

The Role of Restructuring in Bank M&As: Evidence from Branch-level Data*

Lucas A. Mariani

Bernardo Ricca

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Abstract

We study how banks restructure their operations after M&As and the implications for bank outcomes and credit provision. We leverage rich data at the branch level, including labor force characteristics and financial information such as assets, liabilities, revenues, and costs. The consolidated conglomerates engage in substantial resource reallocation compared to their private counterparts. We classify branches as target or acquirer branches according to their pre-consolidation ownership and, using address information, we are able to follow their trajectories even post-consolidation. We show they are restructured on different margins. Labor is reallocated toward acquirer branches, which experience an increase in the quality of their loan officers. Restructuring increases profitability at both acquirer and target branches, even after controlling for market power gains. Improvements in the lending provision and deposit collection at acquirer branches and cost reduction at target branches underlie this increase in profitability. Our results show that the restructuring process is not only an essential value-creation mechanism of M&As but that it also reshapes the provision of financial services across the branch network of the new conglomerate.

*Mariani: Economic Research Southern Africa and University of Milano-Bicocca, lmariani@econrsa.org, lucas.mariani@unimib.it. Ricca: Insper, bernardoOGR@insper.edu.br. We are grateful to Yasser Boualam, Anusha Chari, Gustavo Cortes, Diogo Mendes (discussant), and seminar participants at the WEFIDEV webinar, LACEA-LAMES, Lubrafin, FGV-EAESP, Central Bank of Brazil, and the RIDGE Workshop on Financial Stability for helpful comments.

1 Introduction

Bank M&As and their consequences attract the attention of regulators and academics. Most of the literature in banking is devoted to the impact of M&As on market power and the resultant adverse effects on market outcomes such as interest rates and total lending. However, M&As might affect market outcomes through several other channels, which are difficult to disentangle. For instance, companies undergo a restructuring process post-consolidation by changing their management practices and organizational structure and by downsizing or reallocating their production factors. In turn, this restructuring process can have significant repercussions for credit and deposit markets. However, due to the lack of detailed branch-level information, there is scant evidence on how banks restructure their operations after M&As.

Our paper aims to fill this gap using matched employee-branch data and branch-level financial information. The data give us a detailed picture of how banks allocate physical, financial, and human resources across their branch network. Using pre-M&A ownership information, we classify branches as target or acquirer branches.¹ Moreover, in spite of establishment identifiers changing after a consolidation, we are able to follow the same branch before and after the M&A using address information. This feature of the data allows us to document heterogeneous effects on the acquirer and target branches and track the redistribution of resources across the conglomerate branch network. Our main contribution is to document the restructuring process along the branch network that ensues M&A events and provide evidence on how this process can create value for the new conglomerate and reshape the provision of financial services.

We show that consolidations in the banking industry lead to substantial resource reallocation. The restructuring engenders profitability gains at both target and acquirer branches beyond those that result from increases in market power. We employ a stacked difference-in-differences empirical strategy using as controls branches of similar private banks that eventually took part in a consolidation but that operated as separate entities during our sample period.² Our approach compares branches within the same municipality, which allows us to control for time-varying shocks at the local level, ruling out confounders such as changes in local demand and borrowers' creditworthiness.

¹There is only one merger in our sample. In this case, we classify as acquirer the bank that holds the majority of shares in the new organization.

²This is similar to the approach that selects control firms by matching on observables (e.g., [Lagaras, 2020](#)).

We first show that, despite following similar trajectories before the M&A, there is an increase of 33% lending at acquirer branches compared to control branches operating in the same market, whereas target branches decrease lending by 19%. Acquirer branches' lending increases gradually after the consolidation, peaking at around four years after the event and remaining at this level in the following years.

Next, we document significant labor reallocation across the branch network of the new conglomerates. The number of employees at acquirer branches increases while it decreases at target branches. The increase in employment at acquirer branches is due to internal transfers from target branches, not external hiring. Not only does the number of employees increase at acquirer branches, but the skill of the employees also increases, particularly of loan officers, suggesting that banks use M&As to access a scarce source of talent that is crucial to running the activity of credit provision ([Agarwal and Ben-David, 2018](#); [Hertzberg et al., 2010](#); [Ma et al., 2022](#)). The labor reallocation toward acquirer branches uncovers a new mechanism in the literature that analyzes the heterogeneous effects of consolidations on target and acquirer borrowers (e.g., [Degryse et al., 2011](#); [Di Patti and Gobbi, 2007](#); [Karceski et al., 2005](#)).

The labor and lending reallocations to acquirer branches are accompanied by increases in deposits. However, the increase in deposits following the consolidation does not match that in lending; in fact, the lending-to-deposits ratio increases at acquirer branches. Compared to other industries, banks can easily reallocate funds obtained from deposits and other funding instruments across their branches ([Campello, 2002](#); [Cremers et al., 2011](#); [Gilje et al., 2016](#)). These results suggest that the internal reallocation of funding plays a role after M&As.

We then investigate whether these results are associated with enhanced operating efficiency. Measuring productivity with data on revenues and costs is challenging because greater market power might prompt increases in mark-ups and decreases in input prices such as wages and deposit rates ([Syverson, 2011](#); [Atalay et al., 2014](#); [Drechsler et al., 2017](#); [Prager and Schmitt, 2021](#)). As a result, M&As might boost profitability without any improvement in physical productivity. Because we focus on the consolidation of banks with an extensive geographical presence, we can address this potential confounder by exploring the fact that increases in local market power are highly heterogeneous across markets. In some markets, the event leads to a significant increase in local market power, whereas in others the increase is not meaningful. Using pre-consolidation local market shares, we add gains in local market power as a control in our specifications. Moreover, on the one hand, restructuring is a lengthy pro-

cess: downsizing or reallocating the labor force requires negotiation with workers and unions; changes in management practices and in the organizational culture take time to implement. On the other hand, exercising increases in market power can happen shortly after the event. Therefore, an inspection of the dynamics of the effects also sheds light on the role of restructuring. Finally, local competitors that comprise our control group can react strategically and increase mark-ups in reaction to the M&A, which would dampen the effects that are explained by a larger market power but not those that are explained by the restructuring process.

We find that profits per employee increase at acquirer branches after the consolidation. We show that this increase arises from increased lending provision productivity, measured by lending per employee, which dominates increases in labor and other costs. Interestingly, we also find an increase in profits per employee at target branches, in spite of lending per employee remaining unchanged at those branches. We find that such increases in profitability are explained by cost-cutting, in that both labor and other costs contract after the consolidation. Productivity gains accrue slowly after the M&A, peaking at around four years after the event. The timing of the gains and the different mechanisms that underlie the increases in profitability at target and acquirer branches suggest that the restructuring process plays an important role in M&A value creation over and above increases in market power.

Finally, we provide evidence that the gains at acquirer branches are not offset by losses at target branches. We form a synthetic conglomerate of target and acquirer branches before M&As and proceed in an analogous way with banks in the control group that eventually merged but that during our sample period were independent firms. Both lending and lending per employee increase in conglomerates post-consolidation, while the number of employees decreases. We also test whether the effects in non-overlapping markets, in which there is no local gain in market power but potential restructuring gains, differ from those in overlapping markets, in which there is an increase in local market power and potential restructuring gains. We document that the effects on lending and lending per employee are present in non-overlapping markets, which provides evidence suggesting that efficiency gains play a role post-consolidation.³

³If customers value attributes such as the safety of the bank and the size of the branch network, market power can increase even in non-overlapping markets, in which there is no increase in *local* market power. However, as banks in our control group are similar in terms of size and geographical presence, we believe the consolidations in our sample do not lead to a significant competitive edge in terms of those characteristics.

