

Some don't like it hot: bank customers and NGO campaigns against brown banks.

CLÉMENT MAZET-SONILHAC¹ JEAN-STÉPHANE MÉSONNIER^{2,3}

¹Bocconi ²Banque de France
³Sciences Po

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Opinions expressed are those of the authors and do not necessarily reflect the views of the Banque de France or the Eurosystem

This paper

- Individual investors increasingly care for the climate, e.g. when choosing a pension plan (Bauer, Ruof, Smeets, 2021, Anderson and Robinson, 2021)
- Do households also value the ES performance of their deposit bank ?
If yes, do they switch to competitors ?
- Plausible main source of information on this for depositors :
environmental activists (NGOs)

Motivation : NGOs naming and shaming “brown” banks


OXFAM
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Le pouvoir citoyen
contre la pauvreté

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ACTUALITÉ, AGIR, CLIMAT ET ÉNERGIE, SUEZ HOMINAGE

L'AFFAIRE BNP : STOP AU DÉVELOPPEMENT DES ÉNERGIES FOSSILES !

16 OCTOBRE 2020 - 10 MINUTES À LIRE

Depuis de nombreuses années, Oxfam France alerte quand à la lourde responsabilité que porte le secteur des finances dans la crise climatique actuelle. En finançant des projets d'exploitation des énergies fossiles, les banques participent activement aux dérèglements climatiques. C'est pourquoi, nous lançons une action en justice inédite, pour mettre fin à l'impunité des banques et c'est à BNP que nous nous attaquons !


 Les Amis
de la Terre
France

Nous connaître

Nos campagnes

Agir

CLIMAT-ÉNERGIE

SOCIÉTÉ GÉNÉRALE, PLEIN GAZ SUR LES FOSSILES



Société Générale soutient massivement le secteur du gaz de schiste outre-Atlantique, l'une des plus graves menaces pour le climat mondial et pour les populations locales. La banque joue notamment un rôle clé dans le développement d'un mégaprojet de terminal d'exportation de gaz de schiste prévus sur la côte du Texas : Rio Grande LNG.


 Les Amis
de la Terre
France

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FAIRE UN DON

ÉNERGIE

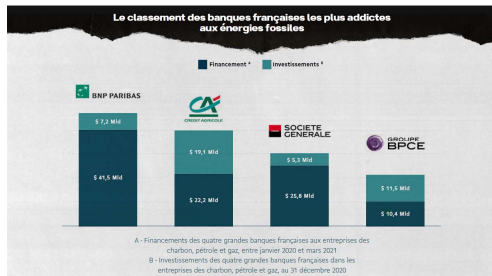
COMMERCE DE PÊCHE

8 JUILLIET 2020

Mozambique : Société Générale et Crédit Agricole soutiennent le projet gazier très controversé de Total



Société Générale et Crédit Agricole choisissent d'ignorer les risques associés aux méga-projets gaziers au Mozambique. Les deux banques aident Total à mener à bien le financement de son projet Mozambique LNG, quitte à semer le chaos dans une



Motivation (2) : calls for switching banks?

11-04-2017

Réseau Action Climat

L'ASSOCIATION → L'URGENCE CLIMATIQUE → AGIR POUR LE CLIMAT → NOS PUBLICATIONS → FAIRE UN DON

ALIMENTATION BÂTIMENT EMPLOI ENERGIE EUROPE FISCALITE INDUSTRIE INTERNATIONAL LOCAL TRANSPORTE

Le change de banque

Loin d'être neutre en carbone, notre compte en banque peut être une source de pollution. Certaines banques utilisent l'argent que nous leur confions pour financer et investir dans des projets fortement émetteurs de CO₂, aggravant ainsi la crise climatique.



Source: Réseau Action Climat (NGO)

Menu Ouest France

Rechercher actualité, pays, match...

En ce moment Coupe du monde au Qatar Guerre en Ukraine Manifestations en Chine Réchauffement climatique

Accueil > Environnement

Et si le premier geste à faire pour la planète, c'était de changer de banque ?

Quand on pense écogestes, on pense à son alimentation, à son mode de transport, pas forcément à son portefeuille. Pourtant, les banques sont les plus gros pollueurs en France. Et notre épargne peut contribuer, sans que nous le sachions, à détruire l'environnement. Explications.

Ouest-France
Philippe MATHÉ
Publié le 26/10/2022 à 08h01

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Crédit Agricole, Société Générale et BNP Paribas sont les trois entreprises du Cac40 à avoir la plus grande empreinte carbone. | ARCHIVES MARG OLLIVIER/OUEST-FRANCE

Source: Ouest France (Sep. 2022)

This paper

- We leverage new data on NGO campaigns targeting French banks over 2010-2020 to construct new measures of banks' reputation for climate-damaging lending (i.e., being *brown*, or *fossil* banks).
- Using granular bank and loan data, we look at impact of banks' brown reputation on :
 - Households deposits and loans with banks in French counties (*département*),
 - Interest rates on new housing loans (geolocalized at ZIP-code of issuing bank branch).
- **Identification** : NGO campaigns assumed to be exogenous to local retail banking markets in France.
 - Campaigns mostly target international CIB business.
 - Concentrated banking market : all major groups under continuous public scrutiny.

Main findings

- 1 Banks perceived as browner face lower supply of sight deposits
 - controlling for local economic conditions and banking covariates
 - Economically significant : bank's brown reputation $\uparrow + 1 \text{ SD} \Rightarrow$ deposits $\downarrow -3.4\%$
- 2 Using Macron law (Feb. 2017), evidence that bank switching costs matter.
 - Average reaction (exits) mostly ex post
 - Outflows throughout in counties with more educated/richer/greener households and more competitive bank markets
- 3 Lower housing loan demand for browner banks :
 - Reduced outstanding amounts at county-bank level
 - Lower rates on new housing loans : some WTP of French depositors for avoiding brown banks.

