

Legal Forms and Regulatory Responses: A Comparative Analysis of S and C Corporation Community Banks

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Abstract

This study investigates the differential responses of Subchapter S and C corporation banks within the U.S. community banking sector to significant policy changes following the 2007–2008 financial crisis. Using bank-level data from 2003 to 2019 and employing a difference-in-differences analysis, we explore how legal forms influence banks' yields on earning assets and funding costs. Our findings reveal that S banks, due to their unique tax status and capital access limitations, exhibited more pronounced reductions in asset yields and increased funding costs compared to C banks.

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1 Introduction

The legal form of a business significantly determines its operational flexibility, tax liabilities, and access to capital, which are crucial in responding to regulatory changes. The difference in regulatory responses can lead to different investment behaviors and financial strategies, ultimately impacting the broader economy, including job creation, innovation investment, and competitive dynamics within industries. Understanding these differential responses from a regulatory perspective is essential for designing legislation that fosters a stable yet dynamic market environment. This paper contributes to the broader discourse on financial regulation by documenting how legal form shapes banks' operational adjustments to post-crisis policy changes, highlighting the need to account for organizational heterogeneity in regulatory design.

Specifically, this study focuses on the adaptive responses of Subchapter S and C corporations within the community banking sector to regulatory changes. Our goal is to empirically document how legal forms contribute to disparate responses to macroeconomic environment changes.

Subchapter S corporation banks (S banks) operate as pass-through entities for tax purposes. Unlike C corporation banks (C banks), the earnings of S banks are only subject to personal income taxation at the shareholder level, thus avoiding the burden of double taxation. However, S corporations face a set of limitations on access to capital, including a cap on the number of shareholders, the inability to issue preferred stock, and specific restrictions on shareholder eligibility [29], [30]. Furthermore, because corporate profits and losses are allocated in proportion to ownership stakes, shareholders are obliged to fulfill their income tax obligations, irrespective of whether they have received actual distributions from the bank.

The legal form under which a bank operates – either as an S bank or a C bank – significantly influences its tax obligations, access to capital, and consequently its operational strategies. Empirical studies show that these structural constraints influence banks' balance-sheet composition and pricing behavior. For example, [28] and [54] document systematic differences in the pricing of deposits and loans between S and C banks. Since S banks do

not pay corporate income taxes, the after-tax marginal return on a given loan is higher than that of C banks. Assuming the cost of extending loans is similar, one would expect S banks to be more aggressive in making loans and enjoy a higher after-tax profit margin. However, if the interest rate on loans decreases, the relative decrease in the return for S banks would be greater than that of the decrease for C banks. In other words, the difference in marginal return between the two legal forms would diminish.

However, due to the regulatory constraints inherent in their legal structure, S banks face greater difficulty accessing equity capital. This means that they must rely more heavily on deposits to finance their investments. As a result, they are more dependent on deposits to fund their investments. When regulatory capital requirements increase, S banks face disproportionately higher costs in securing equity capital compared to C banks. Consequently, S corporations need to offer more attractive terms to secure customer deposits. We anticipate that S banks' interest costs on deposits will be more sensitive to capital requirement changes compared to C banks.

Given their unique operational constraints and advantages, S and C banks are expected to adopt different asset management strategies in response to regulatory changes. We examine this fundamental distinction between S and C banks by analyzing their responses to significant regulatory changes and interest rate adjustments in recent history. Following the 2007-2008 financial crisis, the Federal Reserve Bank significantly reduced the federal funds rate to nearly zero. Furthermore, in response to the financial crisis, the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, aiming to increase the regulation and oversight of the financial industry, introduced stricter capital requirements. These requirements demanded higher quantities and qualities of capital to enhance banks' loss-absorbing capacity and reduce the risk of failure.

Our research utilizes bank-level data from the FDIC's Call Reports, covering the period from 2003 to 2019. Through a difference-in-differences analysis, we carefully explore how yields on earning assets and funding costs have varied between S and C banks following the regulatory changes after the financial crisis. This empirical strategy aims to uncover the

differences in response strategies between banks with different legal forms to the changed regulatory environment.

By examining the banking industry closely, we focus on community banks which are an important part of the U.S. banking system. Predominantly, S banks fall into the community bank category. In contrast, large national and regional banks, which are mainly C banks, operate differently due to various confounding factors. For a clearer and more accurate comparison within our study, we concentrate on community banks that have chosen either the C corporate legal status or the subchapter S status. Using comparable banking institutions, our approach ensures a focused examination of the differences between S and C banks and their different responses to policy environment changes.

Our investigation reveals that, in an era of unprecedentedly low interest rates, due to differences in tax treatment and the marginal returns on loans, S banks experienced a more significant drop in yields on earning assets than C banks in the period after the financial crisis, relative to the period before. Furthermore, the regulatory changes necessitated that community banks maintain higher levels of capital. Consequently, as previously discussed, S banks faced a significantly larger increase in the cost of funding earning assets in comparison to C banks in the post-crisis era relative to the period preceding it.

It is important to note that our investigation does *not* aim to analyze the direct causal effects of policy changes on banks. Instead, it utilizes these policy shifts to explore and understand the fundamental organizational differences between S and C banks. Our main interest is in revealing how the legal structure of banks affects their operational and strategic behaviors amid evolving regulatory landscapes. In this scenario, the introduction of regulatory reforms, like the Dodd-Frank Act, coupled with the reduction of the federal funds rate, serves as a distinctive context to accentuate and highlight these inherent differences.

We acknowledge the complexity of isolating the factors that drive a bank's choice between S and C corporation status, as well as the challenges in fully accounting for the potential biases that may arise in discussing their behaviors and financial characteristics. Our approach, therefore, strategically pivots away from attempting to parse out the causes behind

the observed differences in bank characteristics, portfolio choices, and financing costs directly attributed to their legal forms. Instead, we leverage the backdrop of policy changes as a tool to reveal and highlight the pre-existing distinctions between these two types of banks.

The economic literature has long recognized that a firm’s *legal form* shapes its tax burden, financing options, and operational behavior. Classic studies document how the differential taxation of Subchapter S and C corporations affects organizational choice ([43, 44]). More recent work shows that the consequences go well beyond that margin: [45] find that legal form affects firms’ employment responses to corporate-tax changes, while [51] quantify the efficiency costs of heterogeneous tax regimes across firms.

For the banking sector in particular, a large Accounting and Finance literature examines the *determinants* and *tax-driven consequences* of Subchapter S corporation election. Papers such as [42], [29], [41], [30], and [28] analyze why banks adopt Subchapter S, whereas [52] and [54] compare the deposit and loan rates offered by S versus C banks.

While these studies center on *tax incentives*, we ask how **legal form mediates banks’ responses to *non-tax* policy shocks**. Focusing on community banks identified in the Call Report, we quantify how S- and C-corporations adjusted asset yields and funding costs to the post-crisis environment anchored by the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank), and a prolonged zero-rate environment. To the best of our knowledge, this is the first evidence on whether organizational form conditions small banks’ operational responses to the modern regulatory regime.

Our approach also complements a sizable literature that relates *size*—rather than legal form—to banks’ conduct. For example, [46, 47] document size-related differences in small-business lending and information production; [48] and [49] examine competition and efficiency in the wake of consolidation. By holding size constant and varying only legal form, we isolate a channel that existing work treats as secondary.

We also build on recent literature that centers on legal form heterogeneity in European banking debates. [61] show that Germany’s tripartite system of public savings banks, co-operatives, and commercial banks produced diverging national positions on the ECB’s Single

Supervisory Mechanism. [62] links Landesbanken losses to the same incentive misalignment that led to the failure of the U.S. savings and loans sector. Most recently, [63] demonstrate that the distinct lobbying power of each pillar explains cross-country variation in post-crisis structural reforms. These studies converge on a core insight: *ownership and legal structure, over and above balance-sheet size, shape both regulatory design and banks' behavioral responses*. Our exploitation of the coexistence of Subchapter S and C-corporation banks provides a U.S. banking sector analogue, and offers insights to inform ongoing European debates over institutional design, legal structure, and financial sector resilience.

Finally, we contribute to the broad literature on financial regulation. [50] provide a global overview, while recent work shows how regulatory burden shape the credit supply ([36], [37], [38], [31]). By documenting how legally distinct, but otherwise comparable, community banks reprice assets and liabilities in response to the same suite of post-crisis rules, we refine our understanding of how regulation interacts with organizational form to influence banking sector resilience.

2 Legal and Regulatory Backgrounds

This section offers a brief history of the Subchapter S corporate legal form in the banking sector. It also explores the differences between S and C legal forms in detail within the banking sector and analyzes their impact on regulatory dynamics and banking practices. Furthermore, this section delves into the contextual framework of regulatory changes following the financial crisis of 2007-2008.

2.1 Legal form of Organization in Banking Industry

The organizational form significantly influences various aspects of a business, including taxation, capital accessibility, and liability exposure ([32]). The primary distinction between S corporations and C corporations lies in their tax treatment. C corporations are subject to taxes at the corporate level, with shareholders facing additional taxation on any dividend

payouts or realized capital gains. In contrast, S corporations maintain non-tax-related corporate advantages such as limited liability and perpetual existence, while also avoiding double taxation. Specifically, S corporations do not incur corporate income taxes. Their business income “passes through” to individual shareholders and is taxed as ordinary income in the year earned, irrespective of whether it is distributed to shareholders that year ([35]).

To qualify for S corporation status, corporations must meet specific criteria that impose restrictions on their capital-raising capabilities. Shareholders must be individuals, certain qualifying trusts or estates, and U.S. citizens, while partnerships, corporations, or nonresident aliens cannot be shareholders. Additionally, a company cannot have more than 100 shareholders and must maintain a single class of stock while being a domestic corporation. These regulations effectively prevent S corporations from becoming publicly traded entities. Furthermore, S corporation shareholders are taxed on their proportional share of income regardless of distribution, meaning they cannot defer personal taxes through retained earnings as C-corp shareholders can. This tax structure creates strong immediate payout incentives — shareholders typically expect distributions “sufficient to cover their tax liability” upon recognition of earnings.

