

Mandatory Disclosure and Takeovers: Evidence from Private Banks

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Abstract: We investigate the role of mandatory financial disclosure in the takeover market for privately held U.S. banks. Acquirers rely on public information to identify potential targets and to conduct preliminary due diligence. Thus, publicly available financial information can play a critical role in the identification and assessment of banks as potential targets in M&A deals. Using a difference-in-difference research design around a quasi-exogenous regulatory change in March 2015, which reduced the frequency and granularity of regulatory reporting by banks with less than \$1 billion in total consolidated assets, we find that these banks are less likely to be targeted in M&A transactions after March 2015. Further, acquirers earn lower bid-announcement returns when targeting banks with limited mandatory disclosure. However, following the identification of target firms, the time taken to complete the acquisition does not differ significantly between banks above and below the \$1 billion asset-size threshold. This finding is consistent with acquirers having access to private information about targets following the signing of confidentiality agreements and/or letters of intent, which reduce their reliance on public financial information. Overall, our study sheds light on the important role of mandatory financial reporting in the takeover market of private firms.

Keywords: Mandatory Disclosure, Mergers and Acquisitions, Private Banks, Regulatory Reports, Takeovers

JEL classification: D83, G21, G28, M41

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1. Introduction

Efficient capital markets facilitate allocation of capital to value-creating investments and withdrawal of capital from value-destroying projects. Financial disclosure is critical for the efficient allocation and reallocation of capital.¹ However, the debate on the costs and benefits of disclosure mandates is controversial and the empirical evidence is mixed (Leuz and Wysocki, 2016; Khan et al., 2018). We examine the impact of mandating financial disclosure on corporate mergers and acquisitions in the banking industry.

Mergers and acquisitions (M&As) are significant corporate events and important means of capital reallocation. They allow assets to be directed towards their best possible use by reallocating control rights over companies. In 2018 alone, the announced M&A transaction volume reached \$4.1 trillion (JP Morgan 2019). Financial disclosures play an important role in M&A as they allow acquirers to evaluate alternative investment opportunities. Acquirers conduct extensive comparative analyses using public financial disclosures to identify and value potential targets (Bruner, 2004; Lajoux and Elson, 2011). Thus, disclosure mandates can facilitate M&As by enhancing the information environment of firms and providing acquirers richer and more precise information about potential targets. This can improve acquirers' estimate of the targets' intrinsic value and expected synergies. On the other hand, enhanced mandatory disclosure can make acquirers cut back on costly private information acquisition and reduce acquirers' incentives to discover proprietary information about potential targets (Verrecchia, 1982; Diamond, 1985; Goldstein and Yang, 2017). Acquirers may engage in less information discovery about alternate uses of the targets' resources and, as a result, make fewer takeover bids. Thus, ex-ante, the impact of disclosure mandates on M&A activity is unclear.

¹ See Roychowdhury et al. (2019) for a recent review of the literature.

We investigate the impact of mandatory financial disclosure on the takeover activity of privately held U.S. bank holding companies (BHCs)², focusing on a regulatory reporting change that raised the asset-size threshold for reporting quarterly consolidated financial information.³ To ease the regulatory reporting burden on relatively small BHCs, effective March 2015 the Federal Reserve Board (FRB) eliminated quarterly consolidated financial reporting requirements (FR Y-9C reports) for BHCs with less than \$1 billion in total consolidated assets. Instead, these banks are now required to file semiannual reports of parent-only financial statements (FR Y-9SP reports).⁴ Previously, only BHCs with less than \$500 million in total consolidated assets were qualified to file FR Y-9SP reports.

In general, banks are among the most opaque corporate entities (Morgan, 2002). The information environment of privately held banks is even more opaque than that of publicly listed banks. Private banks are not registered with the SEC and, hence, are not subject SEC's quarterly financial reporting requirements. Moreover, few, if any, information intermediaries (e.g., analysts, credit rating agencies, etc.) generate information and reports on private banks. Regulatory financial filings are the main source of publicly available information for privately held banks.

The 2015 regulatory disclosure mandate had a significant impact on the information environment of privately held small BHCs by reducing the frequency of their regulatory filings and requiring the reporting of less-detailed information. For instance, in March 2015 the FR Y-9C

² It is worth noting that, in this paper, the notion of bank holding companies (BHCs) encompasses all types of holding companies, including domestic bank holding companies (BHCs), savings and loan holding companies (SLHCs), U.S. intermediate holding companies (IHCs), and securities holding companies (SHCs), because they are all subject to the same reporting requirements.

³ <https://www.federalreserve.gov/newsevents/pressreleases/bcreg20150129b.htm>

⁴ BHCs with consolidated assets of less than \$1 billion that (1) engaged in significant nonbanking activities, (2) conducted significant off-balance sheet activities, or (3) had a material amount of debt or equity securities outstanding that are registered with the SEC, are required to continue filing consolidated financial statements (FR Y-9C reports) on a quarterly frequency.

report included 22 more schedules than the FR Y-9SP report. The difference in the information richness of FR Y-9C and FR Y-9SP reports can also be discerned from their lengths—a typical FR Y-9C report has 65 pages, while an FR Y-9SP report has eight pages. In Section 2, we discuss in detail the differences in the information content of FR Y-9C and FR Y-9SP reports.

Using a difference-in-differences research design that exploits the March 2015 regulatory change in the consolidated asset-size threshold for filing FR Y-9C reports, we investigate the impact of reduced and less frequent mandatory disclosure on takeover activity for private banks. Our sample comprises of privately held BHCs during the period 2012 to 2017. We find that, following the March 2015 regulatory change, there was a sudden decrease in the likelihood of banks with consolidated assets of less than \$1 billion to receive bids. Specifically, after March 2015, a BHC with total consolidated assets of \$1 billion or more was 2.2 percent more likely to be a target of an M&A deal than a BHC with total consolidated assets of less than \$1 billion. (As a benchmark, the unconditional probability of receiving an acquisition bid in our sample was only 3.2 percent.) Whereas, prior to March 2015, there was no significant difference in the trends of takeover activity for banks with total consolidated assets above and below \$1 billion. The findings are robust to including year and bank fixed effects, as well as a comprehensive set of controls.

Preliminary due diligence, which is largely conducted on the basis of public information, helps the acquirer to narrow the list of potential targets. In the subsequent steps, the acquirer gains access to targets' private information to conduct in-depth due diligence and, finally, transactional due diligence (Lajoux and Elson, 2011). Nonetheless, publicly available financial information can also play an important role in these subsequent steps of the M&A process as it can help acquirers assess the accuracy and bias of the private information provided by targets (Ahmed et al., 2020). Thus, we examine the impact of the 2015 regulatory change on the time taken to complete the deal

following a takeover bid. We find that the 2015 disclosure mandate did not significantly alter the time taken to complete the takeover of BHCs with total consolidated assets of less than \$1 billion relative to that of BHCs with total consolidated assets of \$1 billion or more.

In determining the deal price to offer for a bid, the acquirer takes into account the value of the target's resources and expected synergies. The target accepts any bid that is above its reservation price (Hansen, 1987). Publicly available financial information may help an acquirer more precisely estimate the target's intrinsic value and, subsequently, offer a more efficient price closer to the target's reservation price. Acquirers would profit more from acquisitions when they can estimate the value of targets more precisely and bid more effectively (McNichols and Stubben, 2015). Accordingly, we investigate the impact of the 2015 regulatory disclosure mandate on the bid announcement returns for acquirers. We find some evidence suggesting that acquirers' announcement returns for bids for BHCs with total consolidated assets of less than \$1 billion are less positive than those for BHCs with total consolidated assets of \$1 billion or more after the 2015 regulatory change.

We conduct several additional analyses to establish the robustness of our evidence. First, we show that the identifying assumption of no pre-trends for a difference-in-differences research design holds in our setting. Second, we show that BHCs' total consolidated assets is a good instrument to predict whether banks file the more frequent and more detailed FR Y-9C reports and confirm the robustness of our findings using an instrumental variable approach. Finally, our inferences are not sensitive to restricting the sample to a more homogenous set of banks (i.e., BHCs with total consolidated assets between \$500 million and \$5 billion).

In sum, we find that the 2015 regulatory change in the asset-size threshold, which required BHCs with total consolidated assets of less than \$1 billion to file the less detailed FR Y-9SP reports

on a semiannual basis rather than the more detailed FR-Y9C quarterly report, increased the search costs of acquirers for targeting privately held BHCs and decreased the likelihood of privately held BHCs with total consolidated assets of less than \$1 billion receiving acquisition bids. We also find some evidence of acquirers' earning less positive returns on the announcement of bids for such BHCs after the March 2015 regulatory change. However, we do not find any evidence in support of the regulatory change impacting the time taken to complete acquisitions.

We make several contributions to the literature. First, to the best of our knowledge, ours is the first study that shows the impact of financial disclosure mandates on the takeover market. Financial disclosures are an important source of information in acquirers' search for targets and can facilitate more accurate estimation of targets' intrinsic value and expected synergies. Yet, the implications of mandating financial disclosures have barely been studied in the context of the takeover market.⁵ Prior studies have focused on the consequences of accounting quality, comparability, and other characteristics of firms' financial reporting on acquisition outcomes (e.g., Raman et al., 2013; McNichols and Stubben, 2015; Marquardt and Zur, 2015; Martin and Shalev, 2017; Chen et al., 2018; Ahmed et al., 2020). We show that a greater frequency and quantity of mandatory financial disclosures increases the likelihood of BHCs receiving acquisition bids.

Second, we contribute to the sparse literature examining the impact of regulatory requirements on consolidation in the banking industry. The banking industry is one of the most regulated industries. In an effort to reduce the regulatory burden on small banks, it is often the case that regulatory requirements are only applied to banks above a certain asset threshold. Ballew et al. (2017) and Bindal et al. (2020) document that the Dodd-Frank Act, which is applicable to banks

⁵ Bonetti et al. (2020) also investigate the impact of disclosure regulation mandates on the takeover market. However, their focus is not financial disclosure. They examine the effect of the Transparency Directive which tightened disclosure rules for ownership stakes in the takeover market in Europe.

with total consolidated assets of \$10 billion or more, affected the incentives of banks with assets around \$10 billion to engage in acquisitions. We extend this literature by showing that the March 2015 regulatory change, which exempted BHCs with total consolidated assets of less than \$1 billion from filing more frequent and detailed regulatory reports, significantly impacted the reallocation of small BHC's resources to their best use.

Finally, our findings should be of interest to bank regulators as they implement and evaluate asset size-based mandatory disclosure regulations. Small BHCs are exempted from filing the more detailed FR Y-9C reports on a quarterly basis to reduce their regulatory burden. We document an unintended consequence of this regulation—a reduction in the liquidity and market discipline of small BHCs via a decrease in the likelihood of small BHCs being targeted for acquisitions. Bank regulators should take into account the impact of bright line asset threshold-based disclosure mandates on the M&A activity in the banking industry in assessing the costs and benefits of such regulation.

The rest of the paper is organized as follows. We discuss institutional details in Section 2 and develop the hypotheses in Section 3. Section 4 and 5 describe the research design and sample construction, respectively. We report the empirical results in Section 6 and conduct additional analyses in Section 7. Finally, Section 8 provides the conclusion.

2. Institutional Background

The banking industry in the U.S. has always been heavily influenced by regulations. Banks and legislators play a cat-and-mouse game, where banks are constantly adapting to avoid undesirable regulations and legislators are passing new regulations to fill the loopholes. One such example is the Bank Holding Company Act of 1956 (the Act), which was enacted by the U.S. Congress to stop banks from side-stepping bank branching restrictions by organizing as chain or

group banks (Mahon, 2013). The Act endowed the Federal Reserve with broader regulatory powers to control and regulate the actions of banks that organized as bank holding companies to conduct banking and nonbanking activities.⁶

Under the purview of Regulation Y and the amended Bank Holding Company Act, BHCs periodically report their financial condition and performance to the Federal Reserve using the various FR-Y9 forms. The Consolidated Financial Statements for Holding Companies (FR Y-9C) collect financial information from BHCs on a consolidated basis in the forms of a balance sheet, income statement, and several supporting schedules, including a schedule of off-balance sheet activities. The FR Y-9C report is the most expansive of the FR Y-9 reports and contains more schedules than any of the other reports in the FR Y-9 series. It is filed quarterly as of the last calendar day of the quarter and it is the primary tool used by bank regulators to monitor BHCs between onsite examinations. The FR Y-9C report is also the most widely requested and reviewed report for BHCs.⁷

The total consolidated assets determine whether a BHC is required to report a FR Y-9C form or another FR Y-9 form. Periodically, the Federal Reserve assesses the regulatory burden on banks and revises the asset-size thresholds for filing the various FR Y-9 forms. Such initiatives to reduce the regulatory and reporting burden on BHCs have led to an increase in the asset-size threshold for filing the FR Y-9C report from \$150 million to \$500 million in March 2006, from \$500 million to \$1 billion in March 2015, and from \$1 billion to \$3 billion in September 2018.⁸

⁶ Over time, the Bank Holding Company Act has been amended numerous times to reduce regulatory restrictions on banking and nonbanking activities. For example, the Riegle-Neal Interstate Banking and Branching Efficiency Act of 1994 eased interstate branching restrictions and the 1999 Graham-Leach-Bliley Act removed restrictions which prohibited BHCs from owning other financial institutions.

⁷ See <https://www.federalreserve.gov/apps/reportforms/reportdetail.aspx?sOoYJ+5BzDal8cbqnRxZRg==>

⁸ The change in the asset-size threshold for filing the FR Y-9C report over time is consistent with the change in the asset-size threshold to qualify as a small BHC under the Small Bank Holding Company Policy Statement (Policy Statement). To facilitate the formation and expansion of small banks as well as to reduce their regulatory burden, the

BHCs with total consolidated assets below the asset-size threshold for filing the FR Y-9C reports file the Parent Company Only Financial Statements for Small Holding Companies (FR Y-9SP). The information content of the FR Y-9SP report is significantly lower than that of the FR Y-9C report. First and foremost, the FR Y-9C report provides consolidated information on a holding company organization, and, therefore, presents substantial information on the activities conducted by the organization's subsidiaries. In contrast, the FR Y-9SP is a parent-only report, which does not provide detailed information on the subsidiaries' activities.⁹

Second, the FR Y-9C report provides significantly more details on the organization's essential activities than the FR Y-9SP report. Specifically, the FR Y-9C report includes 22 more schedules than the FR Y-9SP report. These schedules include: (1) information regarding the organization's composition and quality of crucial assets, such as charge-offs, recoveries, allowance for loan and lease losses, past due loans, residential mortgages, and trading assets; (2) information pertaining to the organization's critical liabilities, such as deposit liabilities and trading liabilities; (3) information on the organization's relatively risky activities, including derivatives, off-balance-sheet items, insurance-related underwriting activities, and securitization; and (4) information reflecting the safety and soundness of the organization, including but not limited to regulatory capital and changes in holding company equity capital. The aforementioned information is often of paramount importance in evaluating the healthiness of a banking organization. The difference in the information richness between the FR Y-9C and FR Y-9SP reports can also be discerned

Policy Statement allows qualifying BHCs to hold higher levels of debt than would otherwise be permitted for large BHCs (see 12 CFR Appendix C to Part 225 – Small Bank Holding Company Policy Statement).