Related literature

- **Impact of bad ESG news** : on firms' stock prices : Krueger (2015), earning forecasts : Derrien, Krueger, Landier and Yao (2021), mutual fund flows : Hartzmark and Sussman (JoF, 2019).
- we build measures of bank ES reputation based on NGO campaigns and focus on retail depositors.
- **Boycotts and NGO campsains** : e.g., following Rana Plaza scandal : Koenig and Poncet (2019). ESG concerns and bank depositors : anti-Dakota-pipeline depositors in Homanen (2022), antigun depositors in Jeung (2022). Heat waves and deposits with “climate chaos” banks in US in Ozlem Dursun de Neef and Ongena (2023).
- we consider NGO campaigns over a decade + role of switching costs.
- **Non-pecuniary preferences and WTP for green** : theory : Pastor et al. (2022), Pedersen et al. (2021). Evidence from surveys, field experiments : Riedl and Smets (2017), Giglio et al. (2023), Bauer et al. (2021), Heeb et al. (2022).
- new evidence of WTP for greener banking by retail depositors.

Data

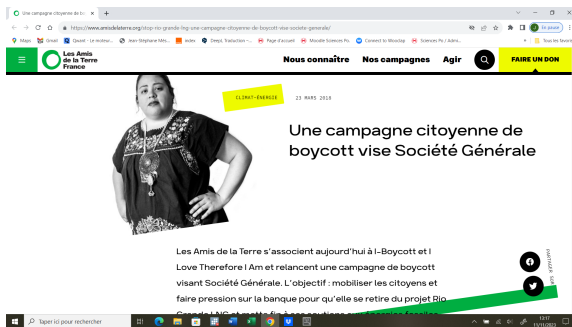
- **Sigwatch** : NGO campaigns targeting corporations, 2010-2020, shared by P. Keonig (PSE).
- **CEFIT** : aggregate deposits and loans to households by bank-county (*département*), monthly, 2009-2019. Source : Banque de France.
▶ HHI
- **M-Contran** : individual housing loans issued by representative sample of bank branches, quarterly (first month), 2013-2020. Source : Banque de France. ▶ Maps
- **Supervisory data** : SURFI modules (monthly and quart. bank balance sheet and IS), mapping of banks into bank groups (*GEA*). Source : ACPR.
- **Socio-economic data** : fiscal income per household (2010), education (2008). Zipcode level. Source : INSEE. ▶ Maps
- **Green vote** : results of 2009 and 2014 elections of MEUP. Share of votes for all ecological parties (EELV, GE, Cap 21...). Source : Ministry of Interior. ▶ Maps

NGO campaigns : Sigwatch's database

- Sigwatch is a European consultancy tracking, monitoring and analyzing NGO campaigns on ESG issues worldwide since 2010 (cf. Koenig, 2017)
- Advise corporations about how to best engage with activist groups.
- Sigwatch provides information about **NGO campaigns** : series of related communications/actions, aimed to achieve a specific objective of the NGO or coalition of NGOs.
- **Campaign alert** : individual observation at Campaign action ID × Targeted company level.
 - As many alerts by action as there are named companies.
- Sigwatch qualitative assessment : sentiment (-2 to +2), prominence (1 to 4), NGO outreach (1 to 2.75).
- Information on campaign content (main issues, web link...)

Sigwatch data : Example of campaign

- On 23 March 2018 *Les Amis de la Terre* and *i-boycott.org* launched campaign to denounce the funding by Société Générale (SG) of two contended fossil energy projects : the Rio Grande LNG terminal and the Rio Bravo gas pipeline in Texas.
- Registered by Sigwatch : 28 March 2018.
- Sigwatch's assessment : very negative sentiment (-2), high prominence (4).



Data cleaning : NGO campaigns

Campaign selection :

- Campaigns targeting French bank brands
- Campaigns related to environmental and social (ES) issues.
- Campaigns run by at least one French NGO or targeting the French public.

Identification of targeted banks = large bank “brands”

- 9 large groups/brands named in campaigns : CA, BPCE, CM-CIC, SG, BNPP, HSBC, Credit Coopératif, LBP, LCL.
- We drop campaigns naming only AM subsidiaries of major bank groups (Natixis, Amundi) : parent not known by retail depositors.

Data cleaning : NGO campaigns (2)

We sort campaign alerts by ES topic

- **Climate change (CC)** : hand-made dictionary of fossil fuel-related words (e.g., “coal”, “oil”, “pipeline”, “fracking” ...)
- **Other environmental (OE)** : deforestation, water use, animal welfare...
- **Social (S)** : human rights and labor rights abuses, mining and indigenous people, tax avoidance...

Final sample : 361 negative and 79 positives ES alerts targeting 9 bank brands.

Data cleaning : deposits/loans

Deposits/Loans outstanding by bank-county (2010-2020) :

- Only banks affiliated with 7 largest groups operating in France (above 95% of household deposits).
- Only banks that report w/ monthly frequency (exit CCoop).
- Exclude Corsica and overseas territories (DOM-COM).
- Cancel observations s.t. outlier growth rate outside p1-p99 (cf. M&A, reporting break...).
- **Final sample** : 100 banks in 7 banking groups, 94 counties, 120 months \Rightarrow some 122,000 observations.

Data cleaning : individual mortgage loans

New housing loans (2013-2020) :

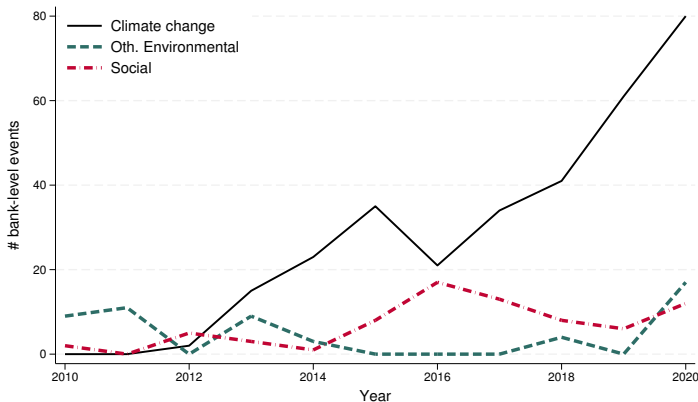
- Keep regular fixed-rate housing loans (exc. regulated loans) to households in mainland France
- Drop renegotiated loans and interim loans (*prêts relais*), loans with missing/zero rate or amount.
- Keep only banks present in previous deposit/loan sample (consistency) ?
- Keep only municipalities with more than 10 loans issued and at least 3 bank branches throughout.
- drop LBP : all housing loans issued by branch in Zipcode 75115.
- **Final sample** : some 165,000 loans issued by 77 banks in 6 banking groups, by branches in 1,070 municipalities.