S banks generally have concentrated ownership, often involving inside shareholders such as managers or family owners. [58] show that “bank risk-taking varies positively with the comparative power of shareholders,” and that “stockholder-controlled banks take more risk than managerially controlled banks.” In contrast, [64] find that inside shareholders—who are typically less diversified—tend to act more cautiously, in line with agency theory. Interestingly, the S-bank legal form, which combines limited tax deferral benefits with concentrated ownership, may generate competing pressures on risk preferences.

Historically, banks only became eligible to be classified as S corporations with the passage of the 1996 Small Business Job Protection Act. Due to the significant tax benefits associated with the S corporation legal form, the number of subchapter S banks and their importance within the banking industry steadily increased from 1997 to 2008. However, this trend experienced a notable slowdown in the aftermath of the 2008 financial crisis, and there was an

apparent reversal following the Great Recession (see Section 3 for more details). Additionally, despite the persistent tax advantages of S banks, the share of assets and deposits held by S banks in the industry exhibited similar reversals post-financial crisis ([40]).

S banks encounter similar regulations as C banks of similar size, while also grappling with unique challenges ([29]) and incurring additional expenses when adopting the S corporation status. This includes writing off deferred tax assets upon conversion (SFAS No. 109, para. 127, FASB 1992), which reduces Tier 1 capital and exposes them to costly interventions if capital falls below certain thresholds ([30]). Additionally, S banks cannot use net operating loss carry-forwards and may face penalties for unrealized gains during conversion. There is also a five-year waiting period for legal status conversion. Nonetheless, S corporations remain a popular organizational form for US banks.

2.2 Financial Regulation Backgrounds

The financial industry underwent substantial regulatory changes after the 2008 financial crisis, led by the Dodd-Frank Wall Street Reform and Consumer Protection Act in the United States. The Dodd-Frank Act, signed into law in 2010, focused on financial stability, accountability, and consumer protection. It established government agencies such as the Financial Stability Oversight Council and the Consumer Financial Protection Bureau. These regulations standardized the banking leverage ratio and broadened the scope of capital requirements.¹

A sizable literature has explored the impacts of the Dodd-Frank Act and related regulations on banks. Numerous studies have documented the disparate effects of these regulations on banks of different sizes. For instance, [33] scrutinizes the Dodd-Frank Act regulations

¹Basel III, negotiated in 2010 but phased in only after 2015, introduced complementary international standards. It targeted global banking by strengthening capital quality and adequacy, enhancing risk management, and imposing stricter liquidity requirements. Our empirical strategy focuses on the first major regulatory shift in the U.S.—the Dodd-Frank Act of 2010. While our emphasis is domestic, we acknowledge that the negotiation and announcement of Basel III in 2010 may have influenced banking sector expectations, even though full implementation occurred in later years.

that categorize banks based on their size and reveals that banks scale their assets and loans more slowly if they are below but near the regulation size thresholds. [24] find that the Dodd-Frank regulatory compliance requirements reduce incentives for all banks to extend small loans, which are essential for smaller banks. [8] evaluate capital ratio and liquidity regulations. They find that smaller banks respond to higher capital ratio requirements by increasing their liquidity ratios, while larger banks do not demonstrate this behavior. These results suggest that additional liquidity requirements are only appropriate for larger banks.

Furthermore, the Dodd-Frank Act directly affects S bank financing by altering the criteria for Tier 1 capital. Prior to the Dodd-Frank Act, bank holding companies (BHCs) could issue Trust Preferred Stocks (TruPS), which were structured essentially as subordinated or unsecured debt. The banks under the control of these BHCs could then borrow from TruPS to meet the Tier 1 capital requirement. This instrument was particularly attractive to smaller banks and, even more so, to S banks, as it provided a solution to the restriction on issuing preferred stocks. However, the Dodd-Frank Act eliminated TruPS from Tier 1 capital, further constraining S banks' ability to raise capital.

Complementary global banking standards, introduced by Basel III after 2010, also added a layer of complexity for S banks through the capital conservation buffer requirement.² This regulation requires banks to maintain a buffer above the minimum capital requirement. This buffer should amount to 2.5 percent of a bank's total risk-weighted assets and must be comprised solely of Common Equity Tier 1 (CET1) capital. When the buffer falls below 2.5 percent, automatic constraints on capital distribution (e.g., dividends, share buybacks, and discretionary bonus payments) are imposed to replenish the buffer. If an S bank fails to meet the capital conservation buffer and faces restrictions on making distributions, shareholders are obligated to pay taxes on the bank's net income from their own funds, creating a financial challenge. This situation significantly hinders S banks in attracting new shareholders or raising additional capital from existing ones. Moreover, it may prompt banks to hold a

²The buffer phased in from 2016 to 2019; any effect in our 2010–2015 window would reflect banks' anticipatory adjustments, not a binding rule.

specific proportion of high-quality deposits, impacting their risk-taking strategies.³

3 Data and Empirical Strategy

This section describes the data sources, sample construction, and empirical methodology used to investigate how key financial outcomes for community banks evolved in the aftermath of the 2008 financial crisis and the Dodd-Frank Act of 2010. We begin by outlining our primary data source – the Bank Call Reports – and define the sample restrictions to ensure comparability between Subchapter S and C banks. We then present descriptive statistics to highlight similarities and structural differences between the two legal forms of community banks. Finally, we introduce the regression specification that underpins our main empirical analysis, including the key outcome variables, control variables, and interaction terms central to our difference-in-differences framework.

3.1 Data Sources and Sample Construction

The dataset used in this paper comes from the Bank Call Report, a mandated filing that all FDIC-insured banks in the US must submit quarterly to the Federal Deposit Insurance Corporation (FDIC). The dataset spans from the first quarter of 2003 to the final quarter of 2019, providing comprehensive coverage of banking activity during this period.⁴

³In the U.S., 75 percent of small banks with assets of less than \$100 million, as well as all large banks with more than \$10 billion in assets, have Bank Holding Companies (BHCs). These holding companies do not oversee the day-to-day operations of the banks they own. However, they wield significant control over management and company policies. They have the authority to hire and fire managers, establish and assess strategies, and monitor the performance of their subsidiaries’ businesses. BHCs can take the form of either C corporations or pass-through entities. If an S corporation holding company possesses a significant stake (greater than 25 percent) in a C bank, it can become the bank’s holding company. When an S corporation holding company owns 100 percent of a bank, all of the subsidiary’s assets, liabilities, and items of income, deduction, and credit are treated as those of the parent.

⁴To mitigate the influence of the COVID-19 pandemic, which has a significant impact on bank deposits, we conclude our dataset at the end of 2019.

We restrict the sample to community banks that are not mutual institutions because this yields the cleanest comparison of legal forms. We rely on the FDIC data indicator to identify community banks. The FDIC defines community banks as locally focused lenders that rely on retail deposits and specialize in consumer and small-business credit, unlike larger regional or national banks whose international operations and capital-markets activities would confound size and business-model effects.⁵ Nearly all Subchapter S banks fall in this category, and their C-corporation counterparts are closely comparable: in our data the median assets are \$112 million for S banks and \$167 million for C banks, with both groups sharing the same core retail-deposit and focusing on Small and Medium Enterprise lending. Accordingly, our results apply to community banks, and we leave the question of whether they generalize to larger institutions to future work.

Additionally, our analysis is restricted to banks operating within the 50 U.S. states and the District of Columbia. The final sample includes 438,414 bank-quarter observations, representing approximately 88 percent of all observations in the full FDIC dataset.

3.2 Descriptive Statistics

Table 1 provides a summary of the community bank data across four metrics – asset size, tier 1 risk capital ratio, efficiency ratio, and dividend payout ratio, by banks’ legal forms.

In terms of assets, the medians of community-bank C corporations and Subchapter S banks are close—\$167 million versus \$112 million—but the mean for C banks is more than twice as large (Table 1). Two forces explain this asymmetry. First, a subset of community C banks can raise public equity, allowing them to “scale up” and stretch the right tail of their size distribution, whereas S banks face a 100-shareholder cap, a single-class-of-stock rule, and a prohibition on public listings.

⁵In this study, we adopt the FDIC’s 2012 definition of community banks, which remained unchanged throughout our sample period. For the purposes of our analysis, the classification of community bank status is fixed over time. Although the FDIC later updated its definition, that revision occurred after the end of our study period.

Second, S banks are disproportionately headquartered in rural markets. Approximately 40.6% of C community banks are headquartered in rural areas, whereas 59.5% of S community banks operate in rural regions. Rural areas are typically defined as regions located outside core-based statistical areas, meaning they are distant from urban centers with populations over 10,000. The inherently lower loan demand and growth prospects in rural areas constrain the potential size of S banks.

These capital-raising constraints plus market-size differences compress the upper tail of the S-bank distribution and generate the higher skewness and larger standard deviation observed for C-bank assets.

Table 1: SUMMARY STATISTICS

VARIABLE	C BANKS			S BANKS		
	MEAN	MED.	STD. DEV.	MEAN	MED.	STD. DEV.
ASSET (\$ BILLIONS)	0.460	0.167	1.349	0.201	0.112	0.328
TIER 1 RISK CAP. RATIO	16.566	14.149	8.637	16.218	14.280	7.392
EFFICIENCY RATIO	74.497	70.032	29.440	67.766	66.050	20.746
PAYOUT RATIO	1.871	0.000	38.040	5.108	3.692	7.185
(PAYOUT+UNDIVIDED PROFITS) RATIO	39.759	51.612	398.821	57.735	65.543	61.314

Table 1 also shows that community banks of the two legal forms have similar tier 1 risk capital ratios and efficiency ratios. The tier 1 risk capital ratio is the proportion of a bank's tier 1 capital, which consists of the most reliable and highest-quality capital (e.g. equity capital), to its risk-weighted assets. This financial ratio measures a bank's financial strength and ability to absorb losses.