⁹ Instead of consolidating (i.e., adding) the assets, liabilities, revenue and expenses of the subsidiaries with those of the parent, the FR Y-9SP report merely provides the net assets (net profit) of the subsidiaries in one balance sheet (income statement) line item.

from their respective lengths—a typical FR Y-9C report has 65 pages compared to only eight for a FR Y-9SP report.

Finally, while FR Y-9C reports are filed on a quarterly basis at the end of March, June, September, and December, FR Y-9SP reports are filed on a semiannual basis at the end of June and December. Therefore, relative to the information disclosed in quarterly FR Y-9C reports, the information disclosed in semiannual FR Y-9SP reports is delayed and stale. Given that the regulatory filings are the main source of publicly available disclosures for privately held BHCs, the information environment of privately held BHCs that file FR Y-9SP reports is significantly opaquer than those that file FR Y-9C reports.

Some—but far from all—of the information that is provided by FR Y-9C reports and omitted from FR Y-9SP reports can be obtained from call reports issued by commercial bank subsidiaries of the BHC. First, without the consolidated FR Y-9C report, intra-company transactions cannot be fully eliminated in stand-alone financial reports and, therefore, the performance and operations of a consolidated organization cannot be fully evaluated. Second, the FR Y-9C reports have three important schedules that are unavailable in call reports—interest sensitivity, insurance-related underwriting activities, and predecessor financial items (if applicable). As a result, it is difficult for outsiders to fully examine the adequacy of the BHCs’ asset-liability management and the magnitude of the organization’ nonbanking activities. Third, if a BHC has nonbank subsidiaries, activities of the nonbank subsidiaries are not reported in the call reports.¹⁰

¹⁰ A BHC’s nonbank subsidiary is typically required to submit a stand-alone regulatory report to regulators, the report has much fewer details than the schedules in FR Y9-C reports and the report is not readily available to the public. Financial information on each nonbank subsidiary is filed in the FR Y-11 (if a domestic subsidiary), or the FR 2314 (if a foreign subsidiary). Yet, the FR Y-11 and FR 2314 are only available through the Board’s Freedom of Information Office. Moreover, some securities and insurance subsidiaries are exempted from filing a FR Y-11 report when reporting to their U.S. functional regulator. These separate filings are in general not available to outsiders besides the functional regulators (Avraham, Selvaggi, and Vickery, 2012).

We focus on the March 2015 change in the asset-size threshold for filing FR Y-9C reports to investigate the impact of mandatory financial disclosure on the takeover activity of privately held BHCs. The March 2006 change in the asset-size threshold closely preceded the 2007-2009 financial crisis, which significantly reduced the M&A activity in the United States. In 2006, there were 15,271 M&A transactions with the announced transaction volume amounting to \$2.07 trillion. M&A activity reduced to 12,153 transactions and \$973 billion in announced transaction volume in 2009 (Institute of Mergers, Acquisitions, and Alliances, 2020). Finally, we do not focus on the September 2018 change in the asset-size threshold for filing the FR Y-9C reports as the change is too recent and currently available ex-post data are limited.

3. Related Literature and Hypotheses Development

Through reallocation of control over companies, mergers and acquisitions help with efficient reallocation of capital by directing capital towards its best use. Publicly available financial information plays an important role in the efficient reallocation of capital through M&As. In the early stages of M&As, acquirers conduct preliminary due diligence to identify potential targets.¹¹ The acquirers depend on public information to short list potential targets, estimate their intrinsic values, conduct peer analyses, and evaluate potential synergies from the acquisition. Publicly available financial information about targets is of critical importance at this stage as it is a major input in target valuation and peer comparative analyses (Lajoux and Elson, 2011; Chen et al., 2018).

Preliminary due diligence helps acquirers narrow the list of targets and is, typically, followed by in-depth due diligence. In this stage, acquirers sign confidentiality agreements with potential

¹¹ See Lajoux and Elson (2011) and Chen et al. (2018) for a detailed review of the acquisition process.

targets and are privy to limited private information.¹² In-depth due diligence involves company visits, management meetings, updates to targets' valuation, negotiation of other terms and conditions, and the determination of an offer price.

If an acquisition offer is accepted, an acquisition agreement is signed and an announcement of the deal is often made public. At this stage, transactional due diligence begins. An acquirer utilizes greater access to its target's private information to verify the accuracy of the target's prior representations, search for hidden liabilities, and conduct post-merger integration planning. If the negotiations are successful and regulatory approvals are obtained, the merger is completed.

On the one hand, financial disclosure mandates make a rich set of information publicly available and may help acquirers better identify potential targets by reducing search costs, more accurately estimate the intrinsic value of targets and potential synergies, and more effectively facilitate ex-post supervision. A large prior literature documents that financial disclosure, in general, helps investors evaluate alternative M&A investment opportunities and subsequently monitor the investments.¹³ In particular, prior studies find that the characteristics of targets' financial disclosures have important implications for acquisition outcomes. Specifically, target firms' accounting quality is found to be positively associated with higher (lower) deal announcement returns for the acquirer (target), the speed of reaching a successful final resolution, the cash proportion of the acquisition consideration, the deal premium, and the likelihoods of receiving non-negotiated bids and deal completion (e.g., Raman, Shivakumar, and Tamayo, 2013; Skaife and Wangerin, 2013; Marquardt and Zur, 2015; McNichols and Stubben, 2015; Ahmed et

¹² An acquirer can make a tender offer directly to the shareholders of the target firm if the target firm's directors are unwilling to engage. In such tender offers, the acquirer is more dependent on the target firm's public financial disclosures to compose the terms and conditions of an acquisition bid.

¹³ See Bushman and Smith and Armstrong, Guay, and Weber (2010) for reviews of this literature.

al., 2020). Moreover, Martin and Shalev (2017) find that the availability of target-specific information (measured with stock return non-synchronicity) improves acquisition efficiency. Furthermore, Chen et al. (2018) show that, when target firms' financial statement are more comparable with industry peers, acquirers make better acquisition decision. Therefore, disclosure mandates may enhance target firms' information environment by making more detailed and precise information publicly available and thus, in turn, facilitate M&As.

Another avenue for mandated disclosures to increase the likelihood of M&A is that it reduces the information-production and proprietary costs that companies face if they were to market themselves as potential targets. If no disclosures are required, to increase the likelihood of being acquired companies need to produce and disseminate information to potential bidders. Some companies may find that these costs outweigh the potential benefits and avoid providing the information at all or provide it selectively, which would in turn reduce the likelihood of M&A.

On the other hand, however, enhanced mandatory disclosure may deter M&As by crowding out private information production. Disclosure mandates have the potential of weakening the incentives of acquirers to discover costly proprietary information about targets and become more informed (Verrecchia, 1982; Diamond, 1985; Goldstein and Yang, 2017), which can result in acquirers making fewer takeover bids. Consistent with this notion, Bonetti et al. (2020) find that increased disclosure requirements regarding major ownership stakes slowed down corporate takeover activity in the European Union.

Given these arguments, the ex-ante effect of disclosure mandates on takeover activity is unclear. Accordingly, we formally state our first hypothesis (in the null form) as follows:

H1: Mandatory financial disclosure by a firm has no impact on its likelihood of receiving a takeover bid.

Next, we examine the impact of targets' mandatory financial disclosure on the time taken for a M&A deal to reach resolution. As discussed above, acquirers have access to targets' private information following the signing of confidentiality agreements with the targets. Thus, the usefulness of publicly available financial information may be dampened during in-depth and transactional due diligence stages of acquisitions. However, acquirers' private information access may be limited and, further, the targets may cherry pick to present only favorable private information (Ahmed et al., 2020). In such cases, publicly available financial information may help assess the accuracy of the provided private information thereby speeding the process of due diligence (Marquardt and Zur, 2015). Based on both sides of the arguments, we formally state our second hypothesis (in the null form) as follows:

H2: Mandatory financial disclosure by a target firm has no impact on the speed of resolution of a takeover bid.

Finally, we consider the impact of target firms' mandatory financial disclosure on the profitability of takeover bids for acquirers. Target firms shall accept any takeover bid that is above their reservation price (Hansen, 1987). However, the reservation price is uncertain and unknown. In determining takeover bids, acquirers value targets' resources and post-merger synergies. By providing detailed information about targets' assets and activities, disclosure mandates can help acquirers better estimate the value of targets' resources and expected synergies. Thus, target firms' financial disclosures can help acquirers increase their profits by offering deal prices closer to target firms' reservation price (McNichols and Stubben, 2015). Nonetheless, acquiring firms have access to private information after signing confidentiality agreements with target firms, and, therefore, may not rely on publicly available financial information to figure out targets' reservation price and determine takeover bids. Thus, the usefulness of target firms' publicly available financial

disclosures on acquiring firms' profitability is ex-ante unclear.¹⁴ Based on these arguments, we formally state our third hypothesis (in the null form) as follows:

H3: Mandatory financial disclosure by a target firm has no impact on the profitability of a takeover bid for an acquirer.

4. Research Design

The March 2015 increase in the asset-size threshold from \$500 million to \$1 billion for filing FR Y-9C reports is not likely to have resulted from changes in any individual BHC's fundamentals or in the likelihood of a BHC being a target in an M&A transaction (i.e., the outcome we examine in our tests). Thus, we use this regulatory change as an exogenous source of variation in the extent and frequency of mandatory disclosure by BHCs, to examine the impact of disclosure mandates on the takeover market of privately held BHCs. To do so, we use a traditional difference-in-difference (DD) research design and estimate the following reduced form model:

$$M\&A_{it} = \beta_1 Above_{it-1} * Post_t + \beta_2 Above_{it-1} + \delta LogAssets_{it-1} + \gamma Controls_{it-1} + \alpha_i + \alpha_t + \varepsilon_{it} \quad [1]$$

where i represents the i -th BHC and t indicates the t -th year. $M\&A_{it}$ designates whether or not the BHC is a target of an M&A transaction—it is an indicator variable that equals one if the BHC is a target in year t , and zero otherwise.¹⁵ We focus on control acquisitions where the target is a privately held BHC.¹⁶ $Above_{it}$ indicates whether the BHC meets the asset-size threshold

¹⁴ Target firms' publicly available financial disclosures should be of greater use to acquiring firms when determining the consideration to be paid if the acquisition is a non-negotiated tender offer. In such cases, the directors of target firms are unwilling to engage with acquiring firms and, thus, acquiring firms are more dependent on public information to value targets.

¹⁵ In untabulated tests, the results are robust to alternative dependent variables of how many times the firm was targeted by different buyers in one year, how many times the firm completed M&A deals in one year, and a dummy variable indicating whether or not the firm is successfully taken over in year t .

¹⁶ Given that our deal observations are at the BHC level, we confirmed that none of the M&A deals are government-assisted takeovers or bank resolutions.

designated by the March 2015 change for filing FR Y-9C reports¹⁷. We define $Above_{it}$ in two ways: $ActualAbove_{it}$ and $FixedAbove_{it}$. $ActualAbove_{it}$ is an indicator variable that equals one if the BHC total consolidated assets is \$1 billion or more at the beginning of year t and zero otherwise. $FixedAbove_{it}$ is equal to one if the total consolidated assets of the BHC is \$1 billion or more at the end of 2014 (i.e., the last fiscal year before the change in the asset-size threshold) and zero otherwise. $Post_t$ equals one if year t is 2015 or later and zero otherwise. $LogAsset_{it-1}$ equals the natural log of the BHC's total consolidated assets at the beginning of year t ; it is the running variable that determines the $ActualAbove_{it}$ status of BHC i . In robustness tests, we also include more flexible forms of $LogAsset_{it-1}$, such as the interaction of $LogAsset_{it-1}$ with $Post_t$ —which allows total consolidated assets to have a different effect on M&A activity before and after the regulatory asset-size threshold change—as well as non-linear forms of total consolidated assets (e.g., the square and cube of $LogAsset_{it}$). α_i and α_t are firm and year fixed effects, respectively. ε_{it} is the error term, which is clustered at the BHC level.

$Controls_{it-1}$ represents a comprehensive set of control variables measured as of the beginning of year t . We include the BHC's age ($LogAge$), because firm age is a widely acknowledged determinant of a firm's likelihood of being targeted in an M&A transaction (Mata et al. 1995; Dunne et al. 1988; Grilli et al. 2010). We include RWC , the total risk-based capital ratio, to control for the BHC's capital structure and capital adequacy. We also include the interaction term $RWC*Post$, because the introduction of Basel III likely changed the impact of capital adequacy on the likelihood of M&A as it subjected BHCs to higher quality and quantity of capital

¹⁷ We acknowledge that BHCs that file the FR Y-9C and FR Y-9SP reports are faced with different degrees of capital requirements. To be specific, BHCs that file the FR Y-9SPs are exempted from the minimum consolidated capital requirements (Regulation Y, Appendix C), whereas BHCs that file the FR Y-9Cs must meet these requirements. However, the different capital requirements are documented not to have an impact on banks' likelihood of being M&A targets (Hannan and Pilloff, 2005).

requirements.^{18,19} Following Rossi and Volpin (2004), we also control for profitability, measured using the return on equity (*ROE*). We choose *ROE* as our measure of profitability because we are able to calculate it at the consolidated BHC-level even for BHC that file the less-detailed parent-only financial statements (FR Y-9SP) in the post period.²⁰ We also include the deposit-to-total-liabilities ratio (*Deposit/Liability*) and the loan-to-deposit ratio (*Loan/Deposit*) to control for any possible effect of differences in funding sources or liquidity. We additionally include the ratio of the allowance for loan and lease losses to total loans and leases held for investment (*ALLL*), to account for the BHC's loans credit quality, which for many small banks is the primary source of risk. Finally, we take into account the number of subsidiary banks of the BHC (*LogNumBanks*), to control for the complexity of a BHC's banking activities. Detailed definitions of all variables are provided in Appendix A.

The FR Y-9SP reports do not contain the requisite information to calculate *RWC*, *Deposit/Liability*, *Loan/Deposit*, or *ALLL* for BHCs on a consolidated basis. Hence, we use the values of these variables as of the end of 2014 for all post-2014 observations. We use 2014 information for all firms, including those that continue to report FR Y-9C forms and for which

¹⁸ Basel III was introduced in the U.S. on January 1, 2015. It requires a BHC that files the FR Y-9C reports to maintain the following minimum capital ratios: (i) a common equity tier 1 capital ratio of 4.5 percent, (ii) a tier 1 capital ratio of 6 percent, (iii) a total capital ratio of 8 percent, and (iv) a leverage ratio of 4 percent. Since the common equity tier 1 capital ratio was not used or reported until 2015, we cannot include it as a control variable in our analyses. Given that tier 1 capital ratio, total capital ratio, and leverage ratio are highly correlated, we include only the total capital ratio. However, our results are robust to alternative choices of capital ratios.

