Banking on a Corporate Rebrand

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ONLINE APPENDIX

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A Additional Tables

Table A1: **German-named banks vs. other banks: mean comparison tests (1916)**

	Other	German-named	Δ of means	SE of Δ	t-stat for Δ
Total assets (in 100K USD)	11.57 [17,496]	22.69 [174]	-11.12	7.41	-1.50
Total deposits (in 100K USD)	9.60 [17,496]	19.73 [174]	-10.13	6.41	-1.58
Leverage ratio (total assets/capital and surplus)	6.28 [17,496]	7.67 [174]	-1.39	0.22	-6.42***
Liquid asset ratio (specie and due from banks/total assets)	0.23 [17,496]	0.20 [174]	0.02	0.01	2.25**
Loan share (loans/total assets)	0.63 [17,496]	0.67 [174]	-0.04	0.01	-2.66***
Bonds share (bonds and stocks/total assets)	0.09 [17,496]	0.09 [174]	0.00	0.01	0.32
Bonds to loans ratio (bonds and stocks/loans)	0.54 [17,225]	0.18 [172]	0.36	2.88	0.13
Deposit share (total deposits/total assets)	0.77 [17,496]	0.83 [174]	-0.06	0.01	-6.36***
Market share in location (total deposits)	0.58 [17,496]	0.38 [174]	0.20	0.03	7.32***
Excess market share in location (total deposits)	1.00 [17,496]	0.99 [174]	0.01	0.04	0.36
Surplus and profits/capital	0.61 [17,496]	0.80 [174]	-0.20	0.05	-3.89***
Bank age	15.46 [17,496]	18.88 [174]	-3.42	1.01	-3.39***
National bank (dummy)	0.27 [17,496]	0.14 [174]	0.13	0.03	3.85***
Fed member bank (dummy)	0.27 [17,496]	0.14 [174]	0.13	0.03	3.71***
Only bank in town (dummy)	0.34 [17,496]	0.19 [174]	0.15	0.04	4.09***
Share of German population (county, 1910)	2.93 [17,144]	6.36 [174]	-3.43	0.24	-14.56***
German newspapers per 100K inhabitants (city, 1910)	1.61 [17,496]	6.22 [173]	-4.61	1.19	-3.86***
Farms per 1,000 inhabitants (county, 1910)	98.52 [17,150]	75.44 [174]	23.08	3.60	6.42***
City population (in K, 1910)	58.95 [16,310]	167.77 [170]	-108.82	31.21	-3.49***

This table presents mean comparison tests for bank-level variables (measured in 1916), town-level variables (measured in 1910) and county-level variables (measured in 1910), comparing German-named banks to all other banks present in our sample in 1916. The number of individual bank observations is shown in square brackets. Many locations did not feature German-named banks and many locations were single bank towns. These features of our data explain why the sample size in the table above is larger than in Table A3 below. The excess market share of bank i in location L is defined as follows: excess market $\text{share}_{i,L}$ = market $\text{share}_{i,L}/(1/\text{number of banks}_{i,L})$. Asterisks indicate statistical significance: * for $p < 0.1$, ** for $p < 0.05$, and *** for $p < 0.01$.

Table A2: **German-named banks vs. other banks: mean comparison tests (1920)**

	Other	German-named	Δ of means	SE of Δ	t-stat for Δ
Total assets (in 100K USD)	16.98 [19,315]	33.34 [154]	-16.37	11.50	-1.42
Total deposits (in 100K USD)	14.09 [19,315]	28.13 [154]	-14.04	9.57	-1.47
Leverage ratio (total assets/capital and surplus)	8.25 [19,315]	9.73 [154]	-1.47	0.29	-5.03***
Liquid asset ratio (specie and due from banks/total assets)	0.14 [19,315]	0.14 [154]	0.01	0.01	0.92
Loan share (loans/total assets)	0.67 [19,315]	0.68 [154]	-0.01	0.01	-0.72
Bonds share (bonds and stocks/total assets)	0.13 [19,315]	0.14 [154]	-0.01	0.01	-0.68
Bonds to loans ratio (bonds and stocks/loans)	0.81 [19,021]	0.25 [153]	0.56	3.75	0.15
Deposit share (total deposits/total assets)	0.79 [19,315]	0.83 [154]	-0.05	0.01	-4.62***
Market share in location (total deposits)	0.57 [19,315]	0.40 [154]	0.17	0.03	6.07***
Excess market share in location (total deposits)	1.00 [19,315]	1.00 [154]	0.00	0.05	0.05
Surplus and profits/capital	0.75 [19,315]	0.87 [154]	-0.12	0.06	-1.91*
Bank age	17.41 [19,315]	22.87 [154]	-5.46	1.12	-4.89***
National bank (dummy)	0.26 [19,315]	0.14 [154]	0.13	0.04	3.52***
Fed member bank (dummy)	0.31 [19,315]	0.27 [154]	0.05	0.04	1.23
Only bank in town (dummy)	0.32 [19,315]	0.18 [154]	0.14	0.04	3.69***
Share of German population (county, 1920)	1.83 [19,227]	4.14 [154]	-2.30	0.15	-14.94***
Farms per 1,000 inhabitants (county, 1920)	95.39 [19,232]	73.78 [154]	21.61	3.86	5.60***
City population (in K, 1920)	70.85 [17,735]	201.17 [151]	-130.32	38.43	-3.39***
Farmland value (percent change, 1910-1920)	95.41 [18,863]	88.93 [154]	6.48	5.25	1.23
Improved acres (percent change, 1910-1920)	3.57 [18,863]	-1.73 [154]	5.31	1.81	2.94***
Mortgage debt per farm (percent change, 1910-1920)	199.74 [18,845]	144.19 [154]	55.56	21.75	2.55**

This table presents mean comparison tests for bank-level variables (measured in 1920), town-level variables (measured in 1920) and county-level variables (measured as changes between 1920 and 1910), comparing German-named banks to all other banks present in our sample in 1920. The number of individual bank observations is shown in square brackets. The excess market share of bank i in location L is defined as follows: excess market share$_{i,L}$ = market share$_{i,L}$/(1/number of banks$_{i,L}$). Asterisks indicate statistical significance: * for p < 0.1, ** for p < 0.05, and *** for p < 0.01.

Table A3: **German-named banks vs. other banks: within-town mean comparison tests (1916)**

	Difference	SE of difference	t-stat for difference
Total assets (in 100K USD)	-13.44	12.88	-1.04
Total deposits (in 100K USD)	-9.89	11.14	-0.89
Leverage ratio (total assets/capital and surplus)	0.47	0.23	2.02**
Liquid asset ratio (specie and due from banks/total assets)	-0.00	0.01	-0.14
Loan share (loans/total assets)	0.01	0.01	1.06
Bonds share (bonds and stocks/total assets)	-0.01	0.01	-0.83
Deposit share (total deposits/total assets)	0.03	0.01	3.11***
Market share in location (total deposits)	-0.02	0.02	-1.07
Surplus and profits/capital	0.19	0.07	2.68***
Bank age	-0.39	1.38	-0.28
National bank (dummy)	-0.16	0.05	-3.49***

This table shows within-town mean comparison tests between German-named and other banks in our sample for 1916 (11,713 banks in total, 141 of which have German names). We obtain the within-town difference in means estimates by regressing the variable of interest on a German bank dummy and town fixed effects. Note that several German-named banks drop from the estimation sample for 1916 (c.f. Table A1) because they were the only bank in their town. Asterisks indicate statistical significance: * for $p < 0.1$, ** for $p < 0.05$, and *** for $p < 0.01$.

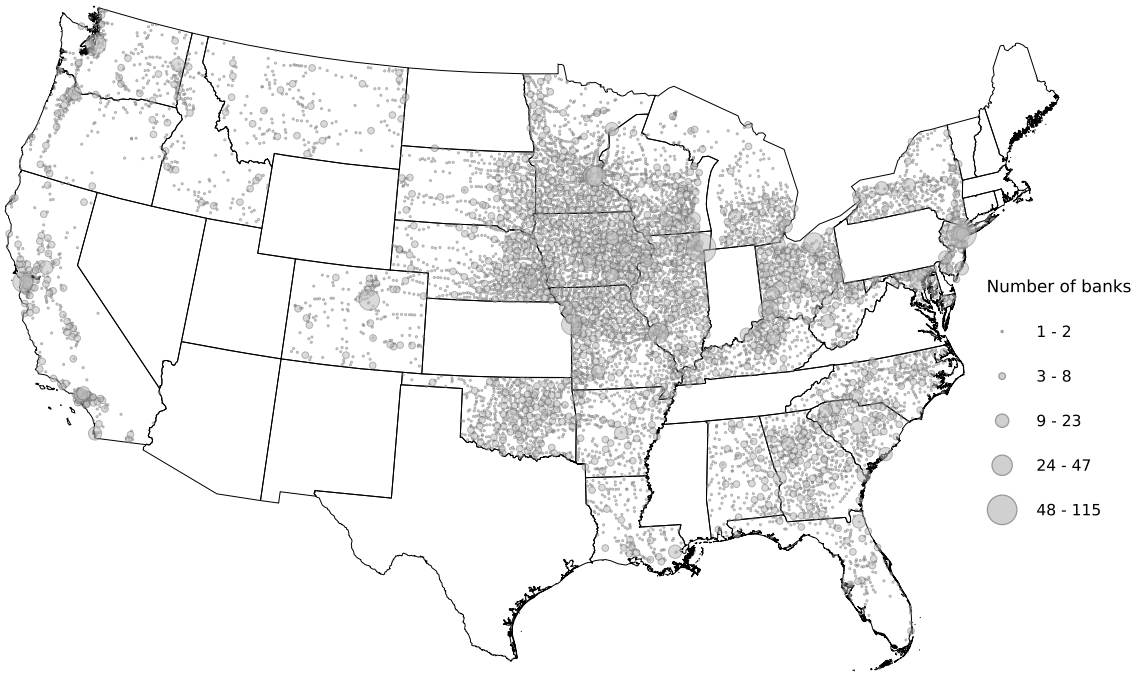
Table A4: **Heterogeneity by accrued brand value**

Established German rebranders relative to less established German rebranders			
	(1)	(2)	(3)
	Assets (log)	Deposits (log)	Market share (log)
ATET (in log points)	-0.2110***	-0.2202***	–0.1571***
	(0.0561)	(0.0560)	(0.0554)
ATET (percent difference)	−19.02%	−19.76%	−14.54%
Total German rebanders (banks aged ≥ 19 years)	38 (19)	38 (19)	38 (19)

This table presents synthetic difference-in-differences (SDiD) estimates for the average treatment effect of established brand value on the treated, defined as German-named banks aged 19 years or more in 1916 (i.e., the sample median of German-named banks that rebranded). The results show that the joint impact of anti-German and rebranding effects was more negative for those German-named banks with above median age. The cleaned and balanced estimation sample contains 16 neutral rebranders and 22 patriotic rebranders. Exactly 8 neutral rebranders and 11 patriotic rebranders are classified as treated based on their age. Hence, accrued brand value as proxied by bank age in 1916 was evenly split across neutral and patriotic rebranders. We display bootstrapped standard errors clustered at the bank level in parentheses. Asterisks indicate statistical significance: * for $p < 0.1$, ** for $p < 0.05$, and *** for $p < 0.01$.