We further report results on the efficiency ratios for the two types of banks within the same table. The Efficiency Ratio is noninterest expense less amortization of intangible assets as a percent of net interest income plus noninterest income. A lower efficiency ratio indicates greater efficiency, as the institution operates more efficiently and generates higher profits

relative to its operating costs. Neither of these measures is significantly different between C and S corporate banks we have in our sample. This indicates that community banks in the dataset share similar financial strength and operating efficiency.

Table 1 also presents the banks’ payout ratios. The payout ratio is the proportion of a bank’s earnings that is returned to shareholders in the form of dividends. S banks tend to distribute significantly more than C banks.

For tax purposes, all of an S bank’s profits are passed through and taxed at the individual shareholder level. However, “pass-through” taxation does not require S banks to fully distribute those profits. This creates an interesting conundrum for S bank shareholders – they may owe taxes on earnings that the bank retains as undivided profits.

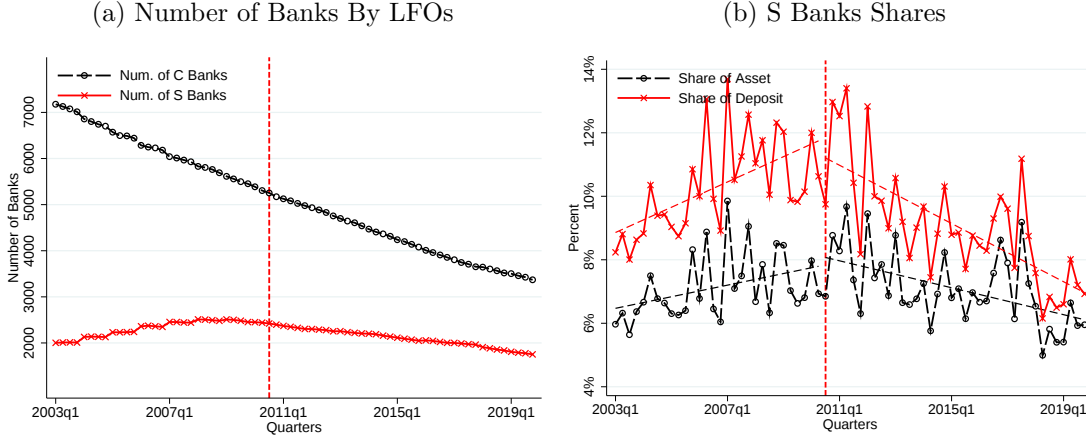
In practice, both S and C banks distribute only a relatively small portion of net income as payouts, as shown in Table 1. S banks tend to distribute significantly more than C banks, primarily to help their shareholders cover personal tax liabilities.

In the last measure of Table 1, we also include the ratio of payouts plus undivided profits to net income. The data show that, in addition to funding capital expenditures and contributing to legal and loan loss reserves, S banks also tend to retain a larger share of undivided profits compared to C banks, in order to support future operations and meet regulatory requirements.

In addition to Table 1, we illustrate the trends of S and C banks over different data periods in Figure 1. In the left panel of Figure 1, the black line with circle markers traces the quarterly count of community banks by legal form from 2003 Q1 through 2019 Q4. This panel illustrates a continuous decline in the number of C banks over time. During the entire sample period, the total number of C banks has fallen by more than 50 percent, which is indicative of a consistent consolidation trend among these banks. In contrast, the red line with cross markers demonstrates a different pattern for S banks. Initially, the number of S banks steadily increased leading up to the Great Recession of 2008-2009. However, in the aftermath of the recession, the trend reversed, and there was a noticeable decline in the number of S banks. The vertical red dashed line indicates the year 2010. After 2010, the

number of S banks continued on a declining trajectory, matching the consolidation patterns experienced by the C banks. By the end of 2019, the total number of S banks had fallen below the 2003 level.

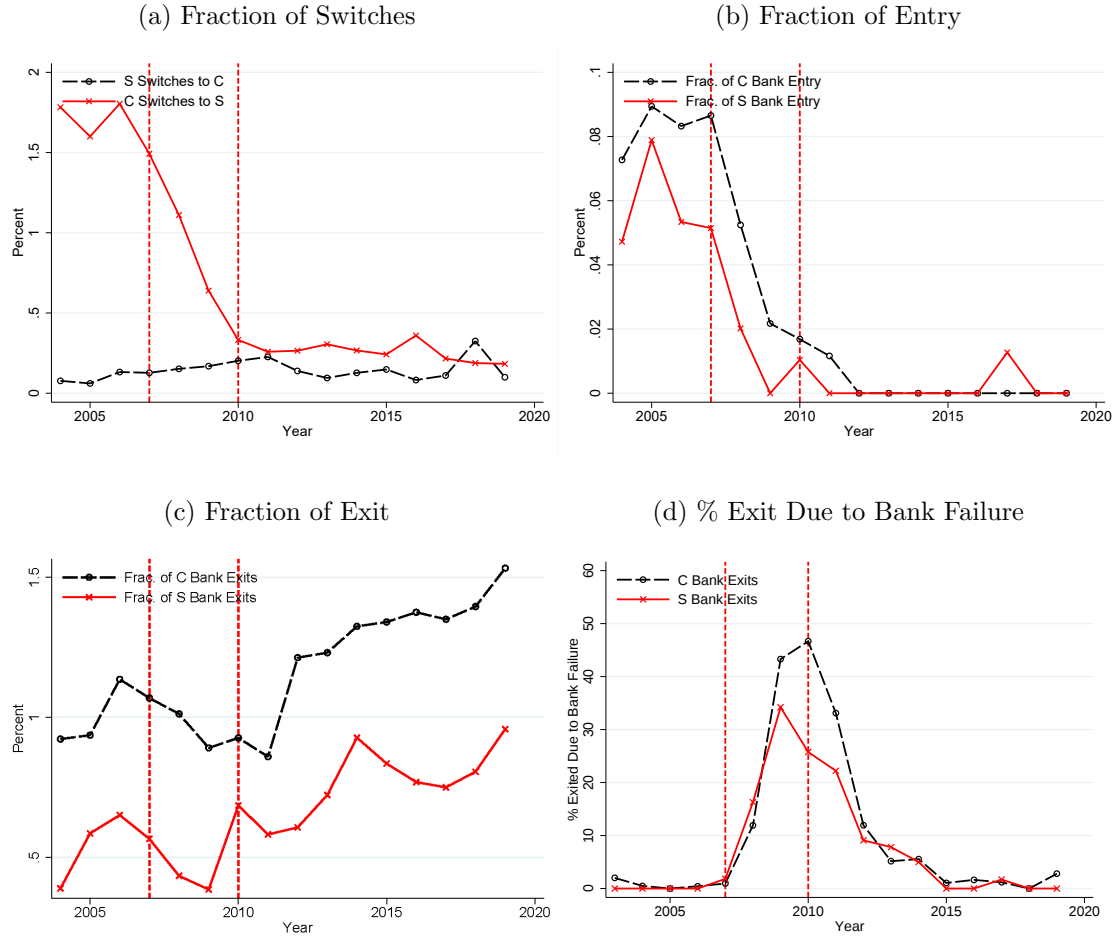
Figure 1: Relative Importance of Subchapter S Banks



The right panel of Figure 1 illustrates the trends in the relative share of assets and deposits held by S banks. The black line with circle markers represents the asset share, while the red line with cross markers indicates the deposit share. We have also added piecewise trend lines for the periods before and after the year 2010. Prior to 2010, both asset and deposit shares displayed an upward trend, suggesting that S banks were steadily gaining importance within the industry. During the Great Recession, S banks maintained an asset share of around 11 percent, while their deposit share held steady at approximately 7 percent. However, after 2010, both shares began to decline, indicating a modest reduction in S banks' relative presence in the market.

Figure 2 takes a closer look at how banks enter, exit, and switch between legal forms during the data periods. In all the panels, there are two vertical red dashed lines marking the years 2008 and 2010. The years between these lines correspond to the Great Recession. Also, panels (a), (b), and (c) in Figure 2 show the trends in the proportion of banks. The percentages are calculated based on the proportion within each legal form.

Figure 2: Entry, Exit, and Switches in Legal Form



Panel (a) depicts the proportion of community banks switching legal forms. Subchapter S banks are not likely to switch to C corporate legal forms. The average annual switch proportion is consistently below 0.3 percent, and the trend remains largely unaffected by the Great Recession and subsequent regulatory changes. On the other hand, a noteworthy proportion – around 1.75 percent of C banks switched to S banks annually before the Great Recession. However, this proportion steadily declined during the recession years, dropping to below 0.5 percent after 2010. In terms of absolute numbers, the switches from S banks to C banks have always been small, averaging around 30 per year throughout the sample period. However, the number of switches from C banks to S banks peaked in 2007 at 143

and declined to fewer than 10 per year in the late 2010s. In summary, post-2010, very few banks switched legal forms, both in proportion and absolute numbers.

In Panel (b), we look at the proportion of new community banks entering by legal form. Both S and C banks saw substantial entry prior to the Great Recession. For example, in 2006 alone, 156 new C banks and 21 S banks entered the market. However, entry declined sharply during the crisis and virtually disappeared after 2010. Between 2011 and 2020, C bank entries averaged fewer than 5 per year, and S bank entries were essentially zero in most years. This lack of entry is now well documented. [65] show that the annual rate of new-bank charters fell from more than 100 in 1990–2008 to *fewer than one* after 2010. [66] report that only *four* de novo banks were chartered nationwide during 2011–2013, and the FDIC’s [75] *Community Banking Study* (Chart 2.4) records *no* new charters in 2012, 2014, or 2016. Consistent with those figures, Federal Reserve Governor [76] notes that just 44 new banks formed in the entire decade following the financial crisis.

The reasons for the absence of entry after 2010 are not the focus of this paper. However, the absence of entry presents a unique opportunity for us to focus on examining changes within banks based on their legal forms. After 2010, no new banks are entering or making legal form decisions, and there are also minimal switches between legal forms. Therefore, most of the legal form decisions for existing banks were likely determined before 2010. Therefore, if we observe any divergence in trends among banks of different legal forms after 2010, these changes are likely the result of internal shifts within the banks themselves, due to the differences in legal forms.