Related Literature

Previous literature on bank M&As focuses primarily on the anti-competition effects of these events (e.g., [Sapienza, 2002](#); [Garmaise and Moskowitz, 2006](#); [Allen et al., 2014, 2016](#); [Joaquim et al., 2019](#)).⁴ Most studies that use M&As as a shock to concentration document a negative impact on prices, total credit, and real variables such as employment and firm survival.⁵ Negative effects can be particularly severe for borrowers who rely on soft information and a close relationship with loan officers.⁶ On the other hand, other studies argue that because of asymmetric information in lending markets, a certain degree of concentration might be beneficial (e.g., [Crawford et al., 2018](#); [Mahoney and Weyl, 2017](#); [Petersen and Rajan, 1995](#)). Bank M&As can also promote financial stability because of an increase in diversification (e.g., [Goetz et al., 2016](#)) or a better selection of borrowers (e.g., [Mayordomo et al., 2020](#)). Moreover, the arrival of new data and better information processing can improve the ability to screen borrowers ([Panetta et al., 2009](#)). Finally, consolidation can benefit consumers if banks practice uniform pricing ([Granja and Paixao, 2022](#)).

Although there is some evidence of improvements in efficiency caused by consolidations in the banking sector (e.g., [Maksimovic and Phillips, 2001](#); [Maksimovic et al., 2011, 2013](#); [Schoar, 2002](#)), studies are limited to bank-level analyses because branch-level information is usually not available (e.g., [Akkus et al., 2016](#); [Erel, 2011](#); [Focarelli and Panetta, 2003](#)). As a result, the literature is mostly silent about *how* banks restructure. Studies of M&As in other industries argue that efficiency gains can come from labor restructuring (e.g., [Dessaint et al., 2017](#); [Gehrke et al., 2021](#); [Lagaras, 2017, 2020](#); [Ma et al., 2022](#)), changes in corporate control and managerial practices ([Braguinsky et al., 2015](#); [Bloom and Van Reenen, 2010](#)), and improved resource allocation ([Devos et al., 2009](#); [Li, 2013](#); [Maksimovic et al., 2011](#)). In line with these papers, we show that M&A activity in the banking industry leads to efficiency gains through similar channels: labor reallocation and improved resource allocation. By uncovering these channels, our

⁴M&As can also be the result of managerial hubris, empire-building motives, or irrationality (e.g., [Gorton and Rosen, 1995](#); [Malmendier and Tate, 2008](#) and [Roll, 1986](#)). M&As also have ex-ante benefits, such as reducing managerial slack ([Bertrand and Mullainathan, 2003](#)) and fostering innovation ([Phillips and Zhdanov, 2013](#)).

⁵Studies that draw on different shocks to competition find similar results. See, among others, [Carlson et al. \(2019\)](#) and [Gissler et al. \(2020\)](#). The use of M&As to understand the impact of market concentration is not restricted to the banking industry. See, for instance, [Dafny et al. \(2012\)](#) in the case of the health insurance industry.

⁶See, among others, [Bonfim et al. \(2021\)](#), [Degryse et al. \(2011\)](#), [Di Patti and Gobbi \(2007\)](#), [Karceski et al. \(2005\)](#), [Martín-Oliver et al. \(2020\)](#), [Nguyen \(2019\)](#), and [Petersen and Rajan \(1994\)](#).

paper is also related to the literature that studies the motives of M&As (e.g., [Dessaint et al., 2017](#)).

The paper proceeds as follows. Section 2 presents some background on the banking sector in Brazil, the data we use, and the empirical strategy. Section 3 presents the results. Section 4 concludes.

2 Empirical and Institutional Setting

2.1 The Banking Sector in Brazil and M&A Activity

We consider M&As of large private banks that took place in the late 2000s. Prior to this wave of M&As, the banking sector in Brazil was already dominated by a few private and government-owned banks ([Cortes and Marcondes, 2018](#)). In December of 2006, the 5 largest commercial banks accounted for 60.5% of total assets held by commercial banks, 62.5% of total credit, and 66.2% of total deposits. The 10 largest commercial banks accounted for 82.3% of total assets held by commercial banks, 85.6% of total credit, and 85.2% of total deposits. Government-owned banks are relevant in terms of size. The two largest government-owned commercial banks accounted for 29.3% of total assets held by commercial banks. The 10 largest banks had a large branch network over the territory, with most of them having more than 1,000 branches and some of them having more than 3,000 branches.

Despite being concentrated, the banking system experienced another wave of consolidations starting in 2007. As highlighted by [Caiazza et al. \(2012\)](#), the years following the summer of 2007 and the subsequent financial crisis were marked by a substantial increase in M&A activity in the banking sector. Brazil was not different in that sense. In this period, four large private commercial banks, which accounted for 32.9% of the total credit granted by commercial banks, participated in consolidations. The share of the target banks alone in total lending was 14.4% before the crisis.

Table 1 shows characteristics of all the M&A episodes considered in our analyses.⁷ We focus on large private banks in operation in the country in 2006. In an attempt to mitigate concerns about selection into consolidation, the control group consists of private banks that participated in consolidation in 2016—after the sample period of our analysis. We do not include government-owned banks as controls because there is

⁷As we use confidential labor data, we chose not to disclose the name of the banks.

ample evidence that they operate differently from private banks in Brazil.⁸ The banks in our sample accounted for 51.4% of the total credit granted by commercial banks. Figure 1 shows the geographical location of the branches. The maps confirm that the banks in our sample have a large branch network and that the consolidation events we study were not specific to a given region.

2.2 Data

Our analysis relies on micro-data drawn from a variety of sources. The first is the employer-employee matched data from RAIS (Relação Anual de Informações), a dataset by the Brazilian Ministry of Labor and Employment. This dataset contains labor market data for the universe of firms and workers in the formal sector, which covers the totality of commercial banks' employees. Databases from the Brazilian Central Bank that provide information about commercial banks at the conglomerate and branch levels are our second source of data.

The Brazilian Central Bank data include information about the bank conglomerates and all the active bank branches. The data on conglomerates are available on a quarterly frequency and include the balance sheet, income statement, and regulatory (e.g., capital ratio) information.⁹ This dataset also contains a taxpayer identifier for each bank (8-digit taxpayer identifier). The branch-level data include information about the first and last year in which the branch was active, address, zip code, and bank branch taxpayer identifier (14-digit taxpayer identifier, out of which the first 8 digits are the taxpayer identifier of the bank). This dataset allows us to identify the branches that participated in the bank M&As between 2007 and 2008. By using the branch address, last and first year of operation, and current bank conglomerate, we can map the bank branches that changed their taxpayer number due to the M&As during the period of the analysis – the target branches. This characteristic of our data is essential since target branches change their identifier when a M&A event happens and their ownership changes.

We also use administrative records from the Brazilian Central Bank about each branch in operation. These data are available on a monthly frequency. We focus on the period between 2004-2015.¹⁰ This dataset is based on a mandatory form that all

⁸For instance, see [Coelho et al. \(2013\)](#), [Coleman and Feler \(2015\)](#), [Garber et al. \(2021\)](#), and [Sanches et al. \(2018\)](#).

⁹IF.data. Access: <https://www3.bcb.gov.br/ifdata/>.

¹⁰The analysis is restricted to this period due to the availability of branch address information.

bank branches in the country should report, and it includes branch location, the legal taxpayer number of the bank (8-digit), the branch taxpayer identifier (14-digit), and balance sheet information about the branch's assets (e.g., lending) and liabilities (e.g., demand, time, and savings deposits) at the end of each month. We can also observe total revenues and total costs.

The employer-employee data is available in two forms: employee-level and firm-establishment-level. From the employee-level data, we obtain information on the month each employee was hired or laid off, wages, employee characteristics, such as occupation and education, and employer characteristics, such as the establishment (branch) taxpayer 14-digit identifier. The occupation information allows us to map the loan officers at the branch and their number of years of experience. The information on the branch 14-digit taxpayer identifier enables us to merge this dataset with the ones provided by the Brazilian Central Bank. Finally, we can compute total labor costs using this data and thus decompose total costs obtained from the branch income statement into labor and other costs.

