



Bright Lines: How Regulatory Asset Thresholds Change the Banking Industry

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Debates about reforming or repealing various provisions of the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank) have echoed throughout Congress since the bill became law.

Momentum picked up after the 2016 elections, but attempts at changing key features of the law always have been largely one-sided. In early December, however, the Senate Banking Committee advanced the “Economic Growth, Regulatory Relief and Consumer Protection Act,” S. 2155, to the full Senate. This bill met with bipartisan accord in the committee led by Chairman Mike Crapo (R-ID), with seven Republicans and nine Democrats supporting its advancement.¹ S. 2155 contains policies that would amend, roll back, or eliminate key parts from Dodd-Frank. While this may simply be the next swing in a series of financial industry reform misses, the bipartisan nature of this particular bill’s support is notable given Congress’s recent history in this arena.

In the summer of 2017, the briefly-but-highly scrutinized Financial CHOICE Act advanced out of the House Financial Services Committee and was passed by the House, in both instances along strictly partisan lines.² Lacking enough support in the Senate, the bill has yet to reach the floor. That bill seeks, among other things, to repeal the Volcker Rule and to drastically scale back the regulatory authority of the Consumer Financial Protection Bureau (CFPB).

SUMMARY

- One of the key features of the Dodd-Frank Act is that it imposes specific and costly regulatory requirements on banks that cross the threshold of having more than \$10 billion in total assets.
- Anecdotal accounts have suggested that this threshold has led to increased consolidation in the banking industry. This brief provides new statistical evidence of that phenomenon. Banks that approach the \$10 billion threshold are significantly more likely to engage in an acquisition, pay more for that acquisition, and acquire bigger target banks than similar banking institutions did prior to Dodd-Frank.
- As banks approach the \$10 billion threshold and become subject to heightened regulation under Dodd-Frank, the evidence suggests that banks engage in an acquisition so as to improve their financial position. The fact that the costs of regulatory compliance do not vary significantly with total assets not only reinforces this incentive for acquisition, but makes it all the more desirable to acquire larger target banks.
- To the extent that policymakers are concerned with further consolidation in the banking industry, these findings should be of interest as they continue to evaluate current regulations and develop new ones, which might include the use of bright line asset thresholds that impose requirements with fixed compliance costs.



Comparatively, the scope of S. 2155 is more modest. One of its primary provisions is the proposal to raise the asset threshold at which a bank holding company is considered a “systemically important financial institution” (SIFI) from \$50 billion to \$250 billion, and to exempt all banks with less than \$100 billion in assets (up from \$10 billion) from federal stress tests.³ As policymakers debate the merits of such threshold changes, the lessons learned from the imposition of regulatory thresholds under Dodd-Frank could be instructive.

Currently, under Dodd-Frank, there are three particular requirements that are only imposed on banks with more than \$10 billion in total assets: (1) regulatory oversight by the CFPB, which includes quarterly assessments, (2) the requirement to perform and report the results of annual company-run stress tests (Dodd-Frank Act Stress Tests, or DFASTs), and (3) the Durbin Amendment, which restricts debit card interchange fees.⁴ In our research, we have discovered that these threshold-based regulatory requirements affect the acquisition activity of banks around those thresholds. Specifically, we find that, in order to maintain relatively stable financial metrics (e.g., ROA) when suddenly

subjected to the costs of stress tests and CFPB oversight, banks approaching the current \$10 billion asset threshold are much more likely to engage in an acquisition (+62%), pay more for that acquisition (+42%), and acquire bigger target banks (+52%), compared to the pre-Dodd-Frank period. In short, bright line thresholds have increased consolidation in the banking industry. Although the financial press and analysts have highlighted anecdotal cases of this behavior,⁵ this Issue Brief discusses new statistical evidence showing that consolidation is a more widespread phenomenon.⁶

Our focus on acquisition activity in the banking industry is relevant given recent interest in consolidation at both the top of the industry, leading to banks that are “too big to fail,” and at the bottom of the industry, leading to the disappearance of smaller regional and community banks that serve important segments in the United States.⁷ With big changes to Dodd-Frank potentially on the horizon, it is important for policymakers to be mindful of how bright line thresholds may affect bank behavior in ways that may not be desirable from a public policy perspective.