However, the proportion of community banks exiting the industry steadily increases after 2010, as shown in Panel (c) of Figure 2. In absolute terms, however, the number of community bank exits gradually declined. While there were over 200 C bank exits annually in the early 2000s, this number dropped to around 170 per year in the late 2010s. S bank exits also declined slightly, from 61 in 2006 to around 50 per year in the later part of the decade. Throughout the period, the exit rate for S banks remained significantly lower than that for C banks. Community bank exits generally fall into two categories: mergers and bank

failures. Panel (d) of Figure 2 displays the percentage of exits due to failures for both types of legal form organizations (LFOs). Bank failures were concentrated during the Great Recession and its immediate recovery. After 2010, most exits were driven by mergers rather than failures. However, the difference in the composition of exit types between S and C banks is not statistically significant.

To determine whether the endogenous choice of exits significantly diverges between the S and C banks after 2010, we performed a logit regression. This analysis examines the likelihood of exits for both S and C banks, controlling for bank-specific characteristics such as asset size, tier 1 risk capital ratio, efficiency ratio, rural location, and incorporating time-period and state-fixed effects. The results, presented in the online appendix, indicate that while S corporations are less likely to exit in general, the difference in the likelihood of exits between S and C banks does not diverge significantly after 2010. This result provides evidence that, after considering bank-specific factors and legal forms, banks made similar exit decisions both before and after 2010.

3.3 Empirical Specification

We restrict our regression analysis solely to community banks that are not mutual institutions. We impose this restriction because C banks encompass large national and regional banks, which exhibit significantly different characteristics than smaller subchapter S banks. For instance, major US banks engage in extensive international operations and derive substantial income from corporate investment, while subchapter S banks primarily operate within a specific geographic area, focusing on consumer deposits and small business lending.

Since nearly all subchapter S banks fall under the category of community banks, the natural comparison lies with C corporate community banks. Additionally, we exclude a small fraction of mutual banks. A mutual bank is a cooperative financial institution owned by its depositors or customers. All mutual institutions are taxed like C corporation banks. These institutions may behave quite differently than their non-mutual counterparts.

The main regression model is specified in Equation 1. The dependent variable in the model is denoted as y_{it} , representing the financial ratio of interest. The subscripts i and t refer to the bank and time period, respectively.

$$y_{it} = CONST + \alpha_t + \sigma_s + \beta_1 POST_t + \beta_2 SCORP_{it} + \beta_3 POST_t \times SCORP_{it} + \gamma \times X_{it} + \varepsilon_{it} \quad (1)$$

The first dependent variable, Yield on Earning Assets, is the total interest income as a percent of average earning assets. Earning assets include all loans and other investments that earn interest or dividend income. The yield on earning assets measures the effectiveness of the banking institution in generating income from its assets that are actively deployed to generate interest income. A higher yield indicates that the institution's loans and investments generate a higher level of interest income relative to the value of those assets.

The second dependent variable, Cost of Funding Earning Assets, is the total interest expense on deposits and other borrowed money, such as inter-bank loans or issued debt, as a percent of average earning assets. It measures the costs of obtaining the funds necessary to support the institution's interest-earning activities. A higher cost of funding earning assets indicates that the institution incurs relatively higher expenses to finance its interest-earning activities.⁶

We estimate Equation (1) using a difference-in-differences (DiD) framework. In the empirical specification, the dummy variable $POST_t$ indicates whether a particular quarter is after 2010. The dummy variable $SCORP_{it}$ indicates whether bank i is a subchapter S bank in quarter t . To capture the potential differences between subchapter S banks and C banks after 2010, the regression also includes the interaction term $POST_t \times SCORP_{it}$.⁷ Our focus

⁶It is possible that the yield on earning assets and the cost of funding earning assets are not fully independent across bank types. For example, if C banks offer lower loan rates and higher deposit rates, this may constrain how far S banks can diverge without losing customers. To test for such cross-type competitive pressures, we consider alternative dependent variables as the difference between each bank's rate and the average rate of the opposite ownership group. Regression results using these difference-in-rates measures are included in the appendix. They are directionally consistent with the main findings, confirming the robustness of our results and the statistical significance of the treatment effects.

⁷To account for the possibility that the relationship between explanatory variables and bank outcomes may

is on the interaction term, which isolates within-bank behavioral changes, given that few banks switched legal form or entered/exited the market after 2010.

We identify 2010 as the pivotal year for examining treatment effects. This choice is large due to the enactment in that year of the Dodd-Frank Wall Street Reform and Consumer Protection Act, a significant regulatory change that dramatically transformed the banking regulatory landscape. This period serves as a natural experiment, marking a clear demarcation between the pre- and post-regulatory environments and providing a robust framework to assess how S banks and C banks adapted.

To explicitly account for macroeconomic policy shifts, we incorporate two macroeconomic policy variables. The first is the Federal Funds Rate, obtained from the Federal Reserve Economic Data (FRED), which serves as the primary tool of U.S. monetary policy and directly influences both the returns on bank assets and the cost of liabilities. The Federal Reserve lowered interest rates to near zero at the end of 2008, business loan rates, indicated by 10-year Treasury yields, continued to decline, reaching historical lows after 2010.

The second set of variables captures changes in macroprudential policy, indicating whether regulatory authorities tightened or loosened such policies in a given year. These indicators are derived from the monthly database developed by Alam et al. (2019) and are aggregated to the quarterly level to align with our panel dataset.

The coefficients on the macroeconomic policy variables capture immediate responses of bank yields and funding costs to changes in interest rates and macroprudential policy. In contrast, the coefficient on $POST_t$ is interpreted as the average long-term effect of the post-2010 regulatory environment on bank behavior. This distinction allows us to separate transitory macroeconomic influences from structural changes linked to Dodd-Frank implementation.

The model also includes bank-specific control variables, which are crucial in accounting

differ systematically between S and C banks, we estimate an alternative specification in which all covariates are interacted with the S Corp dummy. This approach allows for heterogeneity in slopes across bank types and follows the methodology employed in related studies such as [60]; [59]. The results are included in the Appendix. The main findings remain robust, with only minor changes in magnitude, confirming the consistency of our baseline results

for observable sources of cross-sectional heterogeneity that may affect the yield on earning assets or the cost of funding earning assets, independent of legal form. Log total assets is used to capture size-based economies of scale and bargaining power, which may influence both the pricing of loans and the cost of funds. The tier 1 risk-based capital ratio serves as a proxy for a bank’s financial soundness and regulatory capital buffer, which can impact its lending aggressiveness and funding costs. The efficiency ratio reflects operational efficiency and cost management ability, which may correlate with both profitability and pricing behavior. In addition, a rural location indicator is included to capture geographic market differences—such as competition, loan demand, and deposit pricing—since prior analysis indicates that S banks are more likely to operate in rural markets than C banks. Including these controls helps mitigate omitted-variable bias and strengthens the internal validity of the estimated treatment effects.

Finally, the model includes two fixed effects: time-specific fixed effects, α_t , capturing common time trends across the entire banking sector, and state-specific fixed effects, σ_s , capturing time-invariant regional differences.

The error term, denoted as ε_{it} , represents the unobserved factors or random shocks that affect the financial ratios but are not accounted for by the included variables. We cluster the standard error at the highest bank holding company level. A Bank Holding Company (BHC) has a controlling interest in one or more banks, and exercises control over its subsidiary banks. Overall, the banks are grouped into 13,218 unique clusters.

By clustering robust standard errors, we account for potential arbitrary non-independence between time periods and individual bank units within each bank holding company. This approach helps to ensure that our analysis properly addresses any correlations or dependencies that may exist within the data structure.

The DiD approach is particularly well-suited to our setting for three reasons. First, the implementation of the Dodd-Frank Act in 2010 and the concurrent shift to an ultra-low interest rate regime created a natural treatment period that applies to all banks, but with potentially heterogeneous impacts depending on structural constraints—such as the share-

holder limit or taxation rules—associated with legal form. Second, as shown in Section 3, legal form transitions were rare and exit nearly ceased after 2010, mitigating concerns about endogenous selection into treatment. Third, the DiD model allows us to flexibly control for both time-invariant bank characteristics and time-varying shocks common to all banks, using state and year fixed effects.

Our empirical strategy builds on established approaches used in prior literature that investigates regulatory and monetary policy impacts using DiD designs. In the context of the 2008 financial crisis, [2] apply a DiD approach to estimate the impact of TARP capital infusions on bank risk-taking by comparing recipient and non-recipient banks before and after the program. Likewise, [3] use county-level exposure to large banks to evaluate how the credit supply contraction during the crisis affected local credit markets and employment, leveraging variation across counties in a DiD framework. Together, these studies demonstrate that DiD is a standard and well-established method in the banking literature for identifying causal effects when institutions are differentially exposed to policy or market shocks. Following this tradition, our design emphasizes pre-determined institutional characteristics and their interaction with exogenous shocks to estimate differential behavioral responses.

3.3.1 Decomposition Methodology

To better understand the mechanisms behind changes in the two key outcome variables – Yield on Earning Assets and Cost of Funding Earning Assets – we conduct decomposition exercises using supplementary regressions. For the yield measure, we decompose the change into two parts: (1) changes in the average yield on loans and yields on other earning assets, and (2) shifts in portfolio composition, as captured by the percentage of loans in total earning assets.

Similarly, for the cost of funding measure, we examine changes in the interest rates paid on different funding sources, such as interest-bearing deposits and other liabilities, as well as changes in the funding structure, namely the relative shares of these sources in total liabilities. These supplementary regressions follow the same specification as Equation (1), replacing the

dependent variable with each relevant component and retaining the same control variables and interaction terms.

To quantify the contribution of each channel, we use the estimated coefficients to simulate counterfactual scenarios for a representative (median) community bank while holding all control variables constant. This approach allows us to isolate the extent to which post-2010 divergence across legal forms is attributable to "price" effects—such as differences in yields or interest rates—and "composition" effects—such as shifts in asset or funding mixes.

Through this decomposition, we are able to distinguish whether the observed differences between Subchapter S and C banks reflect changes in pricing behavior or structural adjustments in balance sheet composition. The results are presented in Section 4.5.