¹⁹ Not all BHCs became subject to the minimum capital requirements of Basel III at the same time. Although the majority of BHCs became subject to the minimum requirements starting January 1, 2015, for BHCs with \$250 billion or more in total consolidated assets compliance was required since January 1, 2014. Our results are robust to excluding these banks.

²⁰ We confirm this notion by verifying that, among firms that file both the FR Y-9C reports and Y-9LP reports (i.e. a parent-only report also filed by the FR Y-9C filers), 93.76% of the firms have less than 0.01% differences between their parent-only ROEs and consolidated ROEs. We conjecture that the minor differences exist due to different rounding errors in different reports.

therefore same period information is available post 2014. This is important to prevent any potential bias from using asynchronous information.

To examine the impact of disclosure mandates on the time taken to complete M&A deals, we estimate the following reduced-form model:

$$Duration_{it} = \beta_1 Above_{it-1} * Post_t + \beta_2 Above_{it-1} + \delta LogAssts_{it-1} + \gamma Controls_{it-1} + \alpha_t + \varepsilon_{it} \quad [2]$$

where $Duration_{it}$ is the number of days between the date of the M&A announcement and the date when the M&A transaction is completed for BHC i that is targeted in year t . ε_{it} is the error term.²¹ All other variables are as defined in Equation [1]. We do not include bank fixed effect because we have less than 100 observations to perform this regression.

Finally, we investigate the impact of disclosure mandates on the bid announcement returns for acquirers by estimating the following reduced-form model:

$$BHAR_{it} = \beta_1 Above_{it-1} * Post_t + \beta_2 Above_{it-1} + \delta LogAssets_{it-1} + \gamma Controls_{it-1} + \alpha_t + \varepsilon_{it} \quad [3]$$

where $BHAR_{it}$ is the seven-day bid announcement abnormal return of the acquirer i that takes over a BHC. The seven-day window is centered on the date when the bid of the taking over is announced for the acquirer i in year t . We estimate expected returns using the Fama-French three factor model, estimated over a 100-day estimation period ending 50 days before the announcement date of the bid. All other variables are as defined in Equation [1]. Again, we do not include bank fixed effect due to the small sample size.

²¹ We no longer need to cluster by bank, because, in most cases, one bank has only one observation in Equations [2] and [3]—there are only three banks that each appear twice in Equations [2] and [3]. However, we also do a robustness test where we cluster by bank. Our inferences remain unchanged.

5. Sample Selection and Descriptive Statistics

5.1. Sample Selection

We obtain data on BHCs from the Federal Reserve, data on bank M&A transactions from SNL Financial, and data on stock prices from CRSP. Panel A of Table 1 presents the details of our sample construction. We begin with 29,579 bank-year observations representing a sample of U.S. BHCs that file the FR Y-9 reports (including the FR Y-9C and FR Y-9SP reports) from 2012 to 2017.^{22, 23} We exclude 1,044 bank-year observations with missing, zero, or negative total consolidated assets. Next, we drop 728 bank-year observations where the total consolidated assets is between \$900 million and \$1.1 billion. These banks are close to the asset-size threshold for filing FR Y-9C reports following the March 2015 regulatory change, and they may therefore manipulate their total consolidated assets to obtain a desirable filing status (e.g., Bindal et al., 2020).²⁴ We also exclude BHCs that never filed FR Y-9Cs report before December 31st, 2014, and bank-year observations before December 31st, 2014, without corresponding FR Y-9C reports. We do this because we cannot obtain banks' consolidated financial information if the FR Y-9C reports are not filed in the pre-period. Next, we delete 2,197 observations of BHCs that are subject to SEC disclosure mandates, as for these firms FR Y-9C may not be the main source of public financial information.²⁵ Lastly, we exclude 226 bank-year observations of BHCs that file the FR Y-9C reports for reasons other than having total consolidated assets of \$500 million or more during the

²² We end the sample period in 2017 because the asset-size threshold for filing the FR Y-9C reports changed in September 2018 to total consolidated assets of \$3 billion or more.

²³ If a BHC ceases to exist in the middle of a fiscal year, we consider its last available report as its fiscal-year-end report for the year.

²⁴ Our results are robust to excluding banks with total consolidated assets between \$850 million and \$1.15 billion or between \$950 million and \$1.05 billion.

²⁵ We identify a BHC's public filing status using CRSP-FRB (2017) linking table. Our results are robust to excluding only bank-year observations for when a BHCs is registered with the SEC rather than to dropping all bank-year observations of a BHC that is registered with the SEC at any point in time during our sample period.

pre-period (i.e. the period before 2015). These BHCs are fundamentally different from the rest of BHCs in our sample as they file the FR Y-9C reports for certain qualitative requirements, including those pertaining to nonbanking activities, off-balance sheet activities, or publicly registered debt or equity. Therefore, our DD research design is estimating the “local” treatment effect of mandating expanded and more frequent disclosure on the takeover market for BHCs with total consolidated assets of \$1 billion or more. Our final sample includes 3,244 bank-year observations.

5.2. Descriptive Statistics

Panel A of Table 2 reports the number of privately held BHCs targeted in M&A transactions over our sample period, classified based on whether or not the total consolidated assets of the target are less than \$1 billion. In the pre-March 2015 period, the number of BHCs is slightly greater than that in the post-period partly because some BHCs cease to exist after they are acquired. Descriptive statistics for the variables are reported in Panel B of Table 2. All continuous variables are winsorized at the 1 and 99 percentiles of their respective distributions. 3.2 percent of the bank-year observations are targets in M&A transactions (*M&A*). On average, it takes 204 days for an M&A transaction to be completed (*Duration*), and 98.1 percent of deals in our sample are successfully completed (untabulated). The mean (median) seven-day M&A announcement abnormal return for the acquirer (*BHAR*) is 2.2 (1.4) percent. Because we focus on privately held BHCs, the banks included in our sample are relatively small—the mean (median) total consolidated assets (*Assets*) is \$2.89 billion (\$819 million). The BHCs are well-capitalized and profitable, with mean total risk-based capital ratio (*RWC*) and return on equity (*ROE*) of 16.7 and 8.9 percent, respectively. The target banks tend to have long history—the mean age of the BHCs (*Age*) is 24.4 years. Moreover, these banks seem to be well funded by deposits—the mean deposit-to-liability ratio (*Deposit/Liability*) is 90.5 percent, while the mean loan-to-deposit ratio (*Loan/Deposit*) is 78.0

percent. The mean of the ratio of allowance for loan and lease losses to total loans and leases held for investment (*ALLL*) is 1.7 percent. Finally, the median BHC has one subsidiary bank (*NumBanks*).

6. Results

6.1. Mandatory Disclosure and the Takeover of Privately Held BHCs

We begin by providing univariate evidence of the impact of more frequent and detailed mandatory regulatory disclosure on the takeover likelihood of privately held BHCs. Before the March 2015 change in the asset-size threshold for filing FR Y-9C reports, all of our sample BHCs filed the FR Y-9C reports quarterly. So, there is no difference in their mandatory reporting in the pre-March 2015 period. From March 2015 onwards, BHCs with total consolidated assets of \$1 billion or more have continued to file quarterly FR Y-9C reports, while BHCs with total consolidated assets of less than \$1 billion have been filing the less-detailed semiannual parent-only FR Y-9SP reports.

Table 3 compares the differences in the likelihood of BHCs being targeted in M&A transactions in the pre- and post-March 2015 periods between BHCs with total consolidated assets above and below \$1 billion. In the pre-period, the takeover rate of BHCs is comparable between both sets of BHCs. The mean takeover rate is 3.0 (3.3) percent for BHCs with total consolidated assets of \$1 billion or more (less than \$1 billion) in the pre-period. However, the takeover rates of the two groups of BHCs diverge in the post-March 2015 period. In the post-period, the likelihood of BHCs with total consolidated assets of less than \$1 billion slightly decreases to 2.4 percent while that of BHCs with total consolidated assets of \$1 billion or more increases to 4.1 percent. However, since neither the increase nor the decrease is statistically significant, the difference-in-difference in the likelihood of BHCs being targets of M&As is statistically insignificant.

We also examine differences in the time taken to complete M&A transactions (*Duration*) and the abnormal returns for M&A announcements (*BHAR*) between the two groups of BHCs in the pre- and post-March 2015 periods. The difference-in-differences of these variables are statistically insignificant as well. We conjecture that the insignificant differences in the univariate analysis is because we do not control for the differences in characteristics between the two groups of BHCs. Therefore, we continue with regression analyses.

Table 4 reports the results of estimating various specifications nested in Equation [1] using Linear Probability Models. We include year and BHC fixed effects in the regressions and cluster standard errors by BHC. In Panel A, we classify a BHC to be above or below the March 2015 asset-size threshold for filing the FR Y-9C reports based on lagged total consolidated assets (*ActualAbove*). In Column 1, the coefficient on *ActualAbove*Post* is 0.022 and statistically significant (t-statistic = 1.81), suggesting that banks with total consolidated assets of \$1 billion or more are more likely to be targeted in M&A transactions after the March 2015 change in the asset-size threshold for filing the FR Y-9C reports. That is, after March 2015, a BHC with total consolidated assets of \$1 billion or more is 2.2 percent more likely to be the target in a M&A transaction than a BHC with assets less than \$1 billion. Relative to the mean BHC target rate of 3.2 percent in our sample, this represents a 69 percent increase in the likelihood of being targeted. It is worth noting that the takeover rates of BHCs do not differ between BHCs with total consolidated assets above and below the \$1 billion asset-size threshold prior to March 2015—specifically, the coefficient on *ActualAbove* is -0.01 and statistically insignificant (t-statistic = -0.05).

Our results are robust to including a comprehensive set of controls. For instance, in Column 6, we control for BHCs' regulatory capital, performance, age, funding source, liquidity, loan portfolio

risk, number of subsidiary banks, and allow for more flexibility in the relation between bank size and the likelihood of being targeted. The coefficient on *ActualAbove*Post* continues to be positive and statistically significant (coefficient = 0.047, t-statistic = 2.28), and the coefficient on *ActualAbove* remains statistically insignificant (coefficient = -0.026, t-statistic = -0.90).

In Panel B, we classify BHCs relative to the March 2015 asset-size threshold for filing the FR Y-9C reports based on their total consolidated assets as of December 2014 (*FixedAbove*). Our inferences remain unchanged. In sum, the evidence suggests that more detailed and more frequent mandatory regulatory disclosure reduced the search costs of acquirers for targeting privately held BHCs and increased the likelihood of BHCs that file the FR Y-9C reports being acquired.

6.2. Mandatory Disclosure and Speed of Deal Completion

Next, we investigate the impact of mandatory disclosure on the time to deal completion. Table 5 reports the results of estimating Equation [2] using Ordinary Least Squares (OLS) regressions. The regressions include year fixed effects, and inferences are based on robust standard errors. In Panel A, we classify BHCs to be above or below the March 2015 asset-size threshold for filing FR Y-9C reports using their lagged total consolidated assets (*ActualAbove*). Across all specifications of Equation [2], the coefficients on *ActualAbove*Post* are statistically insignificant, implying that the time taken to complete an acquisition does not differ significantly between BHCs with assets above or below \$1 billion after the March 2015. This suggests that more detailed and frequent mandatory disclosure has no influence on the speed with which M&A deals can be completed. In Panel B, we classify BHCs into banks that meet the asset-size threshold of \$1 billion for filing the FR Y-9Cs and banks that do not based on their total consolidated assets as of December 2014 (*FixedAbove*). The inferences remain unchanged.

Given that an acquirer has access to private information about its target to conduct in-depth due diligence after announcing the M&A deals, it is not surprising that the impact of mandatory public disclosure on the speed of M&A deal resolutions is muted. However, our findings contrast with those of prior studies which find that target firms' accounting quality is positively associated with the speed with which M&A deals reach final resolution (e.g., Marquardt and Zur, 2015). Nonetheless, we acknowledge that this difference may be due to the caveat that our sample for this test is relatively small—it ranges solely between 98 to 104 observations.

6.3. Mandatory Disclosure and Acquirers' Bid-Announcement Returns

Table 6 reports the results of estimating Equation [3] using OLS regressions. We include year fixed effects and report robust standard errors. For this analysis, our sample is restricted to publicly listed acquirers so the number of observations is particularly small, ranging between 73 and 78. In Panel A, we classify BHCs relative to the March 2015 asset-size threshold for filing the FR Y-9C reports based on their lagged total consolidated assets (*ActualAbove*). In Columns 2 and 4, the coefficients on *ActualAbove*Post* are positive and statistically significant. For example, a coefficient of 0.057 in Column 2 suggests that after March 2015, acquirers, on average, earn an incremental 5.7 percent seven-day abnormal return around announcements of bids for target BHCs with total consolidated assets of \$1 billion or more. In contrast, prior to March 2015, there is no evidence that acquirers' bid announcement returns for BHCs with total consolidated assets of \$1 billion or more were significantly different from those for BHCs with total consolidated assets of less than \$1 billion. This suggests that more detailed and more frequent mandatory disclosure by targets helps acquirers to bid more effectively and earn greater profits (e.g., McNichols and Stubben, 2015). However, our evidence is relatively weak. In Columns 1, 3, 5, and 6, the coefficient on *ActualAbove*Post* is statistically insignificant.

In Panel B, we classify BHCs relative to the March 2015 asset-size threshold for filing the FR Y-9C report according to their total consolidated assets as of December 2014 (*FixedAbove*). Our inferences remain unchanged. In sum, there is some evidence suggesting that more detailed and more frequent mandatory regulatory disclosure by targets helps acquirers bid more effectively.

7. Additional Analyses

We conduct several additional analyses to assess the sensitivity and robustness of our findings.

7.1. Test of the Parallel-Trend Assumption

The validity of the DD research design depends on having no marked trends in the dependent variables prior to the examined event. To empirically assess this in our setting, we examine the dynamic effects of filing an FR Y-9C report on a firm's likelihood of being targeted. Following Bertrand and Mullainathan (2003), we replace the $Above_{it}$ dummy with five indicator variables corresponding to the years 2013-2017, with each variable equal to one if the total consolidated assets of the BHC are \$1 billion or more in that year, and zero otherwise. For example, $Above(-1)$ is an indicator variable that equals one if the BHC has total consolidated assets of \$1 billion or more in 2013, and zero otherwise; and $Above(0)$ is an indicator variable that equals one if a BHC has total consolidated assets of \$1 billion or more in 2014, and zero otherwise. Similarly, $Above(1) - Above(3)$ are indicator variables indicating whether a BHC's total consolidated assets equal \$1 billion or more in 2015, 2016, and 2017, respectively. An economically and statistically significant coefficient on $Above(-1)$ would suggest the existence of pre-trends in the targeting of BHCs with total consolidated assets of \$1 billion or more in M&A transactions and raise concerns about the validity of the DD approach (Bertrand and Mullainathan, 2003).