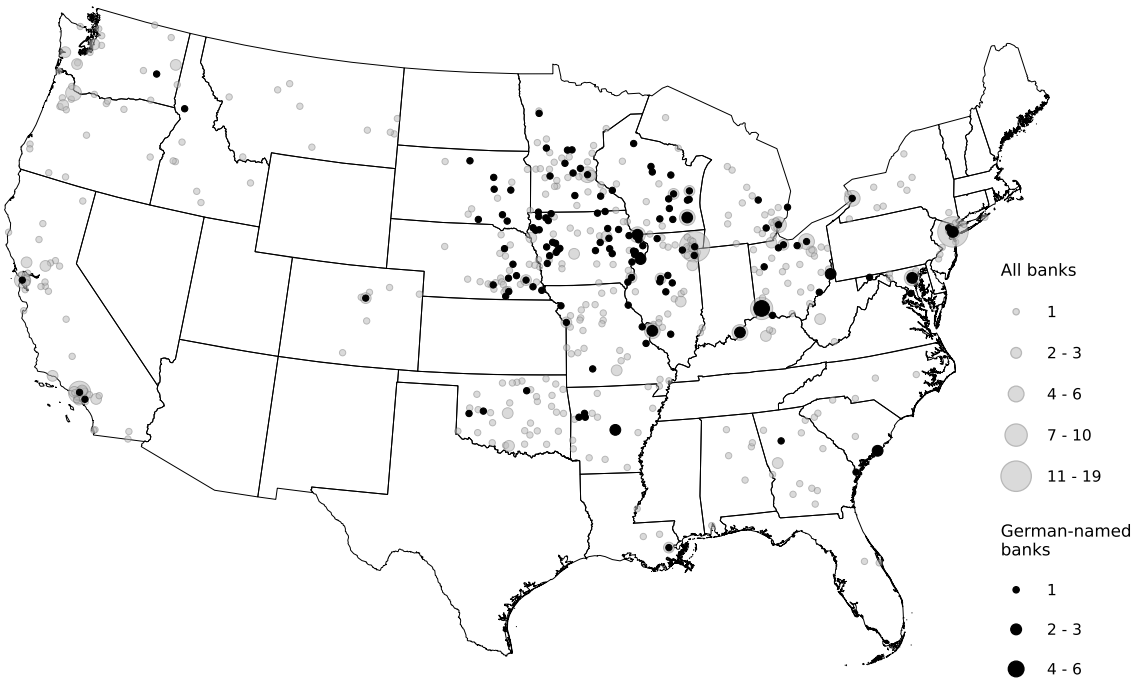
B Additional Figures

Figure B1: **Banks in sample**



This figure shows the number and locations of all banks in our sample as of 1916.

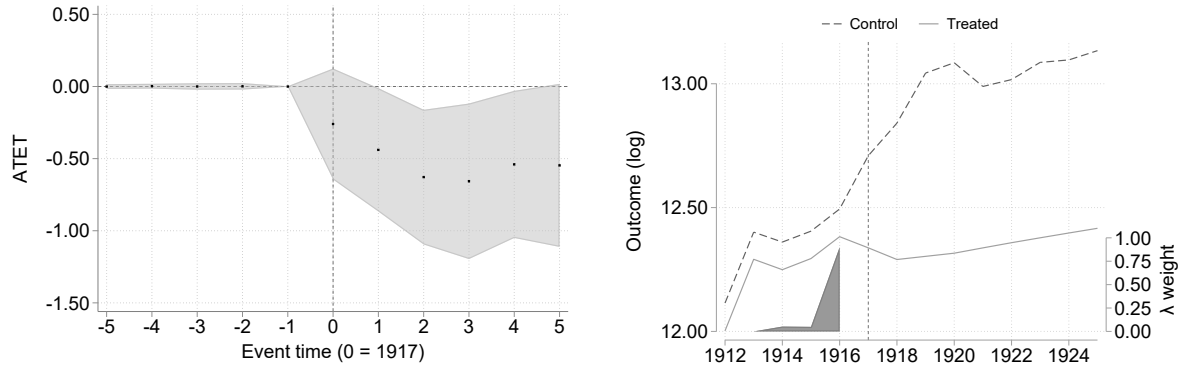
Figure B2: **Geographic locations of banks changing name (1913–1925)**



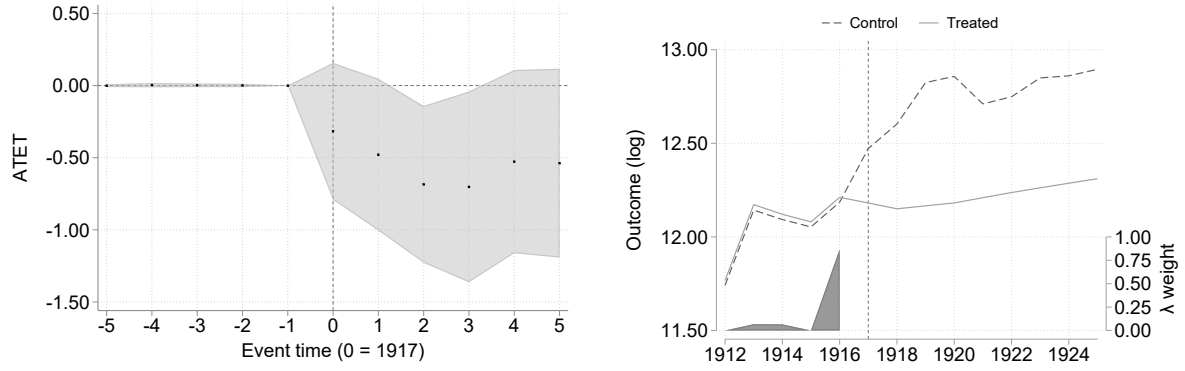
This figure shows the number and locations of all banks in our sample that changed their name between 1913 and 1925. We plot the total number name changing banks in a location in gray, and overlay it with the number of German-named banks that changed their name in black.

Figure B3: **Dynamic anti-German effect**

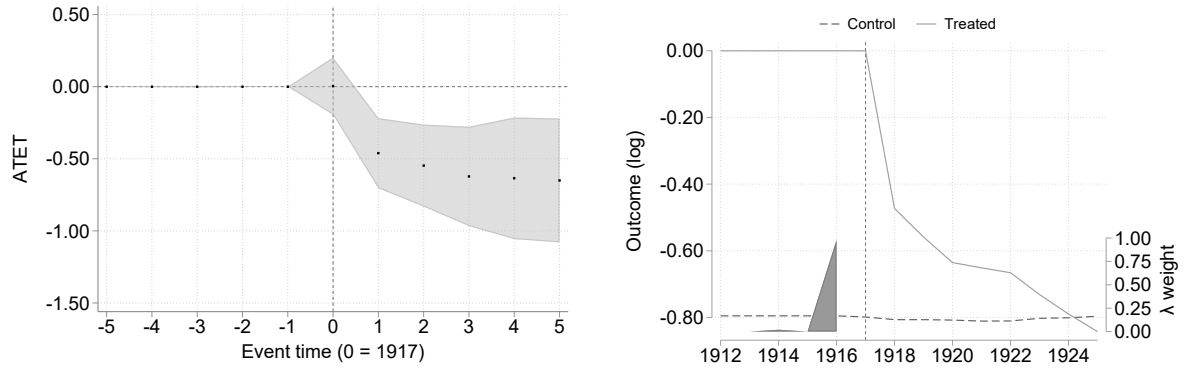
Panel A. Total assets (log)



Panel B. Total deposits (log)



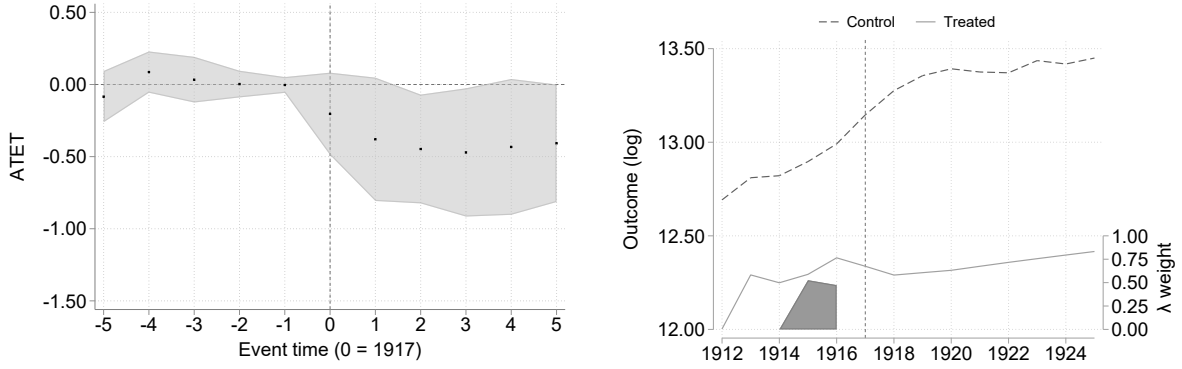
Panel C. Market share of deposits (log)



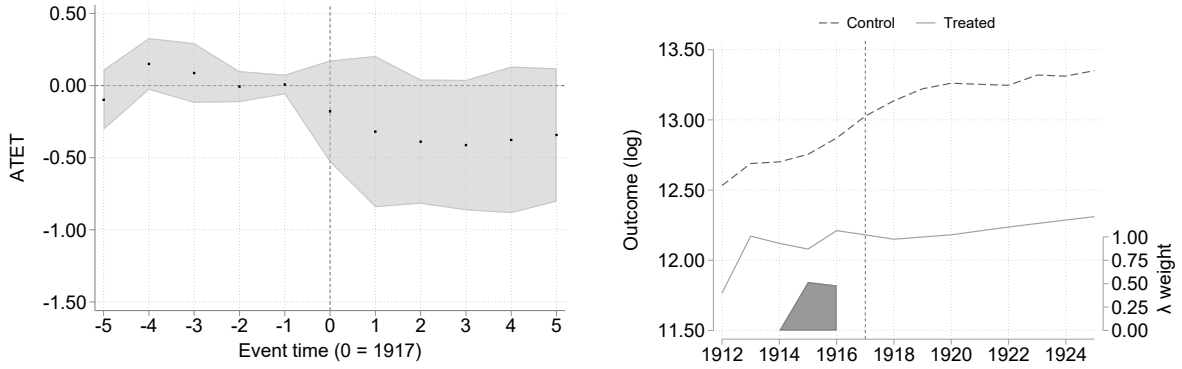
This figure shows the dynamic anti-German effect obtained by estimating the event-study version of the synthetic difference-in-differences regression in Equation (1) in the main paper. We compare German name keepers (treated unit) to non-German name keepers (control group). The left column in the three panels A, B, and C plot the treatment effect of keeping the German name on the evolution of assets, deposits and market share respectively. We also display 95% confidence intervals based on standard errors using the placebo-based method as proposed by Arkhangelsky et al. (2021). The right column in each panel shows the constructed synthetic control and the underlying time (λ) weights.