4 Empirical Results

This section presents the empirical findings based on the regression framework introduced in Section 3.3. Our analysis focuses on two key financial ratios in the banking sector: the Yield on Earning Assets and the Cost of Funding Earning Assets. We begin by documenting how these ratios evolved for Subchapter S and C corporations after 2010, using a difference-in-differences (DiD) approach. These regressions establish the core empirical pattern: following the financial crisis, the yield advantage previously held by S banks diminished, while their funding cost advantage also narrowed relative to C banks.

We then investigate the validity of the identifying assumptions, including the parallel trends assumption, using an event study specification. In subsequent sections, we assess the robustness of our findings by incorporating alternative proxy measures for both asset returns and funding costs. We further test for possible compositional bias by restricting the sample to banks that never switched legal form. Finally, we conduct a decomposition analysis to explore the mechanisms behind the observed divergence in yields and funding costs. This analysis quantifies the relative contributions of pricing versus compositional factors, helping to explain how shifts in behavior and portfolio structure contributed to the post-2010 trends.

It is important to emphasize that our analysis does not seek to estimate the causal impact of legal form on financial outcomes. Instead, our focus is on characterizing how the relationship between bank type and key financial ratios changed after the crisis—conditional on banks having already selected into their legal form. As discussed in Section 3, legal form transitions were rare after 2010, so the observed post-2010 divergence is unlikely to be driven by selection or entry effects. Rather, it reflects the different long-term structural changes faced by incumbent S and C banks in response to a common set of macroeconomic and regulatory shocks.

4.1 Main Results

Table 2 presents the regression results for the Yield on Earning Assets in the first column. The coefficients on the control variables, including the bank size, the Tier 1 risk-based capital ratio, and the efficiency ratio all exhibit a statistically significant negative relationship with the yield on earning assets. This suggests that larger and more financially stable banks generally have a lower yield on their earning assets. The location of a bank in rural areas significantly decreases its yield.

The Federal Funds Rate is positively and significantly associated with the yield on earning assets, suggesting that banks respond to higher policy rates by repricing their loan portfolios or shifting toward higher-yielding assets. This is consistent with standard interest rate transmission mechanisms. Macroprudential policy also plays a statistically significant role. Periods of policy tightening are associated with lower yields, which is in line with the expectation that stricter capital or lending constraints may reduce risk-taking. Conversely, policy loosening is associated with higher yields, reflecting an environment that encourages credit growth and greater portfolio risk.

Turning to the key DiD variables, the coefficient on “S Corp” reflects the average difference between S and C banks prior to 2010, while the coefficient on “Post ” captures the change over time for C banks. These coefficients establish the baseline levels against which the interaction effect is measured. The coefficient on S Corp is positive and statistically sig-

Table 2: REGRESSION RESULTS

	YIELD ON EARNING ASSET	COST OF FUNDING EARNING ASSET
POST	-1.302*** (0.021)	-1.164*** (0.010)
S CORP	0.066*** (0.018)	-0.060*** (0.012)
POST X S CORP	-0.065*** (0.014)	0.051*** (0.010)
LOG ASSET	-0.127*** (0.007)	0.035*** (0.004)
RURAL	-0.071*** (0.014)	-0.022*** (0.008)
TIER 1 RISK CAPITAL RATIO	-0.038*** (0.001)	-0.017*** (0.001)
EFFICIENCY RATIO	-0.007*** (0.000)	0.001*** (0.000)
FED FUND RATE	0.035*** (0.010)	0.004 (0.003)
MAPP TIGHTENING	-0.048*** (0.004)	-0.031*** (0.001)
MAPP LOOSENING	0.038*** (0.007)	0.020*** (0.002)
CONSTANT	7.921***	1.369***
QUARTERLY F.E.	YES	YES
STATE F.E.	YES	YES
R^2	0.631	0.795

NOTES: Standard errors, clustered at the top Bank Holding Company level, are given in parentheses. Three (***), two (**), and one (*) stars indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

nificant, indicating that prior to 2010, Subchapter S banks earned higher yields on earning assets compared to C banks. The Post dummy is negative and significant, capturing the substantial decline in yields across the industry following the Great Recession and the onset of near-zero interest rate policy.

It is important to clarify that we do not take any stance on the causal effect of different legal forms on yields. This is because there could be inherently unobservable factors that influence banks in choosing different legal forms, and these same factors could also contribute to the differences in yields. Our focus is rather on the interaction term “Post $\times$ S Corp.” As shown in the Section 3, there were almost no entries after 2010, and the number of banks switching legal forms also declined significantly. Therefore, the coefficient on the interaction term “Post $\times$ S Corp” primarily reflects behavioral changes in banks that had already chosen their legal forms before 2010. If yields diverge after 2010, it must be attributed to banks of different legal forms reacting differently to structural shifts in the macroeconomic environment and policies in the long term. Table 2 shows that the coefficient on the interaction term “Post $\times$ S Corp” is negative and significant. This indicates that the difference in yields between S and C banks has significantly decreased after 2010.

The second column of Table 2 reports the regression results for the Cost of Funding Earning Assets. The cost tends to increase with bank size and the efficiency ratio but decreases with the Tier 1 risk-based capital ratio. Larger banks have a higher average cost of financing their earning assets, but financially safer banks have lower average costs. The location of a bank in a rural area has a significant effect on reducing funding costs.

The Federal Funds Rate does not show a statistically significant effect on the cost of funding. This result may reflect stickiness in deposit rates or slower pass-through of policy rate changes to banks’ funding bases compared to the asset side. In contrast, macroprudential policy variables exhibit statistically significant effects. Policy tightening is associated with lower funding costs, which could reflect reduced demand for funds or greater discipline in bank liability management under stricter regulatory environments. Policy loosening is associated with higher funding costs, possibly due to increased borrowing and risk-taking

during more permissive periods.

The coefficient on “S Corp” is negative and statistically significant, indicating that, before 2010, S banks enjoyed a funding cost advantage relative to C banks. The “Post” dummy is also negative and significant, capturing the broad-based decline in funding costs across the industry following the financial crisis and subsequent monetary easing. The interaction term “Post $\times$ S Corp” is positive and significant, showing that S banks experienced a smaller decline in funding costs than C banks after 2010. This implies that while both types of banks benefited from a lower-rate environment, the relative funding advantage of S banks diminished in the post-crisis period.

The key insight from Table 2 is that after 2010, subchapter S banks experienced a more significant decrease in the yields on earning assets relative to C banks, controlling for bank size, geographic extent, risk, profit, operating efficiency, and immediate response to macroeconomic policy changes. On the other hand, subchapter S banks’ costs of funding earning assets decreased relatively less than those of C banks.

4.2 Parallel Trend Assumption

As aforementioned, our DiD approach relies on the parallel trend assumption, which posits that, in the absence of any changes, the average trends for S and C banks would follow parallel paths over time. Essentially, it assumes that the relative differences in yields and costs between these two types of banks would remain stable over time in the absence of treatment. By assuming parallel trends, any divergences in the differences between the groups can be attributed to the treatment rather than any other factors.

The Great Recession, which lasted from 2008 to 2010, could have significant impacts on both bank yields and costs. Although the inclusion of per-period fixed effects in our analysis accounts for the average effects of the Great Recession and any macroeconomic cyclicalities on bank earnings and costs, we must make sure that there is no trend divergence between C and S banks prior to 2010, possibly caused by the Great Recession.

To examine the validity of the parallel trend assumption, we employ an event study

design with leads and lags. This design allows us to assess the dynamics of treatment effects over time. In particular, we generate lead and lag variables for the treatment indicator in 2010. We have created lead variables for subsequent years such as 2011, 2012, and so on. Similarly, lag variables are generated for preceding years like 2009, 2008, and so forth. Then, we incorporate the interaction terms between these lead and lag variables and the subchapter S dummy variable in the DiD model.

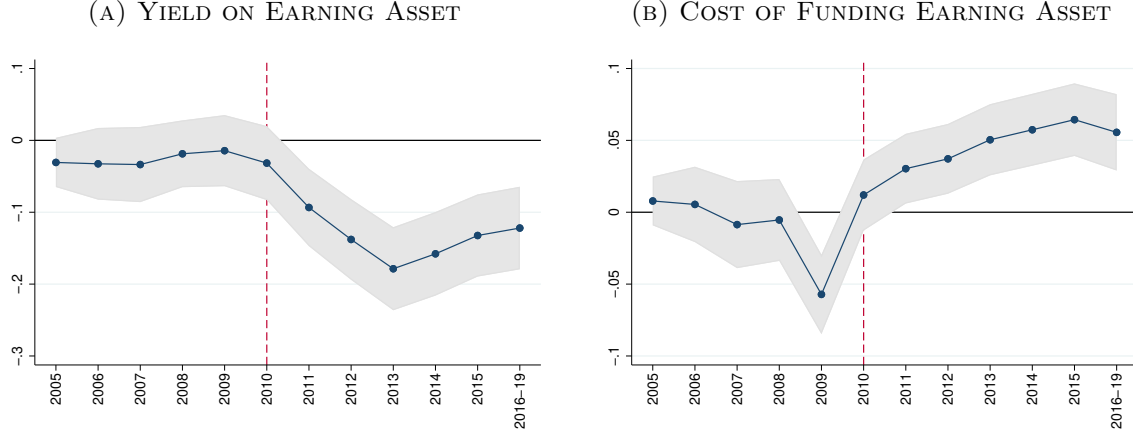
By examining the coefficients on the interaction term over time, as shown in Figure 3, we can assess the treatment effects' dynamics. This analysis allows us to evaluate the validity of the parallel trend assumption and ascertain whether the divergence in the differences between subchapter S banks and C banks is a result of the treatment effect.

In Figure 3, the reference years are 2003-2004, and the 95 percent confidence intervals of the coefficients are shaded in grey. Panel (A) illustrates that, during the years preceding the implementation year, the differences in Yield on Earning Assets between subchapter S and C banks do not exhibit significant disparity compared to the reference years. However, after 2010, the difference between S and C banks starts to fall. The decline in this difference is statistically significant and reached its lowest point in 2013. Since then, it has remained relatively stable.