2.3 Descriptive Statistics

In Table 2, we present summary statistics at the bank (conglomerate) level before the M&A events, in December 2006. Banks are large in terms of assets and the number of branches. Even though target banks are smaller across some dimensions than control and acquirer banks (for instance, total assets and loans), they nonetheless have on average 1034 branches. In comparison to acquirer banks, target banks are also smaller in terms of total deposits (demand, savings, and time deposits), although they are able to obtain more time deposits. Finally, leverage ratios (Basel capital ratio and book debt-to-equity) and funding costs (measured as a percentage of the Central bank policy rate) are similar, as is the share of loan loss provision.

The sample includes 9,259 branches. In Table 3, we provide descriptive statistics of the branches. Columns (2) and (4) show, respectively, the mean value of the variables for target and acquirer branches, while column (1) shows the same statistics for branches of the control group. The branches in our sample did not differ statistically in terms of size (total assets), the number of employees, the share of employees with tertiary education, profits per employee, and market share in December 2006 when comparing consolidation (acquirer and target) with control branches. Yet we do observe some differences. For instance, in comparison to control branches, lending per

worker is higher at target branches (but not at acquirer branches), while deposits per worker and the quality of employees and loan officers are smaller in acquirer branches.

The fact that characteristics at the bank and conglomerate levels are not strikingly different is reassuring. First, as we show later, the fact that banks are similar in observables attenuates the threat posed by the endogeneity of our treatment. Of particular relevance is the fact that profitability measures are not different: for instance, acquirer branches were not more profitable (statistically) than control banks before the shock. Second, it is unlikely that banks and branches that have similar characteristics before the reform reacted differently to the crisis aside from the effects of consolidations. However, to further guarantee that our results are not driven by differences in observables, we will add controls for characteristics that might be correlated with post-treatment performance in our empirical strategy.

2.4 Empirical Strategy

Our empirical strategy exploits branch-level information and the timing of the M&A events to establish a link between consolidation and branch outcomes. We also exploit variation in branches' ownership before the consolidation to investigate heterogeneous effects on target and acquirer branches.

Recent articles have shown that researchers need to be cautious about interpreting the results of two-way fixed effects models (Goodman-Bacon, 2018; Callaway and Sant'Anna, 2018; Chaisemartin and D'Haultfœuille, 2020). Goodman-Bacon (2018) shows that the treatment effects using this specification are a combination of the weighted average of the unit-time treatment effects. These treatment effect coefficients in the context of two-way fixed effects can be potentially weighted by negative weights (Chaisemartin and D'Haultfœuille, 2020). Therefore, the linear regression coefficient may, for instance, be negative while all the individual treatment effects are positive.

We stack the M&A events-specific data to calculate an average effect across all the events and use suitable control units to overcome the problems highlighted above (Gormley and Matsa, 2011; Cengiz et al., 2019; Baker et al., 2022).¹¹ We construct cohorts of treated branches for each M&A event and stack the cohorts to estimate the average treatment effect. For each cohort, the control group consists only of private bank branches that did not participate in a bank M&A during the time window of our

¹¹This specification uses stricter criteria for the choice of the control groups. By aligning events by event-time, we prevent the negative weighting of some events that may occur with a staggered design.

estimation but that participated in these events in the future. This choice allows us clearly estimate the treatment effects without the problems of not-yet treated units (Callaway and Sant’Anna, 2018; Chaisemartin and D’Haultfœuille, 2020). We use an estimation window of 10 years around each M&A event.¹² More formally, we estimate the following model:

$$y_{g,i,t} = \delta_1 Post_{b,t} \times Target_b + \delta_2 Post_{b,t} \times Acquirer_b + \alpha_{g,i} + \alpha_{g,m,t} + \beta_{g,t} X_{g,i} + \beta_{m,i,t} X_{m,i} \times Post_{b,t} + \epsilon_{g,t} \quad (1)$$

in which i represents the bank branch, b the bank, g the event cohort, and m the municipality. The coefficient δ_1 represents the M&A effect on the target branches, and δ_2 represents the M&A effect on the acquirer branches. The coefficients $\alpha_{i,g}$ absorb any fixed unobserved branch characteristic, while the municipality, cohort by time fixed effects, $\alpha_{g,m,t}$, absorb the common time-varying changes at the local level, such as demand or creditworthiness shocks. Furthermore, we control for heterogeneous market power gains due to the consolidation, measured by the incremental market share caused by the event using pre-M&A levels. Controlling for these gains is essential in our setting since it enables us to isolate the effects of resource restructuring from direct impacts led by changes in local market concentration. Because the banks we study are large and diversified retail banks, it is reasonable to assume they operate in the same market; this would not be the case if banks specialize in particular types of clients (e.g., Paravisini et al., 2015), which would make our measure of market power gains less meaningful. We also control for other possible confounding effects that might be correlated with post-consolidation performance by using branch pre-M&A characteristics interacted with cohort and time dummies.¹³ This baseline specification allows us to check the heterogeneous effects of M&As at the branch level and to analyze possible reallocations of bank resources across the branch network of the new conglomerate.

Our “within market” approach is convenient because the large M&As we study coincide with the onset of the 2007-2008 financial crisis. As a result, in absence of the M&A events, different markets could have had distinct performances. For instance,

¹²Three years before and six years after the event. Using the same stacked approach, we also check the parallel trends assumption and the dynamic treatment effects after the M&A events.

¹³These characteristics include bins of the branch size (measured by total assets) and the number of employees.

firms in markets with more branches per population could be more levered or exposed to disruptions in international markets through trade relationships. Our municipality-time fixed effects approach deals with those possibilities.

Our empirical strategy has two main drawbacks. The first, which is common to all M&A studies, is that banks that participate in consolidations are not randomly selected. This can cloud the magnitude of our coefficients because, in relation to control branches, target and acquirer branches might experience an increase (or decrease) in productivity even in absence of the M&A, a possibility that a parallel trends test would not detect. We seek to minimize this issue in several ways. First, our control branches belong to banks that participate in a large M&A after our sample period. Second, we add baseline branch characteristics interacted with time dummies to alleviate concerns that heterogeneity across banks drives our results. Finally, certain features of the M&As we study further mitigate these concerns. The M&As in our sample occurred right after the Lehman collapse. As a result, despite a lengthy negotiation period, their timing was relatively exogenous and the absence of pre-trends is particularly reassuring. Moreover, a key driver of those M&As was the need to strengthen the banks in a period of turmoil and liquidity drought. The second drawback is that our “within market” approach precludes the studies of aggregate effects. As a result, unlike papers that perform “across-market” comparisons (e.g., [Joaquim et al., 2019](#)), we cannot claim that efficiency gains are large enough to compensate for the increase in market concentration.

3 Results

In this section, we provide the M&A results on branch outputs. We first show the effects of consolidations on bank lending supply. We then investigate the possible gains from restructuring after the M&As through the reallocation of funding and labor along the branch network. We conclude by analyzing the effects of these gains from restructuring on productivity and profitability, highlighting the mechanisms of such results.

3.1 Bank M&As and Credit Supply

We start by analyzing the effects of the consolidations on lending supply and branch operation among target and acquirer branches. In Table 5, we present the heterogeneous change in lending supply across branches of the acquirer and target banks after

the consolidation events. In our preferred specification, our results suggest a large decrease in lending provision at target branches (19%) in comparison to control branches in the same municipality. On the other hand, lending in acquirer branches increases by 33.4%. Moreover, we show the importance of controlling for the local credit market competition gains from the new conglomerate. However, all the results are qualitatively similar if we consider only control for common time-varying local credit market changes. Figure 2 shows the dynamics of these effects. Lending grows gradually after the event in acquirer branches, peaking at around four years after the M&A and remaining at this level thereafter, while lending declines gradually at target branches, leveling off at around year 4 after consolidation and remaining at this level thereafter.