Figure B4: **Dynamic neutral rebranding effect**

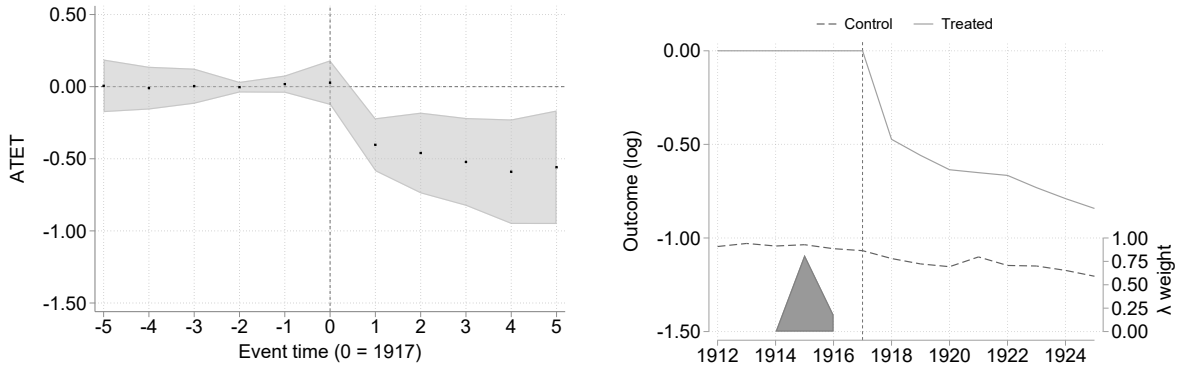
Panel A. Total assets (log)



Panel B. Total deposits (log)

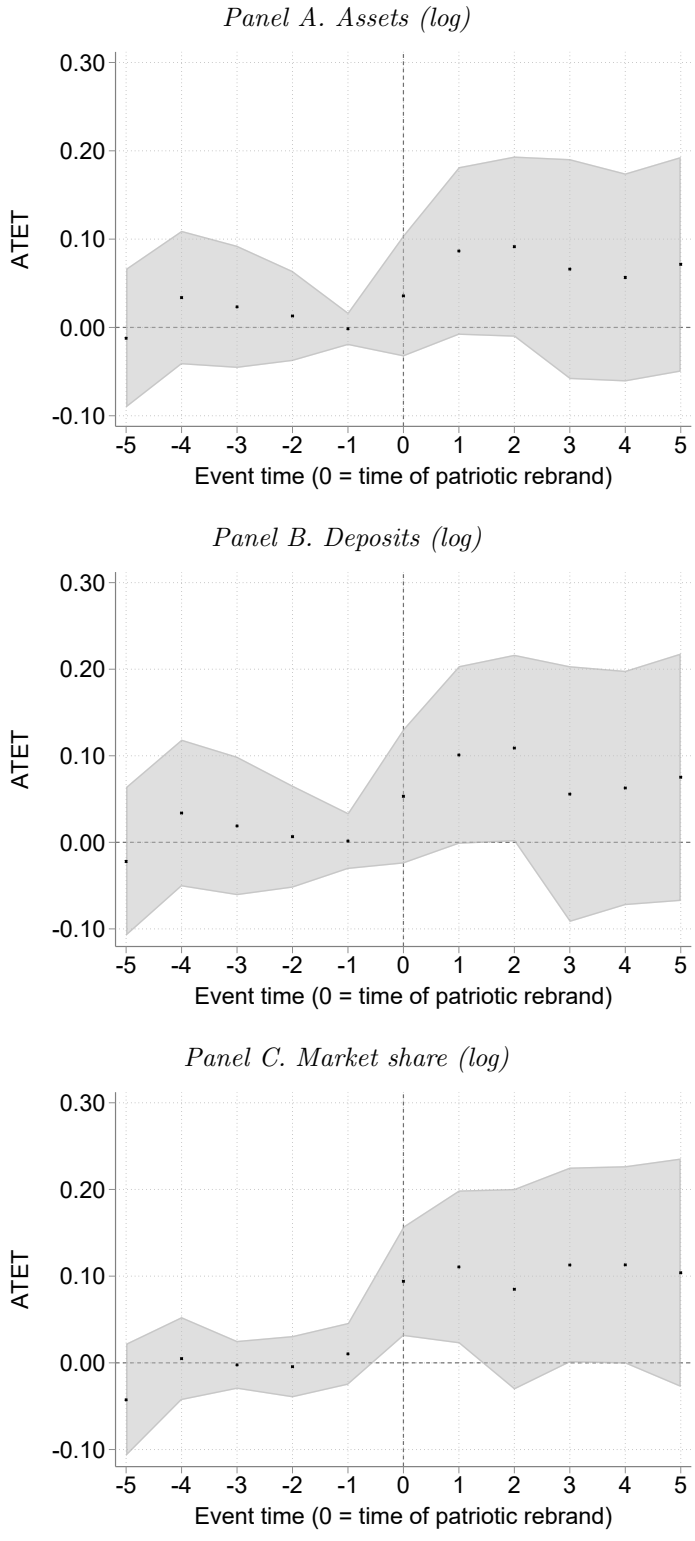


Panel C. Market share of deposits (log)



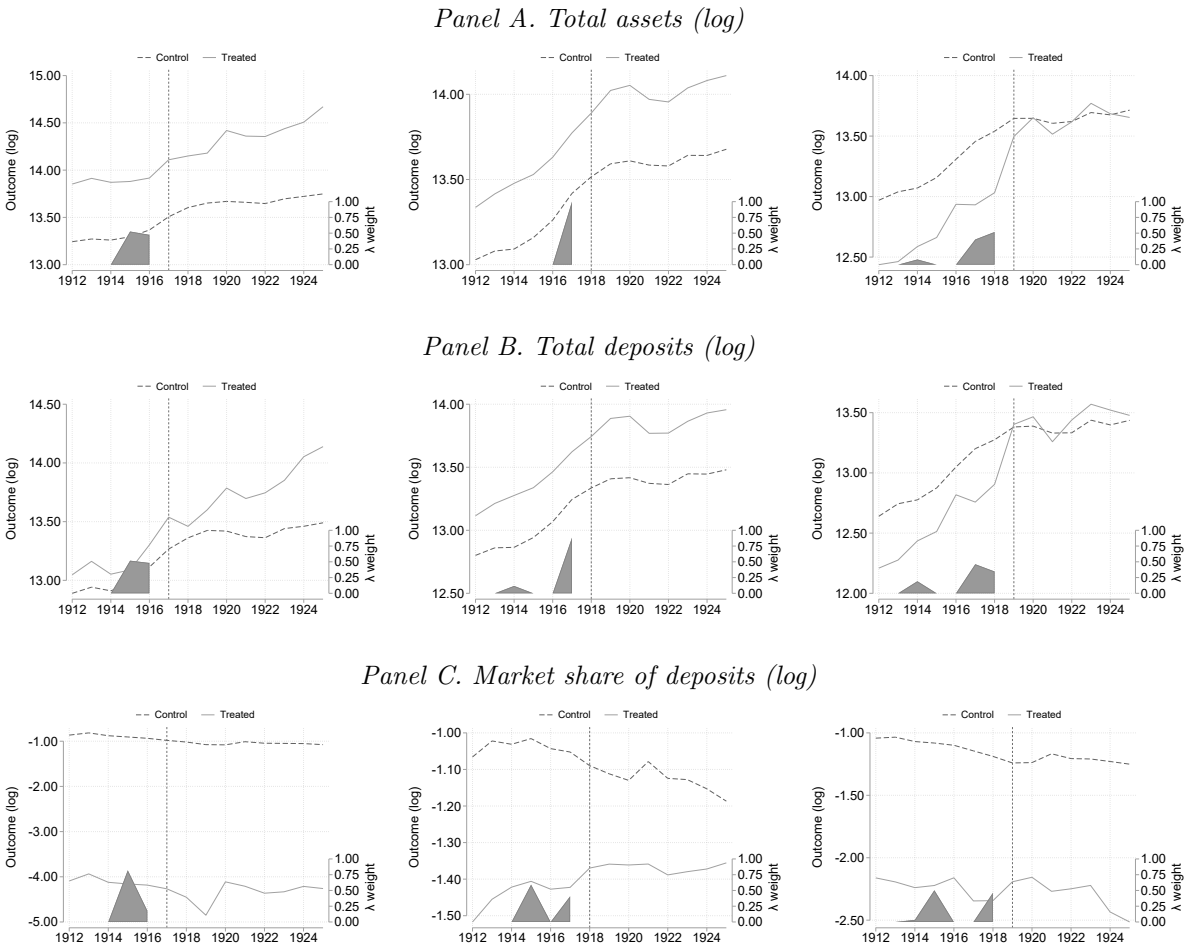
This figure shows the dynamic neutral rebranding effect obtained by estimating the event-study version of the synthetic difference-in-differences regression in Equation (1) in the main paper. We compare German name keepers (treated unit) to German neutral rebranders (control group). The left column in the three panels A, B, and C plot the treatment effect of keeping the German name on the evolution of assets, deposits and market share respectively. We also display 95% confidence intervals based on standard errors using the placebo-based method as proposed by Arkhangelsky et al. (2021). The right column in each panel shows the constructed synthetic control and the underlying time (λ) weights.