Mapping campaigns against banking brands into banks' deposit/loan data

- In order to merge bank brand-level campaigns with bank-level data, we define each individual bank's brand as :
 - brand of parent banking group if bank name easily identified with group's main brand
 - own brand otherwise.
- **Examples :**

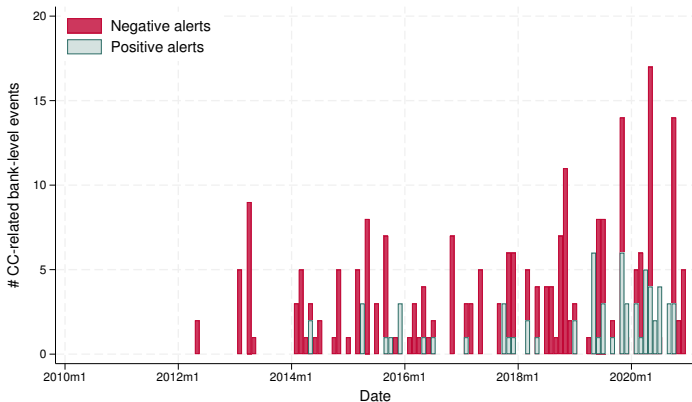
Bank name	Bank group	Bank brand
CA Ile de France	CA	CA
Credit Lyonnais	CA	Credit Lyonnais
Credit du Nord	SG	Credit du Nord
BP Rives de Paris	BPCE	BPCE
Banque de Savoie	BPCE	Banque de Savoie

NGO campaigns targeting French banks : timeline



Note. Period : 2010-2020. All negative and positive NGO campaign alerts pointing at French banks (bank brands). An alert is defined by a campaign event and the name of the targeted bank. Source Sigwatch.

NGO campaign alerts on climate change-related issues



Note. Period : 2010-2020. All negative and positive NGO campaign alerts pointing at French banks (bank brands). An alert is defined by a campaign event and the name of the targeted bank.
Source : Sigwatch, authors' computations.

Negative alerts targeting French banks by NGO and ES topic

NGO name	CC issue					
	No		Yes		Total	
	N	Col %	N	Col %	N	Col %
Amis de la Terre	43	36.8	170	69.7	213	59.0
Attac France	19	16.2	9	3.7	28	7.8
Fondation 30 Millions d'Amis	7	6.0	0	0.0	7	1.9
Friends of the Earth	4	3.4	4	1.6	8	2.2
Greepeace	6	5.1	9	3.7	15	4.2
LDH	6	5.1	0	0.0	6	1.7
Observatoire des Multinationales	2	1.7	3	1.2	5	1.4
Oxfam	0	0.0	23	9.4	23	6.4
Reclaim Finance	0	0.0	11	4.5	11	3.0
Secours Catholique	5	4.3	0	0.0	5	1.4
Sherpa	3	2.6	3	1.2	6	1.7
Total others	22	18.8	12	4.9	34	9.4
Total	117	100.0	244	100.0	361	100.0

Note. Period : 2010-2020. All ESG issues and breakdowns. Only campaigns by French-based NGOs and/or targeting France. Source : Sigwatch, authors' computations.

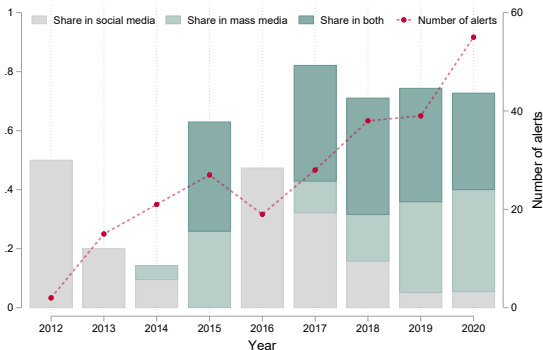
Negative alerts targeting French banks by bank brand and ES topic

	Total				Proportion			
	All ES	CC	Other E	S	All ES	CC	Other E	S
Bank brand								
BPCE	24	17	4	3	0.07	0.07	0.09	0.04
CA	70	53	8	9	0.19	0.22	0.17	0.13
CM-CIC	13	10	1	2	0.04	0.04	0.02	0.03
SocGen	98	75	12	11	0.27	0.31	0.26	0.15
BNP	124	75	13	36	0.34	0.31	0.28	0.51
HSBC	23	8	6	9	0.06	0.03	0.13	0.13
LBP	6	5	1	0	0.02	0.02	0.02	0.00
Cred. Coop	1	0	1	0	0.00	0.00	0.02	0.00
LCL	2	1	0	1	0.01	0.00	0.00	0.01
Total	361	244	46	71	1.00	1.00	1.00	1.00

Note. Period : 2010-2020. All ESG issues and breakdowns. Only campaigns by French-based NGOs and/or targeting France. Source : Sigwatch, authors' computations.

► Positive alerts

Negative CC alerts : gauging the audience in mass media and Twitter.



Note. Share of NGO alerts about brown banks for which we can identify some media coverage on the websites of all national and major regional French daily and weekly newspapers, as well as French TV and radio broadcasts. Tweets mentioning both the NGO and the bank in a [-5;+30] days window around alerts. Period : 2010-2020. Sample : negative NGO campaign alerts blaming French banks (bank brands) on CC issues. Source : Sigwatch, Twitter, authors' computations.

Tweets and NGO alerts about brown banks : analysis.

	Tweet Count				Tweet Sentiment		Newspaper count
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
NGO Power	-0.238 [0.207]			-0.193 [0.194]	-0.193 [0.194]	0.086 [0.054]	-0.225 [0.183]
Sentiment		-0.273** [0.110]		-0.248*** [0.094]	-0.248*** [0.094]	0.048*** [0.018]	-0.332*** [0.058]
Prominence			0.397*** [0.111]	0.365*** [0.113]	0.365*** [0.113]	-0.099*** [0.028]	-0.120 [0.103]
Bank FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	316	316	316	316	316	316	301
Pseudo/Adj. R2	0.225	0.244	0.259	0.278	0.278	0.227	0.108

Note. Period : 2011-2020. Dependent variable in columns (1) to (5) : count of Tweets for each NGO campaign about a CC topic. Regression method : PPML. Dependent variable in column (6) : average tweet sentiment measured using FinBERT. Regression method : pool OLS. *Sentiment* : unscaled, signed sentiment from Sigwtach. *NGO power* and *Prominence* : unscaled variables from Sigwtach. Robust standard errors.