In Table 4, we show that branch closings increase after these episodes at target bank branches 4.4%), while acquirer branches close less in comparison to the control group in a similar magnitude. These results provide further evidence that branch closings do not seem to be a very important source of reduction in lending supply in our setting. Figure 2 shows that closures of target branches begin in the year after the M&A and remain at a stable level until the end of our time window, suggesting that banks spread this particular type of restructuring over time. The negative effect of M&As on the closure of acquirer branches peaks one year after the M&A and remains at this level thereafter.

These results point out that effects are very different for target and acquirer branches, which is in line with other papers that analyze the effects of consolidations on clients of targets and acquirers (Sapienza, 2002; Di Patti and Gobbi, 2007; Degryse et al., 2011). Our results also highlight that the aggregate effects of the consolidations can vastly differ depending on the market’s composition before the consolidation. Markets with a higher share of acquirer branches should have much better access to credit after the consolidations than markets with a higher share of target branches. We build on our analysis in the following two sections by highlighting the role of funding and labor reallocations along the branch network on these divergent effects among target and acquirer branches after the M&A.

3.2 Labor Restructuring

In this section, we begin by analyzing the reallocation of labor across the branch network after the M&As. We rely on labor administrative information to show how banks use their branch networks to reallocate employment from the target banks’ branches

to the branches owned by the acquirer bank before the consolidation. To do this, we concentrate on the branches that were always open between 2004 and 2015.

In Tables 7, we look at the growth in the branches' number of employees, total external hiring, and the total number of employees transferred to the branch during the period. The results suggest that the target branches decrease the number of employees by 21% in comparison to control branches, while acquirer branches experience a small increase in their labor force. In the target branches, two combined factors seem to explain the large change in the number of employees: the lower number of new net hirings and the increased number of workers transferred from other branches. The increase in the number of employees in acquirer branches comes solely from a large increase in the net number of transfers from other branches (19.7%) along the conglomerate branch network.

We then analyze if this labor reallocation from the target branches to the acquirer branches impacts employees' ability.¹⁴ As we highlighted in Section 2.3, the branches of the acquirer and target branches were very similar, aside from the fact that target branches had loan officers with much higher ability. As previous research has shown, this type of bank employee is crucial to running the activity of credit provision (Hertzberg et al., 2010; Agarwal and Ben-David, 2018). Therefore, we proceed by checking if the ability of the branches' employees and specifically the loan officer changes among target and acquirer branches after the consolidation. The results in Table 8 show that while there is no significant change in the ability of other employees in the branch, the ability of loan officers increases substantially (7.8%) in acquirer branches. Together with the previous results that show a large increase in internal transfers in acquirer branches, our results suggest that acquirer banks used consolidation as a way to access a pool of highly skilled loan officers.

Our results in this section uncover a new channel in which there could be winners and losers after bank consolidations, especially for opaque firms (Di Patti and Gobbi, 2007). What we do next is to analyze if the new conglomerate also uses the internal capital markets to reallocate resources and to analyze the effects of labor reallocations on deposit collection and funding allocation.

¹⁴Our measure of ability is based on Abowd et al. (1999). See Appendix A for a description of the construction of the skill variables.

3.3 Consolidation and Funding

In Table 6, we look at the effects of consolidation deposits and the allocation of funding along the internal capital markets. We show that target branches' deposits do not significantly change after the consolidations, while acquirer branches experience an increase in deposits of about 15%. This result is in line with our previous result on the labor reallocation channel and with previous research that shows that in the deposits market, efficiency gains lead to more favorable conditions for consumers (Focarelli and Panetta, 2003).

However, the increase in deposits in acquirer branches is smaller in magnitude than the increase in lending. In fact, the ratio between lending and deposits in the acquirer branches increases by 11.7%, suggesting that acquirer branches lend less to the internal capital market after the consolidations. We test this conjecture directly by studying the impact on the amount that each branch lends to the conglomerate's other members. Columns (4) and (5) of Table 6 show that acquirer branches decrease the amount of capital that they lend to the conglomerate's internal capital markets as a share of the deposits they collect. Therefore, our results point out that funding reallocation played a role in acquirer branches because the increase in lending supply also required increases in funding at these branches. However, these funding reallocations cannot fully explain the dynamics of lending supply among banks that participated in the consolidations since the lending-to-deposits ratio also increases.

3.4 M&A Value Creation: the Role of Reallocation

This section documents consolidation effects on productivity and profitability as well as the mechanisms of these improvements, such as cost-cutting or increased revenues. Table 9 documents the effects of M&As on productivity measures. We show that, despite an increase in the total number of employees, lending per employee increases in acquirer branches (22.6%) in comparison to control branches. This result is in line with our results regarding the reallocation of highly skilled loan officers to acquirers. We do not observe a statistically significant effect on either acquirer or target branches' deposits per employee. Finally, looking at the effects on productivity measured by the branch value-added over the number of employees, we observe that both acquirer and target branches exhibit large and significant increases in profit per worker after the consolidation. To guarantee that these results are not driven by higher mark-ups in lending markets and lower costs in funding costs, we explicitly control for the local

gain in market power.

In Table 10, we analyze the sources of the increases in the value-added by explicitly analyzing branches' costs and revenues. On the one hand, we show that increases in productivity in acquirer branches are driven by large increases in revenues (24.1%). Despite an increase in other costs (46.9%), the gain in revenues is such that the net effect on profits is positive. On the other hand, revenues remain stable at target branches, but profits increase because of cost-cutting since both labor (-29.7%) and other cost decreases (-50.8%) reduce sharply. Our results in this section add to the literature on M&A value creation that draws on plant-level data [Blonigen and Pierce \(2016\)](#). Although the net effects of consolidations in the bank sector can be heterogeneous among target and acquirer branches (and regions/clients exposed to these banks), consolidations in our setting generated significant productivity increases induced by resource reallocation.

3.5 Local Level Lending Productivity

In this section, we evaluate the effects of the M&As on lending productivity by aggregating the data at the conglomerate-city level. We do so by aggregating branch-level information, considering both the acquirer and the target banks at the city level. As before, we form the control group by using banks that participated in a M&A after our analysis period and considering them as a "conglomerate". As in our branch-level specifications, we use a similar stacked difference-in-differences specification.

Our results in Table 11 provide some evidence that the new conglomerates increase their lending productivity after consolidations when compared to other conglomerates that were formed just after our period of analysis. We show that the consolidated banks disproportionately increase their lending supply and reduce employment, generating an increase in their lending per worker after the consolidation. Moreover, our results also show that these effects are above and beyond market power considerations. Without controlling for such market power gains, our results in Column (7) indicate an increase in lending productivity of 14.8%. Importantly, considering such market power considerations, the effects are even more prominent, with a point estimate of 25.9%. The results of this section provide suggestive evidence of sizable productivity gains in the banking sector after consolidations. Such effects are often ignored when comparing the non-overlapping and overlapping markets, as in the large body of literature that analyzes the impact of lower competition due to consolidations ([Garmaise](#)

and Moskowitz, 2006; Joaquim et al., 2019).

4 Robustness Checks

4.1 Alternative control group

One possible identification concern is that the target banks in our control group might be facing different growth paths than the banks that form our treatment group. In Table 12, we replicate our main results using only the banks that acted as acquirers in M&A deals after the period of time of our analysis. The results presented in this table are quantitatively in line with our baseline results, which are obtained by including in the control group both acquirer and target firms that take part in M&A operations that occur after the end of our estimation window.

