Social Capital and Bank Misconduct

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Social norms

- Social norms have an influence on the **behavior of individuals** (e.g., Guiso et al. 2011) ... and **firms** (e.g., Hilary and Hui, 2009 JFE)
    - Individuals tend to comply with certain expected behaviors (Akerlof and Kranton, 2006 JEP)
- I focus on **social capital** as a source of social norms:
    - Social capital captures the quality of **social norms** in an area
    - Higher social capital is associated with **denser networks** and **higher levels of trust, pro-social and civic behavior** (Woolcock 2001)

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Social capital and firms/managers behavior

① **Higher social capital is associated with denser networks of individuals**

  - Bank managers may support, engage in, or conceal misconduct due to personal interests (Bergstresser and Philippon, 2006 JFE; Nguyen et al. 2016 RF)...
  - ...however, networks of relationships and communities around individuals and organizations **reduce the preferences of internals for engaging in opportunistic behaviors** (Hasan et al 2017 JFQA, Hoi et al. 2019 JFE):
    - Misbehavior is subject to a **higher degree of stigmatization** in areas with higher social capital: Social capital encourages people to fulfill their obligations (Coleman 1990)
    - **Information spreads rapidly** in regions with stronger networks (Buonanno et al. 2009)

② A higher degree of **altruism**, **reciprocity** and respect for **civic norms** associated with social capital:

  - Higher pressure from peers regarding **civic and socially positive behaviors** (Hasan et al 2017 JAR, Lins et al. 2017 JF)
  - Higher **pro-social behavior**: more careful when taking actions that may turn-out over-confident (Huang and Shang 2019 JCF)

Research questions

- I study whether **social capital levels** surrounding the area where a bank is headquartered have an effect on the probability that a bank is **involved in misconduct**
- I investigate whether banks that are involved in misconduct are **disciplined differently** in high and low social capital areas

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Measuring social capital

- Two components of social capital: **networks** and **respect for civic norms**
- Social capital is measured as the first **principal component** in an analysis of four county-level variables (as in Hasan et al. 2017 JFQA; Hoi et al. 2019 JFE):
    - Two proxies for civic norms: **US Census response rate** and **voter turnout** in the presidential elections
    - Two measures of the density of networks: number of **social and civic associations** and number of **local NGOs** (both scaled by population)
    - Measured in 1997, 2005, 2009 and 2014

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Measuring social capital
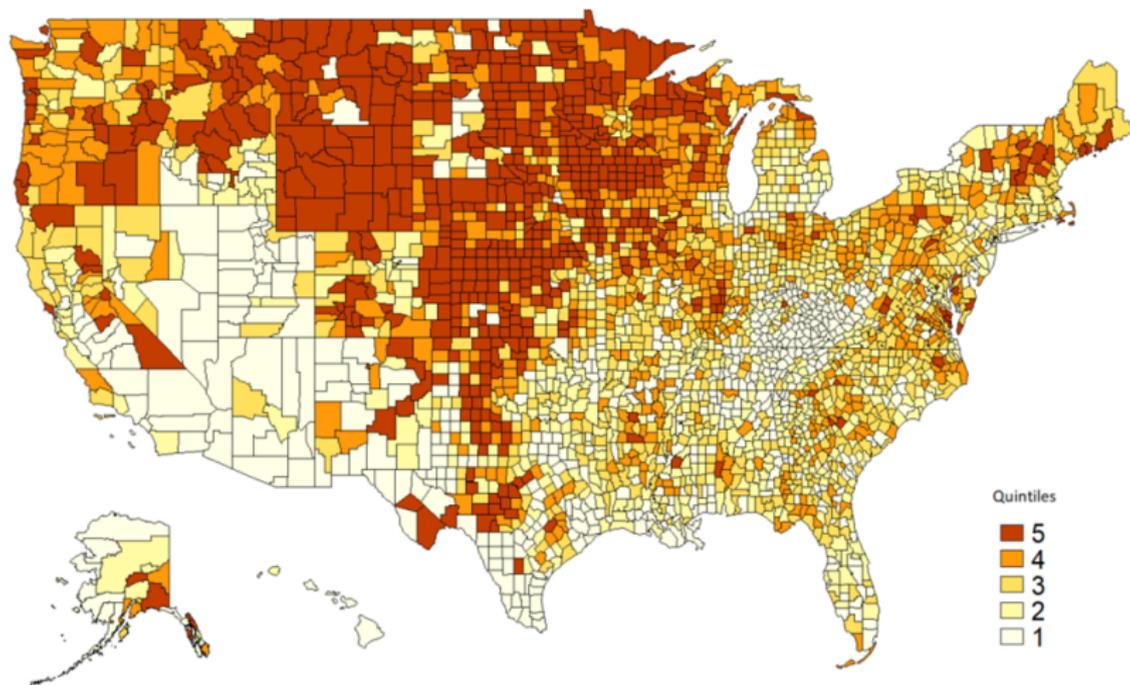
Bank misconduct

- Bank-level indicator of misconduct:
    - **Violations of laws and regulations** (Nguyen et al., 2016 RF)
    - Banks are subject to on-site examinations: If examiners detect that the bank has breached any law or regulation, an **enforcement action (EA)** is issued
        - Technical: capital adequacy and liquidity, asset quality, lending (risk concentrations), provisions and reserves
        - Non-technical: failures of the bank's internal control and audit systems, risk management systems, anti-money laundering violations, violations of consumer protection laws, breaches of the requirements concerning the fitness and propriety of board members, senior managers or other persons closely associated with banks, and cases related to fraud and insider abuse

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In a nutshell

- Findings:
  - U.S. Banks headquartered in high social capital areas → **Lower likelihood of regulatory misconduct**
    - One standard deviation increase in social capital associated with a 12% lower probability that a bank is involved in misconduct
    - The effect is more pronounced for **less geographically dispersed banks**
  - Markets/Counties with higher social capital → **Harsher punishment against 'deviant' banks**
    - 1.3% decrease in deposit market share in higher social capital markets/counties

Sample and data

- Data:
    - Social Capital variables: Northeast Regional Center for Rural Development (NRCRD) at Pennsylvania State University
    - Commercial Banks data: Call reports & FDIC summary of deposits
    - County-level variables: BEA and US Census
    - Enforcement actions hand-collected from US bank regulators (FDIC, OCC and Fed) websites
- Period **2001 - 2015**, annual data
    - 101,669 bank-year observations
    - Misconduct is present in 3.1% of the observations