Measuring banks' reputation for sustainability : SRI

For each type of ES campaign (CC, OE, S, all ES) and for negative vs positive alerts separately, we build a bank's reputation index in three steps :

- Step 1 : alert-specific impact score on date d (using, e.g., only negative CC alerts)

$$AIS_{nbd} = S_{nbd} \times P_{nbd} \times N_{nbd}$$

where S_{nbd} , P_{nbd} , N_{nbd} are scaled sentiment, prominence and (max) NGO power.

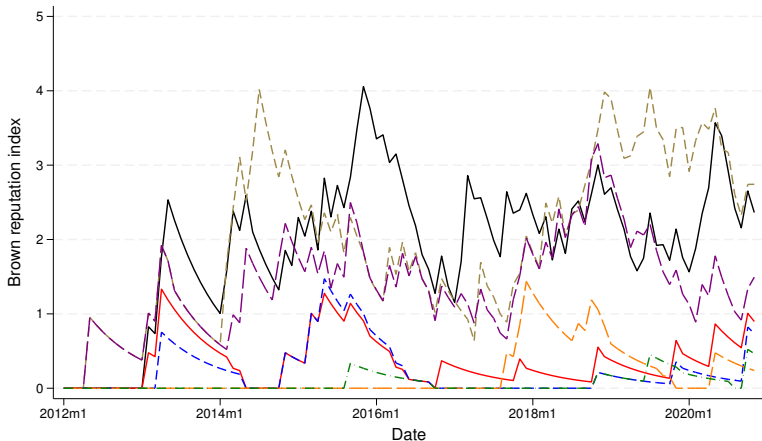
- Step 2 : aggregation over one month = monthly reputational score

$$MRS_{bt} = \sqrt{\sum_{d \in t} AIS_{nbd}}$$

- Step 3 : sum of lagged monthly scores with exponential decay (half-life : 6 months, i.e., $\theta = \ln(2)/6$) = sustainability reputation index

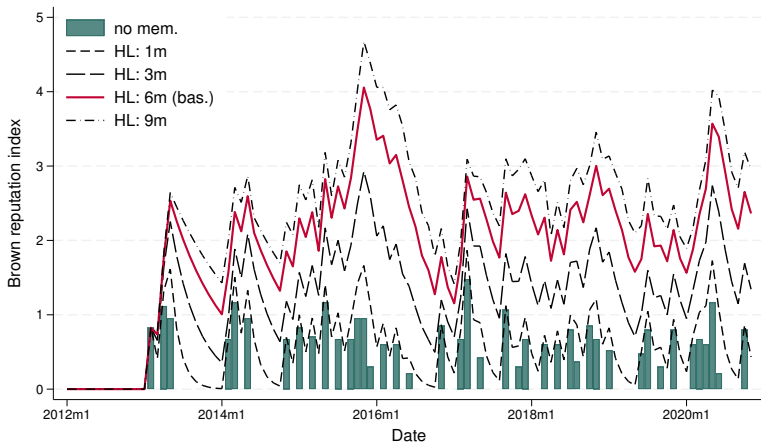
$$SRI_{bt} = \sum_{\tau=0}^{12} \exp(-\tau.\theta).MRS_{b,t-\tau}$$

Banks' brown reputation indexes



Note. Only negative NGO campaigns targeting the bank brand. Source : Sigwatch, authors' computations.

Banks' brown reputation indexes : robustness



Note. Brown reputation index of one of the most targeted bank brands, depending on our assumptions regarding θ . Bars : assuming that people stay away for only one month. Lines : reputation indexes series when half-life (HL) of past news is 1, 3, 6 or 9 months. Source : Sigwatch and authors' computations.

Impact of banks' SRI on households deposits : empirical model

$$\ln(Y_{bct}) = \beta^- \times SRI_{bt}^- + \beta^+ \times SRI_{bt}^+ + \gamma \times \ln(BB_{bct}) + \theta \times Z_{b,t-1} + \delta_b + \delta_{ct} + u_{bct} \quad (1)$$

where :

Y_{bct} : sight deposits of b in d (term deposits, housing loans...), EUR thds.

SRI_{bt}^- : bank b 's negative reputation index on CC (or OE, S, ES).

SRI_{bt}^+ : bank b 's positive reputation index on CC (or OE, S, ES).

BB_{bct} : nb of b 's branches in county c (local size/demand for deposits)

$Z_{b,t-1}$: monthly bank-level controls (size, leverage, retail deposits to assets)

δ_b, δ_{ct} : FE capture invariant bank characteristics and macro and local activity/house prices etc.

Expected sign : $\beta^- < 0$

Bank-county-level regression sample : descriptive statistics

	Mean	Std.Dev.	p10	p25	Median	p75	p90	Nb.Obs.
Sight deposits (thds)	253521.88	402551.93	13339.00	42836.00	122849.00	302626.50	656251.00	122368
Sight deposits (log)	11.55	1.51	9.50	10.67	11.72	12.62	13.39	122368
Term deposits (log)	12.05	1.61	9.85	11.04	12.21	13.31	14.01	122365
All deposits (log)	12.55	1.57	10.40	11.59	12.72	13.75	14.43	122484
Housing loans (thds)	668225.86	1.01e+06	31905.00	85971.00	277114.00	831315.00	1.78e+06	122362
Housing loans (log)	12.43	1.55	10.37	11.36	12.53	13.63	14.39	122362
Regul. hous. loans (log)	9.83	2.02	7.03	8.86	10.10	11.23	12.05	118919
All housing loans (log)	12.53	1.56	10.43	11.46	12.63	13.74	14.48	122376
Sight deposits (dlog)	0.01	0.03	-0.03	-0.01	0.01	0.02	0.04	123619
Neg. ES SRI	0.80	1.13	0.00	0.00	0.27	1.14	2.62	127154
Pos. ES SRI	0.15	0.40	0.00	0.00	0.00	0.00	0.58	127154
Neg. CC SRI	0.55	0.87	0.00	0.00	0.00	0.85	1.92	127154
Pos. CC SRI	0.13	0.39	0.00	0.00	0.00	0.00	0.48	127154
Nb branches (log)	2.39	1.37	0.00	1.39	2.48	3.43	4.08	110720
Assets(-1) (log)	25.15	1.87	22.93	23.56	25.47	26.41	27.77	95452
Capital/Ass.(-1)	0.04	0.02	0.02	0.02	0.02	0.05	0.07	95447
Non-bank dep./Ass.(-1)	0.49	0.24	0.13	0.16	0.61	0.68	0.74	95447
Share green vote	13.86	5.47	7.91	9.29	12.62	18.21	22.02	127154
Share college educ.	0.22	0.07	0.16	0.18	0.20	0.24	0.28	127154
Income per hhld. (log)	3.13	0.15	2.98	3.03	3.09	3.18	3.27	127154
HHI deposits (pp)	1.25	0.58	0.53	0.83	1.19	1.68	2.04	127154

Note. Bank-county-level sample. Period : 2010-2020. Deposits and loans in euro thds.