5 Conclusion

This paper sheds light on the role that the restructuring process plays in post-consolidation value creation and financial provision. We leverage rich branch-level data on employees and balance sheet information to show that banks reallocate funding and labor across their branch network, especially highly skilled loan officers. We also provide evidence that these reallocations increase productivity and that the restructuring is heterogeneous at acquirer and target branches. While the productivity of acquirer branches increases as a result of higher levels of lending productivity, that of target branches increases due to cost-cutting.

Our results contribute to the buoyant literature that studies the ex-post effects of M&As on productivity, consumer welfare, and financial stability, and the ex-ante effects on innovation and managerial incentives. We describe a restructuring process that is likely an essential contributor to the increase in productivity we document. As the banks in our sample have an extensive branch network, there is a sizeable cross-sectional variation in increases in market share due to the consolidation. This fact allows us to control directly for increases in local market power and rule out the possibility that this increase in productivity is due to higher mark-ups or declines in funding costs. Our results also inform the public and policy debate about relevant efficiency gains that consolidations in the financial industry can generate.

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6 Tables

Table 1: M&A Episodes 2007-2016

Target bank	Acquirer bank	Treatment status	Market share - 2006	Year M&A
Bank 1	Bank 2	Treated	12.8%	2007
Bank 3	Bank 4	Treated	17.6%	2008
Bank 5	Bank 6	Control	15.7%	2016

Notes: The M&A date is the one when a bank joined a newly formed conglomerate in the Central Bank dataset on conglomerates. The bank conglomerate that changed its tax identifier is considered the target bank, while the one that kept its tax identifier is considered the acquirer. The national share of lending is the sum of the lending share of the target and acquirer banks branches in December 2006.

Table 2: Conglomerate summary statistics in 2006

	Target	Acquirer	Control
Net income	1.7	4.1	3.0
ROE (%)	17.8	25.5	24.2
Total assets	108.5	153.6	135.8
Liabilities	98.2	135.5	121.3
Book equity	10.3	18.1	14.4
Loans	47.3	60.4	60.6
Funding cost (% of Selic)	77.5	80.3	79.0
Capital ratio (Basel, %)	14.9	16.8	16.5
Debt-to-equity	9.5	9.0	10.4
Branches	1034	1843	1988
Personnel	2.1	2.9	3.4
Administrative	3.5	4.5	4.0
Loan provision (share of loans, %)	5.5	6.4	6.5
Deposits	45.8	47.1	60.8

Notes: Descriptive statistics as of 30/12/2006. Monetary values are in billions BRL.

Table 3: Branches summary statistics in 2006

	Control (Mean)	Target (Mean)	(p-val.)	Acquirer (mean)	(p-val.)
Branch assets (log)	17.34	17.52	0.59	16.88	0.32
Branch employees	19.03	17.49	0.40	17.00	0.27
Branch market share	0.33	0.25	0.19	0.39	0.16
Tertiary education	0.53	0.50	0.87	0.67	0.48
L. officers _{AKM}	0.04	0.03	0.89	-0.09	0.03
Employees _{AKM}	-0.21	-0.28	0.08	-0.29	0.07
log(Profit per worker)	10.85	11.71	0.55	11.77	0.53
log(Lending per worker)	13.27	14.38	0.02	13.85	0.17
Observations	3,941		1,759		3,436

Table 4: M&As and Branch Closings

	Branch Closing		
	(1)	(2)	(3)
Post M&A \times Target	0.046*** (0.016)	0.048*** (0.015)	0.044** (0.019)
Post M&A \times Acquirer	-0.020** (0.009)	-0.035*** (0.009)	-0.040*** (0.013)
Observations	108787	108787	108787
R Squared	0.569	0.581	0.581
Branch \times Date M&A FE	✓	✓	✓
City \times Time \times Date M&A FE	✓	✓	✓
Branch Size \times Time \times Date M&A FE		✓	✓
Market Power Controls \times Post			✓

Notes i) Standard errors clustered at branch-M&A and bank-time-M&A level ii) All dependent variables are the Inverse Hypersine Transformation of the original variables iii) Market power controls are an indicator variable if the local market contained both target and acquirer branches and the new conglomerate local market share before the M&A. iv) * $p < 0.10$, * $p < 0.05$, ** $p < 0.01$.

Table 5: M&As effects on Lending Supply

	Lending		
	(1)	(2)	(3)
Post M&A \times Target	-0.056 (0.055)	-0.051 (0.052)	-0.190** (0.089)
Post M&A \times Acquirer	0.475*** (0.058)	0.467*** (0.048)	0.334*** (0.068)
Observations	84264	84264	84264
R Squared	0.896	0.900	0.900
Branch X Date M&A FE	✓	✓	✓
City \times Time X Date M&A FE	✓	✓	✓
Branch Size X Time X Date M&A FE		✓	✓
Market Power Controls X Post			✓

Notes i) Standard errors clustered at branch-M&A and bank-time-M&A level ii) All dependent variables are the Inverse Hypersine Transformation of the original variables iii) Branch Size variables include the number of employees, total assets, and market share quartiles before the M&A. iii) All dependent variables are the Inverse Hypersine Transformation of the original variables iii) Market power controls are an indicator variable if the local market contained both target and acquirer branches and the new conglomerate local market share before the M&A. iv) * $p < 0.10$, * $p < 0.05$, ** $p < 0.01$.

Table 6: M&As effects on deposits and internal transfers

	Deposits		Lending to Deposits		$\frac{ICMAssets}{Deposits}$	
	(1)	(2)	(3)	(4)	(5)	(6)
Post M&A \times Target	-0.029 (0.097)	-0.211* (0.115)	-0.112* (0.059)	-0.034 (0.063)	-0.005 (0.022)	0.023 (0.029)
Post M&A \times Acquirer	0.330*** (0.050)	0.154** (0.058)	0.041* (0.021)	0.117** (0.048)	-0.080*** (0.016)	-0.053** (0.026)
Observations	84264	84264	84260	84260	84260	84260
R Squared	0.929	0.930	0.843	0.843	0.819	0.819
Branch X Date M&A FE	✓	✓	✓	✓	✓	✓
City x Time X Date M&A FE	✓	✓	✓	✓	✓	✓
Branch Size X Time X Date M&A FE	✓	✓	✓	✓	✓	✓
Market Power Controls X Post		✓		✓		✓

Notes i) Standard errors clustered at branch-M&A and bank-time-M&A level ii) All dependent variables are the Inverse Hypersine Transformation of the original variables iii) Branch Size variables include the number of employees, total assets, and market share quartiles before the M&A. iii) All dependent variables are the Inverse Hypersine Transformation of the original variables iii) Market power controls are an indicator variable if the local market contained both target and acquirer branches and the new conglomerate local market share before the M&A. iv) * p<0.10, * p<0.05, ** p<0.01.

Table 7: M&As and Labor Reallocation

	Employees		Net Int. Transfers		Net Hirings	
	(1)	(2)	(3)	(4)	(5)	(6)
Post M&A × Target	-0.149*** (0.039)	-0.210*** (0.055)	-0.099 (0.086)	-0.158 (0.112)	-0.322** (0.134)	-0.098 (0.158)
Post M&A × Acquirer	0.124*** (0.026)	0.070* (0.038)	0.241*** (0.076)	0.197** (0.087)	-0.136 (0.096)	0.082 (0.125)
Observations	84264	84264	83971	83971	83971	83971
R Squared	0.933	0.933	0.235	0.235	0.460	0.461
Branch X Date M&A FE	✓	✓	✓	✓	✓	✓
City x Time X Date M&A FE	✓	✓	✓	✓	✓	✓
Branch Size X Time X Date M&A FE	✓	✓	✓	✓	✓	✓
Market Power Controls X Post		✓		✓		✓

Notes i) Standard errors clustered at branch-M&A and bank-time-M&A level ii) All dependent variables are the Inverse Hypersine Transformation of the original variables iii) Branch Size variables include the number of employees, total assets, and market share quartiles before the M&A. iii) All dependent variables are the Inverse Hypersine Transformation of the original variables iii) Market power controls are an indicator variable if the local market contained both target and acquirer branches and the new conglomerate local market share before the M&A. iv) * p<0.10, * p<0.05, ** p<0.01.