Similarly, Panel (B) of Figure 3 shows that the differences in Cost of Funding Earning Assets between subchapter S and C banks in the years preceding 2010 do not indicate any significant divergence from the reference years. The notable exception is the Year 2009. During this year, the coefficient is significantly lower compared to the reference year, indicating that the funding cost of subchapter S banks is lowered relative to the C banks. However, this trend undergoes a reversal in the subsequent years. Following the change in regulations, the difference between subchapter S and C banks in terms of Cost of Funding Earning Assets begins to increase and stays significantly positive. Given that the subchapter S banks had relatively lower costs in the preceding years, this increasing trend implies that the cost advantage enjoyed by subchapter S banks has diminished after 2010.

Overall, our findings suggest that S banks have experienced diminishing advantages in

Figure 3: PARALLEL TREND ASSUMPTIONS



both Yield on Earning Asset and Cost of Funding Earning Asset after 2010, with these effects persisting in the years thereafter.

4.3 Alternative Proxy Measures

To assess the robustness of our main results, we re-estimate the regression model using two additional outcome variables commonly used to proxy for banks' earnings performance and funding structure. The results are presented in Table 3. Columns (1) and (3) replicate the main results for Yield on Earning Assets and Cost of Funding Earning Assets from Table 2. Column (2) introduces Net Interest Margin as an alternative proxy for yield performance, while Column (4) uses the Interest Expenses to Liabilities ratio as an alternative measure of funding costs.

Across all specifications, the control variables exhibit consistent signs and statistical significance. Larger banks and more efficient banks tend to have lower net interest margins and higher funding costs, while better-capitalized banks (those with higher Tier 1 risk-based capital ratios) consistently show lower funding costs and higher margins. Rural banks again display lower yields and costs, reflecting potentially more stable, lower-risk environments.

Monetary and macroprudential policy variables also behave as expected. A higher Federal

Table 3: Regression Results – Other Proxies

	YIELD ON EARNING ASSET	NET INTEREST MARGIN	COST OF FUNDING EARNING ASSET	INTEREST EXPENSES TO LIABILITIES
POST	−1.302*** (0.021)	−0.138*** (0.021)	−1.164*** (0.010)	−0.409*** (0.008)
S CORP	0.066*** (0.018)	0.126*** (0.018)	−0.060*** (0.012)	−0.031*** (0.008)
POST X S CORP	−0.065*** (0.014)	−0.116*** (0.015)	0.051*** (0.010)	0.025*** (0.006)
LOG ASSET	−0.127*** (0.007)	−0.162*** (0.007)	0.035*** (0.004)	0.018*** (0.003)
RURAL	−0.071*** (0.014)	−0.048*** (0.014)	−0.022*** (0.008)	−0.018*** (0.005)
TIER 1 RISK CAPITAL RATIO	−0.038*** (0.001)	−0.020*** (0.001)	−0.017*** (0.001)	−0.006*** (0.000)
EFFICIENCY RATIO	−0.007*** (0.000)	−0.008*** (0.000)	0.001*** (0.000)	−0.000 (0.000)
FED FUND RATE	0.035*** (0.010)	0.030*** (0.009)	0.004 (0.003)	0.430*** (0.004)
MAPP TIGHTENING	−0.048*** (0.004)	−0.017*** (0.004)	−0.031*** (0.001)	−0.211*** (0.002)
MAPP LOOSENING	0.038*** (0.007)	0.017*** (0.006)	0.020*** (0.002)	0.080*** (0.001)
CONSTANT	7.921*** (0.178)	6.552*** (0.186)	1.369*** (0.084)	0.512* (0.264)
QUARTERLY FE	YES	YES	YES	YES
STATE FE	YES	YES	YES	YES
R^2	0.631	0.222	0.795	0.752

NOTES: Standard errors, clustered at the top Bank Holding Company level, are given in parentheses. Three (***), two (**), and one (*) stars indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Funds Rate significantly increases the yield on earning assets and the net interest margin, but its effect on the cost of funding is not statistically significant.

Interestingly, the Federal Funds Rate has a large and statistically significant positive effect on the interest expense-to-liability ratio. This suggests that bank interest expenses are more responsive to Federal Reserve actions than their overall cost of funding. Macroprudential tightening is associated with lower yields, margins, and funding costs, while loosening produces the opposite effects—supporting the interpretation that changes in the regulatory stance affect banks’ pricing of both assets and liabilities.

The key variables of interest – “Post”, “S Corp”, and “Post $\times$ S Corp” – remain statistically significant and directionally consistent across all outcome variables. The Post dummy shows large and significant declines in yields, margins, and interest costs after 2010, aligning with the post-crisis policy environment. The S Corp coefficient is positive for both yield and margin, and negative for both cost measures, indicating that S banks performed better on average prior to 2010. Most importantly, the “Post $\times$ S Corp” interaction is negative and significant for yield and margin, and positive and significant for both cost variables. This pattern reinforces our main finding: S banks experienced a greater decline in asset yields and net interest margins, and a smaller reduction in funding costs, relative to C banks post-2010.

Together, these results suggest that our conclusions are robust to alternative measurement strategies. Regardless of whether we proxy bank profitability and funding structure using earning yields and costs of funding or net margins and interest expense ratios, the directional effects and relative differences between S and C banks remain intact. This robustness enhances confidence in our interpretation that differences in legal form shaped banks’ responses to macroeconomic and regulatory changes following the financial crisis.

4.4 Entry, Exit, and Switches

Bank entry, exit, and switches can possibly confound the regression analysis presented in Table 2. As we have shown in the Data section, entry was near zero and switches in legal forms were significantly lower in the post-2010 years. We have reason to believe that most

community banks in our analysis have chosen their legal forms prior to 2010.

To further investigate these possible confounding factors, we employ two approaches. Firstly, we rerun the regression presented in Table 2 using a restricted sample. This restricted sample includes only banks that maintained the same legal form throughout the entire sample period. We exclude banks that changed their legal form or were new entries or exits. In essence, this restricted sample comprises community banks that have continuously operated as either subchapter S or C corporations throughout the entire sample period. The restricted sample has 229,717 bank-quarter observations and 6,778 clusters.

Table 4 displays the regression results. The coefficients for both Yield on Earning Assets and Cost of Funding Earning Assets exhibit the same signs and are comparable in magnitude to those presented in Table 2 from the main regression. These findings indicate that the main results remain robust when using the restricted sample, wherein only banks that maintained the same legal form throughout the entire sample period were included.

Specifically, the results reaffirm that, after 2010, subchapter S banks reduced the yields on earning assets relatively more than those of C banks, and their costs on funding earning assets decreased relatively less than those of C banks. These results indicate that the divergence in yield and cost between S and C banks after 2010 is primarily attributed to the difference in legal forms of organization, rather than shifts in bank compositions across the two different legal form groups.

4.5 Decomposition Analysis and Discussion

We investigate the underlying mechanisms behind the post-2010 divergence in the Yield on Earning Assets and the Cost of Funding Earning Assets between S and C banks. This section presents decomposition analyses and interpretation of the results.

4.5.1 Change in Yield on Earning Assets

In this section, we provide insights into why the yields on earning assets have diverged after 2010 between banks of two different legal forms. A bank's earning assets can be partitioned

Table 4: REGRESSION RESULTS - NO ENTRY, EXIT, OR SWITCH IN LFO

	YIELD ON EARNING ASSET	COST OF FUNDING EARNING ASSET
POST	-1.307*** (0.022)	-1.199** (0.013)
S CORP	0.067** (0.027)	-0.044*** (0.018)
POST X S CORP	-0.070*** (0.018)	0.034** (0.014)
LOG ASSET	-0.151*** (0.011)	0.034*** (0.006)
RURAL	-0.037* (0.021)	0.016 (0.011)
TIER 1 RISK CAPITAL RATIO	-0.040*** (0.002)	-0.013*** (0.001)
EFFICIENCY RATIO	-0.009*** (0.001)	0.000 (0.000)
FED FUND RATE	0.021*** (0.007)	0.004* (0.002)
MAPP TIGHTENING	-0.051*** (0.004)	-0.030*** (0.001)
MAPP LOOSENING	0.032*** (0.005)	0.019*** (0.001)
CONSTANT	8.340*** (0.201)	1.360*** (0.105)
QUARTERLY F.E.	YES	YES
STATE F.E.	YES	YES
R^2	0.678	0.810

NOTES: Standard errors, clustered at the top Bank Holding Company level, are given in parentheses. Three (***), two (**), and one (*) stars indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

into two broad categories: (i) *Loans*, which dominate the balance sheet (typically more than one-half of earning assets) and carry the highest yields and credit risk; and (ii) *Other earning assets*—lease finance, trading accounts, U.S. Treasury and agency securities, and interest-bearing balances at other institutions—which are lower-risk and therefore lower-yield.

Before 2010 the average loan in our sample earned 6.85%, whereas other earning assets earned 3.95%. After 2010 those averages dropped to 5.49% and 2.00%, respectively. Because S banks systematically hold a smaller share of loans and a larger share of low-yield securities than C banks, a given decline in loan yields depresses their overall earning-asset yield more sharply [69].

To pinpoint the mechanics, we estimate three regressions—*Yield on Loans*, *Yield on Other Earning Assets*, and *Share of Loans in Earning Assets*—using the same control set as in Equation (1). Table 5 reports the coefficients of interest, with the interaction term “Post x S Corp” capturing any additional post-2010 shift for S banks.

Column (1) shows that loan yields fell by 1.28 percentage points post-2010, with a significantly steeper decline for S banks. This aligns with prior work showing that S banks often pass through part of their tax advantage by offering lower loan rates [52], [71], a tendency that intensifies in low-rate environments.

Column (2) indicates no significant legal-form gap in the yield on other earning assets, which is expected given these assets are priced in national markets. Column (3) reveals that while all community banks increased the loan share in their portfolios post-crisis, S banks did so to a lesser extent. This more conservative shift likely reflects capital constraints imposed by Basel III and the shareholder limit, which restrict external equity access. These factors led S banks to preserve dividend payouts for tax obligations by favoring lower-risk securities [72], [75].