Banks' brown reputation and the supply of sight deposits.

	(1)	(2)	(3)	(4)	(5)
Negative CC	-0.033*** [0.010]	-0.033*** [0.010]	-0.040*** [0.013]	-0.020*** [0.007]	-0.030** [0.013]
Positive CC		0.008 [0.019]	0.017 [0.018]	-0.007 [0.026]	0.043 [0.043]
Nb branches (log)			0.953*** [0.054]		0.925*** [0.053]
Assets(-1) (log)				0.146*** [0.050]	0.057 [0.083]
Capital/Assets(-1)				-2.209** [0.928]	-0.230 [1.228]
Non-bank dep./Assets(-1)				0.805*** [0.239]	0.551* [0.315]
Bank FE	Yes	Yes	Yes	Yes	Yes
County-Time FE	Yes	Yes	Yes	Yes	Yes
Obs.	122368	122368	106119	91324	76525
Clusters	100	100	99	59	58
R2	0.772	0.772	0.937	0.816	0.949

Note. Bank-county-level sample. Period : 2010-2020. Dep. variable : log sight deposits of households. *Negative CC* (resp. *positive CC*) is the negative (positive) reputation index (SRI) of the bank brand for issues related to climate change. *Nb branches* is the number of branches of the bank in the county. SE clustered at the bank (CIB) level.

Economic effect : $SRI_b^-(CC) \uparrow +1SD \Rightarrow \text{deposits}_{bd} \downarrow \text{€} 9 \text{ mns}$

Robustness.

- ① Within bank-county specification. ▶ Within
- ② Varying memory parameter θ . ▶ Theta
- ③ CC-related vs other ES-related campaigns. ▶ CCvsES

Mechanism : lower switching costs and depositors' exits

- Intensive vs extensive margin : multibank customers rebalancing deposits across banks and/or customers switching banks
- Regulatory change : reform simplifying bank mobility (Feb. 2017) (Art. 43 of “Macron law” of August 2015) :
 - Removed administrative burden for switching bank (\downarrow switching costs ≈ 0)
 - Discontinuity : sight deposits treated, term deposits are not (more contractual frictions) \Rightarrow placebo

ÉCONOMIE

Mobilité bancaire : les débuts prometteurs de la loi Macron

Un mois après l'entrée en vigueur de ce dispositif qui permet aux clients de changer de banques plus facilement, les consommateurs n'hésitent plus à faire jouer la concurrence.

Par Véronique Chocron

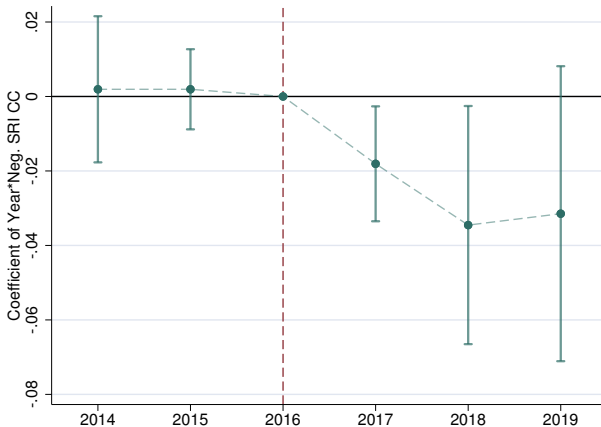
Publié le 07 mars 2017 à 11h00, mis à jour le 07 mars 2017 à 11h00 - 🕒 Lecture 1 min.

Impact of the 2017 *Macron law* on bank account mobility.

	Sight dep.			Term dep.		
	(1)	(2)	(3)	(4)	(5)	(6)
				2015+2017		
Negative CC	-0.040*** [0.013]	-0.014 [0.009]	-0.006 [0.010]	-0.017 [0.012]	0.007 [0.009]	0.018* [0.010]
Neg. CC × Post		-0.040** [0.017]	-0.039* [0.022]	-0.021** [0.009]	-0.040 [0.026]	-0.044 [0.036]
Pos. CC SRI	0.017 [0.018]	0.018 [0.017]	0.048 [0.038]	0.011 [0.011]	0.028 [0.021]	0.034 [0.042]
Nb branches (log)	0.953*** [0.054]	0.953*** [0.054]	0.925*** [0.053]	0.957*** [0.055]	0.956*** [0.053]	0.930*** [0.050]
Assets(-1) (log)			0.049 [0.083]			0.220*** [0.078]
Capital/Ass.(-1)			-0.619 [1.020]			-0.458 [1.341]
Non-bank dep./Ass.(-1)			0.568* [0.306]			0.538* [0.302]
Bank FE	Yes	Yes	Yes	Yes	Yes	Yes
County-Time FE	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	106119	106119	76525	21885	106045	76374
Clusters	99	99	58	98	99	58
R2	0.937	0.937	0.949	0.940	0.948	0.958

Note. Bank-county-level sample. Period : 2011-2020, except col. 4 : 2015 and 2017 only. Dep. variable : log sight deposits (col. 1 to 4), or term deposits (col. 5-6) of households. *Negative CC* (resp. *positive CC*) : negative (positive) reputation index (SRI) of the bank brand for issues related to climate change. *Nb branches* : number of branches of the bank in the county. SE clustered at the bank (CIB) level.

2017 law on bank account mobility : dynamics



Note. Bank-county-level sample. Period : 2014-2019. Dep. variable : log sight deposits of households. The figure shows the estimated coefficients of the negative CC reputation index interacted with year dummies. Bars : 95% confidence intervals.