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Baseline Results

- $P(M_{i,t}) = \beta_0 + \beta_1 SocialCapitalHQ_{c,t-1} + \beta_2 X_{i,t-1} + \mu_r + \tau_t + u_{i,t}$
- $X_{i,t-1}$:
  - Bank-level: equity ratio, allowance loans & leases, ROA, liquidity, RWA, deposit ratio, age, size, size sq, competition, BHC, publicly held
  - County-level: income pc, employment, education, median age, urban/rural dummy

	(1)	(2)	(3)
	No control variables	Baseline	Cluster by county
Dependent var. :	P(Misconduct=1)	P(Misconduct=1)	P(Misconduct=1)
social capital	**-0.096***[-0.007]**	**-0.056***[-0.003]**	**-0.056***[-0.003]**
	(0.009)	(0.012)	(0.013)
Constant	No	Yes	Yes
Regulator FE	Yes	Yes	Yes
Time FE	Yes	Yes	Yes
Cluster	Bank	Bank	County
Pseudo-R2	0.054	0.168	0.168
Observations	101669	101669	101669

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Robustness Checks

- **Robust** to
    - bivariate probit model: Effect driven by committed misconduct and no impact on misconduct detection
    - bank FE (using a linear probability model)
    - state FE
    - split: OCC and State Banks
    - social capital as a trait of bank CEO or other executives
    - other county-level variables (e.g. religion)
    - only urban banks
    - controlling for number of banks in the county
    - organ donation as a proxy for social capital
    - random dummy classifier
- Results hold for **technical** and **non-technical** misconduct

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Addressing Endogeneity

Instruments for social capital:

1. *Power distance*: power distributed unevenly, according to a hierarchy of authority

   - **epidemiological approach**: Parent's attitudes and values are good predictors of the values and behavior of their descendants
   - **country of ancestry** data from the US Census and **Hoftesde's scores for power distance** for each country
   - power distance for each US county: a weighted average method that combines the percentage of peoples' countries of ancestry (using US county-level data) with the Hoftesde's scores for power distance
   - Example: 30% of reported ancestors are from Germany and 70% of reported ancestors are from Ireland. Power distance score equal to 35 for Germany and 28 for Ireland. County-level measure of power distance takes the value: $30\% \times 35 + 70\% \times 28 = 30.1$

2. *Racial Homogeneity* and *Distance from Canadian border* (Hasan et al. 2017 JFQA)

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2. *Racial Homogeneity* and *Distance from Canadian border* (Hasan et al. 2017 JFQA)

Addressing Endogeneity

	(1) 2SLS	(2) IVprobit	(3) 2SLS	(4) IVprobit
Panel A : Second Stage				
Dependent var. :	social capital	social capital	social capital	social capital
Instrumented social capital	-0.005*	-0.113***	-0.004**	-0.062**
	(0.003)	(0.034)	(0.002)	(0.029)
Controls	Yes	Yes	Yes	Yes
Regulator FE	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes
Cluster	County	County	County	County
Observations	101668	101668	101359	101359
Panel B : First Stage				
Dependent var. :	social capital	social capital	social capital	social capital
power distance	-0.090***	-0.090***		
	(0.006)	(0.006)		
HHI race			2.145***	2.145***
			(0.116)	(0.116)
distance to Canadian border (ln)			-0.074***	-0.074***
			(0.021)	(0.021)
Controls	Yes	Yes	Yes	Yes
Regulator FE	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes
Cluster	County	County	County	County
Observations	101668	101668	101359	101359

Heterogeneity

	(1)	(2)	(3)	(4)	(5)	(6)
Sample :	>5 states	<5 states	>$1 Bill & <5 states	<$1 Bill & <5 states	Publily held & <5 states	Privately held & <5 states
Dependent var. :	P(Misconduct=1)	P(Misconduct=1)	P(Misconduct=1)	P(Misconduct=1)	P(Misconduct=1)	P(Misconduct=1)
social capital	0.108	-0.060***	-0.089*	-0.058***	-0.098**	-0.057***
	[0.019]	[-0.003]	[-0.009]	[-0.002]	[-0.006]	[-0.002]
	(0.220)	(0.012)	(0.046)	(0.013)	(0.047)	(0.013)
Controls (Table 3)	Yes	Yes	Yes	Yes	Yes	Yes
Regulator FE	Yes	Yes	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes	Yes	Yes
Cluster	Bank	Bank	Bank	Bank	Bank	Bank
Pseudo-R2	0.224	0.164	0.079	0.180	0.134	0.174
Observations	456	100956	6868	94088	9412	91544

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Social capital once misconduct is revealed

- $\%\triangle MktShare_{i,c,t} = \alpha + \beta_1 Misconduct_{i,t} + \beta_2 ZSocialCapitalBranches_{c,t-1} + \beta_3 Misconduct_{i,t} * ZSocialCapitalBranches_{c,t-1} + \beta_4 X_{i,c,t-1} + \mu_r + \lambda_{s,y} + u_{i,t}$
- Unit of observation: Bank-county

	(1)	(2)	(3)
Sample :	All	Pre-Crisis	Crisis & Post-crisis
Dependent var. :	%ΔMarket share of deposits		
misconduct	-0.998***	-2.662***	-1.111***
	(0.223)	(0.547)	(0.245)
Z social capital branches	-1.047***	-1.683***	-0.549***
	(0.119)	(0.172)	(0.155)
misconduct * Z social capital branches	**-0.303***	**0.607**	**-0.621*****
	(0.184)	**(0.482)**	**(0.201)**
Controls	Yes	Yes	Yes
Regulator FE	Yes	Yes	Yes
State x Year FE	Yes	Yes	Yes
Cluster	Bank-county	Bank-county	Bank-county
Adj. R2	0.032	0.033	0.034
Observations	321360	139439	181921

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Conclusions

- I provide **evidence of a negative association between social capital and bank misconduct**
  - This relationship is plausibly causal
  - One standard deviation increase in the measure of social capital (measured at county-level) corresponds to a 12% reduction of the probability that a bank is involved in misconduct
  - The effect of social capital on misconduct is mostly significant for banks that are less geographically dispersed

- Social capital exerts some **discipline** on banks once misconduct is revealed
  - Once misconduct is revealed, banks are subject to a harsher punishment in counties with higher social capital levels
  - A decrease of 1.3% in deposits market share in counties with higher social capital (14% of the average deposits market share for a bank in a given county)
  - This effect is concentrated during the financial crisis and its aftermath, when trust in the financial sector is significantly lower and social concerns about bank behavior are higher

Thank you

Questions?