Figure B5: **Dynamic patriotic framing effect**



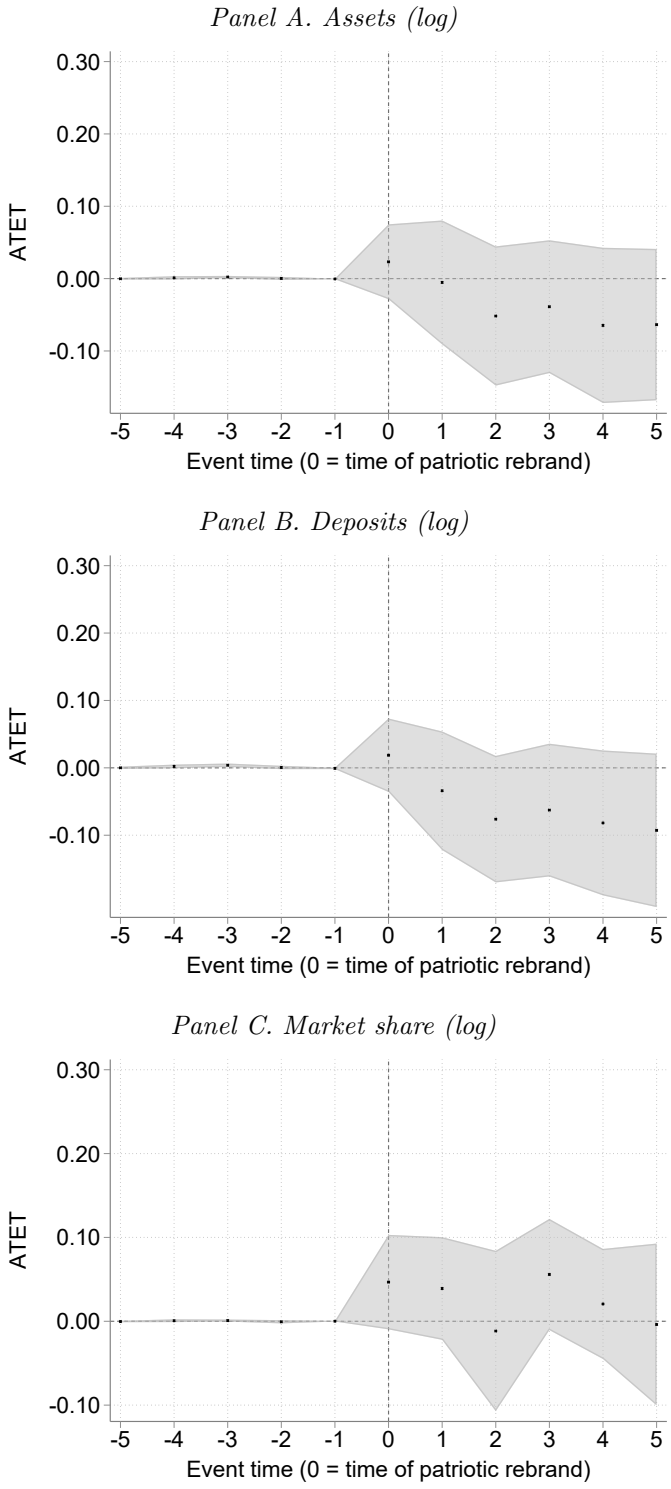
This figure shows the dynamic patriotic framing effect obtained by estimating the event-study version of the synthetic difference-in-differences regression in Equation (1) in the main paper. We compare German patriotic rebranders (treatment group) to German neutral rebranders (control group). The three panels A, B, and C plot the treatment effect of choosing a patriotic name on the evolution of assets, deposits and market share respectively. We also display 95% confidence intervals based on standard errors using the bootstrap-based method as proposed by Arkhangelsky et al. (2021). We plot the constructed synthetic controls for each year cohort and the underlying time (λ) weights in Figure B6. Since patriotic rebranding happened in 1917, 1918 and 1919, treatment is staggered. Hence, event-time is centered around the time of the patriotic rebranding (corresponding to event-time 0). In contrast, for ease of exposition Figure 3 in the main paper uses a common event time definition (0 = 1917) for all effects.

Figure B6: **Cohort-specific synthetic controls for patriotic framing effect**



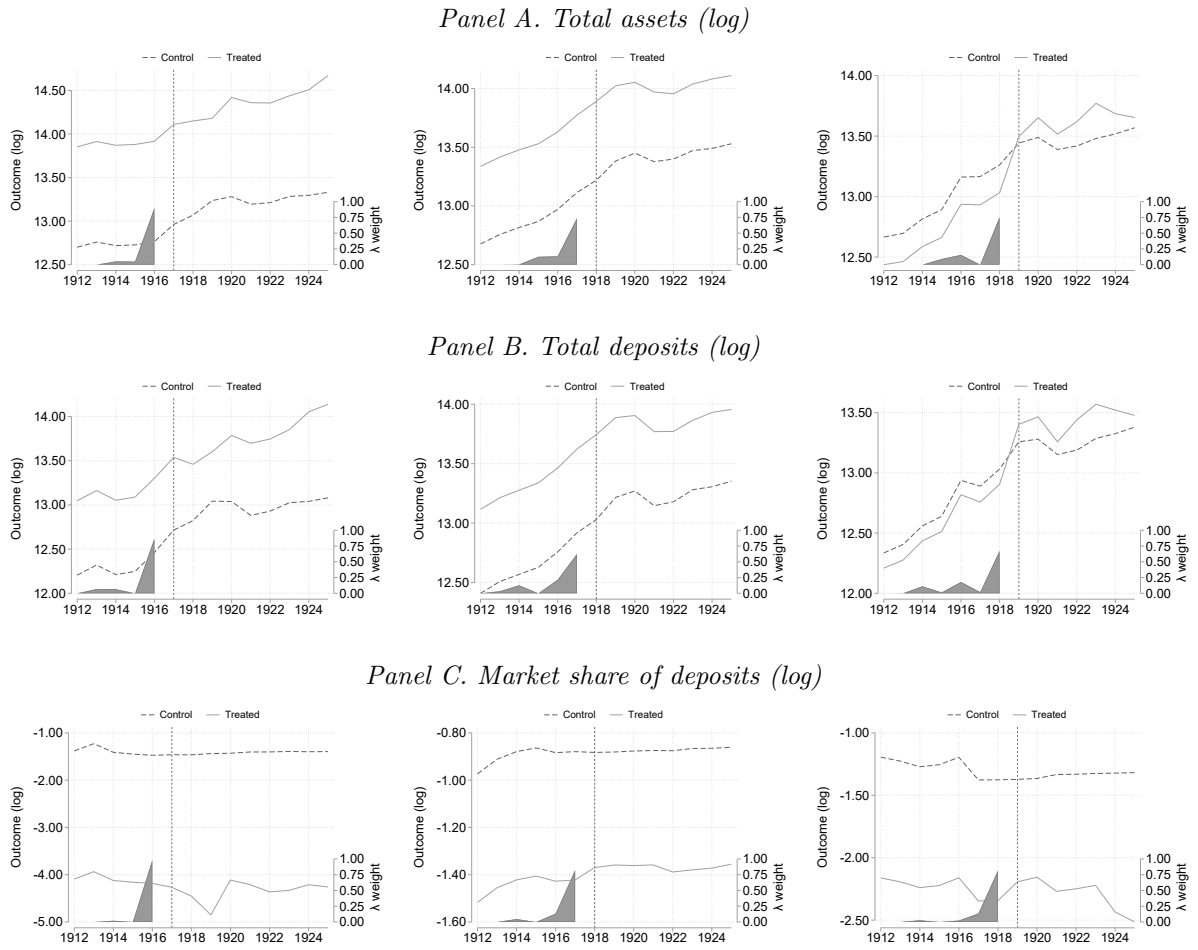
This figure plots the constructed synthetic controls for each year cohort and the underlying time (λ) weights for the treatment effects displayed in Figure B5. The left, middle and right columns show synthetic counterfactuals for patriotic rebranders in 1917, 1918 and 1919 respectively.

Figure B7: **Dynamic combined effect**



This figure shows the dynamic combined effect obtained by estimating the event-study version of the synthetic difference-in-differences regression in Equation (1) in the main paper. We compare German patriotic rebranders (treatment group) to non-German-named banks that did not rebrand (control group). The three panels A, B, and C plot the treatment effect of choosing a patriotic name on the evolution of assets, deposits and market share respectively. We also display 95% confidence intervals based on standard errors using the bootstrap-based method as proposed by Arkhangelsky et al. (2021). We plot the constructed synthetic controls for each year cohort and the underlying time (λ) weights in Figure B8. Since patriotic rebranding happened in 1917, 1918 and 1919, treatment is staggered. Hence, event-time is centered around the time of the patriotic rebranding (corresponding to event-time 0). In contrast, for ease of exposition Figure 3 in the main paper uses a common event time definition (0 = 1917) for all effects.

Figure B8: **Cohort-specific synthetic controls for combined effect**



This figure plots the constructed synthetic controls for each year cohort and the underlying time (λ) weights for the treatment effects displayed in Figure B7. The left, middle and right columns show synthetic counterfactuals for patriotic rebranders in 1917, 1918 and 1919 respectively.

C Additional Information on the Frequency and Drivers of Rebranding

This section provides more details regarding the frequency and drivers of name changes in the commercial banking industry in the 1910s and 1920s. We begin by estimating non-parametric survival models to show how the number of rebranders evolved over time relative to the number of banks that kept their corporate brand names. Specifically, we estimate the following equation:

$$\hat{S}(t) = \prod_{t_i \leq t} \left(\frac{n_i - d_i}{n_i} \right) \tag{C.1}$$

where $\hat{S}(t)$ is the estimated survival probability at time t, t_i stands for number of times at which name changes occur, n_i represents the number of banks at risk just before time t_i, and d_i captures the number of name changes occurring at t_i.

Panel A of Figure C1 shows separate Kaplan-Meier estimates of equation C.1 for German-named and all other banks. This figure shows that only 2% of non-German-named banks changed their names between 1912 and 1925 (521 out of all 24,437 unique non-German-named banks active in at least one year between 1912 and 1925). At the same time, over 90% of German-named banks changed their names between 1917 and 1919.[1] Using the more specific dates of German name changes, Panel B of the figure shows that a few German-named banks changed their names in the latter half of 1917, most changed their name in 1918, and a few more rebranded at the beginning of 1919. In other words, the raw data show that the preponderance of German-named banks changed their name within a narrow time window – between mid-1917 and the beginning of 1919 – suggesting that this group of banks may have been subjected to a common shock.

