THE DECLINE OF BRANCH BANKING

Discussion by Effi Benmelech, Kellogg Northwestern

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Comments on the Paper

- Very interesting paper looking into bank branch openings and closures.
- Many of the results in the paper are related to papers that were written two years ago about the role that technology played in the 2023 Banking Crisis.
- For example, the branch clientele effect (education, income and population density) is consistent with Benmelech et al (2023) who link depositor education, wealth and population density to branch density.
- Bank Clientele is very important but understudied.

BANK BRANCH DENSITY AND BANK RUNS

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Branch Density

Branch Density of Bank $i = \frac{\# of branches of Bank i}{Value of Deposits in Bank i [$B]}$

Ν	Mean	Std	10%	25%	50%	75%
294	9.23	5.783	1.95	4.992	9.026	12.961

Paper Overview

The paper examines the role that branch density played in the 2023 banking crisis

 Banks with lower branch density had lower stock returns and higher outflows of uninsured deposits

Banking with few branches was facilitated by digital technologies and attracted tech-savvy depositors who are highly mobile in times of panic

- Branch density correlated with banks' IT investment and abnormal online traffic to bank website during the panic
- Depositors of low-density banks more likely to be corporate, with large deposits, urban, young, highly educated, and high income

Branch Density - Basic Patterns

Branches and Deposits over Time



Number of Branches Less Correlated with Deposits



 $Deposits_i = \alpha + \beta \times Number \ of \ Branches_i + \varepsilon_i$

Branch Density by Bank Size



Deposit Growth 2010-22 by Branch Density



Deposit Growth 2010-22 by Branch Density



Branch Density and Stock Prices



What is Behind Branch Density?

What is behind Branch Density?

- Banks with lower branch density performed worse. Why?
- Clientele Effect: These banks have business models that attract certain type of customers who are more likely to withdraw their money in times of crisis.
- Who are they and what attracts them?
 - Two hypotheses:
 - a. Digitally-oriented customers attracted by comprehensive IT services
 - b. Price-sensitive customers attracted by higher rates
 - Closely linked, but data supports the IT-based explanation more

Branch Density and Clientele Characteristics (Census)

	Corporate Dep/Total Dep	Log(Avg Deposit)	Urban	Log(Income)	% 60+	% High Edu
Duan als Danaitre	-1.289***	-0.107***	-2.551***	-0.017***	0.164***	-0.785***
Branch Density	(0.314)	(0.020)	(0.540)	(0.003)	(0.048)	(0.122)
Insured Dep	-0.260***	-0.009	-0.242**	-0.001	0.009	-0.039
/Total Dep	(0.076)	(0.007)	(0.120)	(0.001)	(0.016)	(0.028)
Dev / A saat	-0.251**	-0.041***	-0.094	-0.002*	0.020	-0.119***
Dep/Asset	(0.099)	(0.007)	(0.145)	(0.001)	(0.015)	(0.044)
	-0.494**	-0.011	0.344	0.007**	0.057	0.183
WITM LOSSES	(0.242)	(0.013)	(0.346)	(0.003)	(0.047)	(0.115)
Dep Growth	0.062***	0.005***	-0.048*	-0.000	0.003	-0.008
2019-2022	(0.019)	(0.002)	(0.028)	(0.000)	(0.004)	(0.010)
Observations	212	212	212	212	212	212
R-squared	0.391	0.563	0.433	0.208	0.198	0.386
Size Controls	X	Х	X	Х	Х	Х

Branch Density and Clientele Characteristics (MRI Simmons)

	Urban	Log Income	Age $60+$	Bachelor's
(Intercept)	0.962***	10.901^{***}	0.381***	0.442***
	(0.026)	(0.021)	(0.014)	(0.010)
Branch Density	-0.024*	-0.019***	0.014^{***}	-0.010***
	(0.009)	(0.004)	(0.003)	(0.002)
Num.Obs.	100566	69767	100566	100566
% effect	-7.7	-5.7	12.1	-5.6

 Table 2: Bank Demographics

Notes: + p < 0.1, * p < 0.05, ** p < 0.01, *** p < 0.001. Standard Errors clustered at the bank level. % *effect* is the percentage effect of a one Standard Deviation increase in Branch Density (3.01) on the dependent variable mean. This Standard Deviation is computed on the full density data at the bank level.

Branch Density and Use of Digital Technology (MRI Simmons)

	Uses Mobile	Uses In Person	Hates In Person
(Intercept)	0.623***	0.514***	0.556***
	(0.009)	(0.019)	(0.011)
Branch Density	-0.018***	0.023***	-0.021***
	(0.002)	(0.005)	(0.003)
Num.Obs.	100566	100566	100566
% effect	-9.0	12.2	-12.5

Table 3: Mobile & In Person Banking

Branch Density and Use of Digital Technology (MRI Simmons)

	Uses Mobile	Uses In Person	Hates In Person
(Intercept)	0.372***	0.461^{***}	0.421***
	(0.045)	(0.052)	(0.029)
Branch Density	-0.008**	0.023^{***}	-0.020***
	(0.002)	(0.005)	(0.003)
Log Income	0.031^{***}	0.001	0.017^{***}
	(0.004)	(0.004)	(0.002)
Age $60+$	-0.197***	0.103^{***}	-0.121***
	(0.019)	(0.007)	(0.008)
Bachelor's	0.049^{***}	-0.020**	0.020^{***}
	(0.007)	(0.005)	(0.004)
Num.Obs.	69767	69767	69767
% effect	-4.2	12.2	-11.8

Table 4: Mobile & In Person Banking

Notes: + p < 0.1, * p < 0.05, ** p < 0.01, *** p < 0.001. Standard Errors clustered at the bank level. % *effect* is the percentage effect of a one Standard Deviation increase in Branch Density (3.01) on the dependent variable mean. This Standard Deviation is computed on the full density data at the bank level.