Brown reputation and deposits : role of HH characteristics.

	Cutoff : p50 of X			
	(1) X=Educ.	(2) Inc.	(3) Green	(4) Comp.
Neg. CC	0.015 [0.012]	0.019* [0.011]	0.015 [0.013]	0.021 [0.016]
... × Post	-0.054*** [0.017]	-0.056*** [0.016]	-0.056*** [0.020]	-0.061*** [0.020]
... × Top X	-0.054* [0.030]	-0.062** [0.027]	-0.054** [0.025]	-0.064* [0.035]
... × Post × Top X	0.026 [0.022]	0.030 [0.020]	0.030** [0.015]	0.039 [0.024]
Pos. CC SRI	0.019 [0.017]	0.018 [0.017]	0.018 [0.017]	0.018 [0.017]
Nb branches (log)	0.954*** [0.053]	0.954*** [0.053]	0.954*** [0.054]	0.955*** [0.053]
Bank FE	Yes	Yes	Yes	Yes
County-Time FE	Yes	Yes	Yes	Yes
Obs.	106119	106119	106119	106119
Clusters	99	99	99	99
R2	0.937	0.937	0.937	0.937

Note. Bank-county-level sample. Period : 2010-2020. Dep. variable : log sight deposits of households. *Negative CC* (resp. *positive CC*) : negative (positive) SRI of the bank brand for issues related to climate change. *Nb branches* : number of branches of the bank in the county. *Top X* : dummy for counties above median of *X* (college education, income, green vote, bank competition). SE clustered at the bank (CIB) level.

Impact of banks' brown reputation on housing loans

- **Hypothesis** : motivated depositors shun brown banks when taking a mortgage loan
 - Mortgage borrowing and sight-deposit opening often joint decision.
- **Caveat** : any observed fall in mortgage lending may reflect combined demand and supply effects (bank-lending channel)
- To disentangle : need to identify both falling volumes and lower interest rates
 - county-bank level regression on outstanding amounts lent, cf. deposit regression.
 - loan-level regression on interest rates of new mortgage loans, cf. below

Banks' brown reputation and housing loans.

	(1)	(2)	(3)	(4)	(5)
Negative CC	-0.060*** [0.021]	-0.059*** [0.019]	-0.064*** [0.019]	-0.050*** [0.014]	-0.060*** [0.019]
Positive CC		-0.033 [0.022]	-0.022 [0.020]	-0.110*** [0.032]	-0.059 [0.045]
Nb branches (log)			0.874*** [0.050]		0.839*** [0.049]
Assets(-1) (log)				0.306** [0.131]	0.253** [0.120]
Capital/Assets(-1)				-1.915 [2.238]	0.502 [2.632]
Non-bank dep./Assets(-1)				0.638 [0.468]	0.182 [0.509]
Bank FE	Yes	Yes	Yes	Yes	Yes
County-Time FE	Yes	Yes	Yes	Yes	Yes
Obs.	122362	122362	106188	91268	76539
Clusters	100	100	99	59	58
R2	0.805	0.805	0.943	0.835	0.952

Note. Bank-county-level sample. Period : 2010-2020. Dep. variable : log non-regulated mortgage loans to households. *Negative CC* (resp. *positive CC*) is the negative (positive) reputation index (SRI) of the bank brand for issues related to climate change. *Nb branches* is the number of branches of the bank in the county. SE clustered at the bank (CIB) level.

Impact of banks' brown reputation on new loan rates : empirical model

$$r_{ibmt} = \beta^- \times SRI_{bt}^- + \beta^+ \times SRI_{bt}^+ + \gamma \times X_i + \zeta \times Q_{mt} + \theta \times Z_{bmt} + \delta_b + \delta_{ct} + u_{ibmt} \quad (2)$$

where :

SRI_{bt}^- : index of negative reputation on CC issues.

SRI_{bt}^+ : index of positive reputation on CC issues.

X_{it} : loan-level controls (maturity, log amount, collateral dummy)

Q_{ct} : municipality-level controls (# bank branches in ZIP-code, quartile dummies for education, income per hhld, green vote).

Z_{bmt} : quart. bank and bank-municipality controls (balance sheet ratios, NPL, share of local branches).

FE : bank FE and county \times time FE

Expected sign : $\beta^- < 0$.

Loan-level regression sample : descriptive statistics

	Mean	Std.Dev.	p10	p25	Median	p75	p90	Nb.Obs.
Loan rate (TEG)	2.58	0.76	1.76	2.01	2.39	3.04	3.75	246657
Maturity (months)	207.94	75.19	109.00	145.00	216.00	276.00	300.00	246657
Loan amount (EUR thd)	134.62	116.52	30.00	61.81	110.00	174.39	254.93	246657
Loan amount (log)	11.48	0.88	10.31	11.03	11.61	12.07	12.45	246657
Collateralized	0.40	0.49	0.00	0.00	0.00	1.00	1.00	246657
Local bank branches	48.86	79.18	5.00	8.00	17.00	62.00	123.00	245734
Local bank branches (log)	3.09	1.23	1.61	2.08	2.83	4.13	4.81	245734
Share local branches	0.15	0.10	0.05	0.09	0.12	0.20	0.29	245734
Negative CC SRI	0.91	0.89	0.00	0.00	0.75	1.51	2.26	238057
Positive CC SRI	0.31	0.61	0.00	0.00	0.00	0.33	1.49	238057
Share college education (2008)	0.29	0.13	0.16	0.20	0.25	0.35	0.48	242038
Income per hhld (2010)	27.81	12.92	19.68	21.39	23.84	28.40	41.34	242038
Green vote (2009)	0.22	0.05	0.16	0.18	0.21	0.24	0.28	242038
Education Q4	0.58	0.49	0.00	0.00	1.00	1.00	1.00	242038
Income Q4	0.28	0.45	0.00	0.00	0.00	1.00	1.00	242038
Green vote Q4	0.59	0.49	0.00	0.00	1.00	1.00	1.00	242038
Assets(-1) (log)	24.91	1.47	23.40	23.72	24.44	25.80	27.66	223853
Liquid assets/Ass. (-1)	0.16	0.08	0.06	0.10	0.15	0.21	0.26	223853
Capital/Ass.(-1)	0.07	0.04	0.02	0.02	0.07	0.10	0.11	223853
Cust. credit/Ass.(-1)	0.58	0.23	0.13	0.42	0.69	0.72	0.76	223853
Net NNP / Cust.cred. (-1)	-0.00	0.00	-0.00	-0.00	-0.00	0.00	0.00	212093

Note. Loan-level sample. Period : 2013-2020. Dep. variable : housing loan rate (TEG).