We use the following DD model to estimate the dynamic effects of the regulation change on the likelihood of being M&A targets:

$$M\&A_{it} = \beta_{-1}Above(-1)_{i,-1} + \beta_0Above(0)_{i,0} + \beta_1Above(1)_{i,1} + \beta_2Above(2)_{i,2} + \beta_3Above(3)_{i,3} + \delta LogAsset_{it-1} + \gamma Controls_{it-1} + \alpha_t + \varepsilon_{it} \quad [4]$$

Using Linear Probability Models, we report in Table 7 the results of estimating different regression models embedded in Equation 4. We include year fixed effects and cluster standard errors by bank. In Panel A, we classify BHCs relative to the \$1 billion asset-size threshold for filing the FR Y-9C reports based on their lagged total consolidated assets (*ActualAbove*). Across all specifications in Table 7, the coefficients on *Above(-1)* are statistically insignificant, indicating that there is no marked trend in banks' likelihood of being targeted prior to the March 2015 regulatory change in the asset-size threshold for filing the FR Y-9C reports. Moreover, at least one of the estimated coefficients on *Above(1)* and *Above(3)* across all the columns are economically and statistically significant. This suggests that BHCs with \$1 billion or more in total consolidated assets is more likely to be taken over solely following the March 2015 regulatory change in the asset-size threshold for filing the FR Y-9C reports. In Panel B, we define BHCs as above or below the \$1 billion asset-size threshold for filing the FR Y-9C reports based on their total consolidated assets as of December 2014 (*FixedAbove*). Our inferences remain unchanged. The comprehensive results are in favor of that the parallel-trend assumption holds and are consistent with the causal interpretation that the March 2015 regulatory change in the asset-size threshold for filing the FR Y-9C reports reduced banks probability of being targeted.

Figure 1 presents a visual exhibition of the dynamic effects of disclosure regulation change reported in Table 7 Panel A Column 1.

7.2. Instrumental Variable Regressions

Our second set of additional analyses examines whether BHCs' total consolidated assets is a good instrument to predict whether banks file the more frequent and more detailed FR Y-9C

reports, and whether our findings are robust to using an instrumental variable approach. Specifically, we use the following first-stage linear model to evaluate whether *Above*Post* and *Above* are good instruments to predict whether banks file the FR Y-9C or FR Y-9SP reports:

$$Y9C_{it} = \beta Above_{it} * Post + \mu Above_{it} + \delta LogAssets_{it} + \gamma Control_{it} + \alpha_i + \alpha_t + \varepsilon_{it} \quad [5]$$

where $Y9C_{it}$ indicates whether the BHC files the FR Y-9C report. All other variables are as defined in Equation [1].

Then, we estimate the second-stage linear model to evaluate the effect of disclosure on firms' likelihood of being M&A targets. The second-stage model is as follows:

$$M\&A = \beta \widehat{Y9C}_{it} + \delta LogAssets_{it} + \gamma Control_{it} + \alpha_i + \alpha_t + \varepsilon_{it} \quad [6]$$

where $\widehat{Y9C}_{it}$ is the fitted value obtained from estimating Equation [5]. All other variables are as defined in Equation [1].

Table 8 reports the results of estimating various specifications nested in Equation [5] using OLS regressions. We include year and BHC fixed effects and cluster standard errors by BHC. In Panel A, we classify a BHC to be above or below the March 2015 asset-size threshold for filing the FR Y-9C reports based on lagged total consolidated assets (*ActualAbove*). Across all columns, the coefficients on *ActualAbove*Post* are greater than 0.9 and are statistically significant with t-statistics larger than 45. Moreover, the coefficients on *ActualAbove* are around -0.2 and are statistically significant with t-statistics around -4.5. These imply that *ActualAbove*Post* and *ActualAbove* are strong instruments to predict whether a BHC files the FR Y-9C reports. In Panel B, we categorize BHCs into above the March 2015 asset-size threshold for filing the FR Y-9C reports and below the March 2015 asset-size threshold depending on their total consolidated assets as of December 2014 (*FixedAbove*). Our results remain similar. Remarkably, the R-squared in columns of Panel A are greater than the R-squared in corresponding columns of Panel B. This

indicates that *ActualAbove*Post* and *ActualAbove* are stronger instruments than *FixedAbove*Post* and *FixedAbove*. In sum, the evidence suggests that a BHC's total consolidated assets is good instruments to predict whether the BHC files the FR Y-9C reports.

Table 9 reports the results of estimating Equation [6] using OLS regressions. We include year and BHC fixed effects and cluster standard errors by BHC. In Panel A, we define a BHC to be above the March 2015 asset-size threshold for filing the FR Y-9C reports using its lagged total consolidated assets (*ActualAbove*). Across all columns, the coefficients on *Y9C* are positive and are statistically significant, suggesting that BHCs filing the FR Y-9C reports are more likely to be targeted. In Panel B, we define a BHC as above the March 2015 asset-size threshold for filing the FR Y-9C reports using their total consolidated assets as of December 2014 (*FixedAbove*). Our results remain similar. The collective evidence suggests that mandatory disclosure increases a bank's likelihood of being an M&A target.

7.3. Evidence from a Restricted Subsample

BHCs that file FR Y-9C reports are larger than BHCs that file FR Y-9SP reports. Although we control for flexible forms of target's size, it is impossible to fully eliminate any size-related effects. To further mitigate concerns regarding potential size effects, we rerun the analysis limiting the sample to BHCs with total consolidated assets between \$500 million and \$5 billion.²⁶

Table 10 reports the results of estimating Equation [1] using OLS regressions for the restricted subsample. We include year and BHC fixed effects and cluster standard errors by BHC. In Panel A, we categorize a BHC to be above the March 2015 asset-size threshold for filing the FR Y-9C reports using its lagged total consolidated assets (*ActualAbove*). Across all columns, the

²⁶ In untabulated tests, our results are also robust to limiting our sample to BHCs with between \$500 million and \$10 billion in total consolidated assets.

coefficients on *ActualAbove*Post* are positive and are statistically significant, suggesting that BHCs with total consolidated assets of \$1 billion or more are more likely to be targeted. In Panel B, we categorize a BHC as above the March 2015 asset-size threshold for filing the FR Y-9C reports using their total consolidated assets as of December 2014 (*FixedAbove*). Our results remain similar. The collective evidence suggests that BHCs with total consolidated assets of \$1 billion or more are more likely to be M&A targets following the March 2015 regulatory change, and that our findings are not merely due to the size of target BHCs.

8. Conclusion

This paper investigates the role of mandatory financial disclosure in the takeover market for privately held U.S. banks. To identify potential targets and to conduct preliminary due diligence, acquirers generally rely on public information. Focusing on a regulatory change in March 2015 that reduced the availability of information on small bank holding companies, this study examines the impact of financial disclosure on M&A activity. Using a difference-in-difference research design, the study finds that affected banks are less likely to be targeted in M&A transactions after March 2015. Further, acquirers earn lower bid-announcement returns when targeting banks with limited mandatory disclosure. These results suggest that the reduction in availability of information on small banks increased both acquirers' search costs and the uncertainty regarding potential value creation through M&A. They also suggest that while small banks may benefit from the reduction in reporting and proprietary costs associated with reduced disclosure, they bear the cost of lower interest from potential acquirers as well as the proprietary costs associated with marketing themselves as a potential target (which would necessitate disclosures that are not otherwise required since March 2015).

Following the identification of target firms, the time taken to complete the acquisition does not differ significantly between banks above and below the \$1 billion asset-size threshold. This finding is consistent with acquirers having access to private information about targets following the signing of confidentiality agreements and/or letters of intent, which reduce their reliance on public financial information.

A few caveats are in order. First, our focus on a particular industry (banking) and transaction (M&A) results in a relatively small sample, which reduces the power of the tests and the generalizability of the results. Adding to this concern is the fact that banks—especially private ones—are inherently more opaque than other corporate entities. Thus, the impact of the reduction in disclosure on M&A activities documented here may not generalize to other settings. A third caveat is that the reduction in information availability for small firms may also affect larger targets. Large targets may become relatively more attractive (due to their disclosures) or alternatively become less attractive due to a reduction in information about small peers, which is used for comparative and other analyses. Such potential effects are not accounted for in this study.

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Appendix A: Variable Definitions

Variable Name	Definition
<i>Dependent and independent variables</i>	
<i>ActualAbove</i>	One if the BHC's actual total consolidated assets meets the asset-size threshold of \$1 billion, and zero otherwise.
<i>BHAR</i>	Buy-Hold Abnormal Return, calculated using Event Study by WRDS. We use Fama-French Three Factor Model to estimate expected return. The estimation window to estimate the expected return is set to be 100 days. The minimum number of valid returns is 70 observations. The number of trading days to be established between the end of estimation window and the beginning of the event window is 50 days. Event windows start from 3 days before the event and ends 3 days after.
<i>Duration</i>	The time difference between the M&A announcement date and the M&A completion date (measured in days).
<i>FixedAbove</i>	One if the BHC's total consolidated assets in 2014 meets the asset-size threshold of \$1 billion, and zero otherwise. If a BHC does not exist in our sample in 2014, we obtain its last available total consolidated assets in the pre-period to define <i>FixedAbove</i> .
<i>M&A</i>	One if the bank holding company (BHC) is the target of M&A transaction announced in a given year, and zero otherwise.
<i>Post</i>	One if year equals 2015 or greater later, and zero otherwise.
<i>Y9C</i>	One if the bank holding company (BHC) files the FR Y-9C reports in a given year, and zero otherwise.
<i>Bank characteristics</i>	
<i>ALLL</i>	Allowance for loan and lease losses [FR Y-9C: BHCK3123] divided by total loans and leases held for investment [FR Y-9C: BHCK2122 – BHCK5369], following Harris, Khan, and Nissim (2018).
<i>Deposit/Liability</i>	Total deposits [FR Y-9C: BHFN6631 + BHFN6636 + BHDM6631 + BHDM6636] divided by total liabilities [FR Y-9C: BHCK2948]
<i>Loan/Deposit</i>	Total loans and leases held for investment [FR Y-9C: BHCK2122 – BHCK5369] divided by total deposits [FR Y-9C: BHFN6631 + BHFN6636 + BHDM6631 + BHDM6636]
<i>LogAge</i>	Natural Log of one plus the age of a BHC [FR Y-9: RSSD9950].
<i>LogAssets</i>	Natural log of total consolidated assets [FR Y-9C: BHCK2170 and FRY-9SP: BHSP8519].
<i>LogAssets2</i>	The square of natural log of total consolidated assets [FR Y-9C: BHCK2170 and FRY-9SP: BHSP8519].
<i>LogAssets3</i>	The cube of natural log of total consolidated assets [FR Y-9C: BHCK2170 and FRY-9SP: BHSP8519].
<i>LogNumBanks</i>	Natural Log of one plus the number of subsidiary banks of a BHC [RSSD9146].
<i>RWC</i>	Risk-weighted capital ratio [FR Y-9C: BHCK7205/100].
<i>ROE</i>	Return on equity, measured as a BHC's net income at the end of the year divided by the BHC's total equity capital at the beginning of the year. If the BHC filed the consolidated FR Y-9C report, we obtain net income and total equity capital from its FR Y-9C report [FR Y-9C: BHCK4340 and BHCK3210,

	respectively]. If the BHC did not file the consolidated FR Y-9C report, we then obtain the two numbers from the parent-only FR Y-9LP [FR Y-9LP: BHCP4340 and BHCP3210, respectively] or FR Y-9SP [FR Y-9SP: BHSP4340 and BHSP3210, respectively], whichever is filed by the BHC, instead.
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Figure 1: Trends on independent variables between Basel-affected and Basel-unaffected borrowers

This graph visualizes how firms' likelihood of being targeted for M&As dynamically change as a result of the disclosure regulation change. It presents trends from estimating Equation [3]:

$M\&A_{it} = \beta_{-1}Above(-1)_{i,-1} + \beta_0Above(0)_{i,0} + \beta_1Above(1)_{i,1} + \beta_2Above(2)_{i,2} + \beta_3Above(3)_{i,3} + \gamma LogAsset_{it-1} + \alpha_t + \varepsilon_{it}$ for firm i in year t . $M\&A_{it}$ designates whether or not the firm is a target of M&A in year t . $Above(-1)$ — $Above(3)$ represent $ActualAbove(-1)$ — $ActualAbove(3)$, which indicate whether or not a bank holding company (BHC) has \$1 billion or more in total consolidated assets in 2013-2017, respectively. $LogAsset_{it-1}$ represents a BHC's total consolidated assets in year $t-1$. α_t is the year fixed effect. All continuous variables are winsorized at the top and bottom 1%. All variables are defined in the Appendix. The solid dots indicate the average difference for the outcome variables of interest while the solid vertical lines present two-sided 90% confidence intervals based on standard errors clustered at the bank level. Values close to zero (i.e., the red line) indicate no difference in the likelihood of two groups of BHCs being targeted for M&As. The two groups of BHCs do not show significant statistical differences in the likelihood of being M&A targets prior to the disclosure regulation change.