What Do Bank Customers Value? (MRI Simmons)

	Values Online	Values Location	Values Int Rates
(Intercept)	0.262***	0.321***	0.299***
	(0.044)	(0.047)	(0.042)
Branch Density	-0.012***	0.021^{***}	-0.011*
	(0.002)	(0.004)	(0.005)
Log Income	0.021^{***}	0.010^{*}	0.020***
	(0.005)	(0.004)	(0.003)
Age $60+$	-0.079***	0.110^{***}	-0.080***
	(0.008)	(0.009)	(0.009)
Bachelor's	0.012	-0.004	0.023**
	(0.009)	(0.005)	(0.006)
Num.Obs.	69767	69767	69767
% effect	-8.8	11.9	-7.3

Table 6: Factors When Choosing Bank

Notes: + p < 0.1, * p < 0.05, ** p < 0.01, *** p < 0.001. Standard Errors clustered at the bank level. % effect is the percentage effect of a one Standard Deviation increase in Branch Density (3.01) on the dependent variable mean. This Standard Deviation is computed on the full density data at the bank level.

Bank Clientele Sophistication (MRI Simmons)

	Reads Fin News	Uses Twitter	Owns Stocks	Cr Score
(Intercept)	-0.219***	0.123***	-0.430***	574.938***
	(0.042)	(0.027)	(0.035)	(2.651)
Branch Density	-0.015***	-0.005***	-0.005*	0.457
	(0.002)	(0.000)	(0.002)	(0.502)
Log Income	0.053^{***}	0.009^{**}	0.058^{***}	10.744^{***}
	(0.004)	(0.003)	(0.003)	(0.255)
Age $60+$	0.011 +	-0.108***	0.037^{***}	13.160^{***}
	(0.005)	(0.003)	(0.004)	(1.064)
Bachelor's	0.011	0.105^{***}	0.044^{***}	23.179^{***}
	(0.006)	(0.004)	(0.006)	(0.875)
Num.Obs.	69767	69767	69767	69745
% effect	-14.3	-6.5	-7.4	0.2

 Table 8: Sophistication Measures

Notes: + p < 0.1, * p < 0.05, ** p < 0.01, *** p < 0.001. Standard Errors clustered at the bank level. % *effect* is the percentage effect of a one Standard Deviation increase in Branch Density (3.01) on the dependent variable mean. This Standard Deviation is computed on the full density data at the bank level.

Bank Clientele Sophistication (Tidbits) (MRI Simmons)

Dependent Variable	Estimate	P-value	% Effect
Zelle User	-0.032	0.000	-41.8%
Pay Bills in Person	0.018	0.001	47.0%
Number of Credit Cards	-0.094	0.000	-23.0%
Car Policy via Agent	0.025	0.000	15.3%
Car policy via Website	-0.008	0.039	1-3.0%
Drives Tesla	-0.001	0.004	-34.6%
Passport Owner	-0.025	0.000	-11.6%
Frequent Flyer	-0.016	0.000	-13.5%

Measuring IT

- SWZD Aberdeen Data (formerly Harte Hanks)
- Branch-level survey on IT equipment needs and usage, e.g., IT budget, laptops, printers, etc.
- 2010-2017. Data after 2017 is imputed (= essentially extrapolated from 2017) so we do not use it.
- Collected information is sold to large IT firms for marketing purposes

Technology vs Price - a Horserace

	(1)	(2)	(3)
	Deposit Rate	Stock Return (SVB)	Stock Return (First Republic)
IT Growth 2010-2017 (standardized)	0.173*** (0.035)	-1.558*** (0.529)	-0.531* (0.270)
Deposit Rate (standardized)		-0.552 (0.849)	-0.532 (0.390)
Observations	150	150	150
R-squared	0.349	0.314	0.265
Size Controls	Х	Х	Х
All Standard Controls	Х	Х	Х

- The paper provides very interesting evidence on bank branch locations which provides vey valuable information to the banks themselves.
- However, given the results in the paper unclear why branch location matters.
- The authors find very weak evidence or no evidence that lending variables explain branch restructuring.
- That is while bank liabilities are correlated with branch location there is no evidence that bank assets are related to these decisions.

The authors write:

"We find at best only weak evidence that lending variables can explain branch restructuring. This is surprising given that much of the prior banking literature has demonstrated the importance of physical distance between bankers and borrowers ...But technology has significantly reduced the importance of distance... As such, physical proximity no loner matters much for information production.

For these reasons, we argue that the demand for lending does not help explain branch restructuring because bank location matter little for effective credit provisions for banks."

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For these reasons, we argue that the demand for lending does not help explain branch restructuring because bank location matter little for effective credit provisions for banks."

So perhaps banks are not special after all?

But then The authors conclude:

"Understanding the drivers of branch closures matter becayse branch-based frictions have traditionally mediated flows of capital across markets and have affected local-market competition for **both** deposit and credit markets. Such frictions reduce financial market efficiency and integration. Lowering these frictions through technology furthers a process which began in the 1980s with deregulation of restrictions on branching and interstate banking. As such, continued bank restructuring will likely improve the functioning of local financial markets further."