1)		VID (β_2)	
Outcome / Specification	$\leq$ 5 days	$\leq$ 30 days	$\leq$ 5 days	$\leq$ 30 days
Loan size (log)	-0.0024	-0.0045	-0.0580	-0.0592
	(0.0660)	(0.0450)	(0.0649)	(0.0440)
Loan size (levels, $)	-397,147	-34,092	-871,904	-454,818
	(811,835)	(480,217)	(778,325)	(475,979)
Loan size / income	0.0118	0.0071	-0.0369	-0.0400
	(0.0500)	(0.0327)	(0.0405)	(0.0293)
Loan size / prior debt	-0.1092	0.0340	-0.0650	-0.0404
	(0.1397)	(0.0910)	(0.1214)	(0.0866)
Tenor (months)	0.4589	0.5751	-1.2561	-0.5974
	(1.1297)	(0.7538)	(1.1372)	(0.7399)
Observations (5d / 30d)	487 / 1,207	—	518 / 1,344	—
Month FE	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes
Clustered SE	Borrower ID	Borrower ID	Borrower ID	Borrower ID

Heterogeneity

We explore whether results differ across groups. To do so we include interaction terms of LAN with key characteristics of the individuals in Zi (gender, income quintile and age cohort). Note that these variables are included in the controls Xi so additional main effects are not included.

$$Spread_{i,f} = \alpha + \beta_1 LAN_i + \beta_2 (LAN_i \times Z_i) + X_i' \gamma + \delta_t + \varepsilon_{i,f}, \tag{3}$$

- We find limited heterogeneity in the estimated effects of LAN across groups.
- The reduction in borrowing costs is similar across genders and across income levels for men.
- We do however, find a significantly larger effect in middle age borrowers (31 to 45 years).

Heterogeneity

We find differential effects for prime age groups

Subgroup	β_1 LAN
Panel A: Gender	
Main Effect	-1.446**
	(0.654)
LAN × Female	-1.126
	(0.832)
Panel B: Income Quintile	
Main Effect	-2.145*
	(1.217)
Q2	-1.477
	(0.950)
Q4	-0.687
	(0.808)
Q5 / Highest	-0.790
	(1.129)
Panel C: Age Group	
Main Effect	0.684
	(2.434)
31–45	-1.543**
	(0.675)
46–60	-1.690*
	(0.987)
60+	-0.288

Lender Switching

We explore mechanisms through which the landing page may reduce contracted rates. If treated individuals increase their search effort after exposure, the resulting price reduction could operate through either of two channels:

- switching to a new credit provider.
- improved bargaining outcomes with an existing lender.

Lender Switching

We do not find effects of LAN or VID on switching

	5 Days		30 Days	
	LPM	Logit AME	LPM	Logit AME
LAN	0.0402	0.0439	0.0028	0.0036
	(0.0309)	(0.0310)	(0.0203)	(0.0203)
VID (total)	0.0160	0.0212	-0.0013	-0.0012
	(0.0312)	(0.0315)	(0.0206)	(0.0206)
Observations	1,502	1,502	3,800	3,800
Specification	LPM	Logit AME	LPM	Logit AME
Month FE	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes
Clustered SE	Borrower ID	Borrower ID	Borrower ID	Borrower ID
R^2 / Pseudo-R^2	0.125	0.129	0.104	0.096
Dep. var mean (Control, 5d)	0.276	0.276	0.276	0.276

Conclusions and next steps

- **The landing page cuts contracted spreads by 1.5–2 pp** for loans within five working days of PCR access — about one-tenth of the average rate paid. Effects decay to zero beyond the first week.
- **The video has no effect**, despite identical content: attention, not information, is the binding constraint.
- **The channel is within-lender adjustment** — no switching, no change in size or maturity. Competitive pressure operates through the credible threat of search.
- **Policy implication**: well-timed nudges in public credit registries are an effective, near-zero-cost tool — if designed for limited attention.
- **PCRs are interesting platforms**: reach consumers at the decision moment, are regulator-run (non-commercial), and are highly scalable.
- **Next steps**: test effects on payment behavior post-origination.