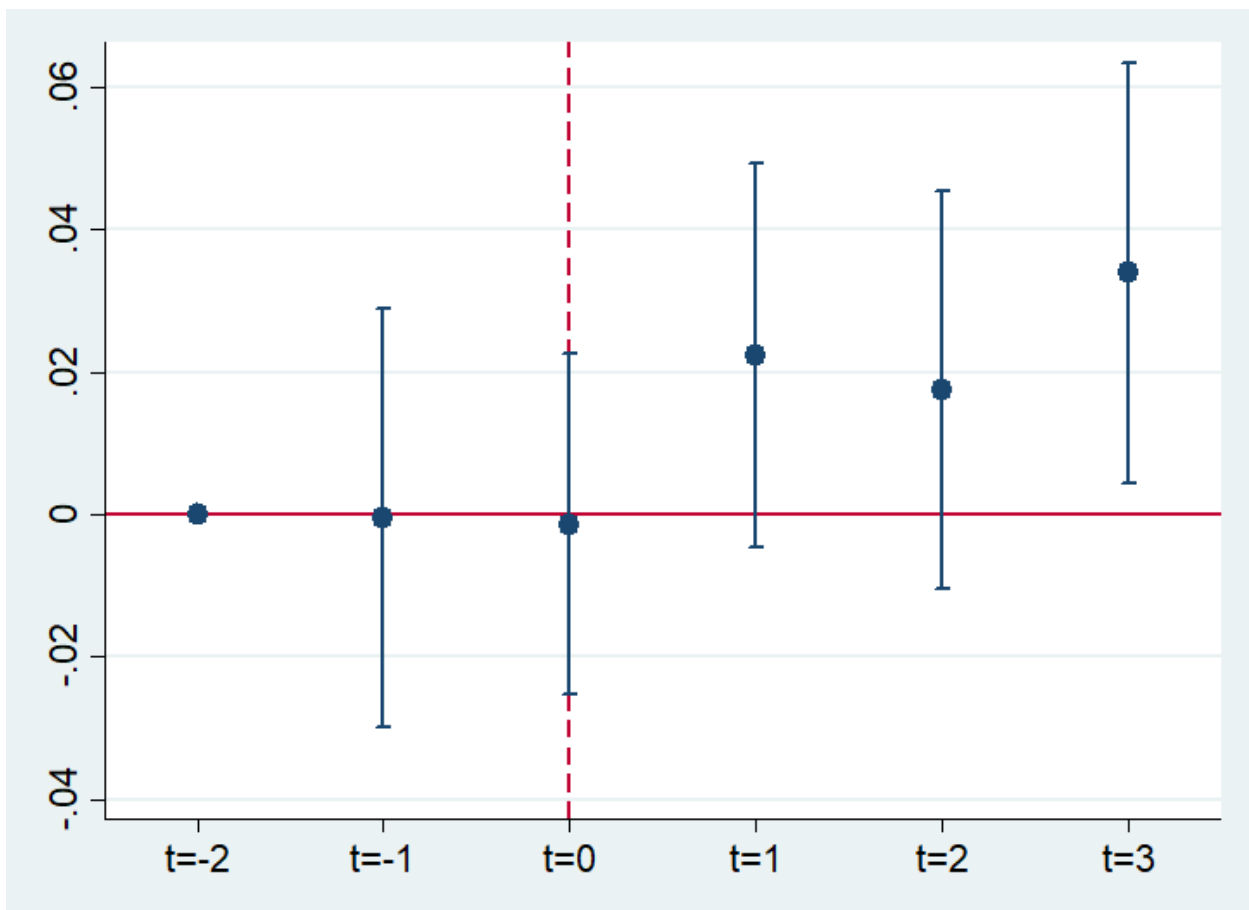


Table 1: Sample construction

This table summarizes how our sample is constructed. The left-hand side column presents our steps in excluding observations, and the right-hand side column reports the number of remaining observations in our sample.

	# of bank-year
The FR Y-9 Reports (2012 to 2017)	29,579
Less: bank-year observations with missing, zero, or negative total consolidated assets	(1,044)
Less: bank-year observations with between \$900 million and \$1.1 billion in total consolidated assets	(728)
Less: BHCs that never filed the FR Y-9C reports in the pre-period or bank-year observations that did not file the FR Y-9C reports in the pre-period	(22,140)
Less: BHCs that ever filed with the SEC during the sample period	(2,197)
Less: BHCs with less than \$500 million in total consolidated assets throughout the pre-period	(226)
	3,244

Table 2: Sample description

This table describes the sample. Panel A exhibits the year distribution of the number of BHCs and of BHCs being targeted between BHCs with assets above and below \$1 billion. Specifically, column (1) exhibits the number of targeted BHCs with total consolidated assets of less than \$1 billion. Column (2) exhibits the total number of BHCs with total consolidated assets of less than \$1 billion. Column (3) exhibits the number of targeted BHCs with total consolidated assets of \$1 billion or more. Column (4) exhibits the total number of BHCs with total consolidated assets of \$1 billion or more. Panel B presents summary statistics for variables used in our study.

Panel A: Number of BHCs – total and targeted

Year	(1)	(2)	(3)	(4)
	Below \$1 billion		Above \$1 billion	
	# of BHCs targeted	# of BHC	# of BHCs targeted	# of BHC
2012	8	359	7	218
2013	17	365	8	212
2014	11	352	5	230
2015	7	314	8	220
2016	8	269	9	230
2017	5	240	11	235

Panel B: Descriptive statistics

	(1)	(2)	(3)	(4)	(5)	(6)
	N	Mean	St.Dev	P25	Median	P75
<i>M&A</i>	3,244	0.032	0.176	0	0	0
<i>Duration</i>	104	204.077	204.329	125.500	154	201.500
<i>BHAR</i>	78	0.022	0.048	-0.008	0.014	0.049
<i>Assets</i>	3,244	2,890,000	10,400,000	635,553	819,000	1,640,247
<i>RWC</i>	3,036	0.167	0.059	0.134	0.153	0.182
<i>ROE</i>	3,244	0.089	0.091	0.055	0.088	0.124
<i>Age</i>	3,222	24.411	11.554	16	26	32
<i>Deposit/Liability</i>	3,244	0.905	0.090	0.876	0.926	0.961
<i>Loan/Deposit</i>	3,244	0.780	0.190	0.668	0.782	0.897
<i>ALLL</i>	3,239	0.017	0.008	0.012	0.015	0.020
<i>NumBanks</i>	3,244	1.178	0.815	1	1	1

Table 3: Univariate analysis

This table compares the characteristics of BHCs and M&A transactions around the asset-size cutoff between pre- and post-periods. *t*-statistics are in parentheses. All continuous variables are winsorized at the top and bottom 1%. *, **, *** indicate statistical significance (two-sided) at the 0.1, 0.05, and 0.01 levels, respectively.

		(1)		(2)		(3)	
		Post-Period		Pre-Period		Difference between periods	
		Mean	N	Mean	N	Mean	t-stat
Actual Above=1	M&A	0.041	685	0.03	660	0.011	(1.047)
	Duration	171.071	28	306.25	20	-135.179*	(-1.850)
	BHAR	0.017	23	0.065	16	-0.049**	(-2.800)
	Assets	5,570,000	685	6,530,000	660	-961,000	(-1.128)
	RWC	0.165	633	0.163	593	0.002	(0.500)
	ROE	0.096	685	0.09	660	0.007	(1.455)
	Age	26.673	679	23.98	652	2.693***	(4.049)
	Deposit/Liability	0.895	685	0.89	660	0.005	(0.872)
	Loan/Deposit	0.815	685	0.782	660	0.033***	(2.823)
	ALLL	0.015	685	0.017	660	-0.002***	(-4.228)
	NumBanks	1.193	685	1.298	660	-0.106*	(-1.946)
Actual Above=0	M&A	0.024	823	0.033	1,076	-0.009	(-1.193)
	Duration	138.3	20	209.528	36	-71.228*	(-1.827)
	BHAR	-0.002	16	0.015	23	-0.017	(-1.349)
	Assets	670,000	823	655,000	1,076	15,300**	(2.462)
	RWC	0.172	792	0.165	1,018	0.007**	(2.490)
	ROE	0.093	823	0.079	1,076	0.014***	(3.082)
	Age	25.865	821	22.121	1,070	3.743***	(7.458)
	Deposit/Liability	0.915	823	0.914	1,076	0.001	(0.297)
	Loan/Deposit	0.77	823	0.764	1,076	0.005	(0.672)
	ALLL	0.016	820	0.017	1,074	-0.001***	(-3.026)
	NumBanks	1.118	823	1.14	1,076	-0.022	(-0.753)
		Post-period		Pre-period		Difference-in-difference: Differences between periods	
		Mean	t-stat	Mean	t-stat	Mean	t-stat
Differenc -es between (Actual Above =1) and (Actual Above =0)	M&A	0.017*	(1.786)	-0.003	(-0.365)	0.020	(1.565)
	Duration	32.771*	(2.015)	96.722	(1.191)	-63.951	(-0.793)
	BHAR	0.018	(1.669)	0.050**	(2.720)	-0.032	(-1.585)
	Assets	4,900,000***	(8.840)	5,880,000***	(9.089)	-976,283.666	(-1.360)
	RWC	-0.007**	(-2.163)	-0.002	(-0.553)	-0.005	(-1.185)
	ROE	0.003	(0.859)	0.010**	(2.064)	-0.007	(-1.069)
	Age	0.808	(1.363)	1.859***	(3.176)	-1.050	(-1.281)
	Deposit/Liability	-0.020***	(-4.248)	-0.024***	(-4.946)	0.004	(0.621)
	Loan/Deposit	0.045***	(4.489)	0.018*	(1.852)	0.027**	(2.013)
	ALLL	-0.001**	(-2.038)	0.000	(0.123)	-0.001	(-1.454)
	NumBanks	0.075*	(1.926)	0.158***	(3.274)	-0.083	(-1.433)

Table 4: The effect of disclosure regulation change on firms' likelihood of being M&A targets

This table presents how firms' likelihood of being targeted for M&As change as a result of disclosure regulation change. Specifically, it presents results from estimating Equation [1]: $M\&A_{it} = \beta_1 Above_{it} * Post_t + \beta_2 Above_{it} + \delta LogAssets_{it-1} + \gamma Controls_{it-1} + \alpha_t + \alpha_i + \varepsilon_{it}$ for firm i in year t . $M\&A$ designates whether or not the firm is a target of M&A in year t . $Above_{it}$ represents: either (1) $ActualAbove_{it}$, which indicates whether or not a bank holding company (BHC) has \$1 billion or more in total consolidated assets in year $t-1$ (results presented in Panel A), or (2) $FixedAbove_{it}$, which indicates whether or not a BHC has \$1 billion or more in total consolidated assets in 2014 (results presented in Panel B). $Post_t$ indicates whether or not the BHC files a regulatory report after 2014. $LogAsset_{it-1}$ represents a BHC's total consolidated assets in year $t-1$. α_i is the firm fixed effect. α_t is the year fixed effect. Fixed effects are not tabulated for brevity. t -statistics are in brackets. Standard errors are clustered at the bank level. All continuous variables are winsorized at the top and bottom 1%. All variables are defined in the Appendix. *, **, *** indicate statistical significance (two-sided) at the 0.1, 0.05, and 0.01 levels, respectively.

Panel A: ActualAbove as the independent variable

VARIABLES	(1) M&A	(2) M&A	(3) M&A	(4) M&A	(5) M&A	(6) M&A
ActualAbove*Post	0.022*	0.042**	0.026**	0.053***	0.053***	0.047**
	[1.81]	[2.35]	[2.04]	[2.80]	[2.73]	[2.28]
ActualAbove	-0.001	-0.015	-0.008	-0.026	-0.026	-0.026
	[-0.05]	[-0.53]	[-0.30]	[-0.91]	[-0.91]	[-0.90]
LogAssets	-0.018	-0.012	-0.058	-0.049	-0.025	-4.628
	[-0.59]	[-0.41]	[-1.33]	[-1.13]	[-0.06]	[-1.31]
LogAssets*Post		-0.014*		-0.020***	-0.020***	-0.018***
		[-1.94]		[-2.81]	[-2.96]	[-2.68]
LogAssets2					-0.001	0.314
					[-0.05]	[1.33]
LogAssets3						-0.007
						[-1.37]
RWC			-0.233	-0.189	-0.193	-0.257
			[-1.54]	[-1.26]	[-1.17]	[-1.49]
RWC*Post			-0.137	-0.135	-0.135	-0.138
			[-1.54]	[-1.52]	[-1.55]	[-1.58]
ROE			-0.019	-0.023	-0.022	-0.021
			[-0.32]	[-0.40]	[-0.39]	[-0.36]
LogAge			0.161***	0.162***	0.162***	0.158***
			[2.60]	[2.64]	[2.64]	[2.60]
Deposit/Liability			0.080	0.083	0.083	0.066
			[0.44]	[0.46]	[0.45]	[0.36]
Loan/Deposit			-0.074	-0.066	-0.066	-0.067
			[-0.64]	[-0.57]	[-0.57]	[-0.58]
ALLL			-0.525	-0.500	-0.501	-0.542
			[-0.30]	[-0.28]	[-0.28]	[-0.31]
LogNumBanks			0.036***	0.036***	0.036***	0.034**
			[2.80]	[2.68]	[2.66]	[2.50]
Observations	3,212	3,212	3,003	3,003	3,003	3,003
Fixed Effects	Year, Bank	Year, Bank	Year, Bank	Year, Bank	Year, Bank	Year, Bank
R-squared	0.286	0.287	0.285	0.286	0.286	0.287

Panel B: FixedAbove as the independent variable

VARIABLES	(1) M&A	(2) M&A	(3) M&A	(4) M&A	(5) M&A	(6) M&A
FixedAbove*Post	0.022*	0.043**	0.027**	0.054***	0.055***	0.049**
	[1.86]	[2.45]	[2.14]	[3.00]	[2.93]	[2.52]
LogAssets	-0.012	-0.006	-0.052	-0.039	0.040	-4.560
	[-0.44]	[-0.23]	[-1.32]	[-1.01]	[0.09]	[-1.33]
LogAssets*Post		-0.015**		-0.021***	-0.021***	-0.019***
		[-2.05]		[-3.04]	[-3.17]	[-2.94]
LogAssets2					-0.003	0.311
					[-0.18]	[1.36]
LogAssets3						-0.007
						[-1.41]
RWC			-0.227	-0.177	-0.187	-0.252
			[-1.51]	[-1.18]	[-1.14]	[-1.46]
RWC*Post			-0.138	-0.136	-0.138	-0.140
			[-1.54]	[-1.53]	[-1.57]	[-1.59]
ROE			-0.017	-0.021	-0.021	-0.020
			[-0.30]	[-0.38]	[-0.36]	[-0.34]
LogAge			0.164***	0.166***	0.166***	0.161***
			[2.64]	[2.70]	[2.70]	[2.66]
Deposit/Liability			0.083	0.088	0.087	0.069
			[0.46]	[0.49]	[0.47]	[0.37]
Loan/Deposit			-0.074	-0.063	-0.063	-0.065
			[-0.64]	[-0.55]	[-0.55]	[-0.56]
ALLL			-0.447	-0.374	-0.378	-0.438
			[-0.25]	[-0.21]	[-0.21]	[-0.25]
LogNumBanks			0.036***	0.035***	0.035***	0.033**
			[2.80]	[2.67]	[2.64]	[2.49]
Observations	3,212	3,212	3,003	3,003	3,003	3,003
Fixed Effects	Year, Bank	Year, Bank	Year, Bank	Year, Bank	Year, Bank	Year, Bank
R-squared	0.286	0.287	0.286	0.287	0.287	0.287

Table 5: The effect of regulation change on the time taken to complete M&A deals

This table presents the effect of disclosure regulation on the time taken to complete M&A deals. Specifically, it presents results from estimating Equation [2]: $Duration_{it} = \beta_1 Above_{it} * Post_t + \beta_2 Above_{it} + \delta LogAssets_{it-1} + \gamma Controls_{it-1} + \alpha_t + \varepsilon_{it}$ for firm i in year t . $Duration_{it}$ designates the time taken to complete M&A deals in year t . $Above_{it}$ represents: either (1) $ActualAbove_{it}$, which indicates whether or not a bank holding company (BHC) has \$1 billion or more in total consolidated assets in year $t-1$ (results presented in Panel A), or (2) $FixedAbove_{it}$, which indicates whether or not a BHC has \$1 billion or more in total consolidated assets in 2014 (results presented in Panel B). $Post_t$ indicates whether or not the BHC files a regulator report after 2014. $LogAsset_{it-1}$ represents a BHC's total consolidated assets in year $t-1$. α_t is the year fixed effect. Fixed effects are not tabulated for brevity. t -statistics—which are calculated using robust standard errors—are in brackets. All continuous variables are winsorized at the top and bottom 1%. All variables are defined in the Appendix. *, **, *** indicate statistical significance (two-sided) at the 0.1, 0.05, and 0.01 levels, respectively.