Appendix: Map Social Capital

Legend:
- 1.17 – 6.63
- 0.30 – 1.17
- -0.20 – 0.30
- -0.64 – -0.20
- -1.14 – -0.64
- -3.66 – -1.14
- No data
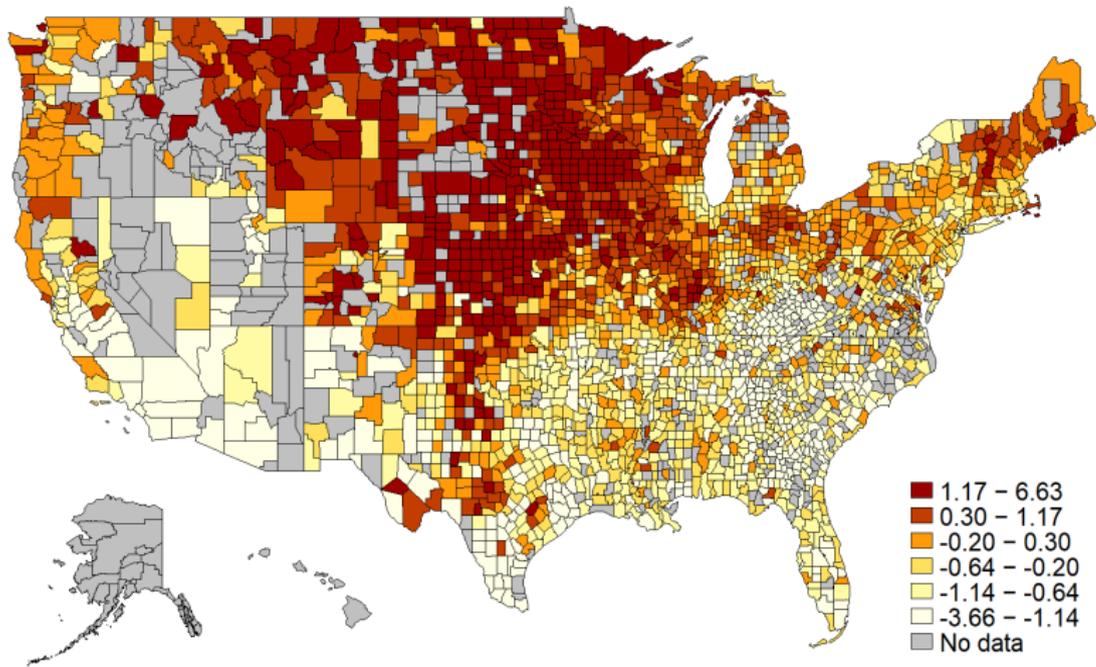
Appendix: Map Misconduct Intensity

■	5.56 − 50.00
■	2.37 − 5.56
■	0.00 − 2.37
□	0.00 − 0.00
■	No data

Appendix: Map Social Capital

■	1.17 − 6.63
■	0.30 − 1.17
■	-0.20 − 0.30
■	-0.64 − -0.20
■	-1.14 − -0.64
■	-3.66 − -1.14
■	No data
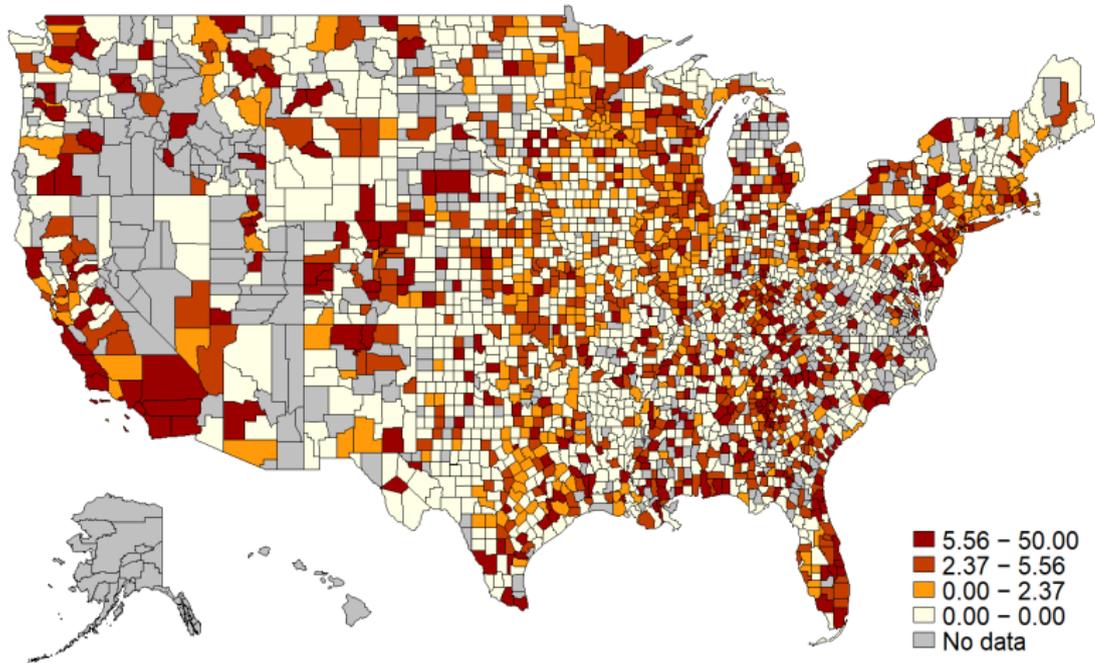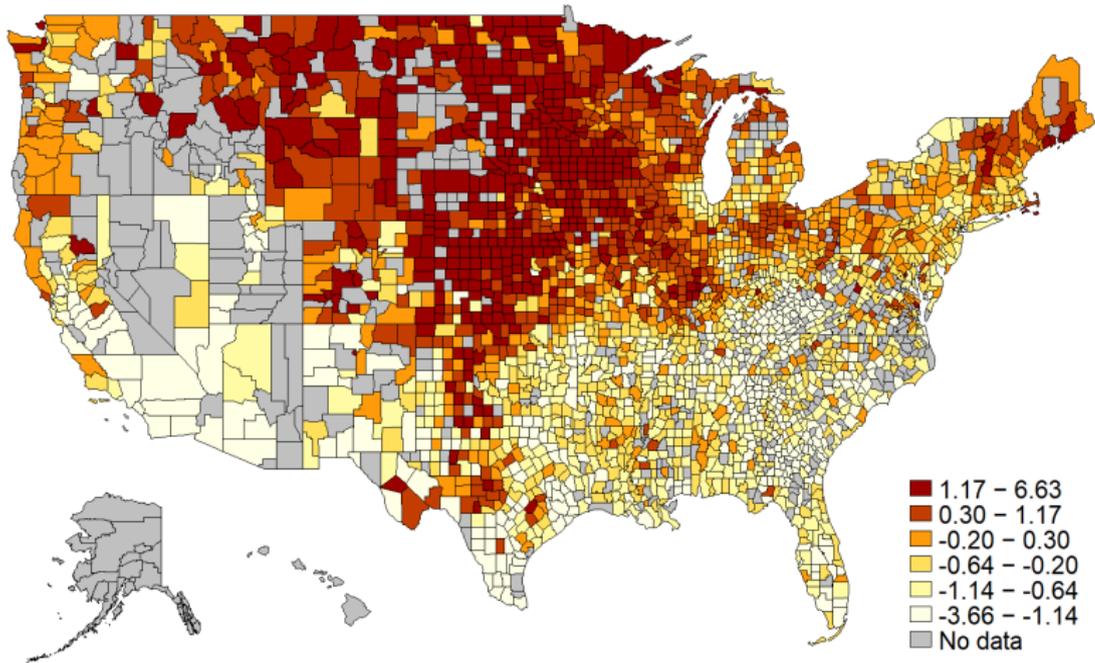
Appendix: Map Racial Homogeneity