Table 8: M&As and Labor Ability

	Employees Ability		Loan Officer Ability		Other Employees Ability	
	(1)	(2)	(3)	(4)	(5)	(6)
Post M&A × Target	0.010 (0.007)	-0.022* (0.013)	-0.027 (0.024)	-0.024 (0.030)	-0.006 (0.009)	-0.008 (0.016)
Post M&A × Acquirer	0.046*** (0.009)	0.014 (0.014)	0.077*** (0.018)	0.078*** (0.024)	-0.001 (0.011)	-0.006 (0.020)
Observations	84264	84264	84264	84264	83646	83646
R Squared	0.815	0.815	0.760	0.760	0.769	0.769
Branch X Date M&A FE	✓	✓	✓	✓	✓	✓
City x Time X Date M&A FE	✓	✓	✓	✓	✓	✓
Branch Size X Time X Date M&A FE	✓	✓	✓	✓	✓	✓
Market Power Controls X Post		✓		✓		✓

Notes i) Standard errors clustered at branch-M&A and bank-time-M&A level ii) All dependent variables are the Inverse Hypersine Transformation of the original variables iii) Branch Size variables include the number of employees, total assets, and market share quartiles before the M&A. iii) All dependent variables are the Inverse Hypersine Transformation of the original variables iii) Market power controls are an indicator variable if the local market contained both target and acquirer branches and the new conglomerate local market share before the M&A. iv) * p<0.10, * p<0.05, ** p<0.01.

Table 9: M&As and Branch Productivity

	<i>Lending</i> <i>Employees</i>		<i>Deposits</i> <i>Employees</i>		<i>Profits</i> <i>Employees</i>	
	(1)	(2)	(3)	(4)	(5)	(6)
Post M&A × Target	0.099** (0.043)	0.020 (0.070)	0.121 (0.093)	-0.002 (0.109)	1.136** (0.488)	1.414** (0.591)
Post M&A × Acquirer	0.342*** (0.049)	0.263*** (0.070)	0.206*** (0.050)	0.082 (0.078)	0.612** (0.306)	0.912** (0.405)
Observations	84264	84264	84264	84264	84263	84263
R Squared	0.881	0.881	0.846	0.846	0.634	0.634
Branch X Date M&A FE	✓	✓	✓	✓	✓	✓
City x Time X Date M&A FE	✓	✓	✓	✓	✓	✓
Branch Size X Time X Date M&A FE	✓	✓	✓	✓	✓	✓
Market Power Controls X Post		✓		✓		✓

Notes i) Standard errors clustered at branch-M&A and bank-time-M&A level ii) All dependent variables are the Inverse Hypersine Transformation of the original variables iii) Branch Size variables include the number of employees, total assets, and market share quartiles before the M&A. iii) All dependent variables are the Inverse Hypersine Transformation of the original variables iii) Market power controls are an indicator variable if the local market contained both target and acquirer branches and the new conglomerate local market share before the M&A. iv) * p<0.10, * p<0.05, ** p<0.01.

Table 10: M&As and Branch Profitability

	Reveneues		Wage Costs		Other Costs	
	(1)	(2)	(3)	(4)	(5)	(6)
Post M&A × Target	-0.008 (0.043)	-0.102 (0.076)	-0.197*** (0.041)	-0.297*** (0.059)	-0.272* (0.151)	-0.508*** (0.173)
Post M&A × Acquirer	0.325*** (0.039)	0.241*** (0.053)	0.124*** (0.024)	0.034 (0.036)	0.688*** (0.086)	0.469*** (0.108)
Observations	84264	84264	84264	84264	84264	84264
R Squared	0.881	0.881	0.919	0.919	0.762	0.762
Branch X Date M&A FE	✓	✓	✓	✓	✓	✓
City x Time X Date M&A FE	✓	✓	✓	✓	✓	✓
Branch Size X Time X Date M&A FE	✓	✓	✓	✓	✓	✓
Market Power Controls X Post		✓		✓		✓

Notes i) Standard errors clustered at branch-M&A and bank-time-M&A level ii) All dependent variables are the Inverse Hypersine Transformation of the original variables iii) Branch Size variables include the number of employees, total assets, and market share quartiles before the M&A. iii) All dependent variables are the Inverse Hypersine Transformation of the original variables iii) Market power controls are an indicator variable if the local market contained both target and acquirer branches and the new conglomerate local market share before the M&A. iv) * p<0.10, * p<0.05, ** p<0.01.

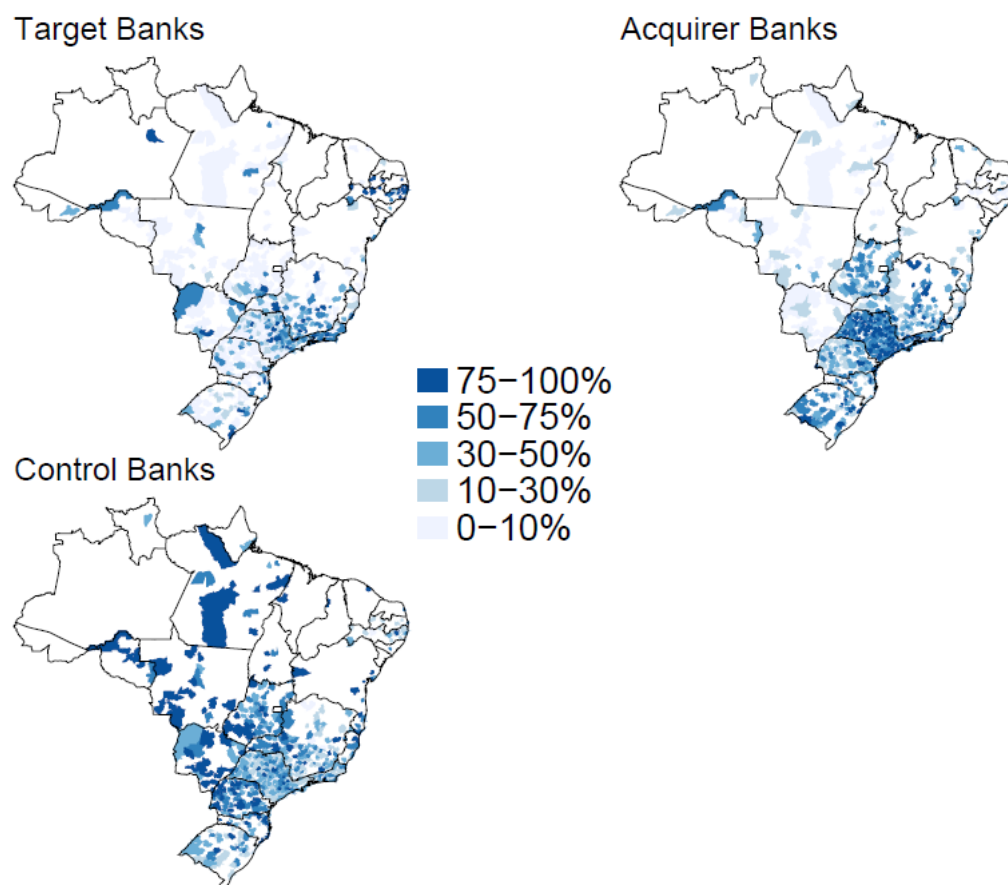
Table 11: Conglomerate-City M&A Effects

	Lending			Employees			<i>Lending Employees</i>		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Post M&A	0.098*** (0.018)	0.099*** (0.025)	0.163*** (0.039)	-0.057*** (0.010)	-0.070*** (0.013)	-0.103*** (0.020)	0.148*** (0.015)	0.153*** (0.018)	0.256*** (0.028)
Post M&A × Overlapping Market		-0.034 (0.038)	-0.051 (0.047)		0.047** (0.021)	0.121*** (0.023)		-0.053** (0.025)	-0.163*** (0.037)
Observations	48549	48405	25070	48549	48405	25070	48079	47936	24856
R Squared	0.947	0.949	0.974	0.951	0.951	0.991	0.857	0.862	0.920
Conglomerate X City x Date M&A FE	✓	✓	✓	✓	✓	✓	✓	✓	✓
Size X Time X Date M&A FE	✓	✓	✓	✓	✓	✓	✓	✓	✓
City x Time X Date M&A FE			✓			✓			✓

Notes i) Standard errors clustered at conglomerate-city-M&A and city-time-M&A level ii) All dependent variables are the Inverse Hypersine Transformation of the original variables iii) Size variables include conglomerate-city number of employees, total assets, and market share quartiles before the M&A. iii) All dependent variables are the Inverse Hypersine Transformation of the original variables iii) * p<0.10, * p<0.05, ** p<0.01.