Panel A: ActualAbove as the independent variable

VARIABLES	(1) Duration	(2) Duration	(3) Duration	(4) Duration	(5) Duration	(6) Duration
ActualAbove*Post	-60.749 [-0.71]	-40.440 [-0.27]	-60.041 [-0.74]	36.245 [0.19]	39.121 [0.21]	44.362 [0.23]
ActualAbove	48.451 [0.44]	38.656 [0.27]	80.309 [0.65]	34.688 [0.19]	6.934 [0.04]	-21.097 [-0.11]
LogAssets	38.066 [1.01]	45.763 [0.64]	19.245 [0.31]	57.123 [0.47]	742.760 [0.86]	-12,073.456 [-0.63]
LogAssets*Post		-16.132 [-0.22]		-82.559 [-0.62]	-87.268 [-0.68]	-94.895 [-0.73]
LogAssets2					-23.664 [-0.73]	883.588 [0.65]
LogAssets3						-21.329 [-0.66]
RWC			299.788 [0.65]	350.526 [0.75]	449.582 [0.97]	411.092 [0.90]
RWC*Post			-362.748 [-0.53]	-414.546 [-0.61]	-558.931 [-0.80]	-510.086 [-0.74]
ROE			399.414* [1.78]	413.759* [1.83]	387.092* [1.76]	388.135* [1.75]
LogAge			-53.140 [-1.60]	-52.317 [-1.57]	-48.475 [-1.44]	-46.955 [-1.42]
Deposit/Liability			-587.091 [-1.39]	-606.610 [-1.47]	-569.882 [-1.39]	-569.209 [-1.38]
Loan/Deposit			-211.612 [-1.02]	-202.181 [-0.93]	-196.015 [-0.90]	-200.204 [-0.91]
ALLL			2,046.406 [0.96]	1,966.033 [0.90]	1,781.874 [0.80]	1,849.023 [0.82]
LogNumBanks			-63.904 [-0.56]	-55.476 [-0.49]	-58.825 [-0.51]	-53.491 [-0.46]
Observations	104	104	98	98	98	98
Fixed Effects	Year	Year	Year	Year	Year	Year
R-squared	0.102	0.102	0.153	0.157	0.160	0.162

Panel B: FixedAbove as the independent variable

VARIABLES	(1) Duration	(2) Duration	(3) Duration	(4) Duration	(5) Duration	(6) Duration
FixedAbove*Post	-61.552 [-0.72]	-43.067 [-0.29]	-61.299 [-0.74]	26.623 [0.13]	39.422 [0.20]	44.334 [0.22]
FixedAbove	47.808 [0.43]	38.656 [0.27]	80.189 [0.66]	37.443 [0.20]	6.865 [0.04]	-20.225 [-0.11]
LogAssets	38.571 [1.04]	45.763 [0.64]	19.489 [0.33]	55.313 [0.46]	789.362 [0.98]	-11,633.089 [-0.62]
LogAssets*Post		-14.854 [-0.20]		-77.661 [-0.56]	-88.523 [-0.67]	-95.292 [-0.72]
LogAssets2					-25.316 [-0.84]	853.275 [0.64]
LogAssets3						-20.637 [-0.66]
RWC			304.812 [0.66]	364.173 [0.78]	467.124 [1.00]	421.486 [0.91]
RWC*Post			-372.066 [-0.54]	-443.095 [-0.65]	-592.552 [-0.85]	-529.191 [-0.77]
ROE			399.178* [1.78]	412.329* [1.81]	386.114* [1.74]	387.585* [1.74]
LogAge			-54.140 [-1.59]	-55.782 [-1.63]	-50.786 [-1.47]	-48.207 [-1.43]
Deposit/Liability			-582.700 [-1.41]	-590.819 [-1.44]	-558.294 [-1.37]	-563.186 [-1.37]
Loan/Deposit			-209.421 [-1.03]	-195.422 [-0.89]	-190.766 [-0.87]	-197.333 [-0.89]
ALLL			2,027.464 [0.96]	1,907.841 [0.87]	1,729.235 [0.78]	1,819.403 [0.81]
LogNumBanks			-64.944 [-0.56]	-59.565 [-0.52]	-61.882 [-0.54]	-55.256 [-0.48]
Observations	104	104	98	98	98	98
Fixed Effects	Year	Year	Year	Year	Year	Year
R-squared	0.102	0.102	0.153	0.157	0.160	0.162

Table 6: The effect of disclosure regulation change on three-day stock reactions to M&As

This table presents the effect of disclosure regulation on stock reactions to M&A announcements. Specifically, it presents results from estimating Equation [3]: $BHAR_{it} = \beta_1 Above_{it} * Post_t + \beta_2 Above_{it} + \delta LogAssets_{it-1} + \gamma Controls_{it-1} + \alpha_t + \varepsilon_{it}$ for firm i in year t . $BHAR_{it}$ represents the seven-day window buy-hold abnormal returns to M&As announced in year t . $Above_{it}$ represents: either (1) $ActualAbove_{it}$, which indicates whether or not a bank holding company (BHC) has \$1 billion or more in total consolidated assets in year $t-1$ (results presented in Panel A), or (2) $FixedAbove_{it}$, which indicates whether or not a BHC has \$1 billion or more in total consolidated assets in 2014 (results presented in Panel B). $Post_t$ indicates whether or not the BHC files a regulator report after 2014. $LogAsset_{it-1}$ represents a BHC's total consolidated assets in year $t-1$. α_t is the year fixed effect. Fixed effects are not tabulated for brevity. t -statistics—which are calculated using robust standard errors—are in brackets. All continuous variables are winsorized at the top and bottom 1%. All variables are defined in the Appendix. *, **, *** indicate statistical significance (two-sided) at the 0.1, 0.05, and 0.01 levels, respectively.

Panel A: ActualAbove as the independent variable

	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	3-Day BHAR	3-Day BHAR	3-Day BHAR	3-Day BHAR	3-Day BHAR	3-Day BHAR
ActualAbove*Post	-0.022 [-1.09]	0.057** [2.51]	-0.021 [-1.06]	0.062* [1.92]	0.053 [1.53]	0.063 [1.67]
ActualAbove	0.034 [1.49]	-0.004 [-0.25]	0.028 [1.25]	-0.008 [-0.36]	0.007 [0.29]	-0.010 [-0.27]
LogAssets	0.009 [0.66]	0.040*** [4.55]	0.022 [1.21]	0.051*** [3.22]	-0.264 [-1.04]	-6.339 [-0.85]
LogAssets*Post		-0.065*** [-5.71]		-0.075*** [-2.88]	-0.066** [-2.29]	-0.078** [-2.12]
LogAssets2					0.011 [1.26]	0.443 [0.83]
LogAssets3						-0.010 [-0.81]
RWC			0.091 [0.53]	0.142 [0.82]	0.085 [0.47]	0.068 [0.38]
RWC*Post			0.076 [0.38]	0.030 [0.14]	0.106 [0.51]	0.123 [0.59]
ROE			-0.028 [-0.75]	-0.007 [-0.17]	0.003 [0.08]	0.006 [0.14]
LogAge			-0.005 [-0.48]	-0.008 [-0.75]	-0.010 [-0.85]	-0.009 [-0.75]
Deposit/Liability			-0.118 [-1.05]	-0.150 [-1.40]	-0.157 [-1.49]	-0.160 [-1.48]
Loan/Deposit			-0.005 [-0.12]	-0.000 [-0.01]	-0.001 [-0.03]	-0.003 [-0.07]
ALLL			0.527 [0.80]	0.415 [0.59]	0.562 [0.79]	0.689 [0.91]
LogNumBanks			-0.001 [-0.05]	0.005 [0.17]	0.006 [0.20]	0.010 [0.29]
Observations	78	78	73	73	73	73
Fixed Effects	Year	Year	Year	Year	Year	Year
R-squared	0.350	0.471	0.422	0.489	0.498	0.506

Panel B: FixedAbove as the independent variable

	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	3-Day BHAR	3-Day BHAR	3-Day BHAR	3-Day BHAR	3-Day BHAR	3-Day BHAR
FixedAbove*Post	-0.019 [-0.95]	0.061*** [2.85]	-0.018 [-0.93]	0.071** [2.40]	0.062* [1.87]	0.068* [1.83]
FixedAbove	0.036 [1.60]	-0.004 [-0.25]	0.034 [1.47]	-0.006 [-0.29]	0.005 [0.20]	-0.007 [-0.19]
LogAssets	0.008 [0.56]	0.040*** [4.55]	0.017 [0.88]	0.050*** [3.01]	-0.179 [-0.72]	-4.418 [-0.58]
LogAssets*Post		-0.067*** [-6.22]		-0.083*** [-3.33]	-0.074** [-2.59]	-0.082** [-2.22]
LogAssets2					0.008 [0.94]	0.309 [0.57]
LogAssets3						-0.007 [-0.55]
RWC			0.091 [0.53]	0.159 [0.90]	0.117 [0.63]	0.103 [0.56]
RWC*Post			0.068 [0.34]	-0.012 [-0.06]	0.043 [0.20]	0.060 [0.28]
ROE			-0.025 [-0.65]	-0.003 [-0.06]	0.004 [0.09]	0.005 [0.12]
LogAge			-0.007 [-0.60]	-0.014 [-1.16]	-0.014 [-1.21]	-0.013 [-1.08]
Deposit/Liability			-0.121 [-1.09]	-0.140 [-1.36]	-0.142 [-1.39]	-0.146 [-1.40]
Loan/Deposit			-0.006 [-0.13]	0.007 [0.17]	0.007 [0.17]	0.005 [0.13]
ALLL			0.483 [0.73]	0.261 [0.36]	0.369 [0.50]	0.474 [0.60]
LogNumBanks			-0.003 [-0.09]	0.002 [0.05]	0.002 [0.07]	0.005 [0.14]
Observations	78	78	73	73	73	73
Fixed Effects	Year	Year	Year	Year	Year	Year
R-squared	0.355	0.487	0.427	0.512	0.517	0.521

Table 7: Dynamic changes in firms' likelihood of being M&A targets resulting from the disclosure regulation change

This table presents how firms' likelihood of being M&A targets dynamically change as a result of the disclosure regulation change. Specifically, it presents results from estimating Equation [4]: $M\&A_{it} = \beta_{-1}Above(-1)_{i,-1} + \beta_0Above(0)_{i,0} + \beta_1Above(1)_{i,1} + \beta_2Above(2)_{i,2} + \beta_3Above(3)_{i,3} + \gamma LogAsset_{it-1} + \alpha_t + \varepsilon_{it}$ for firm i in year t . $Above(-1)$ — $Above(3)$ represent: either (1) $ActualAbove(-1)$ — $ActualAbove(3)$, which indicate whether or not a bank holding company (BHC) has \$1 billion or more in total consolidated assets in 2013-2017, respectively (results presented in Panel A), or (2) $FixedAbove(-1)$ — $FixedAbove(3)$, which indicate whether or not a BHC has \$1 billion or more in total consolidated assets in 2013-2017, respectively (results presented in Panel B). $LogAsset_{it-1}$ represents a BHC's total consolidated assets in year $t-1$. α_i is the firm fixed effect. α_t is the year fixed effect. Fixed effects are not tabulated for brevity. t -statistics are in brackets. Standard errors are clustered at the bank level. All continuous variables are winsorized at the top and bottom 1%. All variables are defined in the Appendix. *, **, *** indicate statistical significance (two-sided) at the 0.1, 0.05, and 0.01 levels, respectively.

Panel A: Dynamic ActualAbove(-1)—ActualAbove(3) as the independent variables

VARIABLES	(1) M&A	(2) M&A	(3) M&A	(4) M&A	(5) M&A	(6) M&A
Actualabove(-1)	-0.000 [-0.03]	-0.004 [-0.23]	0.005 [0.25]	0.001 [0.04]	0.001 [0.05]	0.001 [0.05]
Actualabove(0)	-0.001 [-0.09]	-0.005 [-0.33]	0.003 [0.17]	-0.001 [-0.08]	-0.001 [-0.06]	-0.001 [-0.07]
Actualabove(1)	0.022 [1.37]	0.028 [1.55]	0.025 [1.47]	0.032* [1.71]	0.032 [1.59]	0.032 [1.59]
Actualabove(2)	0.017 [1.03]	0.023 [1.31]	0.014 [0.77]	0.020 [1.05]	0.020 [1.00]	0.020 [1.00]
Actualabove(3)	0.034* [1.90]	0.039** [2.00]	0.036* [1.93]	0.042** [2.08]	0.043* [1.92]	0.043* [1.91]
LogAssets	-0.006* [-1.70]	-0.003 [-0.74]	-0.005 [-1.07]	-0.002 [-0.28]	-0.004 [-0.06]	-0.599 [-0.67]
LogAssets*Post		-0.007 [-0.93]		-0.008 [-1.05]	-0.008 [-1.07]	-0.008 [-1.08]
LogAssets2					0.000 [0.04]	0.039 [0.68]
LogAssets3						-0.001 [-0.69]
RWC			-0.137** [-2.17]	-0.136** [-2.16]	-0.136** [-2.15]	-0.137** [-2.16]
RWC*Post			-0.007 [-0.08]	-0.006 [-0.06]	-0.006 [-0.06]	-0.007 [-0.07]
ROE			-0.063 [-1.53]	-0.064 [-1.55]	-0.064 [-1.55]	-0.063 [-1.54]
LogAge			-0.020*** [-3.28]	-0.020*** [-3.26]	-0.020*** [-3.27]	-0.020*** [-3.26]
Deposit/Liability			0.068* [1.68]	0.069* [1.70]	0.069* [1.68]	0.070* [1.69]
Loan/Deposit			-0.012 [-0.71]	-0.011 [-0.68]	-0.011 [-0.67]	-0.010 [-0.61]
ALLL			0.929** [2.03]	0.913** [1.99]	0.912** [1.98]	0.894* [1.92]
LogNumBanks			-0.016* [-1.80]	-0.016* [-1.81]	-0.016* [-1.80]	-0.016* [-1.80]
Observations	3,244	3,244	3,031	3,031	3,031	3,031
Fixed Effects	Year	Year	Year	Year	Year	Year
R-squared	0.003	0.003	0.013	0.013	0.013	0.013