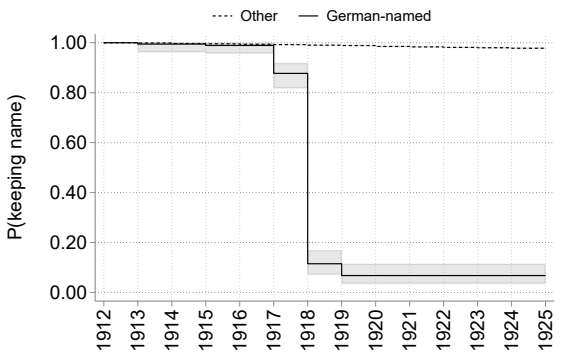
To relate our analysis to existing hypotheses in the literature (e.g. Dacin et al., 2002; Cooper et al., 2005; Kashmiri and Mahajan, 2015; Tsai et al., 2015), we use parametric survival models to explore whether business fundamentals and market structure are drivers of when banks changed their names. We examine these factors for the full sample of banks as well as for German-named banks since the non-parametric evidence suggests that the latter group changed their names in a tightly clustered window of time, likely in response to a negative news shock.

We also use our parametric survival models to assess whether particular bank names affected

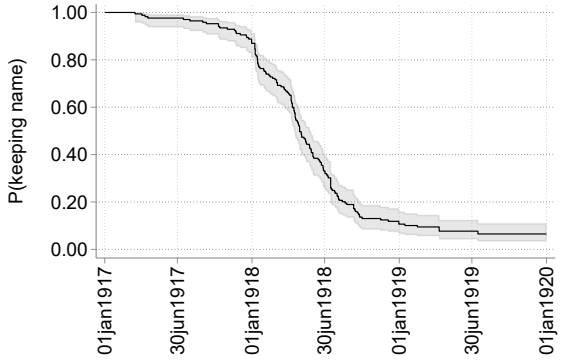
[1] Cox tests for the equality of survivor functions reject the null hypothesis of equality.

Figure C1: **Non-parametric survival estimates**

Panel A. German-named vs. other banks (in years)



Panel B. German-named banks (exact dates)



This figure shows non-parametric survival estimates for bank name changes. Panel A plots Kaplan-Meier survival estimates (including 95% confidence intervals) for the probability that banks of a given type (German-named banks and non-German-named banks, labeled "other") kept their name beyond a certain point in time. We obtain these estimates using equation C.1. Cox regression-based tests for the equality of survivor functions reject the null hypothesis of equality (χ^2-statistic of 8312.91 and p-value of 0.00). Panel B focuses on German-named banks only and uses exact dates for name changes to zoom into the period between 1917 and 1920.

the timing of the name change. We leverage our unique within-industry data (i.e., recall that banks operated in geographically segmented markets) to explore common branding strategies of banks during our sample period. We represent these branding strategies using indicator variables to identify groups of banks that share common "name stems." We focus on name stems or branding strategies that are frequently used by banks and that may signal information to their customers about their characteristics (e.g., security and stability) or the distinct, local markets they are serving. If these indicator variables slow down the time to when banks changed their names, this can be interpreted as evidence that bank attached specific value to their existing names.

To predict factors that led banks to change their names during our sample period, we augment equation C.1 with a matrix ($\mathbf{X}$) of time-varying bank-level covariates (all lagged by one year):

$$\log L(\Upsilon, \gamma) = \sum_{i=1}^{n} \left[\delta_i \log h(t_i|\mathbf{X}_{i,t-1}) + \log S(t_i|\mathbf{X}_{i,t-1})\right], \tag{C.2}$$

where $\log L$ represents the log-likelihood function. Υ is a vector of coefficients corresponding to the matrix of control variables $\mathbf{X}$, γ is the shape parameter of the log-logistic distribution, δ represents a dummy variable indicating bank name changes, h is the hazard function, t marks the time to name change (or censoring if no change occurs by the end of 1925), and S stands for the survival function.[2] Matrix $\mathbf{X}$ includes variables capturing branding strategies, business

[2]The full notations for the survival and hazard functions are $S(t) = \frac{1}{1+\left(\frac{t}{\lambda}\right)^{\gamma}}$ and $h(t|\mathbf{X}_{i,t-1}) = \frac{\gamma/\lambda_i(t/\lambda_i)^{\gamma-1}}{1+(t/\lambda_i)^{\gamma}}$,

fundamentals, charter value, measures of local bank competition, and town and county-level measures of economic structure.

To explore the potential value in corporate names, the baseline model includes three of the most frequently used branding strategies for American banks during our sample period: (1) bank names that contained their location as the first word of the name (signaling their intended market of interest to customers); (2) banks that had "First" in their name (perhaps signaling to (potential) customers that they entered the local market early or were the first bank in a town and potentially conveying that they are the most stable of bank in that town); and (3) bank names that referred to farming or agriculture (perhaps targeting a relevant customer base). In 1916, approximately 22% of all bank names contained the location as the first word of the name; 18% of all bank names had a "First" in their name; and 11% of banks had names referring to farming activities as captured by the name stubs "Farm" or "Agricultur". In Table C1, we show that banks with names referring to farming or agriculture were more prevalent in counties with higher shares of farmland and in counties with more farms per inhabitants, even after controlling for other bank- and location-specific fundamentals. Similarly motivated branding strategies likely applied to other bank names, such as e.g. "Industrial Bank," "Planters and Growers Bank," or "Traders and Manufacturers Bank" etc. Izumi et al. (2024) show that similar branding strategies continue to persist in 2022.

Business fundamentals include a proxy for bank profitability, percentage changes in deposits and paid-in capital (both measured as year-on-year changes), the leverage ratio (total assets to equity, which we define as paid-in capital plus surplus and undivided profits), and a dummy that takes a positive value if a bank's CEO stays the same between 1916 and 1920. The construction and definition of other variables capturing charter value, competition and local economic structure are straight-forward as described in Table C2.

Table C2 displays the estimated hazard ratios based on equation C.2, where values above 1 indicate slower changes and those below 1 indicate faster changes. The first column in the table examines the drivers of non-German-named bank name changes, including the implied value of specific branding strategies banks employed during our sample period. The regression estimates show that banks including a location in their name, the word "First," or words referencing farming rebranded more slowly. Firmly established banks (such as those with more years in operation and hence established brands), those with a larger market share, higher profits and

where $\lambda_i = \exp(\mathbf{X}_{i,t-1}\Upsilon')$.

Table C1: **Determinants of bank names referring to farming**

	Name refers to farming (dummy)			
	(1)	(2)	(3)	(4)
Farming indicators				
Share of land in farms (county, 1910)	0.05***		0.04***	0.04***
	(0.00)		(0.00)	(0.00)
Farms per 1,000 inhabitants (county, 1910)		0.04***	0.03***	0.01**
		(0.00)	(0.00)	(0.00)
Bank name variables				
Name contains location (dummy)				-0.33***
				(0.02)
"First Bank" (dummy)				-0.35***
				(0.03)
German name (dummy)				0.00
				(0.00)
Business fundamentals				
(Surplus and profits)/capital				0.00
				(0.00)
Percentage change in deposits				0.00
				(0.00)
Percentage change in paid-in capital				0.00
				(0.00)
Leverage ratio				0.01**
				(0.00)
Charter value				
Market share in location (deposits)				-0.05***
				(0.00)
Bank age (log)				-0.03***
				(0.00)
Total assets (log)				-0.02***
				(0.01)
National bank (dummy)				0.01
				(0.01)
Competition and local econ. structure				
Number of banks in location (log)				-0.05***
				(0.01)
Share of German born pop. (county, 1910)				0.01***
				(0.00)
City population (log, 1910)				-0.02***
				(0.00)
German newspapers per capita (city, 1910)				0.00
				(0.00)
Observations	17,444	16,819	16,819	15,079
Mean value of outcome variable	0.11	0.10	0.10	0.10
Pseudo R^2	0.03	0.02	0.04	0.26

This table presents average marginal effects obtained from a standard logit regression. The estimation sample contains all active banks in 1916. The outcome variable is a dummy that indicates whether a bank had a name referring to farming as captured by the name stubs "Farm" or "Agricultur". Explanatory variables are measured at the end of 1915 (except where indicated otherwise). All continuous variables are standardized. Heteroskedasticity-robust standard errors for marginal effects are shown in parentheses. Asterisks indicate statistical significance: * for $p < 0.1$, ** for $p < 0.05$, and *** for $p < 0.01$.

Table C2: **Drivers of commercial bank name changes**

Variables	Estimation sample			
	Non-German-named	All	German-named	German-named
	(1)	(2)	(3)	(4)
Branding strategies				
Name contains location (dummy)	1.41***	1.28***	1.63	1.52***
	(0.18)	(0.11)	(4.39)	(0.13)
"First Bank" (dummy)	2.56***	1.92***		
	(0.62)	(0.29)		
Name refers to farming (dummy)	1.46**	1.33**		
	(0.27)	(0.16)		
German name (dummy)		0.09***		
		(0.01)		
Business fundamentals				
(Surplus and profits)/capital	1.45***	1.14**	1.00	1.03
	(0.14)	(0.06)	(0.00)	(0.03)
Percentage change in deposits	0.98	0.98	0.71	0.97
	(0.02)	(0.01)	(0.22)	(0.02)
Percentage change in paid-in capital	0.92***	0.95***	1.01	1.02
	(0.02)	(0.01)	(0.01)	(0.01)
Leverage ratio	1.01	1.01	1.00	1.02
	(0.05)	(0.03)	(0.01)	(0.02)
CEO stays (dummy)	1.48***	1.26***	1.01	0.97
	(0.14)	(0.07)	(0.01)	(0.03)
Charter value				
Market share in location (deposits)	1.33***	1.19***	1.01	1.08**
	(0.11)	(0.06)	(0.02)	(0.04)
Bank age (log)	1.08	1.13***	1.00	1.02
	(0.08)	(0.05)	(0.02)	(0.04)
Total assets (log)	0.98	1.03	1.01	0.93**
	(0.08)	(0.05)	(0.02)	(0.04)
National bank (dummy)	1.253	1.09	1.01	1.02
	(0.19)	(0.09)	(0.01)	(0.06)
Competition and local econ. structure				
Number of banks in location (log)	1.13	1.07	1.02	1.16
	(0.10)	(0.06)	(0.02)	(0.14)
Farms per 1,000 inhabitants (county, 1910)	1.27***	1.15***	1.00	1.04*
	(0.08)	(0.04)	(0.02)	(0.02)
City population (log, 1910)	0.80*	0.87**	0.95	0.83**
	(0.10)	(0.06)	(0.04)	(0.08)
Share of German born pop. (county, 1910)	0.92**	0.95***	1.01*	1.05**
	(0.04)	(0.02)	(0.01)	(0.02)
German newspapers per capita (city, 1910)	1.04	1.02	1.01***	1.06***
	(0.09)	(0.02)	(0.00)	(0.01)
Observations	157,286	158,069	783	162
Adjusted R^2	0.46	0.89	0.06	0.24
Time unit	years	years	years	days
Controls	time-varying	time-varying	time-varying	1916