Banks' brown reputation and mortgage loan rates : WTP.

	All ZIP-codes			Large cities	
	(3)	(4)	(5)		
Negative CC SRI	-0.020*** [0.006]	-0.019*** [0.006]	-0.019*** [0.006]	-0.020*** [0.007]	-0.029*** [0.008]
Positive CC SRI	0.000 [0.007]	0.000 [0.007]	0.000 [0.007]	0.003 [0.007]	-0.005 [0.010]
Local bank branches (log)		-0.018*** [0.003]	-0.019*** [0.003]	-0.020*** [0.003]	-0.024*** [0.007]
Income Q3		-0.013** [0.005]	-0.012** [0.005]	-0.012* [0.006]	-0.015 [0.014]
Income Q4.		-0.040*** [0.007]	-0.040*** [0.007]	-0.040*** [0.007]	-0.065*** [0.023]
Education Q3		-0.022*** [0.007]	-0.023*** [0.008]	-0.023*** [0.007]	-0.102** [0.041]
Education Q4		-0.043*** [0.008]	-0.043*** [0.008]	-0.044*** [0.008]	-0.121*** [0.040]
Share local branches			-0.063* [0.032]	-0.056 [0.034]	-0.063 [0.067]
Loan-level controls	Yes	Yes	Yes	Yes	Yes
Bank-level controls				Yes	Yes
Bank FE	Yes	Yes	Yes	Yes	Yes
County-Time FE	Yes	Yes	Yes	Yes	Yes
Obs.	238036	232636	232636	198720	87745
Clusters	76	75	75	75	73
R2	0.756	0.757	0.757	0.777	0.787

Note. Loan-level sample. Period : 2013-2020. Dep. variable : interest rate of new housing loans, including fees (*TEG*). Loan-level controls : maturity, amount, collateral dummy. *Local bank branches* : total number of bank branches in county. *Share local branches* : ratio of the bank's branches to all bank branches in same ZIP-code. Bank-level controls : size, liquid assets, capital/assets, cust. credit/assets, Net NPL/credit. SE clustered at the bank (CIB) level.

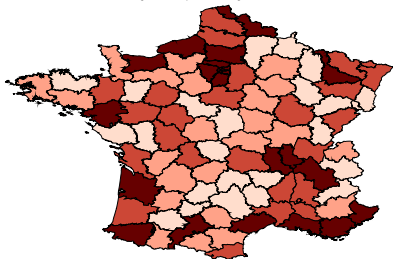
Conclusion

- We investigate the reaction of bank depositors to NGO campaigns targeting brown or “fossil” banks in France
- At the bank-county level, we find :
 - Lower supply of sight deposits with browner banks
 - Driven by exit of discontent, CC-motivated bank customers
 - Average effect takes place after regulation that cuts switching costs to zero.
- Associated impact on mortgage loans :
 - Lower outstanding volumes and lower interest rates on new loans for browner banks
 - confirms fall in loan demand for browner banks
 - point at (small) willingness-to-pay for being customer of greener banks.

Local banking competition - county level

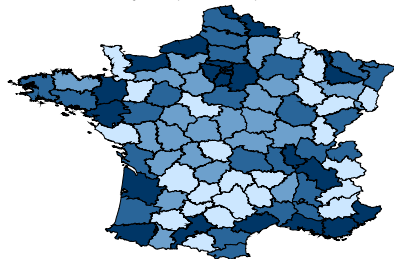
Housing loans

Banking market competition: housing loans, 2010



Households deposits

Banking market competition: households deposits, 2010



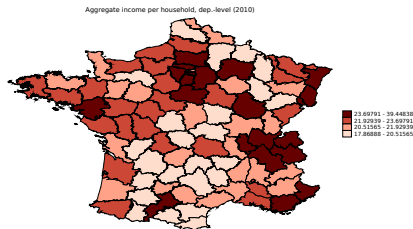
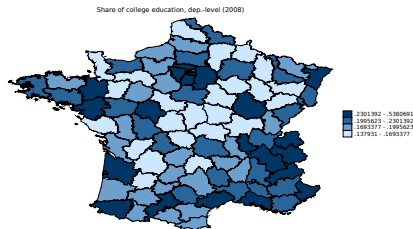
Note. Quartiles of HHI of deposits/housing loans across banks in each county. Darker color : higher competition, i.e. lower local HHI.

► Back

Higher education and income - county level

College education (2008)

Income per household (2010)

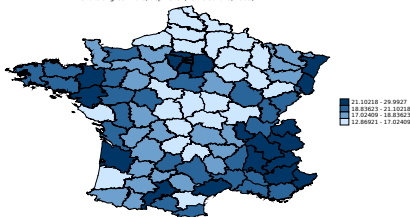


▶ Back

Vote for Green parties, EUP elections - county level

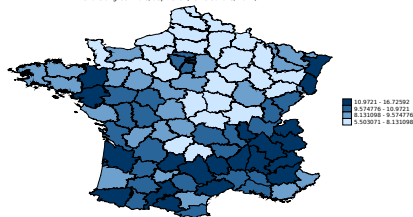
2009

Share of green vote, dep.-level (EUP elections, 2009)



2014

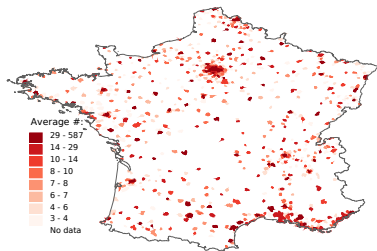
Share of green vote, dep.-level (EUP elections, 2014)



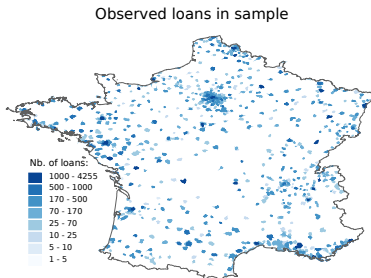
► Back

Loan-level data : heterogeneity across municipalities

Nb. bank branches (average)



Observed loans (total)



Note. Period 2013-2018. Average number of bank branches per municipality (ZIP code) over the period. Total number of new housing loans issued by banks in each municipality over the period.