Panel B: Dynamic FixedAbove(-1)—FixedAbove(3) as the independent variables

VARIABLES	(1) M&A	(2) M&A	(3) M&A	(4) M&A	(5) M&A	(6) M&A
Fixedabove(-1)	-0.001 [-0.04]	-0.005 [-0.30]	0.006 [0.29]	-0.000 [-0.01]	0.001 [0.04]	0.001 [0.03]
Fixedabove(0)	-0.001 [-0.04]	-0.005 [-0.34]	0.004 [0.28]	-0.001 [-0.09]	-0.000 [-0.03]	-0.001 [-0.04]
Fixedabove(1)	0.025 [1.51]	0.033* [1.75]	0.030* [1.71]	0.040** [2.06]	0.041** [1.97]	0.041* [1.96]
Fixedabove(2)	0.018 [1.02]	0.026 [1.39]	0.017 [0.93]	0.026 [1.35]	0.028 [1.33]	0.027 [1.30]
Fixedabove(3)	0.039** [1.99]	0.047** [2.12]	0.045** [2.16]	0.055** [2.37]	0.056** [2.27]	0.055** [2.24]
LogAssets	-0.007* [-1.81]	-0.003 [-0.70]	-0.006 [-1.35]	-0.001 [-0.26]	-0.014 [-0.21]	-0.393 [-0.44]
LogAssets*Post		-0.009 [-1.17]		-0.012 [-1.51]	-0.012 [-1.53]	-0.012 [-1.52]
LogAssets2					0.000 [0.19]	0.025 [0.44]
LogAssets3						-0.001 [-0.44]
RWC			-0.137** [-2.17]	-0.135** [-2.14]	-0.135** [-2.13]	-0.135** [-2.14]
RWC*Post			-0.011 [-0.12]	-0.011 [-0.12]	-0.011 [-0.12]	-0.011 [-0.13]
ROE			-0.062 [-1.51]	-0.063 [-1.53]	-0.062 [-1.51]	-0.062 [-1.51]
LogAge			-0.021*** [-3.40]	-0.021*** [-3.41]	-0.021*** [-3.44]	-0.021*** [-3.42]
Deposit/Liability			0.068* [1.68]	0.070* [1.72]	0.072* [1.74]	0.072* [1.74]
Loan/Deposit			-0.010 [-0.60]	-0.009 [-0.52]	-0.008 [-0.50]	-0.008 [-0.46]
ALLL			0.935** [2.04]	0.913** [1.99]	0.909** [1.98]	0.899* [1.94]
LogNumBanks			-0.016* [-1.74]	-0.016* [-1.76]	-0.016* [-1.74]	-0.016* [-1.74]
Observations	3,244	3,244	3,031	3,031	3,031	3,031
Fixed Effects	Year	Year	Year	Year	Year	Year
R-squared	0.004	0.004	0.014	0.014	0.014	0.015

Table 8: First-stage IV regressions—Evaluating whether firms meeting the asset-size threshold can predict them filing the FR Y-9C reports

This table presents whether firms meeting the asset-size threshold can predict them filing the FR Y-9C reports. Specifically, it presents results from estimating Equation [5]: $Y9C_{it} = \beta Above_{it} * Post + \mu Above_{it} + \delta LogAssets_{it} + \gamma Control_{it} + \alpha_i + \alpha_t + \varepsilon_{it}$ for firm i in year t . $Y9C_{it}$ indicates whether a BHC files the FR Y-9C reports in the post-period. $Above_{it}$ represents: either (1) $ActualAbove_{it}$, which indicates whether or not a bank holding company (BHC) has \$1 billion or more in total consolidated assets in year $t-1$ (results presented in Panel A), or (2) $FixedAbove_{it}$, which indicates whether or not a BHC has \$1 billion or more in total consolidated assets in 2014 (results presented in Panel B). $Post_t$ indicates whether or not the BHC files a regulator report after 2014. $LogAsset_{it-1}$ represents a BHC's total consolidated assets in year $t-1$. α_i is the firm fixed effect. α_t is the year fixed effect. Fixed effects are not tabulated for brevity. t -statistics are in brackets. Standard errors are clustered at the bank level. All continuous variables are winsorized at the top and bottom 1%. All variables are defined in the Appendix. *, **, *** indicate statistical significance (two-sided) at the 0.1, 0.05, and 0.01 levels, respectively.

Panel A: ActualAbove as the independent variable

VARIABLES	(1) Y9C	(2) Y9C	(3) Y9C	(4) Y9C	(5) Y9C	(6) Y9C
ActualAbove*Post	0.934*** [66.47]	0.916*** [52.61]	0.934*** [61.05]	0.912*** [47.10]	0.915*** [48.74]	0.911*** [45.97]
ActualAbove	-0.222*** [-4.74]	-0.211*** [-4.55]	-0.209*** [-4.43]	-0.195*** [-4.17]	-0.200*** [-4.26]	-0.200*** [-4.26]
LogAssets	0.071** [2.54]	0.067** [2.38]	0.059 [1.59]	0.051 [1.39]	0.449 [1.57]	-2.178 [-0.88]
LogAssets*Post		0.012*** [3.19]		0.016*** [3.26]	0.017*** [3.47]	0.018*** [3.38]
LogAssets2					-0.014 [-1.51]	0.165 [0.99]
LogAssets3						-0.004 [-1.10]
RWC			-0.013 [-0.12]	-0.047 [-0.48]	-0.099 [-1.04]	-0.136 [-1.40]
RWC*Post			-0.078 [-0.59]	-0.079 [-0.60]	-0.089 [-0.67]	-0.090 [-0.68]
ROE			-0.030 [-0.93]	-0.027 [-0.84]	-0.024 [-0.73]	-0.023 [-0.70]
LogAge			-0.054 [-1.21]	-0.054 [-1.22]	-0.054 [-1.22]	-0.057 [-1.26]
Deposit/Liability			0.389 [1.63]	0.387 [1.63]	0.381 [1.60]	0.371 [1.56]
Loan/Deposit			0.116 [1.18]	0.110 [1.12]	0.107 [1.09]	0.106 [1.08]
ALLL			0.376 [0.32]	0.356 [0.31]	0.340 [0.29]	0.317 [0.27]
LogNumBanks			-0.023 [-1.14]	-0.023 [-1.11]	-0.023 [-1.15]	-0.024 [-1.19]
Observations	3,212	3,212	3,003	3,003	3,003	3,003
Fixed Effects	Year, Bank	Year, Bank	Year, Bank	Year, Bank	Year, Bank	Year, Bank
R-squared	0.949	0.949	0.949	0.949	0.949	0.949

Panel B: FixedAbove as the independent variable

VARIABLES	(1) Y9C	(2) Y9C	(3) Y9C	(4) Y9C	(5) Y9C	(6) Y9C
FixedAbove*Post	0.869*** [52.82]	0.804*** [33.77]	0.864*** [49.69]	0.796*** [31.42]	0.806*** [33.06]	0.781*** [28.77]
LogAssets	0.265*** [5.25]	0.247*** [5.11]	0.355*** [6.56]	0.322*** [6.21]	1.663*** [3.30]	-18.226*** [-3.22]
LogAssets*Post		0.046*** [5.23]		0.052*** [4.93]	0.055*** [5.24]	0.061*** [5.10]
LogAssets2					-0.048*** [-2.81]	1.310*** [3.35]
LogAssets3						-0.031*** [-3.44]
RWC			0.275 [1.61]	0.150 [1.09]	-0.028 [-0.23]	-0.307* [-1.80]
RWC*Post			-0.121 [-0.79]	-0.125 [-0.82]	-0.156 [-1.02]	-0.165 [-1.07]
ROE			-0.018 [-0.47]	-0.007 [-0.20]	0.003 [0.07]	0.009 [0.24]
LogAge			0.029 [0.38]	0.023 [0.31]	0.023 [0.30]	0.003 [0.04]
Deposit/Liability			0.491** [1.97]	0.479* [1.94]	0.458* [1.85]	0.381 [1.53]
Loan/Deposit			0.177 [1.61]	0.150 [1.39]	0.139 [1.29]	0.135 [1.19]
ALLL			2.955** [2.20]	2.771** [2.08]	2.704** [2.04]	2.442* [1.86]
LogNumBanks			-0.049 [-1.37]	-0.047 [-1.25]	-0.049 [-1.34]	-0.057 [-1.51]
Observations	3,212	3,212	3,003	3,003	3,003	3,003
Fixed Effects	Year, Bank	Year, Bank	Year, Bank	Year, Bank	Year, Bank	Year, Bank
R-squared	0.926	0.927	0.926	0.927	0.927	0.928

Table 9: Second-stage IV regressions—Evaluating the effect of disclosure on firms’ likelihood of being M&A targets

This table presents the effect of disclosure on firms’ likelihood of being M&A targets. Specifically, it presents results from estimating Equation [6]: $M\&A = \beta Y9C_{it} + \delta LogAssets_{it} + \gamma Control_{it} + \alpha_i + \alpha_t + \varepsilon_{it}$ for firm i in year t . $Y9C_{it}$ is the fitted value obtained from estimating equation [2]: $Y9C_{it} = \beta Above_{it} * Post_t + \delta LogAssets_{it} + \gamma Control_{it} + \alpha_i + \alpha_t + \varepsilon_{it}$. $Above_{it}$ represents: either (1) $ActualAbove_{it}$, which indicates whether or not a bank holding company (BHC) has \$1 billion or more in total consolidated assets in year $t-1$ (results presented in Panel A), or (2) $FixedAbove_{it}$, which indicates whether or not a BHC has \$1 billion or more in total consolidated assets in 2014 (results presented in Panel B). $Post_t$ indicates whether or not the BHC files a regulator report after 2014. $LogAsset_{it-1}$ represents a BHC’s total consolidated assets in year $t-1$. α_i is the firm fixed effect. α_t is the year fixed effect. t -statistics are in brackets. Standard errors are clustered at the bank level. All continuous variables are winsorized at the top and bottom 1%. All variables are defined in the Appendix. *, **, *** indicate statistical significance (two-sided) at the 0.1, 0.05, and 0.01 levels, respectively.

Panel A: ActualAbove as the independent variable

VARIABLES	(1) M&A	(2) M&A	(3) M&A	(4) M&A	(5) M&A	(6) M&A
Y9C	0.023* [1.85]	0.045** [2.42]	0.028** [2.07]	0.056*** [2.81]	0.055*** [2.75]	0.049** [2.27]
LogAssets	-0.018 [-0.63]	-0.018 [-0.63]	-0.061 [-1.50]	-0.058 [-1.44]	-0.096 [-0.22]	-4.474 [-1.25]
LogAssets*Post		-0.015** [-1.98]		-0.019*** [-2.73]	-0.019*** [-2.92]	-0.018*** [-2.62]
LogAssets2					0.001 [0.09]	0.301 [1.26]
LogAssets3						-0.007 [-1.29]
RWC			-0.233 [-1.55]	-0.193 [-1.30]	-0.188 [-1.14]	-0.250 [-1.45]
RWC*Post			-0.135 [-1.51]	-0.130 [-1.46]	-0.129 [-1.47]	-0.132 [-1.50]
ROE			-0.018 [-0.31]	-0.022 [-0.38]	-0.022 [-0.38]	-0.021 [-0.36]
LogAge			0.162*** [2.62]	0.163*** [2.65]	0.163*** [2.64]	0.159*** [2.60]
Deposit/Liability			0.069 [0.38]	0.060 [0.33]	0.061 [0.33]	0.047 [0.25]
Loan/Deposit			-0.078 [-0.67]	-0.072 [-0.62]	-0.072 [-0.62]	-0.072 [-0.62]
ALLL			-0.542 [-0.31]	-0.561 [-0.32]	-0.558 [-0.32]	-0.598 [-0.34]
LogNumBanks			0.037*** [2.81]	0.037*** [2.71]	0.037*** [2.72]	0.035** [2.56]
Observations	3,212	3,212	3,003	3,003	3,003	3,003
Fixed Effects	Year, Bank	Year, Bank	Year, Bank	Year, Bank	Year, Bank	Year, Bank
R-squared	0.001	0.001	0.007	0.007	0.007	0.007

Panel B: FixedAbove as the independent variable

VARIABLES	(1) M&A	(2) M&A	(3) M&A	(4) M&A	(5) M&A	(6) M&A
Y9C	0.025*	0.054**	0.031**	0.068***	0.068***	0.063**
	[1.86]	[2.44]	[2.14]	[2.97]	[2.91]	[2.51]
LogAssets	-0.019	-0.020	-0.064	-0.061	-0.074	-3.407
	[-0.67]	[-0.70]	[-1.58]	[-1.53]	[-0.17]	[-0.94]
LogAssets*Post		-0.018**		-0.024***	-0.024***	-0.023***
		[-2.15]		[-3.08]	[-3.16]	[-2.91]
LogAssets2					0.000	0.228
					[0.03]	[0.94]
LogAssets3						-0.005
						[-0.97]
RWC			-0.236	-0.187	-0.185	-0.232
			[-1.57]	[-1.26]	[-1.14]	[-1.36]
RWC*Post			-0.134	-0.127	-0.127	-0.129
			[-1.49]	[-1.42]	[-1.44]	[-1.46]
ROE			-0.017	-0.021	-0.021	-0.020
			[-0.29]	[-0.37]	[-0.36]	[-0.35]
LogAge			0.163***	0.164***	0.164***	0.161***
			[2.63]	[2.68]	[2.68]	[2.65]
Deposit/Liability			0.068	0.055	0.055	0.045
			[0.37]	[0.30]	[0.30]	[0.24]
Loan/Deposit			-0.079	-0.073	-0.073	-0.073
			[-0.68]	[-0.63]	[-0.63]	[-0.63]
ALLL			-0.540	-0.563	-0.562	-0.593
			[-0.30]	[-0.32]	[-0.32]	[-0.34]
LogNumBanks			0.038***	0.038***	0.038***	0.037***
			[2.85]	[2.72]	[2.72]	[2.59]
Observations	3,212	3,212	3,003	3,003	3,003	3,003
Fixed Effects	Year, Bank	Year, Bank	Year, Bank	Year, Bank	Year, Bank	Year, Bank
R-squared	0.001	0.000	0.006	0.006	0.006	0.006

Table 10: The effect of regulation change on firms close to the asset-sized cutoff

This table presents the effect of disclosure regulation change on firms with between \$500 million and \$5 billion in total consolidated assets. Specifically, it presents results from estimating Equation [1]: $M\&A_{it} = \beta_1 Above_{it} * Post_t + \beta_2 Above_{it} + \delta LogAssets_{it-1} + \gamma Controls_{it-1} + \alpha_t + \alpha_i + \varepsilon_{it}$ for firm i in year t . $M\&A$ designates whether or not the firm is a target of M&A in year t . $Above_{it}$ represents: either (1) $ActualAbove_{it}$, which indicates whether or not a bank holding company (BHC) has \$1 billion or more in total consolidated assets in year $t-1$ (results presented in Panel A), or (2) $FixedAbove_{it}$, which indicates whether or not a BHC has \$1 billion or more in total consolidated assets in 2014 (results presented in Panel B). $Post_t$ indicates whether or not the BHC files a regulator report after 2014. $LogAsset_{it-1}$ represents a BHC's total consolidated assets in year $t-1$. α_i is the firm fixed effect. α_t is the year fixed effect. Fixed effects are not tabulated for brevity. t -statistics are in brackets. Standard errors are clustered at the bank level. All continuous variables are winsorized at the top and bottom 1%. All variables are defined in the Appendix. *, **, *** indicate statistical significance (two-sided) at the 0.1, 0.05, and 0.01 levels, respectively.