■	0.922 − 0.982
■	0.864 − 0.922
■	0.768 − 0.864
■	0.628 − 0.768
■	0.498 − 0.628
■	0.246 − 0.498
■	No data
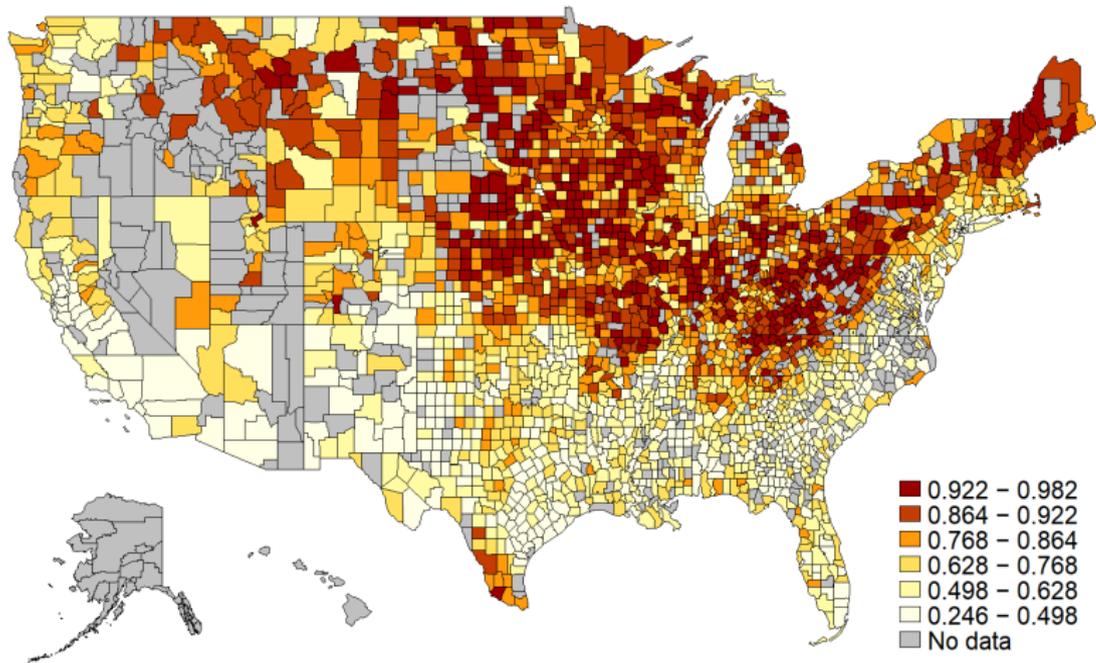
Appendix: Urban - Social Capital
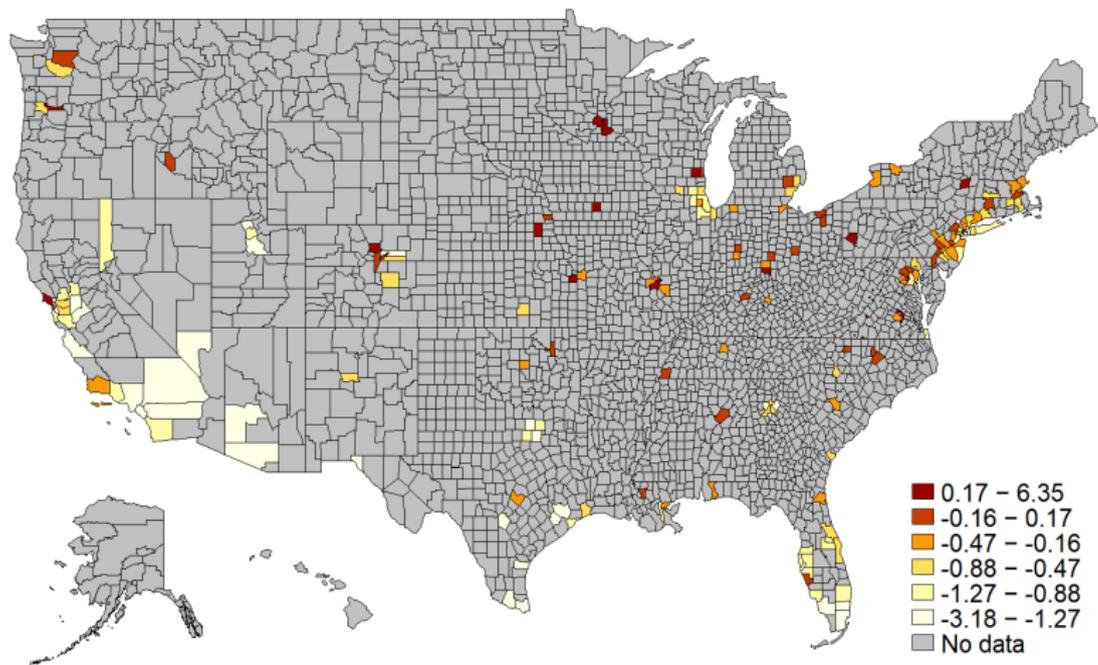
Appendix: Urban - Misconduct Intensity