This table presents parametric survival estimates for the time to name changes. We obtain these estimates using equation C.2. Columns 1–3 use annual time stamps for name changes, whereas column 4 draws on the exact dates for name changes of German-named banks. All continuous variables are standardized and coefficients are shown in time ratio format (exponentiated coefficients). Time ratios above 1 indicate that a one standard deviation increase in the covariate increases median survival time by (time ratio -1)$\times$100 percent. Time ratios below 1 indicate that a standard deviation increase in the covariate reduces median survival time by (1$-$ time ratio)$\times$100 percent. For the multiple-record per bank data in columns 1–3, we report clustered (bank-level) standard errors for non-exponentiated coefficients in parentheses. For the single-record per bank data in column 4, we cluster standard errors by census region. Asterisks indicate statistical significance: * for $p < 0.1$, ** for $p < 0.05$, and *** for $p < 0.01$.

surplus (where surplus is shareholder equity above capital), and those located in farming areas were also slower to rebrand. By contrast, those in large cities with more competition or that had large increases in paid-in capital changed their names faster.[3] These findings confirm two general hypotheses in the branding literature for our setting: (1) banks attach distinct value to their brand names and (2) rebranding is costly for banks. Those banks that were already established in their markets and had accrued brand value were less likely to feel compelled to change their names. Moreover, corporate brand names that appeal to customers or that invoke a firm's position or its security and soundness seem to matter, suggesting that commercial banks viewed their names as intangible assets whose values were based on customer perceptions about their identity. The estimation results in column (1) also provide *prima facie* evidence that CEO turnover often goes along with bank name changes. Banks that kept their CEO between 1916 and 1920 are substantially slower to change their names as evidenced by the 56% increase in their median time to a name change.

Column (2) expands the sample to include German-named banks and adds an indicator representing this ethnicity-based branding strategy. The German-name indicator variable is not only statistically significant, but predicts that most German-named banks were going to change their name. Specifically, the survival ratio implies that the median time until a rebrand decreased by 90% for German-named banks. Moreover, while German-named banks comprise less than 1% of all commercial banks in our sample, their addition alters the predictive power of several other variables. For example, the coefficient on a bank's surplus falls both in terms of size and statistical significance, which may suggest that the factors leading German-named banks to change their name were orthogonal to factors leading to the rebranding of other banks. To further substantiate this conjecture, we implement a simple back-of-the-envelope analysis. We apply the survival estimates from column (1) to the period between 1917–1920 to obtain an out-of-sample median survival time for the names of German-named banks. We find that this out-of-sample median survival time amounts to 29 years, whereas the Kaplan-Meier estimate is only 2 years. In this way, the typical factors that would lead most banks to change their name worked against German-named banks that rebranded.

To further differentiate the rebranding decision for German-named banks compared to other banks, Column (3) focuses only on the sub-sample of German-named banks.[4] In contrast to

[3] Our results are not sensitive to including a separate Fed member indicator variable. This is likely because the vast majority of Fed members at the time were national banks, an indicator variable already included in Table C2.

[4] We drop the indicator variables for farming-related names and for "First bank" in the bank's name since

other banks that changed their names, we find that business fundamentals, market competition, and charter value do not significantly predict a name change for German-named banks. Furthermore, the only local market condition that significantly predicts a German-named bank's name change is German newspapers per capita. This town-level proxy for the influence of local German culture or customer base somewhat slows the time it takes for a German-named bank to rebrand. Overall, as can be inferred from the low adjusted R^2 relative to the previous two columns, the model underlying the results in Column (3) does not do a good job of predicting German-named bank rebranding, suggesting German-named banks were fundamentally responding to different factors than other banks rebranding during this period – a finding that informs the structure of our empirical tests in the main paper.[5]

Given that most German-named banks changed their name in a very narrow time window, it is possible that annual data are missing variation in the decision to change a name. Therefore, column (4) uses information on the exact dates of rebranding for German-named banks to examine factors that may have mattered for explaining fine-grained variation in the timing of these name changes. We measure all variables in $\mathbf{X}$ as of 1916 except the percentage changes in deposits and paid-in capital, which are measured between 1916 and 1917. Besides confirming the importance of the proxy for the influence of local German culture or customer base, the coefficients suggest that German-named banks with higher market shares and German-named banks with location-based names waited longer to rebrand. Larger German-named banks (as measured by (log) total assets) and German-named banks in larger cities changed their names faster. However, the main finding from Column (4) is that a bank's business fundamentals remain uninformative for explaining the granular variation in the timing of German-named bank rebranding in 1917, 1918, and 1919.

only one German-named bank in our estimation sample featured such names.

[5]To limit unobserved heterogeneity, our paper's focus is on name changes that took place between 1917 and 1920. The findings discussed above remain qualitatively unchanged when we re-estimate the multiple-record per bank regressions in columns 1–3 of Table C2 for the period 1917–1920 only.

D Potential Confounders of Rebranding Effects

D.1 Fed Membership Adoption by German-named Banks

Anecdotal evidence suggests that state banks, which once had German names, were looking to signal patriotism beyond their name changes. While national banks were required to join the Federal Reserve System upon its establishment in 1914, Congress gave state-chartered banks the choice to join. Relatively few state banks chose to join citing higher regulations and restrictions (Anderson et al., 2018; Calomiris and Jaremski, 2022). Membership, however, allowed banks to advertise their association with a distinctly American institution, and could have been used to counteract the negative German news shock. Suggestive evidence for changes in membership status are visible when we compare the mean values of the Fed membership dummy for German-named banks in 1916 and 1920 (see Tables A1 and A2).

To formally test this hypothesis, we predict whether a state bank would adopt Federal Reserve membership in a given year using the following equation:

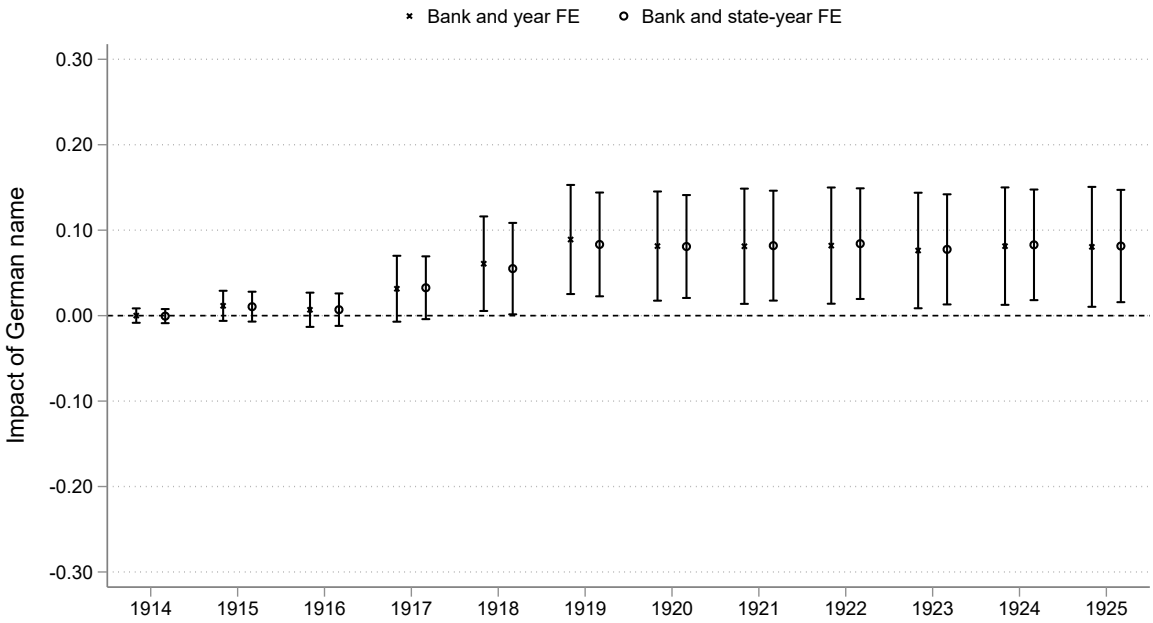
$$Y_{i,t} = \Gamma \sum_{k=1914}^{1925} [\mathbb{1}(German)_i \times \mathbb{1}(t = k)_t] + \phi_i + \delta_{(S)t} + u_{i,t} \tag{D.3}$$

where $Y_{i,t}$ represents a dummy for Federal Reserve membership, $\mathbb{1}(German)_i$ is an indicator flagging banks with a German name, and $\mathbb{1}(t = k)$ stands for saturated set of year dummies (1913 serves as the base year). We also control for bank and year or state-year fixed effects (ϕ_i and $\delta_{(S)t}$ respectively).

The coefficients on the interaction term for each year are provided in Figure D1.[6] The results show that German-named banks were no more likely to adopt membership before 1917. However, starting in 1918 (and coincident with most of the name changes), German-named banks became more likely to join the Fed compared to other banks. The statistically significant difference persists through the end of our sample in 1925 and is robust to controlling for state-specific time trends. The absence of pre-trends and the robustness of estimates to the inclusion granular and demanding fixed effects strongly suggests that we can interpret the effects as causal and persistent. Based on these results, we either exclude banks that adopted Fed membership or control for a time-varying dummy of Fed membership in the main paper.

[6] We do not include 1912 in the regression because the Fed was not started until 1914.

Figure D1: **Impact of German name on Fed membership**



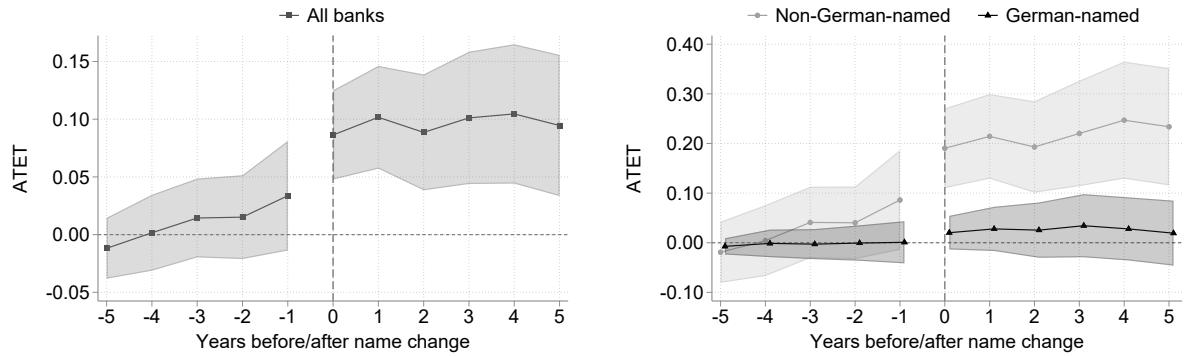
This figure plots event-study estimates for the impact of German-named banks on state-chartered banks' Federal Reserve membership, using 1913 as the base year. Note that the Federal Reserve System was only founded in late 1913. We obtain these estimates using equation D.3. 95% confidence intervals.