Hence, the divergence in yields on earning assets between S and C corp banks after 2010 may be attributed to S corp banks experiencing a comparatively more substantial decline in loan yields and maintaining a smaller proportion of loans in their asset portfolio. Using the estimated coefficients of the regressions, we can decompose the contribution of these

Table 5: EARNING ASSET YIELDS AND COMPOSITION

	YIELD ON LOANS	YIELD ON OTHER EARNING ASSETS	SHARE OF LOANS IN EARNING ASSETS
POST	-1.267*** (0.027)	-1.093*** (0.032)	4.573*** (0.336)
S CORP	0.117*** (0.027)	0.066*** (0.020)	-0.220 (0.315)
POST X S CORP	-0.074*** (0.015)	-0.042 (0.049)	-0.764*** (0.255)
LOG ASSET	-0.250*** (0.008)	-0.100*** (0.008)	0.025 (0.126)
RURAL	0.084*** (0.015)	-0.067*** (0.015)	-3.006*** (0.256)
TIER 1 RISK CAPITAL RATIO	0.010*** (0.001)	0.000 (0.001)	-1.240*** (0.024)
EFFICIENCY RATIO	-0.005*** (0.000)	-0.003*** (0.000)	-0.045*** (0.005)
FED FUND RATE	-0.082*** (0.014)	0.161*** (0.020)	0.993*** (0.132)
MAPP TIGHTENING	-0.022*** (0.005)	-0.149*** (0.008)	-0.777*** (0.053)
MAPP LOOSENING	0.031*** (0.008)	0.077*** (0.012)	0.455*** (0.089)
CONSTANT	9.233*** (0.203)	2.637*** (0.215)	83.126*** (5.290)
QUARTERLY F.E.	YES	YES	YES
STATE F.E.	YES	YES	YES
R^2	0.520	0.489	0.421

NOTES: Standard errors, clustered at the top Bank Holding Company level, are given in parentheses. Three (***), two (**), and one (*) stars indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

factors to changes in yields for a hypothetical bank. This hypothetical community bank has a median asset level, a median tier 1 risk capital ratio, a median efficiency ratio, and is located in non-rural areas.⁸ For this hypothetical bank, the coefficient estimates imply that the *smaller increase in loan share accounts for 37.6 %* of the post 2010 gap in yields on earning asset between S and C banks, while the *larger drop in loan yields accounts for 56.0 %*. Put differently, roughly three-fifths of the divergence is a *price* effect and two fifths a *portfolio composition* effect.

Why did S banks respond more conservatively after the Great Recession? First, the capital-conservation buffer restricts dividend payouts when risk-weighted capital ratios approach the threshold, and S-bank shareholders rely on those dividends to pay personal income taxes on pass-through earnings [76]. Second, supervisory guidance on commercial real estate concentrations, an asset class in which S banks are over represented, further constrained loan growth [73]. Faced with these twin pressures, S banks buffered capital by allocating marginal funds to short-term government securities rather than expanding the loan book. These channels together explain why earning-asset yields for S banks have dropped relatively lower than those of comparable C banks.

4.5.2 Change in Funding Costs of Earning Assets

In this section, we provide insights into why the costs of funding earning assets have diverged after 2010 between banks of two different legal forms. The funding cost of earning assets primarily encompasses the total interest expense incurred on deposits and other borrowed funds. Deposits are the primary funding source for earning assets in the majority of community banks. Deposits can be further categorized into two main types: interest-bearing deposits, including savings accounts and certificates of deposits, and non-interest-bearing deposits, comprising non-interest-paying checking accounts. Alternative forms of borrowed funds, including federal funds purchased, repurchase agreements, and demand notes issued

⁸The median log asset is 5.208, the median tier 1 risk ratio is 14.194, and the median efficiency ratio is 68.583.

to the US Treasury, typically constitute around 10 percent of earning assets.

The fourth columns in Table 6 show the results of four regressions performed on “Interest Cost on Interest-Bearing Deposits,” “Share of Interest Bearing Deposits,” “Cost of Other Funding Source,” and “Share of Other Funding Source,” respectively. These regressions employ the same set of control variables as outlined in Equation 1. We focus on the interaction term “Post x S Corp,” used to identify the divergence in trends post-2010.

In Columns 1 and 3 of Table 6, the interaction terms are both not significantly different from zero. This result indicates that the difference between banks of the two legal forms in interest costs on interest-bearing deposits and costs on other funding sources did not diverge significantly from that before and after 2010. On the contrary, Columns 2 and 4 reveal that S banks maintained a higher proportion of interest-bearing deposits and other funding sources compared to their C bank counterparts after 2010. This suggests that the non-interest-bearing deposit share of funding assets has not grown as substantially in S banks as it has in C banks after 2010.

To gauge economic significance we perform the same decomposition used for earning-asset yields. For the median community bank defined in Section 4.5.1, we hold deposit rates at their pre-2010 levels but let the post-2010 funding mix prevail. The exercise shows that 91.6 percent of the increase in overall funding cost at S banks is explained by the shift toward interest-bearing deposits; only 8.4 percent comes from differences in the rates paid on those deposits. This suggests the alterations in the composition of deposits used to fund earning assets play a pivotal role in the diminution of differences in funding costs for earning assets between Subchapter S and C banks.

It is clear that most of the divergence between S and C banks in costs of funding earning assets was due to S banks retaining a higher proportion of interest-bearing deposits. We conjecture that **two reinforcing forces** lie behind this pattern.

First, S banks are disproportionately headquartered in rural markets and serve fewer corporate customers, limiting their ability to attract low-cost, non-interest-bearing demand deposits [74], [75].

Table 6: COST OF FUNDING EARNING ASSETS AND COMPOSITION

	INT. COST ON INT.-BEARING DEPOSITS	SHARE OF INT.-BEARING DEPOSITS	COST ON OTHER FUND SOURCE	SHARE OF OTHER FUND SOURCE
POST	−0.879*** (0.156)	−6.796*** (0.285)	−1.465*** (0.063)	−2.840*** (0.227)
S CORP	−0.042*** (0.012)	−0.684*** (0.175)	0.094** (0.037)	−0.117 (0.227)
POST × S CORP	0.005 (0.010)	0.373** (0.172)	−0.065 (0.057)	0.658*** (0.156)
LOG ASSET	−0.025*** (0.004)	0.245*** (0.153)	0.115*** (0.013)	1.481*** (0.075)
RURAL	−0.044*** (0.008)	0.222*** (0.093)	0.109*** (0.027)	−1.019*** (0.137)
TIER 1 RISK CAPITAL RATIO	−0.010*** (0.001)	0.001 (0.015)	−0.074*** (0.003)	0.409*** (0.017)
EFFICIENCY RATIO	−0.001*** (0.000)	0.009*** (0.003)	0.017*** (0.001)	−0.019*** (0.003)
FED FUND RATE	−0.082*** (0.008)	−0.063 (0.151)	0.051 (0.037)	0.474*** (0.104)
MAPP TIGHTENING	−0.099*** (0.002)	0.083 (0.058)	0.046*** (0.016)	−0.465*** (0.047)
MAPP LOOSENING	0.063*** (0.005)	−0.433*** (0.096)	0.056*** (0.022)	0.009 (0.065)
CONSTANT	1.830*** (0.089)	66.711*** (4.211)	1.301*** (0.295)	−2.084 (3.997)
QUARTERLY F.E.	YES	YES	YES	YES
STATE F.E.	YES	YES	YES	YES
R^2	0.821	0.227	0.232	0.195

NOTES: Standard errors, clustered at the top Bank Holding Company level, are given in parentheses. Three (***), two (**), and one (*) stars indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Second, capital conservation rules that were enacted after GFC bind more tightly when profits must be distributed so that shareholders can meet pass-through tax liabilities; faced with this constraint, S banks maintain larger buffers of high-quality liquid assets, financing them chiefly with retail certificates of deposit and, to a lesser extent, wholesale funding [76].

Taken together, these two plausible forces—rather than differences in the rates paid on comparable deposits, appear sufficient to account for the post-2010 widening we document in funding costs. A granular, transaction level investigation of how S banks reallocate funding in response to regulatory changes is needed to confirm these conjectures and is left for future research.

4.6 Policy Discussion

Based on our empirical findings, we conjecture that several provisions of the Dodd-Frank Act plausibly underpin the post-2010 patterns we document.

First, §627 repealed Regulation Q, permitting banks to pay interest on business checking accounts as of 21 July 2011. As a result, larger banks would bid aggressively for corporate deposits, forcing community banks to “further cut already-thin margins.”⁹ Consistent with that concern, we find that S banks’ funding costs rise almost entirely because they maintain a higher share of interest-bearing deposits.

Second, §343 temporarily granted unlimited FDIC insurance on non-interest-bearing transaction accounts between December 2010 and December 2012, inducing firms to shift corporate cash to fully insured non-interest accounts. C banks captured more of that flow, whereas S banks relied on costlier retail CDs and wholesale funding, widening the funding-cost gap.

Third, the “Collins Amendment” (§171) extended minimum leverage and risk-based capital requirements to all bank holding companies and phased hybrid instruments out of Tier 1 capital. The tighter effective capital hurdle binds most for closely held S banks that must distribute profits so owners can meet pass-through tax liabilities, prompting larger buffers

⁹See FDIC, “Final Rule Implementing §627 of DFA,” *Federal Register*, 76 FR 42015, 18 July 2011.

of safe securities and slower loan growth.

While these provisions align naturally with our empirical findings, establishing a definitive causal decomposition is beyond the scope of this study and we leave it for future research.

5 Conclusion

Our findings reveal that S banks, characterized by their pass-through taxation status and restrictions on capital raising, exhibited a more pronounced reduction in yields on earning assets and an increased cost of funding those assets in the post-crisis regulatory environment compared to C banks. This divergence underscores the differential impact of legal form on banks' strategic and operational adjustments to regulatory changes.