■	9.00 − 47.00
■	6.00 − 9.00
■	3.45 − 6.00
■	1.61 − 3.45
■	0.23 − 1.61
■	0.00 − 0.23
■	No data
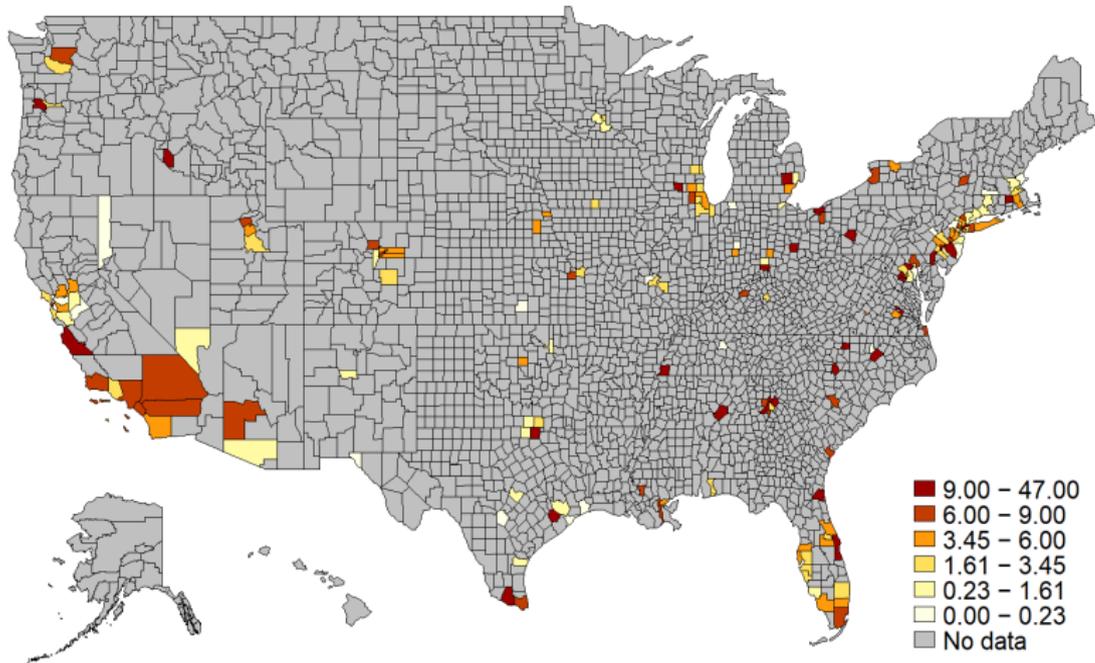
Appendix: Measurement of misconduct intensity

- $MisconductIntensity = \frac{\sum AssetsMisconduct_c}{\sum TotalAssets_c}$
- $\sum AssetsMisconduct_c =$ bank total assets in a county affected by misconduct over the sample period
- $\sum TotalAssets_c =$ bank total assets in a county over the sample period

Examples of Bank Misconduct: Technical

- FDIC, Heartland Bank: ". . . The FDIC and the OSBC considered the matter and determined that they had reason to believe that **the Bank had engaged in unsafe or unsound banking practices**. The FDIC and the OSBC, therefore, accepted the CONSENT AGREEMENT and issued the following: IT IS HEREBY ORDERED, that the Bank, its institution affiliated parties, as that term is defined in section 3(u) of the Act, 12 U.S.C. § 1813(u), and its successors and assigns, cease and desist from the following unsafe or unsound banking practices: . . . C. Operating with an excessive level of adversely classified assets and non-accrual loans; D. **Engaging in hazardous lending and lax collection practices**. . . "

Examples of Bank Misconduct: Non-technical

- OCC, American Bank & Trust Company, N.A.: "...the Currency of the United States of America ("Comptroller") intends to initiate prohibition, cease and desist, and civil money penalty proceedings against Harry S. Coin ("Respondent") pursuant to 12 U.S.C. §§ 1818(b), (e), and (i) on the basis of **Respondent's activities while serving as chief executive officer**..." "...the Comptroller of Respondent caused the Bank to purchase approximately twenty acres of land in Rock Island, Illinois ("Rock Island Property") **without conducting any formal analysis or obtaining prior Board approval**, as required by the Bank's Branching Policy..." "Respondent caused the Bank to deposit $970,000 in Bank funds into the Bank's account at a correspondent bank in exchange for receiving preferential terms on a personal loan from the correspondent bank, in violation of 12 U.S.C. § 1972(2)(A). **The Bank sustained a lost opportunity cost of approximately $30,526 because the Bank's account did not earn any interest** at the correspondent bank. **Respondent received personal gain in the form of a lower interest rate on his personal loan, which resulted in lower payments**..."

Examples of Bank Misconduct: Non-technical

- https://www.marketwatch.com/story/how-billions-in-dark-money-moved-through-a-tiny-one-branch-bank
- OCC, Merchants Bank of California , CA: The Office of the Comptroller of the Currency (OCC), the primary federal regulator of Merchants, has identified **deficiencies in the Bank's practices** that resulted in violations of previous consent orders entered into by Merchants, as well as other violations. The OCC simultaneously assessed a $1 million CMP against Merchants for these violations. Merchants **failed to (a) establish and implement an adequate anti-money laundering (AML) program**, (b) **conduct required due diligence on its foreign correspondent accounts**, and (c) detect and **report suspicious activity**. Merchants' failures allowed billions of dollars to flow through the U.S. financial system without effective monitoring to adequately detect and report suspicious activity. Many of these**transactions were conducted** on behalf of money services businesses (MSBs) that were owned or **managed by Bank insiders** who **encouraged staff to process these transactions without question or face potential dismissal or retaliation. Bank insiders directly interfered with the BSA staff's** attempts to investigate suspicious activity related to these insider-owned accounts.