D.2 Changes in Paid-in Capital

Firms often decide to rebrand when they implement larger structural or organizational changes (Kalaignanam and Bahadir, 2013). Increases in paid-in capital often accompany wider restructuring in the banking industry – e.g., to scale operations and outperform potential local competitors. For this reason, we examine the correlation between increases in paid-in capital and rebranding in our sample of banks.

Figure D2 shows the results. We find that capital increases either just before (we reject the null of the pre-trends at the 5% level) or simultaneously with rebranding events – but *only* for non-German-named banks. German-named banks are clearly different: their paid-in capital exhibits neither pre-trends, nor increases when and after rebranding happens. We draw two conclusions from this analysis. First, it is important to take into account a bank's time-varying capital to disentangle the impact of name changes. Second, the results in Figure D2 provide additional evidence that the rebranding of German-named was plausibly exogenous to fundamentals.

Figure D2: **Bank name changes and changes in paid-in capital**



This figure plots staggered difference-in-differences estimates for the impact of bank name changes on bank-level paid-in capital (including 95% confidence intervals using clustered bank-level standard errors). We estimate Equation (2) in the main paper, using the natural logarithm of paid-in capital as the dependent variable. The left column shows the results we obtain when we pool all banks (German-named and non-German-named banks, including non-German-named rebranders). The right column differentiates between rebranding by banks with German names and rebranding by non-German-named banks. In all specifications, non-German-named banks that did not change their name serve as the control group. The joint test for pre-trends for the pooled estimates (p-value of 0.33) and for the estimates involving only non-German-named banks (p-value of 0.36) do not reject the null of no pre-trends relative to banks that do not change their names but the uptick just before treatment ($t = -1$) is both visible and statistically significant for non-German-named banks (p-value of 0.09). For German-named banks, we find no evidence for pre-trends relative to banks that did not change their names (p-value of 0.63). All regressions include bank and state-year fixed effects, as well as the control vectors $\mathbf{X}'$ and $\mathbf{Z}'$.

D.3 CEO turnover

Similar to capital increases, changes in management often accompany rebranding decisions (Dacin et al., 2002; Wu, 2010; Kashmiri and Mahajan, 2015; Tsai et al., 2015). Drawing on our bank-level data for CEO turnover between 1916 and 1920, we can estimate the correlation between rebranding decisions and changes in banks' top-level management. Specifically, we regress a dummy variable indicating whether a bank president stays the same between 1916 and 1920 on a binary variable that flags rebranding in 1917, 1918 or 1919. We do so for two different estimation samples: non-German-named banks and German-named banks narrowly defined based on the "German" stub, following the approach in the main paper.

The results in Table D1 confirm a statistically and economically highly significant correlation between CEO turnover and rebranding for non-German-named banks. The bank president was 11 percentage points less likely to remain in office if the bank also rebranded. For German-named banks, we find no statistically significant correlation, although the point estimates remains negative. Overall, these findings suggest that CEO turnover can be an important confounder of the rebranding effect, in particular in the case of non-German-named banks.

Table D1: **CEO turnover and rebranding decisions**

	(1) CEO stays (dummy) (*Non-German-named banks*)	(2) CEO stays (dummy) (*German-named banks*)
$\mathbb{1}(Rebranding)$	-0.1135***	-0.0888
	(0.0233)	(0.1444)
Sample period	1917–1919	1917–1919
Observations	16,501	168
Share CEO stays	68.3%	61.3%
Share rebranding	2.3%	92.3%
Pseudo R^2	0.0011	0.0017

This table presents average marginal effects from probit regressions. The binary dependent variable equals one if a bank's CEO remained in office between 1916 and 1920. $\mathbb{1}(Rebranding)$ is a dummy that equals one if the bank changed its name in one of the years 1917, 1918, or 1919. Column (1) covers all non-German-named banks and column (2) restricts the sample to banks with a German name (following the main definition used in the main paper). Heteroskedasticity robust standard errors are shown in parentheses. Asterisks indicate statistical significance: * for $p < 0.1$, ** for $p < 0.05$, and *** for $p < 0.01$.

E Robustness Checks

Table E1: **Average treatment effects on bank-level outcomes (excluding banks in Chicago and NYC)**

Panel A. Anti-German effect *German name keepers relative to non-German name keepers*	(1) Assets (log)	(2) Deposits (log)	(3) Market share (log)
ATET (in log points)	-0.5398***	-0.5630***	-0.5831***
	(0.1753)	(0.2027)	(0.1851)
ATET (percent difference)	−41.71%	−43.05%	−44.19%
Total banks (German name keepers)	5,044 (1)	5,044 (1)	5,044 (1)

Panel B. Combined effect *German patriotic rebranders relative to non-German name keepers*	(1) Assets (log)	(2) Deposits (log)	(3) Market share (log)
ATET (in log points)	-0.0335	-0.0525	0.0236
	(0.0398)	(0.0422)	(0.0409)
ATET (percent difference)	−3.29%	−5.11%	+2.39%
Total banks (patriotic rebranders)	5,065 (22)	5,065 (22)	5,065 (22)

This table presents synthetic difference-in-differences (SDiD) estimates for two average treatment effects on the treated (ATET): the anti-German effect (Panel A) and the combined effect (Panel B). The estimation sample excludes banks located in Chicago and New York City. The neutral rebranding effect and the patriotic framing effect displayed in Table 1 in the main paper remain unchanged (no bank in the two corresponding estimation samples was located in Chicago or New York City) and are thus not again reported here. In Panel A, we show placebo-method based standard errors clustered at the bank level in parentheses. In Panel B, we display bootstrapped standard errors clustered at the bank level in parentheses. Asterisks indicate statistical significance: * for $p < 0.1$, ** for $p < 0.05$, and *** for $p < 0.01$. In the last row of each panel, we display the total number of banks in the estimation sample and provide the number of treated banks in parentheses.

Table E2: **Average treatment effects on bank-level outcomes (banks located in Midwestern and Great Plains states only)**

Panel A. Anti-German effect			
German name keepers relative to non-German name keepers			
	(1)	(2)	(3)
	Assets (log)	Deposits (log)	Market share (log)
ATET (in log points)	-0.4534*	-0.4749*	-0.5759***
	(0.2443)	(0.2765)	(0.1829)
ATET (percent difference)	−36.45%	−37.81%	−43.78%
Total banks (German name keepers)	2,198 (1)	2,198 (1)	2,198 (1)

Panel B. Neutral rebranding effect			
German name keepers relative to German neutral rebranders			
	(1)	(2)	(3)
	Assets (log)	Deposits (log)	Market share (log)
ATET (in log points)	-0.3886*	-0.3237	-0.4953***
	(0.2278)	(0.2548)	(0.1061)
ATET (percent difference)	−32.20%	−27.65%	−39.06%
Total banks (German name keepers)	14 (1)	14 (1)	14 (1)

Panel C. Patriotic framing effect			
German patriotic rebranders relative to German neutral rebranders			
	(1)	(2)	(3)
	Assets (log)	Deposits (log)	Market share (log)
ATET (in log points)	0.1127*	0.1253**	0.1461***
	(0.0590)	(0.0614)	(0.0494)
ATET (percent difference)	+11.93%	+13.34%	+15.73%
Total banks (patriotic rebranders)	31 (18)	31 (18)	31 (18)

Panel D. Combined effect			
German patriotic rebranders relative to non-German name keepers			
	(1)	(2)	(3)
	Assets (log)	Deposits (log)	Market share (log)
ATET (in log points)	0.0239	0.0193	0.0661
	(0.0476)	(0.0469)	(0.0412)
ATET (percent difference)	+2.42%	+1.95%	+6.83%
Total banks (patriotic rebranders)	2,215 (18)	2,215 (18)	2,215 (18)

This table presents synthetic difference-in-differences (SDiD) estimates for all average treatment effects on the treated (ATET): the anti-German effect (Panel A), the neutral rebranding effect (Panel B), and the patriotic framing effect (Panel C). Panel D contains the combined effect, checking whether the neutral rebranding effect and the patriotic framing effect together mitigate the anti-German effect. The estimation sample contains only banks located in Midwestern and Great Plains states. In Panel A and Panel B, we show placebo-method based standard errors clustered at the bank level in parentheses. In Panel C and Panel D, we display bootstrapped standard errors clustered at the bank level in parentheses. Asterisks indicate statistical significance: * for $p < 0.1$, ** for $p < 0.05$, and *** for $p < 0.01$. In the last row of each panel, we display the total number of banks in the estimation sample and provide the number of treated banks in parentheses.

Table E3: **Average treatment effects on bank-level outcomes (only banks in counties with German-named banks as of 1916)**

Panel A. Anti-German effect			
German name keepers relative to non-German name keepers			
	(1)	(2)	(3)
	Assets (log)	Deposits (log)	Market share (log)
ATET (in log points)	-0.5304*	-0.5842*	-0.5932***
	(0.3022)	(0.3453)	(0.2231)
ATET (percent difference)	−41.16%	−44.24%	−44.75%
Total banks (German name keepers)	712 (1)	712 (1)	712 (1)

Panel B. Combined effect			
German patriotic rebranders relative to non-German name keepers			
	(1)	(2)	(3)
	Assets (log)	Deposits (log)	Market share (log)
ATET (in log points)	-0.0428	-0.0633	-0.0029
	(0.0440)	(0.0490)	(0.0449)
ATET (percent difference)	−4.19%	−6.14%	−0.29%
Total banks (patriotic rebranders)	733 (22)	733 (22)	733 (22)

This table presents synthetic difference-in-differences (SDiD) estimates for two average treatment effects on the treated (ATET): the anti-German effect (Panel A) and the combined effect (Panel B). The estimation sample excludes banks located in counties without any German-named banks in 1916. By definition, the neutral rebranding and the patriotic framing effects displayed in Table 1 in the main paper remain unchanged and are thus not again reported here. In Panel A, we show placebo-method based standard errors clustered at the bank level in parentheses. In Panel B, we display bootstrapped standard errors clustered at the bank level in parentheses. Asterisks indicate statistical significance: * for $p < 0.1$, ** for $p < 0.05$, and *** for $p < 0.01$. In the last row of each panel, we display the total number of banks in the estimation sample and provide the number of treated banks in parentheses.