7 Figures

Figure 1: Local Private Market Share in 2006



Notes: i) Our sample includes municipalities with more than one bank branch in 2006.

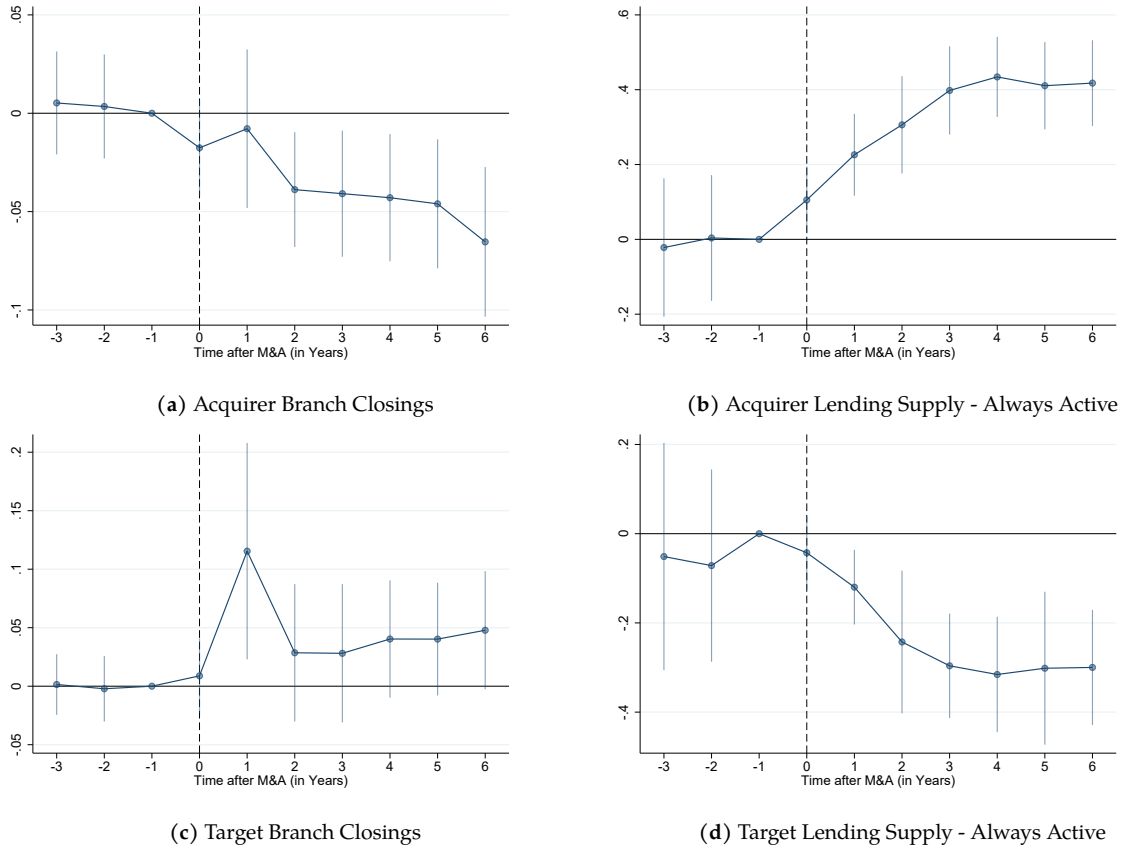


Figure 2: M&A Heterogeneous Effects on Lending Supply

Notes: i) Reported 95% confidence intervals are based on Standard errors clustered at branch-M&A and bank-time-M&A level (ii) All dependent variables are the Inverse Hypersine Transformation of the original variables (iii) The lending variable in this table is the growth rate between t and 2006 of the original variable. Branch closing is an indicator variable equal to one if the branch closes. (iv) All dependent variables are the Inverse Hypersine Transformation of the original variables (v) Branch Controls \times Year FE include bins of branch total assets, total deposits, and employees in 2006. Bank Controls \times Year FE include bins of total assets, total deposits, liquidity ratio, and capital ratio in 2006. Other control variables include branch and city-time fixed effects.

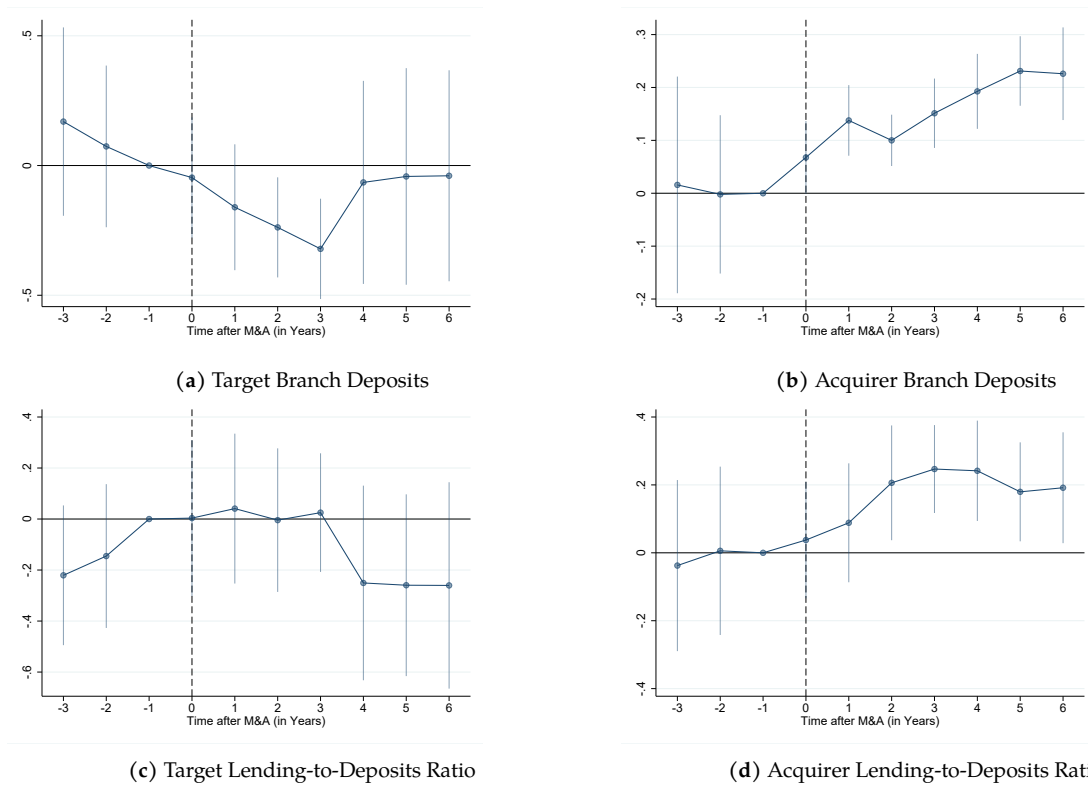
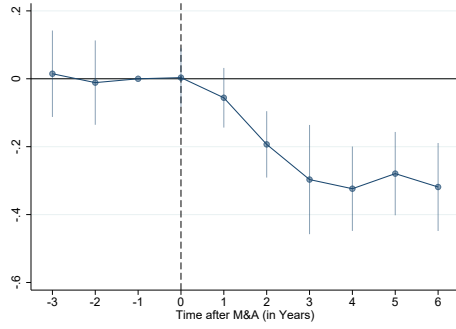
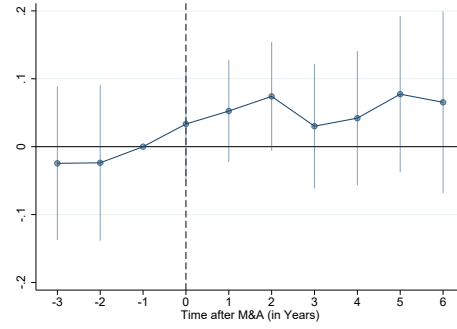