Appendix: Summary Stats

Variables	N	mean	sd	Other vars.	N	mean	sd
misconduct	101669	0.031	0.172	Z score (ln)	97744	3.865	1.049
social capital	101669	0.004	1.201	capital ratio	101645	17.118	7.321
equity ratio	101669	10.668	3.276	loans growth	101669	5.340	15.202
allowance loan lease	101669	1.517	0.792	unused comm growth	88364	16.560	54.586
ROA	101669	1.081	1.012	sd(ROA) (ln)	99871	-1.424	1.003
liquidity	101669	6.713	6.435	NPL ratio	90251	1.551	2.048
RWA	101669	67.515	13.235	wholesale funding	101669	19.838	10.317
deposit ratio	101669	83.239	7.105	accounting restat.	101669	0.045	0.207
age (ln)	101669	3.641	0.935	religion	100402	61.739	17.508
size (ln)	101669	11.880	1.265	less severe	101669	0.029	0.167
size sq	101669	142.740	31.444	organ donation	68330	0.375	0.361
competition	101669	0.193	0.119	CEO social capital	2326	-0.120	0.761
BHC	101669	0.796	0.403	Exec. social capital	2326	-0.061	0.601
publicly held	101669	0.091	0.288	**Instruments**			
income pc (ln)	101669	10.399	0.285	HHI race	101669	0.694	0.199
employment	101669	56.317	13.956	distance to Canadian border (ln)	101359	6.441	0.836
education	101669	21.370	9.981	**Bank-county-level variables**			

Appendix: Summary Stats

Year	All	Technical (%)	Non-Technical (%)	FDIC	OCC	FRB
2001	95	53%	47%	37	51	7
2002	118	61%	39%	47	64	7
2003	121	49%	51%	53	52	16
2004	127	43%	56%	70	48	9
2005	148	21%	79%	81	61	6
2006	142	24%	76%	86	50	6
2007	125	34%	66%	74	37	14
2008	202	53%	47%	89	87	26
2009	391	76%	24%	221	125	45
2010	577	78%	22%	351	152	74
2011	334	61%	39%	233	77	24
2012	254	50%	50%	186	47	21
2013	184	32%	68%	128	37	19
2014	150	24%	76%	101	36	13
2015	146	14%	86%	94	34	18
Total	3114	53%	47%	1851	958	305

Appendix: Channels

	(1)	(2)	(3)	(4)	(5)
Dependent var. :	Zscore	sd(ROA)	Gr. unused commitments	Gr. loans	Accounting Restatements
social capital	0.090***	-0.088***	-1.336***	-0.388***	-0.005***
	(0.006)	(0.006)	(0.212)	(0.075)	(0.001)
Constant	Yes	Yes	Yes	Yes	Yes
Regulator FE	Yes	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes	Yes
Cluster	Bank	Bank	Bank	Bank	Bank
Adj. R2	0.309	0.244	0.040	0.123	0.015
Observations	99764	99871	88364	101669	101669

Appendix: Bivariate probit

- Empirical research on corporate fraud faces a challenge: frauds are not observable until they are detected.
- Poirier (1980) proposes a bivariate probit model to address this problem of partial observability
    - F_i^* denotes firm-i's incentive to commit fraud and X_F determinants of committing fraud
    - D_i^* denote firm's potential for getting caught X_D determinants of detecting fraud
    - $F_i^* = X_F \beta_F + u_i$
      $D_i^* = X_D \beta_D + v_i$
    - For fraud occurrence, I transform F_i^* into a binary variable F_i, where $F_i = 1$ if $F_i^* > 0$, and $F_i = 0$ otherwise. For fraud detection (conditional on occurrence), I transform D_i^* into a binary variable D_i, where $D_i = 1$ if $D_i^* > 0$, and $D_i = 0$ otherwise

Appendix: Bivariate probit

- I do not directly observe the realizations of F_i and D_i: I then set $Z_i = F_i \times D_i$
  - $Z_i = 1$ if fraud is committed and detected and $Z_i = 0$ otherwise
  - $P(Z_i = 1) = P(F_i = 1, D_i = 1) = \phi(X_F \beta_F, X_D \beta_D, \rho)$
  - $P(Z_i = 0) = P(F_i = 0, D_i = 0) + P(F_i = 1, D_i = 0) = 1 - \phi(X_F \beta_F, X_D \beta_D, \rho)$

- So I estimate the joint model using MLE:
  - $L(\beta_F, \beta_D, \rho) = \sum log(P(Z_i = 1)) + \sum log(P(Z_i = 0)) = \sum\{z_i log[\phi(X_F \beta_F, X_D \beta_D, \rho)] + (1 - z_i) log[1 - \phi(X_F \beta_F, X_D \beta_D, \rho)]\}$

Addressing partial observability (Nguyen et al. 2016)

(1) $P(M_{i,t}) = \beta_0 + \beta_1 SocialCapitalHQ_{t-1} + \beta_2 X_{M,i,t-1} + \mu_r + \tau_t + u_{i,t}$

(2) $P(D_{i,t}|M_{i,t}) = \beta_0 + \beta_1 SocialCapitalHQ_{t-1} + \beta_2 X_{D,i,t-1} + \mu_r + \tau_t + \epsilon_{i,t}$

	(1)	(2)
	Bivariate probit with partial observability	
Dependent var. :	P(M=1)	P(D=1 | M=1)
social capital	**-0.084***[-0.002]**	**0.047[0.001]**
	(0.030)	**(0.034)**
Z score		-0.116***
		(0.014)
regulatory capital		-0.003
		(0.004)
equity ratio	-0.019***	
	(0.007)	
ROA	-0.242***	
	(0.021)	
Controls	Yes	Yes
athrho	-0.994***	-0.994***
	(0.150)	(0.150)
Regulator dummies	Yes	Yes
Time FE	Yes	Yes
Cluster	Bank	Bank
Log-Likelihood	-10930.68	-10930.68
Pseudo-R2	-	-
Observations	97720	97720