[▶ Back](#)

Positive alerts targeting French banks by bank brand and ES topic

	Total				Proportion			
	All ES	CC	Other E	S	All ES	CC	Other E	S
Bank brand								
BPCE	24	17	4	3	0.07	0.07	0.09	0.04
CA	70	53	8	9	0.19	0.22	0.17	0.13
CM-CIC	13	10	1	2	0.04	0.04	0.02	0.03
SocGen	98	75	12	11	0.27	0.31	0.26	0.15
BNP	124	75	13	36	0.34	0.31	0.28	0.51
HSBC	23	8	6	9	0.06	0.03	0.13	0.13
LBP	6	5	1	0	0.02	0.02	0.02	0.00
Cred. Coop	1	0	1	0	0.00	0.00	0.02	0.00
LCL	2	1	0	1	0.01	0.00	0.00	0.01
Total	361	244	46	71	1.00	1.00	1.00	1.00

Note. Period : 2010-2020. All ESG issues and breakdowns. Only campaigns by French-based NGOs and/or targeting France. Source : Sigwatch, authors' computations.

► Back

Positive alerts targeting French banks by NGO and ES topic

NGO Name	CC issue					
	No		Yes		Total	
	No	Col %	N	Col %	N	Col %
Amis de la Terre	7	63.6	43	63.2	50	63.3
BankTrack	0	0.0	3	4.4	3	3.8
FairFin	1	9.1	0	0.0	1	1.3
Friends of the Earth	0	0.0	1	1.5	1	1.3
Global Witness	0	0.0	2	2.9	2	2.5
Greepeace	2	18.2	4	5.9	6	7.6
Human Rights Watch HRW	1	9.1	0	0.0	1	1.3
Rainforest Network Alliance	0	0.0	4	5.9	4	5.1
Reclaim Finance	0	0.0	9	13.2	9	11.4
Sierra Club U.S.A.	0	0.0	2	2.9	2	2.5
Total	11	100.0	68	100.0	79	100.0

Note. Period : 2010-2020. All ESG issues and breakdowns. Only campaigns by French-based NGOs and/or targeting France. Source : Sigwatch, authors' computations.

Robustness (1) : within bank-county specification.

	(1)	(2)	(3)	(4)	(5)
Negative CC	-0.035*** [0.011]	-0.035*** [0.011]	-0.042*** [0.010]	-0.023*** [0.007]	-0.029*** [0.009]
Positive CC		0.009 [0.016]	0.011 [0.017]	0.007 [0.018]	0.016 [0.025]
Nb branches (log)			0.210** [0.102]		0.122* [0.062]
Assets(-1) (log)				0.141*** [0.052]	0.114** [0.046]
Capital/Ass.(-1)				-2.412* [1.257]	-2.120* [1.231]
Non-bank dep./Ass.(-1)				0.837*** [0.239]	0.596*** [0.214]
Bank-County FE	Yes	Yes	Yes	Yes	Yes
County-Time FE	Yes	Yes	Yes	Yes	Yes
Obs.	122368	122368	106119	91252	76453
Clusters	100	100	99	58	57
R2 Within	0.025	0.026	0.076	0.136	0.109

Note. Bank-county-level sample. Period : 2011-2020. Dep. variable : log sight deposits of households. *Negative CC* (resp. *positive CC*) is the negative (positive) reputation index (SRI) of the bank brand for issues related to climate change. *Nb branches* is the number of branches of the bank in the county. SE clustered at the bank (CIB) level.

Robustness (2) : varying θ .

	(1)	(2)	(3)	(4)	(5)
	No mem.	HL : 1m	HL : 3m	HL : 6m	HL : 9m
Negative CC SRI (stdd)	-0.007*** [0.002]	-0.015*** [0.004]	-0.029*** [0.009]	-0.035*** [0.012]	-0.037*** [0.012]
Positive CC SRI (stdd)	0.005 [0.004]	0.007 [0.006]	0.007 [0.007]	0.007 [0.007]	0.006 [0.007]
Nb branches (log)	0.953*** [0.054]	0.953*** [0.054]	0.953*** [0.054]	0.953*** [0.054]	0.953*** [0.054]
Bank FE	Yes	Yes	Yes	Yes	Yes
County-Time FE	Yes	Yes	Yes	Yes	Yes
Obs.	106119	106119	106119	106119	106119
Clusters	99	99	99	99	99
R2	0.937	0.937	0.937	0.937	0.937

Note. Bank-county-level sample. Period : 2011-2020. Dep. variable : log sight deposits of households. *Negative CC* (resp. *positive CC*) is the negative (positive) reputation index (SRI) of the bank brand for issues related to climate change. Both variables are here standardized. In column (1), no persistence is assumed. In column (2) to (5), the time-decay parameter is adjusted so that the half-life of news is 1, 3, 6 (baseline) and 9 months respectively. In all cases, we assume that all information older than 12 months is forgotten. *Nb branches* is the number of branches of the bank in the county. SE clustered at the bank (CIB) level.

Banks' brown reputation and deposits : CC vs other ES.

	(1)	(2)	(3)	(4)	(5)
Negative CC SRI	-0.040*** [0.013]				-0.042*** [0.014]
Negative OE SRI		-0.023 [0.020]			-0.042 [0.028]
Negative S SRI			-0.025 [0.018]		-0.019 [0.019]
Negative ES SRI				-0.043*** [0.014]	
Positive ES SRI				0.027* [0.015]	0.025 [0.016]
Nb branches (log)	0.953*** [0.054]	0.953*** [0.054]	0.953*** [0.054]	0.953*** [0.054]	0.953*** [0.054]
Bank FE	Yes	Yes	Yes	Yes	Yes
County-Time FE	Yes	Yes	Yes	Yes	Yes
Obs.	106119	106119	106119	106119	106119
Clusters	99	99	99	99	99
R2	0.937	0.937	0.937	0.937	0.937

Note. Bank-county-level sample. Period : 2010-2020. Dep. variable : log sight deposits of households. *Negative CC* (resp. *Negative OE*, *Negative S* and *Negative ES*) is the negative reputation index (SRI) of the bank brand because of CC (resp. OE, S or ES) issues. *Nb branches* is the number of branches of the bank in the county. SE clustered at the bank (CIB) level.