Taken together, our estimates indicate a modest but economically meaningful decline in profitability for Subchapter S community banks after 2010. The interaction term shows that, relative to C banks, S banks experienced a 0.065 percentage point larger drop in yield on earning assets and a 0.051 percentage point smaller decline in funding costs, resulting in a net profitability reduction of approximately 0.116 percentage points. For a median-sized S bank with \$112 million in assets, this translates into an annual profit loss of about \$129,000, relative to a similarly sized C bank.

This profitability squeeze coincides with the sharp drop in new S-bank charters and the virtual halt in C-to-S conversions documented in Figure 2, suggesting that the pass-through tax advantage no longer offsets the higher capital and liquidity burdens imposed after Dodd-Frank. Policymakers evaluating community-bank vitality should, therefore, recognize that regulation of dividend-linked capital requirements can tilt the competitive playing field even when headline tax rules remain unchanged.

We conjecture that three provisions of the 2010 Dodd-Frank Act, repeal of Regulation Q, temporary unlimited insurance for non-interest transaction accounts, and the Collins Amendment's higher effective capital bar, jointly explain the patterns we observe. The fact that new S-bank charters and C-to-S conversions virtually vanished after 2011 corroborates

the economic magnitude of the profitability shock.

These findings matter for at least three reasons. *First*, they show that legal form interacts powerfully with regulatory design: S community banks whose shareholders rely on dividends to meet pass-through tax liabilities are more sensitive to rules that raise the price of deposits or restrict internal capital. *Second*, the results suggest that uniform capital-and-liquidity requirements can tilt the competitive playing field even when headline tax rules remain unchanged. *Third*, because community banks supply a disproportionate share of small business credit, changes in their relative profitability have implications that spread beyond the banking sector.

It is important to recognize the limits of our study. We do not model risk taking, credit availability, or local economic spillovers, nor do we pinpoint the exact channel through which each Dodd–Frank provision operates. Future work could combine supervisory loan-level data with geographic variation in deposit competition to isolate causal links, or examine whether the profitability squeeze altered credit supply to small firms, innovation investment, or local employment. Additional research could also explore why some S banks have recently elected to switch back to C status and whether similar dynamics apply to credit unions or LLC-chartered banks.

In sum, legal form is more than a tax choice; it shapes how banks absorb and transmit regulatory shocks. A nuanced approach that accounts for these heterogeneities can help policymakers support the resilience and the competitive balance of the diverse community banking sector.

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Appendix – Likelihood of Exits

We performed logit regressions to examine the probability of exits for both S and C community banks. The corresponding results, presented in the following table, display odds ratios instead of coefficients. The regression analysis includes the same sets of control variables as in the main regression.

The above results show that banks of both legal forms are significantly more likely to exit after 2010. Although S corporations are less likely to exit in general, the difference in the likelihood of exits between S and C banks does not diverge significantly after 2010. This result provides evidence that, after considering bank-specific factors and legal forms, banks made similar exit decisions both before and after 2010. It is worth mentioning that the results remain consistent even when we exclude the recession years of 2008-2009 from our analysis, indicating that the observed effects are not solely driven by the impact of the recession.

However, it is important to note that in our analysis we do not differentiate between bank exits resulting from ceasing operations or those resulting from mergers with other banks. This finding could imply that regulatory changes have influenced the competitive landscape of the banking industry.

LOGIT ODDS RATIO - EXITS

POST	0.527** (0.207)
S CORP	−0.427** (0.077)
POST × S CORP	0.094 (0.092)
LOG ASSET	−0.226*** (0.020)
RURAL	−0.314*** (0.039)
TIER 1 RISK CAPITAL RATIO	−0.072*** (0.004)
EFFICIENCY RATIO	0.006*** (0.000)
YIELD ON EARNING ASSET	−0.573*** (0.032)
COST OF FUNDING EARNING ASSET	0.150*** (0.046)
CONSTANT	−0.159 (0.703)
QUARTERLY F.E.	YES
STATE F.E.	YES
PSEUDO R^2	0.148

NOTES: The above table shows odds ratios. The Constant estimates baseline odds. Robust standard errors, clustered at the top Bank Holding Company level, are given in parentheses. Three (***), two (**), and one (*) stars indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Appendix: Fully Interacted OLS Robustness Check

To further assess the robustness of our findings, we estimate an extended ordinary least squares model that allows the effects of all explanatory variables to differ between Subchapter S and C banks. This is achieved by interacting each control variable with the Subchapter S bank indicator. Given the richness and scale of our dataset, this approach enables us to test whether the baseline relationships between bank characteristics and performance outcomes hold across legal forms, rather than assuming homogeneous effects across bank types. This methodology follows applications in the banking literature that explore heterogeneous coefficient structures in rich panel datasets, such as [60].

The following table reports the results of the fully interacted model for both yield on earning assets and cost of funding earning assets. Our primary findings remain robust. The interaction term for $\text{Post} \times \text{S Corp}$ remains negative and significant for yields and positive and significant for funding costs, reinforcing the interpretation that the relative advantage of S banks diminished after 2010. In addition, several interaction terms—particularly those involving rural location, capital adequacy, and efficiency—are statistically significant, indicating that these factors affect S and C banks differently. Overall, these results confirm that the divergence in post-2010 yield and funding cost trajectories by legal form persists even under more flexible modeling assumptions.

REGRESSION RESULTS – ROBUSTNESS

	Yield on Earning Assets		Cost of Funding Earning Assets	
	Main	Interaction Terms	Main	Interaction Terms
Post	−1.302*** (0.021)	−1.297*** (0.022)	−1.164*** (0.010)	−1.162*** (0.010)
S Corp	0.066*** (0.018)	0.375*** (0.120)	−0.060*** (0.012)	−0.114** (0.056)
Post x S Corp	−0.065*** (0.014)	−0.073*** (0.016)	0.051*** (0.010)	0.045*** (0.010)
Log Asset	−0.127*** (0.007)	−0.129*** (0.008)	0.035*** (0.004)	0.032*** (0.004)
Rural	−0.071*** (0.014)	−0.040** (0.017)	−0.022*** (0.008)	−0.033*** (0.009)
Tier 1 Risk Capital Ratio	−0.038*** (0.001)	−0.036*** (0.001)	−0.017*** (0.001)	−0.018*** (0.001)
Efficiency Ratio	−0.007*** (0.000)	−0.006*** (0.000)	0.001*** (0.000)	0.001*** (0.000)
Fed Fund Rate	0.035*** (0.010)	0.038*** (0.010)	0.004 (0.003)	0.004 (0.003)
MaPP Tightening	−0.048*** (0.004)	−0.048*** (0.005)	−0.031*** (0.001)	−0.032*** (0.002)
MaPP Loosening	0.038*** (0.007)	0.035*** (0.011)	0.020*** (0.002)	0.031*** (0.005)
Constant	7.921*** (0.178)	7.864*** (0.180)	1.369*** (0.084)	1.391*** (0.085)
<i>Other S Corp Interaction Terms</i>				
Log Asset		0.013 (0.018)		0.014* (0.008)
Rural		−0.089*** (0.029)		0.030** (0.015)
Tier 1 Risk Capital Ratio		−0.008*** (0.002)		0.003** (0.001)
Efficiency Ratio		−0.003*** (0.001)		−0.001*** (0.000)
Fed Fund Rate		−0.010** (0.004)		0.000 (0.002)
MaPP Tightening		0.003 (0.006)		0.001 (0.002)
MaPP Loosening		0.007 (0.022)		−0.028** (0.011)
Quarterly FE	YES	YES	YES	YES
State FE	YES	YES	YES	YES
R^2	0.631	0.632	0.795	0.795

Appendix: Difference-in-Rates Specification

To address the possibility that the yield on earning assets and the cost of funding earning assets are not entirely independent across bank types, we estimate an alternative specification using the difference between S and C corporation bank outcomes as the dependent variable. Specifically, for each bank-quarter observation, we construct a new outcome variable defined as the deviation between a bank's own rate and the average rate of its peer group. For example, for an S corporation bank, the dependent variable in the yield regression is the difference between its yield on earning assets and the average yield of all C corporation banks in the same quarter; analogously for C corporation banks. This difference-in-rates construction helps capture how much a bank's pricing deviates from its competitors and allows us to assess whether post-policy changes led to strategic repositioning relative to peer benchmarks.

The following table presents the regression results for yield on earning assets and cost of funding earning assets using this difference-in-rates framework. The estimated interaction term $\text{Post} \times \text{S Corp}$ remains statistically significant and directionally consistent with the main model results. Specifically, we observe a relative decline in the yield on earning assets and a rise in the cost of funding earning assets for S corporations in the post-period, confirming the robustness of our findings even when controlling for the broader competitive environment. These findings further support our interpretation that the tax policy change constrained the net interest margins of S banks not only through their own pricing but also in relation to broader market dynamics.

REGRESSION – DIFFERENCE IN RATES

	YIELD ON EARNING ASSET	COST OF FUNDING EARNING ASSET
POST	0.208*** (0.021)	−0.045*** (0.010)
S CORP	0.246*** (0.018)	−0.163*** (0.012)
POST X S CORP	−0.184*** (0.014)	0.090*** (0.010)
LOG ASSET	−0.127*** (0.007)	0.036*** (0.004)
RURAL	−0.071*** (0.014)	−0.022*** (0.008)
TIER 1 RISK CAPITAL RATIO	−0.038*** (0.001)	−0.017*** (0.001)
EFFICIENCY RATIO	−0.007*** (0.000)	0.001*** (0.000)
FED FUND RATE	−0.011 (0.010)	0.006** (0.003)
MAPP TIGHTENING	0.000 (0.004)	−0.002 (0.001)
MAPP LOOSENING	−0.004 (0.007)	0.005*** (0.002)
CONSTANT	1.794*** (0.178)	−0.553*** (0.084)
QUARTERLY F.E.	YES	YES
STATE F.E.	YES	YES
R^2	0.219	0.200

NOTES: Standard errors, clustered at the top Bank Holding Company level, are given in parentheses. Three (***), two (**), and one (*) stars indicate statistical significance at the 1%, 5%, and 10% levels, respectively.