Appendix: Robustness

	(1) Linear Bank FE	(2) State FE	(3) No-rural	(4) SC without interpolation	(5) Organ donation	(6) Religion	(7) Less severe EA
Dependent var. :							
social capital	-0.006*	-0.038**[-0.002]	-0.056***[-0.003]	-0.049***[-0.002]		-0.055***[-0.002]	-0.057***[-0.003]
	(0.003)	(0.015)	(0.015)	(0.011)		(0.012)	(0.012)
organ donation					-0.130***[-0.007]		
					(0.043)		
religion						-0.000	
						(0.001)	
less severe							0.209***
							(0.042)
Controls (Table 3)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Regulator FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State FE	No	Yes	No	No	No	No	No
Bank FE	Yes	No	No	No	No	No	No
Cluster	Bank	Bank	Bank	Bank	Bank	Bank	Bank
Adj. R2	0.054						
Pseudo-R2		0.173	0.155	0.167	0.159	0.168	0.168
Observations	27302	101669	65970	101669	68502	100402	101669

Social capital as a trait of the CEO (or bank executives)

- $P(M_{i,t}) = \beta_0 + \beta_1 CEOorExecutivesSocialCapital_{i,t-1} + \beta_2 X_{i,t-1} + \mu_r + \tau_t + u_{i,t}$
- CEO or Executives social capital: Social Capital level of the place where they grew-up (Jiang et al. 2018)
- CEO controls: CEO age, CEO tenure, CEO compensation and CEO delta
- Board controls: Board independence and board size

	(1) CEO SC	(2) CEO variables	(3) Board variables	(4) Executives SC
Dependent var. :	P(Misconduct=1)	P(Misconduct=1)	P(Misconduct=1)	P(Misconduct=1)
CEO social capital	-0.182**[-0.012]	-0.279***[-0.011]	-0.204**[-0.018]	
	(0.078)	(0.089)	(0.092)	
Executives social capital				-0.187*[-0.013]
				(0.107)
CEO controls	No	Yes	No	No
Board controls	No	No	Yes	No
Controls	Yes	Yes	Yes	Yes
Regulator FE	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes
Cluster	Bank	Bank	Bank	Bank
Pseudo-R2	0.218	0.244	0.226	0.215
Observations	2326	1687	1444	2326
Misconduct avg	0.07	0.07	0.07	0.07

Appendix: Robustness

Actual estimate equal to -0.003

Fraction

Coefficients from regressing false misconduct on social capital
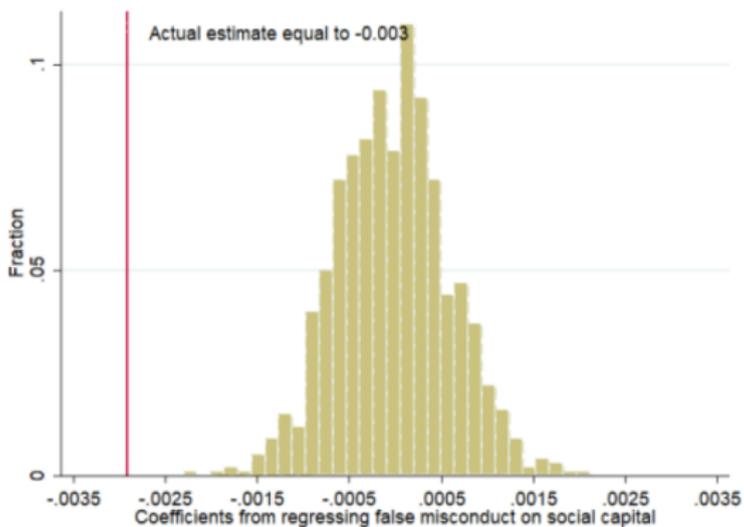
Appendix: Robustness

	(3) Technical EA	(4) Non-technical EA	(5) 2 years lag	(6) 3 years lag
Dependent var. :	P(Technical Misconduct=1)	P(Non-technical Misconduct=1)	P(Misconduct=1)	P(Misconduct=1)
social capital	-0.098***[-0.016]	-0.085***[-0.016]	-0.048***[-0.002]	-0.044***[-0.002]
	(0.023)	**(0.022)**	**(0.012)**	**(0.012)**
Z score				
regulatory capital				
equity ratio	-0.104***	-0.000	-0.030***	-0.029***
	(0.011)	(0.008)	(0.004)	(0.004)
ROA	-0.729***	-0.229***	-0.274***	-0.275***
	(0.036)	(0.027)	(0.009)	(0.010)
Controls	Yes	Yes	Yes	Yes
athrho	-	-	-	-
Regulator dummies	Yes	Yes	Yes	Yes
Time FE	-	-	Yes	Yes
Cluster	Bank	Bank	Bank	Bank
Log-Likelihood	-2920.986	-3188.799	-11407.58	-11167.98
Pseudo-R2	0.250	0.083	0.168	0.168
Observations	8952	8952	99740	97850

Appendix: National (OCC) and State (FDIC & Fed)

	(1)	(2)	(3)	(4)
Sample :	Banks regulated by OCC	Banks regulated by FDIC or Fed	Banks in <5 states regulated by OCC	Banks in <5 states regulated by FDIC or Fed
Dependent var. :	P(Misconduct=1)	P(Misconduct=1)	P(Misconduct=1)	P(Misconduct=1)
social capital	-0.036*[-0.002]	-0.065***[-0.002]	-0.050**[0.003]	-0.067***[0.003]
	(0.022)	(0.015)	(0.022)	(0.01)
Controls (Table 3)	Yes	Yes	Yes	Yes
Regulator FE	No	Yes	No	Yes
Time FE	Yes	Yes	Yes	Yes
Pseudo-R2	0.137	0.183	0.140	0.180
Observations	22164	79505	21814	79221

Appendix: Other County Variables

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	All	Pop gr	Wage gr	Pop	Pop Density	Republican	Nb of banks	Dist. to regulator
Dependent var. :					P(Misconduct=1)			
social capital	-0.036**	-0.051***	-0.056***	-0.039***	-0.038***	-0.055***	-0.054***	-0.054***
	[-0.002]	[-0.002]	[-0.003]	[-0.002]	[-0.002]	[-0.003]	[-0.002]	[-0.002]
	(0.015)	(0.012)	(0.012)	(0.014)	(0.013)	(0.012)	(0.012)	(0.012)
population gr.	0.125	0.036						
	(0.107)	(0.098)						
wage gr.	0.000		-0.000					
	(0.004)		(0.004)					
population (ln)	0.012			0.027**				
	(0.020)			(0.011)				
pop density (ln)	0.020				0.031***			
	(0.016)				(0.010)			
republican	-0.001					-0.002**		
	(0.001)					(0.001)		
numb of banks (ln)	-0.013						0.010	
	(0.018)						(0.013)	
distance to regulator (ln)	-0.001							-0.010
	(0.001)							(0.001)
religion	0.000							
	(0.001)							
Baseline controls (Table 3)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Regulator FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo-R2	0.169	0.168	0.168	0.168	0.168	0.168	0.168	0.167
Observations	98843	99780	101669	101669	101669	101669	101669	101359