Panel A: ActualAbove as the independent variable

VARIABLES	(1) M&A	(2) M&A	(3) M&A	(4) M&A	(5) M&A	(6) M&A
ActualAbove*Post	0.028** [2.10]	0.049* [1.87]	0.033** [2.33]	0.058** [2.06]	0.056* [1.95]	0.051* [1.72]
ActualAbove	-0.010 [-0.37]	-0.025 [-0.79]	-0.018 [-0.65]	-0.035 [-1.08]	-0.032 [-1.00]	-0.036 [-1.08]
LogAssets	-0.011 [-0.31]	0.004 [0.10]	-0.057 [-1.20]	-0.038 [-0.76]	-0.911 [-1.31]	-9.149 [-0.57]
LogAssets*Post		-0.021 [-1.03]		-0.024 [-1.12]	-0.031 [-1.38]	-0.025 [-1.06]
LogAssets2					0.032 [1.26]	0.625 [0.54]
LogAssets3						-0.014 [-0.52]
RWC			-0.244 [-1.20]	-0.235 [-1.18]	-0.235 [-1.19]	-0.237 [-1.20]
RWC*Post			-0.134 [-1.44]	-0.135 [-1.46]	-0.128 [-1.40]	-0.125 [-1.35]
ROE			-0.027 [-0.47]	-0.028 [-0.50]	-0.030 [-0.52]	-0.029 [-0.50]
LogAge			0.194*** [3.29]	0.195*** [3.31]	0.190*** [3.28]	0.189*** [3.26]
Deposit/Liability			0.138 [0.71]	0.147 [0.76]	0.149 [0.77]	0.152 [0.78]
Loan/Deposit			-0.049 [-0.37]	-0.043 [-0.32]	-0.044 [-0.33]	-0.046 [-0.35]
ALLL			-0.923 [-0.52]	-0.955 [-0.54]	-0.986 [-0.55]	-0.971 [-0.55]
LogNumBanks			0.050*** [3.06]	0.048*** [2.97]	0.047*** [2.89]	0.046*** [2.80]
Observations	3,009	3,009	2,851	2,851	2,851	2,851
Fixed Effects	Year, Bank	Year, Bank	Year, Bank	Year, Bank	Year, Bank	Year, Bank
R-squared	0.290	0.290	0.290	0.290	0.291	0.291

Panel B: FixedAbove as the independent variable

VARIABLES	(1) M&A	(2) M&A	(3) M&A	(4) M&A	(5) M&A	(6) M&A
FixedAbove*Post	0.029** [2.18]	0.051** [2.06]	0.034** [2.48]	0.063** [2.37]	0.060** [2.25]	0.057** [2.13]
LogAssets	-0.007 [-0.22]	0.009 [0.27]	-0.052 [-1.23]	-0.028 [-0.59]	-0.848 [-1.22]	-10.191 [-0.75]
LogAssets*Post		-0.022 [-1.17]		-0.028 [-1.36]	-0.034 [-1.59]	-0.029 [-1.35]
LogAssets2					0.030 [1.19]	0.702 [0.72]
LogAssets3						-0.016 [-0.70]
RWC			-0.238 [-1.18]	-0.224 [-1.13]	-0.224 [-1.15]	-0.228 [-1.16]
RWC*Post			-0.135 [-1.45]	-0.137 [-1.48]	-0.131 [-1.42]	-0.126 [-1.36]
ROE			-0.026 [-0.45]	-0.027 [-0.48]	-0.029 [-0.50]	-0.028 [-0.49]
LogAge			0.196*** [3.32]	0.198*** [3.36]	0.194*** [3.33]	0.192*** [3.31]
Deposit/Liability			0.140 [0.73]	0.152 [0.79]	0.154 [0.79]	0.158 [0.81]
Loan/Deposit			-0.048 [-0.36]	-0.038 [-0.29]	-0.039 [-0.29]	-0.041 [-0.31]
ALLL			-0.843 [-0.48]	-0.829 [-0.47]	-0.861 [-0.49]	-0.871 [-0.49]
LogNumBanks			0.050*** [3.07]	0.047*** [2.95]	0.046*** [2.86]	0.045*** [2.82]
Observations	3,009	3,009	2,851	2,851	2,851	2,851
Fixed Effects	Year, Bank	Year, Bank	Year, Bank	Year, Bank	Year, Bank	Year, Bank
R-squared	0.290	0.290	0.290	0.291	0.291	0.291

Table 11: The effect of disclosure regulation change on changes in three-year ROA*Panel A: ActualAbove as the independent variable*

VARIABLES	(1) ROA	(2) ROA	(3) ROA	(4) ROA	(5) ROA	(6) ROA
ActualAbove*Post	0.002 [0.90]	0.007*** [3.17]	0.004** [2.39]	0.008* [2.02]	0.008* [1.93]	0.009** [2.05]
ActualAbove	0.001 [0.68]	-0.001 [-0.85]	-0.004*** [-3.24]	-0.005*** [-3.55]	-0.005** [-2.26]	-0.006** [-2.54]
LogAssets	-0.002* [-1.93]	-0.001 [-0.78]	0.001* [1.92]	0.002*** [3.02]	-0.004 [-0.17]	-0.521 [-1.14]
LogAssets*Post		-0.004*** [-3.78]		-0.003 [-1.26]	-0.003 [-1.14]	-0.005 [-1.43]
LogAssets2					0.000 [0.26]	0.037 [1.14]
LogAssets3						-0.001 [-1.14]
RWC			-0.000 [-0.01]	0.001 [0.10]	-0.000 [-0.01]	-0.001 [-0.08]
RWC*Post			0.003 [0.17]	0.000 [0.00]	0.002 [0.08]	0.003 [0.16]
ROE			0.001 [0.28]	0.002 [0.52]	0.002 [0.53]	0.003 [0.66]
LogAge			0.000 [0.44]	0.000 [0.44]	0.000 [0.34]	0.000 [0.32]
Deposit/Liability			-0.012 [-1.43]	-0.014 [-1.60]	-0.014 [-1.60]	-0.014 [-1.63]
Loan/Deposit			0.000 [0.08]	-0.000 [-0.13]	-0.000 [-0.12]	-0.001 [-0.27]
ALLL			0.055 [0.92]	0.055 [0.89]	0.057 [0.88]	0.067 [1.00]
LogNumBanks			0.006** [2.53]	0.007*** [2.77]	0.007*** [2.75]	0.007*** [2.90]
Observations	57	57	52	52	52	52
R-squared	0.654	0.708	0.732	0.741	0.741	0.746
Fixed Effects	Year	Year	Year	Year	Year	Year
Cluster	Bank	Bank	Bank	Bank	Bank	Bank
Adj. R-squared	0.604	0.660	0.621	0.623	0.612	0.608

Panel B: FixedAbove as the independent variable

VARIABLES	(1) ROA	(2) ROA	(3) ROA	(4) ROA	(5) ROA	(6) ROA
FixedAbove*Post	0.001 [0.70]	0.007*** [2.87]	0.004** [2.44]	0.007* [1.88]	0.007* [1.74]	0.008* [1.86]
FixedAbove	0.001 [0.61]	-0.001 [-0.85]	-0.004*** [-3.43]	-0.005*** [-3.52]	-0.005** [-2.28]	-0.006** [-2.51]
LogAssets	-0.002* [-1.85]	-0.001 [-0.78]	0.002** [2.22]	0.002*** [2.99]	-0.002 [-0.09]	-0.476 [-1.07]
LogAssets*Post		-0.004*** [-3.26]		-0.003 [-0.95]	-0.002 [-0.82]	-0.003 [-1.09]
LogAssets2					0.000 [0.18]	0.034 [1.08]
LogAssets3						-0.001 [-1.08]
RWC			0.000 [0.02]	0.002 [0.14]	0.001 [0.06]	-0.000 [-0.02]
RWC*Post			0.003 [0.18]	-0.001 [-0.07]	-0.000 [-0.01]	0.002 [0.10]
ROE			0.001 [0.26]	0.002 [0.45]	0.002 [0.45]	0.002 [0.55]
LogAge			0.000 [0.45]	0.000 [0.18]	0.000 [0.13]	0.000 [0.13]
Deposit/Liability			-0.012 [-1.41]	-0.014 [-1.52]	-0.014 [-1.50]	-0.014 [-1.52]
Loan/Deposit			0.000 [0.12]	-0.000 [-0.01]	-0.000 [-0.00]	-0.000 [-0.12]
ALLL			0.056 [0.92]	0.052 [0.83]	0.054 [0.82]	0.063 [0.94]
LogNumBanks			0.006** [2.56]	0.006** [2.72]	0.006** [2.70]	0.007*** [2.84]
Observations	57	57	52	52	52	52
R-squared	0.648	0.699	0.732	0.737	0.737	0.741
Fixed Effects	Year	Year	Year	Year	Year	Year
Cluster	Bank	Bank	Bank	Bank	Bank	Bank
Adj. R-squared	0.598	0.649	0.621	0.617	0.606	0.600

Table 12: Cross-sectional analyses between BHCs without subsidiaries and BHCs with subsidiaries

Panel A: ActualAbove as the independent variable

VARIABLES	(1) M&A	(2) M&A	(3) M&A	(4) M&A	(5) M&A	(6) M&A
ActualAbove*Post*Sub	0.040* [1.94]	0.043** [2.02]	0.026** [2.04]	0.053*** [2.80]	0.053*** [2.73]	0.047** [2.28]
ActualAbove*Post	-0.018 [-1.07]	0.002 [0.10]	-	-	-	-
ActualAbove*Sub	-0.052 [-1.02]	-0.057 [-1.14]	-0.008 [-0.30]	-0.026 [-0.91]	-0.026 [-0.91]	-0.026 [-0.90]
Post*Sub	0.018** [2.38]	0.019** [2.36]	-	-	-	-
ActualAbove	0.048 [0.98]	0.040 [0.81]	-	-	-	-
Sub	-0.036* [-1.92]	-0.035* [-1.89]	-	-	-	-
LogAssets	-0.015 [-0.49]	-0.009	-0.058 [-1.33]	-0.049 [-1.13]	-0.025 [-0.06]	-4.628 [-1.31]
LogAssets*Post		-0.015** [-2.02]		-0.020*** [-2.81]	-0.020*** [-2.96]	-0.018*** [-2.68]
LogAssets2					-0.001 [-0.05]	0.314 [1.33]
LogAssets3						-0.007 [-1.37]
RWC			-0.233 [-1.54]	-0.189 [-1.26]	-0.193 [-1.17]	-0.257 [-1.49]
RWC*Post			-0.137 [-1.54]	-0.135 [-1.52]	-0.135 [-1.55]	-0.138 [-1.58]
ROE			-0.019 [-0.32]	-0.023 [-0.40]	-0.022 [-0.39]	-0.021 [-0.36]
LogAge			0.161*** [2.60]	0.162*** [2.64]	0.162*** [2.64]	0.158*** [2.60]
Deposit/Liability			0.080 [0.44]	0.083 [0.46]	0.083 [0.45]	0.066 [0.36]
Loan/Deposit			-0.074 [-0.64]	-0.066 [-0.57]	-0.066 [-0.57]	-0.067 [-0.58]
ALLL			-0.525 [-0.30]	-0.500 [-0.28]	-0.501 [-0.28]	-0.542 [-0.31]
LogNumBanks			0.036*** [2.80]	0.036*** [2.68]	0.036*** [2.66]	0.034** [2.50]
Observations	3,212	3,212	3,003	3,003	3,003	3,003
R-squared	0.287	0.287	0.285	0.286	0.286	0.287
Fixed Effects	Year, Bank	Year, Bank	Year, Bank	Year, Bank	Year, Bank	Year, Bank
Cluster	Bank	Bank	Bank	Bank	Bank	Bank
Adj. R-squared	0.0995	0.100	0.0979	0.0988	0.0984	0.0984

Panel B: FixedAbove as the independent variable

VARIABLES	(1) M&A	(2) M&A	(3) M&A	(4) M&A	(5) M&A	(6) M&A
FixedAbove*Post*Sub	0.034** [2.03]	0.036** [2.18]	0.027** [2.14]	0.054*** [3.00]	0.055*** [2.93]	0.049** [2.52]
FixedAbove*Post	-0.011 [-0.98]	0.010 [0.71]	-	-	-	-
FixedAbove*Sub	-0.095 [-1.31]	-0.104 [-1.48]	-	-	-	-
Post*Sub	0.020*** [2.91]	0.021*** [2.94]	-	-	-	-
FixedAbove	-	-	-	-	-	-
Sub	-	-	-	-	-	-
LogAssets	-0.006 [-0.22]	0.001 [0.02]	-0.052 [-1.32]	-0.039 [-1.01]	0.040 [0.09]	-4.560 [-1.33]
LogAssets*Post		-0.016** [-2.18]		-0.021*** [-3.04]	-0.021*** [-3.17]	-0.019*** [-2.94]
LogAssets2					-0.003 [-0.18]	0.311 [1.36]
LogAssets3						-0.007 [-1.41]
RWC			-0.227 [-1.51]	-0.177 [-1.18]	-0.187 [-1.14]	-0.252 [-1.46]
RWC*Post			-0.138 [-1.54]	-0.136 [-1.53]	-0.138 [-1.57]	-0.140 [-1.59]
ROE			-0.017 [-0.30]	-0.021 [-0.38]	-0.021 [-0.36]	-0.020 [-0.34]
LogAge			0.164*** [2.64]	0.166*** [2.70]	0.166*** [2.70]	0.161*** [2.66]
Deposit/Liability			0.083 [0.46]	0.088 [0.49]	0.087 [0.47]	0.069 [0.37]
Loan/Deposit			-0.074 [-0.64]	-0.063 [-0.55]	-0.063 [-0.55]	-0.065 [-0.56]
ALLL			-0.447 [-0.25]	-0.374 [-0.21]	-0.378 [-0.21]	-0.438 [-0.25]
LogNumBanks			0.036*** [2.80]	0.035*** [2.67]	0.035*** [2.64]	0.033** [2.49]
Observations	3,212	3,212	3,003	3,003	3,003	3,003
R-squared	0.287	0.287	0.286	0.287	0.287	0.287
Fixed Effects	Year, Bank	Year, Bank	Year, Bank	Year, Bank	Year, Bank	Year, Bank
Cluster	Bank	Bank	Bank	Bank	Bank	Bank
Adj. R-squared	0.100	0.101	0.0985	0.0995	0.0992	0.0991