THE ACQUISITION MOTIVATION

When banks cross the \$10 billion threshold and incur the additional compliance costs associated with the new regulations (e.g., expenditures on new software, consultants, and employee salaries), their financial statement ratios, such as ROA or Tier 1 capital, will be negatively affected. Because many of the new compliance costs do not vary significantly with total assets, engaging in an acquisition will not greatly increase them.⁸ Banks engage in acquisitions for a number of different reasons, but a common thread among them is the desire to improve their financial performance, which is often assessed through financial statement ratios. Thus, the decision to engage in an acquisition often involves a comparison between a bank’s current financial position and the projected financial position following an acquisition. We argue that the fixed nature of the compliance costs coupled with the focus on financial statement ratios results in stronger incentives for banks right around the threshold to engage in an acquisition, and the data reflect this (see Figure 1).

These incentives can manifest in at least two different forms. First, the

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¹ The Hill, “Senate panel moves forward with bill to roll back Dodd-Frank,” available at <http://thehill.com/policy/finance/363404-senate-panel-moves-forward-with-bill-to-roll-back-dodd-frank>.

² HousingWire, “Senate Banking Committee introduces repeal of Dodd-Frank Act,” available at <https://www.housingwire.com/articles/42010-senate-banking-committee-introduces-repeal-of-dodd-frank-act>.

³ *Supra* note 1.

⁴ The finalized regulation includes two different stress testing requirements: “company-run” stress tests (DFASTs) and

“supervisory” stress tests. Mid-sized institutions, defined as those with total assets between \$10 and \$50 billion, are only required to conduct annual company-run stress tests, which involve assessing the sensitivity of bank health to several different scenarios issued by the Federal Reserve.

⁵ Bloomberg, “Small Banks Feel the Urge to Merge,” available at <https://www.bloomberg.com/news/articles/2013-10-03/dodd-frank-fills-small-banks-with-the-urge-to-merge>.

⁶ The primary source for this Issue Brief is our paper “Regulatory Asset Thresholds and Acquisition Activity in the

Banking Industry.”

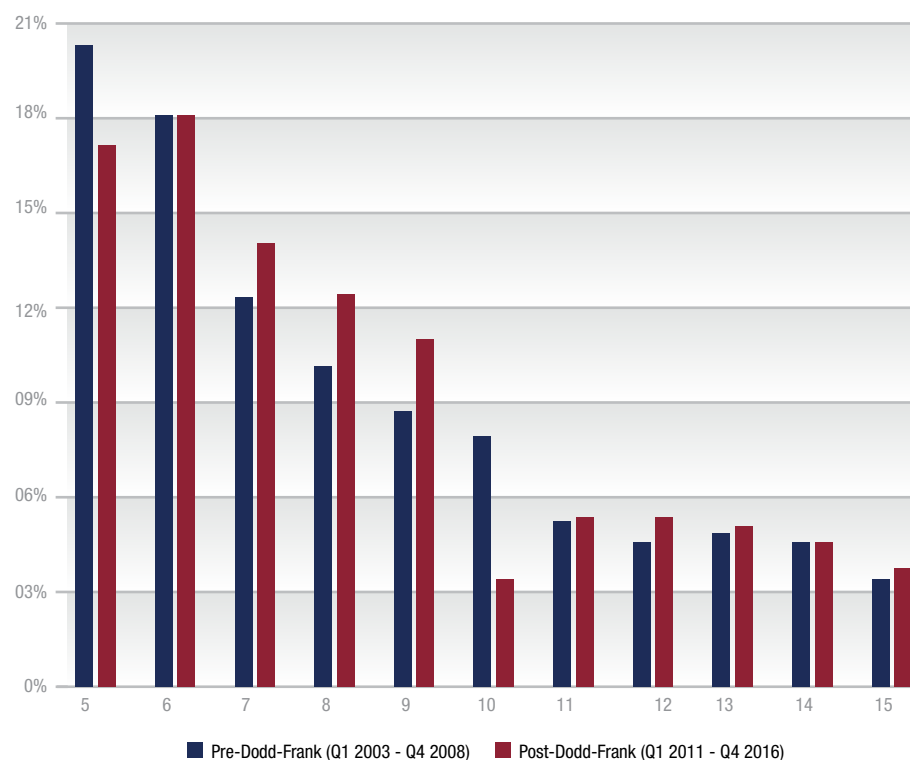
⁷ Lux and Greene (2015).

⁸ The Durbin Amendment, which restricts debit card interchange fees, is another significant cost imposed on banks with more than \$10 billion in total assets. However, the costs associated with this requirement are less likely to be purely fixed. Given our focus on fixed costs, we do not discuss the Durbin Amendment in detail here.