Appendix: Different periods

	(1) Pre-crisis	(é) Post-crisis
Dependent var. :	P(Misconduct=1)	P(Misconduct=1)
social capital	-0.044**	-0.110***
	(0.018)	(0.024)
Constant	Yes	Yes
Regulator and Time FE	Yes	Yes
Pseudo-R2	0.124	0.147
Observations	51263	30398

Appendix: Different areas

Panel A	(1)	(2)	(3)	(4)
Sample :	North	South	East	West
Dependent var. :	P(Misconduct=1)	P(Misconduct=1)	P(Misconduct=1)	P(Misconduct=1)
social capital	-0.065***[-0.003]	-0.050**[-0.002]	-0.054***[-0.002]	-0.080***[-0.003]
	(0.018)	(0.020)	(0.015)	(0.021)
Controls	Yes	Yes	Yes	Yes
Regulator FE	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes
Pseudo-R2	0.165	0.171	0.173	0.168
Observations	53973	47696	68378	33291

Appendix: Relocations

	(1)
	Relocations
Dependent var. :	Misconduct
SCincreasing	0.017
	(0.013)
post	0.040**
	(0.019)
SCincreasing *post	**-0.037***
	(0.022)
Controls	Yes
Regulator and time dummies	Yes
Adj-R2	0.095
Observations	1419

Why Banks?

- Bank misconduct has implications for
  - financial stability (Jackson and Kotlikoff 2018 NBER),
  - shareholder value (Armour et al. 2017 JFQA, Köster and Pelster 2017 JBF),
  - reputation and public confidence (Delis, Iosifidi, et al. 2019 JBF, Zingales 2015 JF) and
  - have negative real effects on local economies where a sanctioned bank operates (Danisewicz et al. 2018 JFI)

Appendix: Principal Components Analysis (PCA)

- PCA is a data reduction technique that allows me to extract a significant portion of the variance of some related (and correlated) variables to come up with a single measure of a specific phenomenon
- Steps:
  1. Data from Rupasingha et al. (2008) for years 1997, 2005, 2009 and 2014:
     - social and civic associations that include physical fitness facilities, public golf courses, religious organizations, sports clubs, political organizations, professional organizations, business associations, labor organizations (ASSN) and number of NGO (NCCS)
     - Voter turnout (PVOTE) and response rate to Census (RESPN)
  2. I standardize the four variables: It makes the data unit free while keeping correlations among variables
  3. I perform a factor analysis and obtain the first component for each year separately
  4. The eigenvalues of the first components are 2.06, 1.94, 1.8 and 1.60 for the years 1997, 2005, 2009 and 2014, respectively
  5. I rotate the factors
  6. I predict a single value for each observation (known as scoring coefficients) based on the factors
  7. Variance captured by first component $>50\%$

Appendix: Principal Components Analysis (PCA)

VARIABLE	RESPN	PVOTE	NCCS	ASSN
RESPN	1			
PVOTE	0.12	1		
NCCS	0.14	0.56	1	
ASSN	0.2	0.36	0.58	1

Appendix: Social capital components

	(1) All components	(2) RESPN	(3) PVOTE	(4) ASSN	(5) NCCS
Dependent var. :	P(Misconduct=1)	P(Misconduct=1)	P(Misconduct=1)	P(Misconduct=1)	P(Misconduct=1)
RESPN	-0.262*[-0.012]	-0.383***[-0.017]			
	(0.152)	(0.137)			
PVOTE	0.010[0.001]		-0.221*[-0.010]		
	(0.139)		(0.127)		
ASSN	-0.111***[-0.004]			-0.121***[-0.005]	
	(0.028)			(0.024)	
NCCS	-0.000[-0.000]				-0.001**[-0.000]
	(0.001)				(0.001)
Controls (Table 3)	Yes	Yes	Yes	Yes	Yes
Regulator and Time FE	Yes	Yes	Yes	Yes	Yes
Pseudo-R2	0.168	0.167	0.167	0.168	0.167
Observations	101669	101669	101669	101669	101669
p-value test : RESPN+PVOTE=ASSN+NCCS	0.41				

Appendix: Table 10 other FE

Sample : Banks in >=2 Counties	(1) All	(2) Pre-Crisis	(3) Crisis & Post-crisis
Dependent var. :	%Market share of deposits		
Z social capital branches	1.515***	1.015***	1.846***
	(0.160)	(0.178)	(0.176)
misconduct * Z social capital branches	-0.449***	-0.074	-0.640***
	(0.172)	(0.296)	(0.185)
County level Controls (Table 10)	Yes	Yes	Yes
Bank x Year FE	Yes	Yes	Yes
Cluster	Bank	Bank	Bank
Adj. R2	0.405	0.415	0.399
Observations	270588	111321	159267

Appendix: Trust in banks

Appendix: Consequences of misconduct

- Armour et al (2017) find that penalized firms' stock prices experience statistically significant abnormal losses of approximately nine times the fines and compensation paid
- Köster and Pelster (2017) estimate that penalties may cost arround 0.6pp - 0.7pp decline in pre-tax ROA after misconduct is revealed but no post-tax impact
- Highest sanction against banks in the US sample: BofA faced $16.5 billion for violations of consumer protection laws.
- BofA net income:
    - 2013: $11.4 billion
    - 2014: $5.5 billion
    - 2015: $15.9 billion
    - 2016: $17.82 billion
    - 2017: $18.2 billion

Appendix: Consequences of misconduct

- Some anecdotal evidence on Danske Bank Money Laundering scandal (September 4th, 2018) - MarketCap is around DKK 172 B (€ 23.05 B) :

Appendix: Ex. BHC vs. Bank level

The Synovus Family of Companies