Table E4: **Average treatment effects on bank-level outcomes (broader definition of German-named banks and non-allied country banks)**

Panel A. Anti-German effect			
German name keepers relative to non-German name keepers			
	(1)	(2)	(3)
	Assets (log)	Deposits (log)	Market share (log)
ATET (in log points)	-0.4921***	-0.5460***	-0.4741***
	(0.1666)	(0.1762)	(0.1233)
ATET (percent difference)	−38.87%	−42.07%	−37.75%
Total banks (German name keepers)	5,092 (2)	5,092 (2)	5,092 (2)

Panel B. Neutral rebranding effect			
German name keepers relative to German neutral rebranders			
	(1)	(2)	(3)
	Assets (log)	Deposits (log)	Market share (log)
ATET (in log points)	-0.4421***	-0.4306***	-0.4018***
	(0.1453)	(0.1548)	(0.0965)
ATET (percent difference)	−35.73%	−34.99%	−33.09%
Total banks (German name keepers)	18 (2)	18 (2)	18 (2)

This table presents synthetic difference-in-differences (SDiD) estimates for two average treatment effects on the treated (ATET): the anti-German effect (Panel A) and the neutral rebranding effect (Panel B). We use a broader definition of German-named banks, including closely associated names (e.g., "Teutonic Bank"), names that reference German town names (e.g., "Bank of Berlin") or names referring to non-allied countries besides Germany (i.e., Austria-Hungary, the Scandinavian countries, and Switzerland). Compared to Table 1 in the main paper, we only gain one additional name keeper (Hanover National Bank in New York City) as all other potential name keepers held brands directly reflecting their town's name. We gain no additional neutral rebrander because all candidate banks (Bank of Steuben, Bank of Berlin, Bank of Steger, and New Berlin Bank) either changed their name outside the 1917–1919 window or increased their capital. Moreover, we gain no additional patriotic rebrander. Even though several Scandinavian-named banks change their brand to a new patriotic one, all these banks drop from the estimation sample, either due to an unbalanced sample, capital changes, or a name change later than 1919. For this reason, the patriotic framing effect and the combined effect displayed in Table 1 in the main paper remain unchanged and are thus not again reported here. In Panel A and B, we show placebo-method based standard errors clustered at the bank level in parentheses. Asterisks indicate statistical significance: * for $p < 0.1$, ** for $p < 0.05$, and *** for $p < 0.01$. In the last row of each panel, we display the total number of banks in the estimation sample and provide the number of treated banks in parentheses.

Table E5: **Average treatment effects on bank-level outcomes (including time-varying controls)**

Panel A. Anti-German effect			
German name keepers relative to non-German name keepers			
	(1)	(2)	(3)
	Assets (log)	Deposits (log)	Market share (log)
ATET (in log points)	-0.5203**	-0.5484**	-0.4733**
	(0.2315)	(0.2755)	(0.2171)
ATET (percent difference)	−40.56%	−42.21%	−37.71%
Total banks (German name keepers)	8,224 (1)	8,224 (1)	8,224 (1)

Panel B. Neutral rebranding effect			
German name keepers relative to German neutral rebranders			
	(1)	(2)	(3)
	Assets (log)	Deposits (log)	Market share (log)
ATET (in log points)	-0.4408**	-0.3617	-0.5296***
	(0.2076)	(0.2303)	(0.1545)
ATET (percent difference)	−35.65%	−30.35%	−41.12%
Total banks (German name keepers)	39 (1)	39 (1)	39 (1)

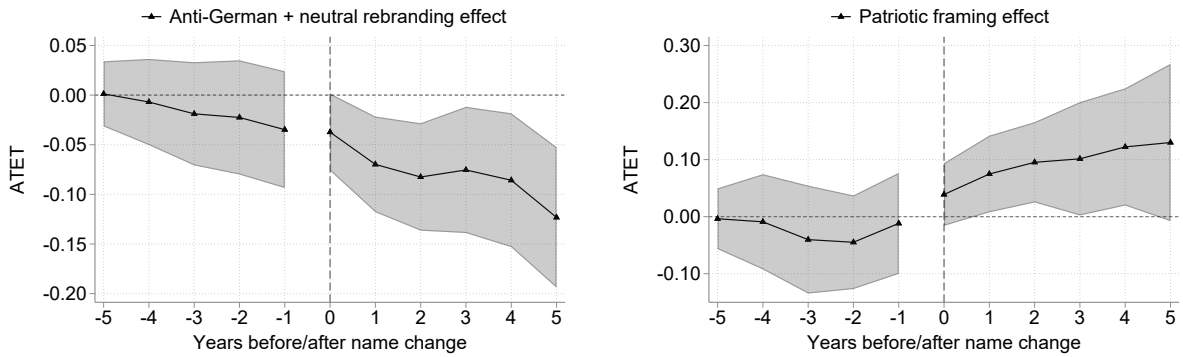
Panel C. Patriotic framing effect			
German patriotic rebranders relative to German neutral rebranders			
	(1)	(2)	(3)
	Assets (log)	Deposits (log)	Market share (log)
ATET (in log points)	0.0697*	0.0861*	0.0612
	(0.0422)	(0.0460)	(0.0424)
ATET (percent difference)	+7.22%	+8.99%	+6.31%
Total banks (patriotic rebranders)	77 (39)	77 (39)	77 (39)

Panel D. Combined effect			
German patriotic rebranders relative to non-German name keepers			
	(1)	(2)	(3)
	Assets (log)	Deposits (log)	Market share (log)
ATET (in log points)	-0.0031	-0.0214	0.0203
	(0.0343)	(0.0384)	(0.0269)
ATET (percent difference)	−0.31%	−2.12%	+2.05%
Total banks (patriotic rebranders)	8,262 (39)	8,262 (39)	8,262 (39)

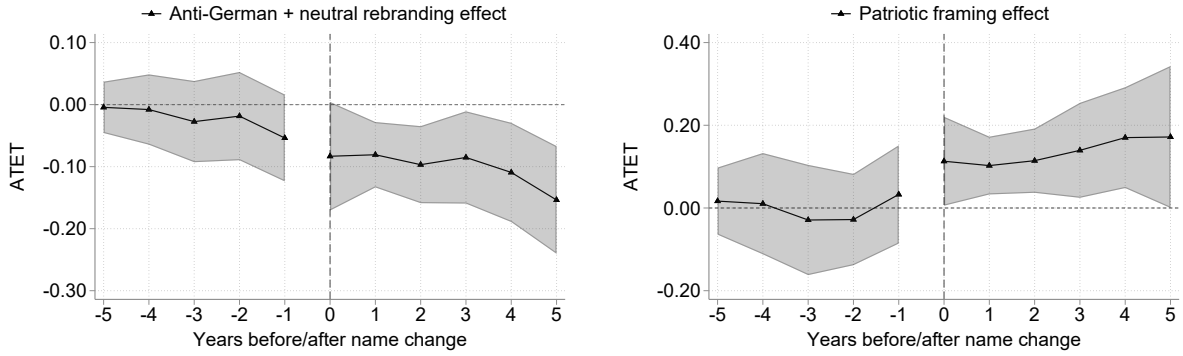
This table presents synthetic difference-in-differences (SDiD) estimates for all average treatment effects on the treated (ATET): the anti-German effect (Panel A), the neutral rebranding effect (Panel B), and the patriotic framing effect (Panel C). Panel D contains the combined effect, checking whether the neutral rebranding effect and the patriotic framing effect together mitigate the anti-German effect. We control for time-varying Fed-membership (dummy variable), paid-in capital (log), CEO turnover between 1916 and 1920 (dummy interacted with post-1917 indicator) and the number of banks in town (log). In Panel A and Panel B, we show placebo-method based standard errors clustered at the bank level in parentheses. In Panel C and Panel D, we display bootstrapped standard errors clustered at the bank level in parentheses. Asterisks indicate statistical significance: * for $p < 0.1$, ** for $p < 0.05$, and *** for $p < 0.01$. In the last row of each panel, we display the total number of banks in the estimation sample and provide the number of treated banks in parentheses.

Figure E1: **Dynamic effects of bank name changes**

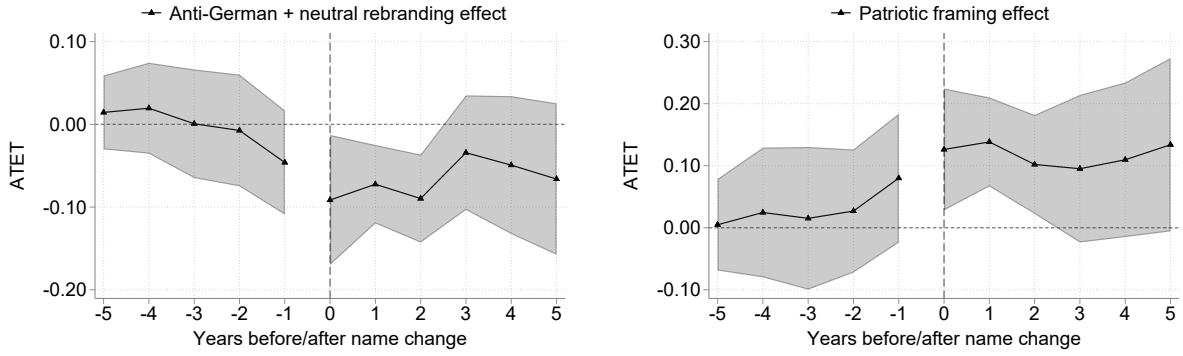
Panel A. Total assets (log)



Panel B. Total deposits (log)



Panel C. Market share of deposits (log)



This figure plots staggered difference-in-differences estimates for the effects of German bank name changes on bank-level outcomes (including 95% confidence intervals using clustered bank-level standard errors). We estimate Equation (2) in the main paper using the imputation approach proposed by Borusyak et al. (2024). All regressions include bank and state-year fixed effects, as well as the control vectors $\mathbf{X}'$ and $\mathbf{Z}'$. Visual inspection and formal statistical tests provide no systematic evidence for pre-trends. We cannot reject the null of no pre-trend at any conventional confidence levels in five out of the six plots. The p-values attached to the no pre-trend test for total assets are 0.68 (joint effect) and 0.43 (patriotic framing effect); for total deposits, they amount to 0.30 (joint effect) and 0.30 (patriotic framing effect); and for the market share p-values stand at 0.04 (joint effect) and 0.21 (patriotic framing effect).

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