⁹ The increased costs resulting from CFPB oversight primarily involve consultant work related to information technology systems, as well as operating costs related to disclosures,



FIGURE 1 PERCENT OF BANK-QUARTER OBSERVATIONS BY ASSET SIZE
(IN BILLIONS)



E.g., roughly 21% of bank-quarter observations in the pre-Dodd-Frank period have end of quarter total assets between \$5 and \$6 billion

Summary: The increased willingness by banks right around the \$10 billion threshold to pay for acquisitions not only results in an observed increase in deal premiums, but also an increase in the probability that a threshold bank wins the bid for potential target banks, thus increasing the observed number of acquisitions made by these post-Dodd-Frank threshold banks.

negative impact of the compliance costs on financial statement ratios will lower the benchmark against which potential targets will be compared and will make some previously unattractive targets look better to banks imme-

diately surrounding the threshold. Second, banks that were already attractive targets absent the new compliance costs now become more attractive to banks right around the threshold, potentially increasing their willingness

to pay for those targets. Collectively, we argue that this increases the demand for acquisitions by banks approaching and just above the threshold, which results in an increase in both the number of acquisitions completed by the threshold banks and the deal premiums associated with those acquisitions.

Although it is challenging to explicitly quantify the fixed compliance costs, there is anecdotal evidence regarding the size banks need to grow to in order to “absorb” the additional costs.⁹ In a recent article, one report states that “a bank that crosses the \$10 billion threshold will probably need to grow its assets to at least \$12 billion to get ‘an appropriate return.’”¹⁰ This estimate is consistent with recent acquisitions involving banks surrounding the threshold. For example, Berkshire Hills Bancorp recently announced the acquisition of Commerce Bancshares, which will take the bank from \$9.3 billion in total assets to about \$12 billion. The CEO states that “the Commerce acquisition would enable Berkshire to ‘fully absorb’ the impacts of crossing the \$10 billion threshold.”¹¹ Although anecdotal in nature, this discussion suggests that the additional costs result in the need for banks to grow to approximately \$12 billion in total assets.

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back office support, and error resolutions. The largest costs from stress testing result from the implementation of new software and data collection systems, as well as expenses for consultants and other employees. In addition, banks must publicly disclose the stress test results.

¹⁰ Smith (2016).

¹¹ Dobbs (2017).

¹² Gao et al. (2009).

¹³ Forbes, “Ranking America’s 100 Largest Banks,” available at <https://www.forbes.com/sites/kurtbadenhau-sen/2017/01/10/full-list-ranking-americas-100-largest-banks/#14fabe434c5a>.

banks/#14fabe434c5a.

¹⁴ Notably, there are 45 banks with total assets between \$10 and \$25 billion and another 18 banks with total assets between \$25 and \$50 billion. See Forbes, *ibid*.



THE ECONOMIC EFFECTS OF THRESHOLD-INCENTIVIZED MERGERS

We compared changes in acquisition activity for bank-quarters in the asset range of \$9 to \$12 billion in a pre-Dodd-Frank-period (2003-2008) to similar activity for bank-quarters in the same asset range in a post-period (2011-2016). This allowed us to control for other costs and benefits associated with the acquisition decision for banks in this size range that would reasonably remain constant from the pre- to post-period (e.g., the direct costs of acquisitions).

We documented an increase in the likelihood of engaging in an acquisition for a treatment group from the pre-period to the post-period relative to the same change for a control group. The marginal effect was an increase of 5.7 percentage points in the likelihood of engaging in an acquisition, which corresponds to an increase of 62% compared to the unconditional probability of engaging in an acquisition for the treatment group. In our second test, we examined the amount of goodwill that was generated from an acquisition as a measure of the deal premium, because a majority of the target banks in our sample were private. We discovered an increase in the proportion of the deal value that was recorded as goodwill for acquisitions by the treatment group relative to those by the control group after the passage of the new regulations. The economic magnitude corresponds to a 42% increase in the “goodwill to deal value” ratio for the average acquisition in our treatment group. Simply put, the increase in both

the quantity of acquisitions and the price at which those acquisitions were executed is consistent with an increase in the demand for acquisitions by banks that were affected by the significant increase in compliance costs.

To provide further support that the increased acquisition activity was associated with the new compliance costs, we performed an additional test that examined the relative size of the target bank to the acquiring bank. Holding all else equal, we hypothesized that an acquisition of a relatively larger target bank would more effectively mitigate the negative effects from crossing the threshold than would the acquisition of a smaller target bank. We tested this prediction by examining the relative size of the target bank to the acquiring bank for the subset of banks in our sample that completed an acquisition. Consistent with our predictions, we found that the treatment group increased the relative size of the target banks from the pre-period to the post-period relative to the same change for control group acquisitions. In terms of economic magnitude, the increase in the relative size corresponds to approximately 52% of the average relative size for the treatment group. This provides supplementary evidence that the increased demand for acquisitions documented in our main tests was indeed driven by the new regulatory compliance costs.

THE ALTERNATE PATH: STAYING BELOW THE THRESHOLD

Although our main analyses focus on banks with incentives to engage in acquisition activity, we acknowledged

that implementing regulations only on banks above an asset threshold may also have resulted in some banks taking actions in an effort to remain below the threshold to avoid the regulatory compliance costs altogether. Prior research documents evidence consistent with this behavior in other settings,¹² but we performed an additional test to assess whether this behavior also existed in our setting. Specifically, we examined the demand for deposits by a treatment group with total assets between \$8 and \$10 billion and compared their changes to a control group. We focused on the deposit mechanism, since each dollar of deposits that a bank accepts increases the amount of assets on their balance sheet and because customer deposits finance a majority of bank assets. Our results suggest that some banks below the threshold decreased both the growth rate on their deposit accounts and the interest rate paid on those accounts after the announcement of the new regulations, relative to the same changes for a control group. Taken together, these findings are consistent with a decrease in the demand for deposits by banks just below the regulatory asset threshold after passage of the new regulations, corroborating the findings in earlier studies that examine different settings and mechanisms.

ALTERNATIVE EXPLANATIONS FOR THE INCREASE IN ACQUISITIONS

One explanation for the increase in acquisitions is that there are certain bank types (i.e., “serial” acquirers) that differentially enter the treatment



and control groups in the pre- versus post-periods. Thus, it might be the selection of bank types that explains our results rather than the compliance costs. We performed two different tests to address this concern, but the results from these tests are consistent with the main results, indicating that certain bank types do not appear to drive our results.

A second explanation is that some other concurrent event (e.g., the financial crisis) drove our results, rather than the compliance costs associated with the regulation. Importantly, our use of a control group mitigates this concern. Our design would not fully rule this out if there was an event occurring at the same point in time that differentially affected the treatment and control groups. But after additional tests, we found that our results continue to hold across these different specifications.

A final concern is that even though the regulations surrounding Dodd-Frank may be the driver of the behavior we document, there could be a different part of the regulation that is driving results. Alternatively, it could be the case that complying with the additional requirements results in benefits to the bank that make acquisitions more attractive. This is unlikely to be a significant concern, however,

given that we perform our tests using a group of control banks that are only larger than the treatment banks. Thus, the control group is subject to the same regulations and would presumably experience the same benefits as the treatment group. This leaves the primary difference between these two groups as the extent to which fixed compliance costs affect bank financial statement ratios.

REGULATORY TAKEAWAYS

Our findings should be of interest to regulators and policymakers as they evaluate current regulations and implement new ones, which might include the use of bright line asset thresholds that impose requirements with fixed compliance costs. It is important to note that we do not argue that the evidence we have presented indicates that bright line thresholds in regulation should be discontinued or that the acquisitions made by banks after the implementation of the new regulations are inefficient choices. Instead, we contend that the potential for increased acquisition activity warrants consideration in evaluating the overall effect of these types of regulations.

The proposal of a \$100 billion asset threshold for stress tests under S.

2155 appears to take the costs of complying with regulations into account, offering relief to banks approaching the \$10 billion threshold. There are only 18 banks with more than \$100 billion in total assets, and none have total assets in the \$80 to \$100 billion range (as of early 2017).¹³ Furthermore, banks approaching a new \$100 billion asset threshold in the future may not be similarly inclined to search for acquisition targets to vault over the threshold, because the costs of complying with regulatory oversight are largely fixed and likely would have a much smaller impact on bank financial ratios, relative to the impact on a \$10 billion bank. In other words, bright line regulatory thresholds should not significantly affect acquisition decisions for the country's biggest banks. But Congress could consider alternative thresholds for triggering mandatory stress tests (e.g., \$25 or \$50 billion) or layering regulatory requirements (i.e., setting different thresholds for stress tests and CFPB oversight).¹⁴ To the extent that policymakers are concerned with further consolidation in the banking industry, they can now consider the effects that bright line asset thresholds have had in recent years when deciding how to make changes for the future.



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