Figure 3: Funding and Internal Capital Markets Reallocation - Always Active branches

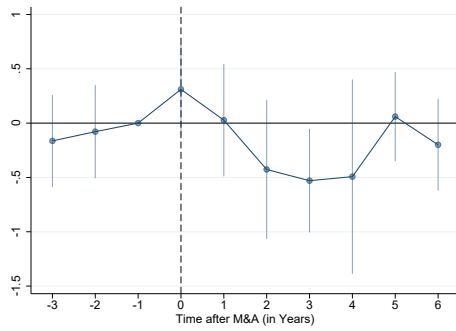
Notes: i) Reported 95% confidence intervals are based on Standard errors clustered at branch-M&A and bank-time-M&A level (ii) All dependent variables are the Inverse Hypersine Transformation of the original variables (iii) The variables on branch deposits and employees in this table are the growth rate between t and 2006 of the original variable. Branch closing is an indicator variable equal to one if the branch closes. Branch Assets on Internal Capital Markets is the ratio of branch assets in the internal capital markets to the total liabilities. (iii) All dependent variables are the Inverse Hypersine Transformation of the original variables (iii) Branch Controls \times Year FE include bins of branch total assets, total deposits, and employees in 2006. Bank Controls \times Year FE include bins of total assets, total deposits, liquidity ratio, and capital ratio in 2006. Other control variables include branch and city-time fixed effects.



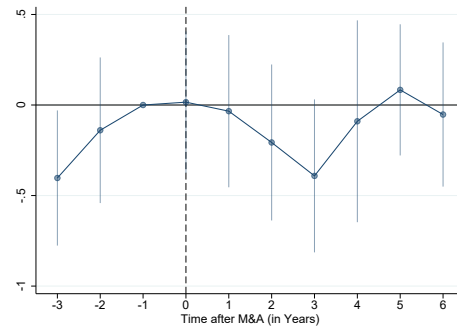
(a) Target Branch Employment



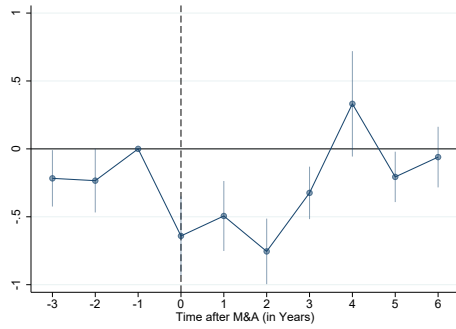
(b) Acquirer Branch Employment



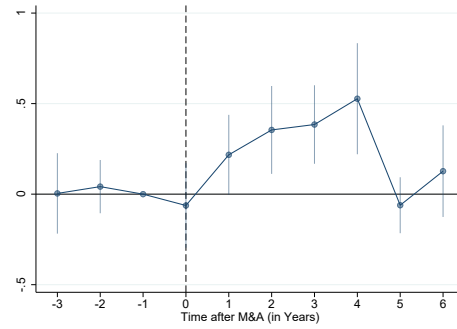
(c) Target Branch Net Labor Hirings



(d) Acquirer Branch Net Labor Hirings



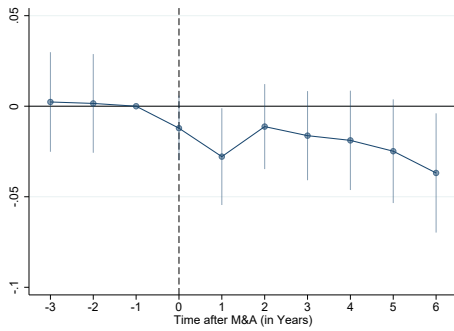
(e) Target Branch Net Labor Transfers



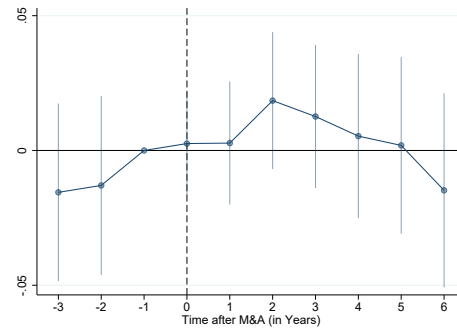
(f) Acquirer Branch Net Labor Transfers

Figure 4: Employment Reallocation - Always Active branches

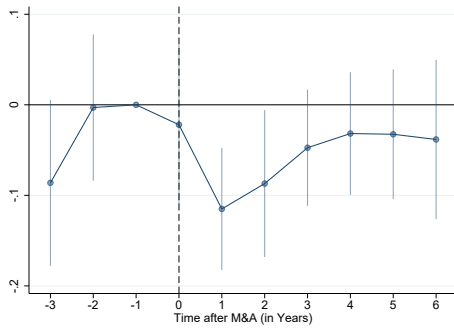
Notes: i) Reported 95% confidence intervals are based on Standard errors clustered at branch-M&A and bank-time-M&A level (ii) All dependent variables are the Inverse Hypersine Transformation of the original variables (iii) The variables on branch deposits and employees in this table are the growth rate between t and 2006 of the original variable. Branch closing is an indicator variable equal to one if the branch closes. Branch Assets on Internal Capital Markets is the ratio of branch assets in the internal capital markets to the total liabilities. (iv) All dependent variables are the Inverse Hypersine Transformation of the original variables (v) Branch Controls \times Year FE include bins of branch total assets, total deposits, and employees in 2006. Bank Controls \times Year FE include bins of total assets, total deposits, liquidity ratio, and capital ratio in 2006. Other control variables include branch and city-time fixed effects.



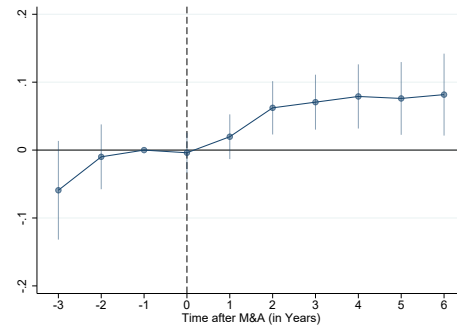
(a) Target Branch Average Employees Ability



(b) Acquirer Branch Average Employees Ability



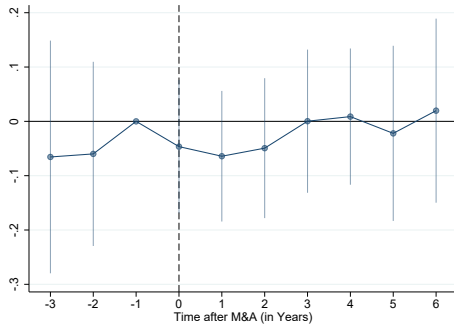
(c) Target Branch Average Loan Officer Ability



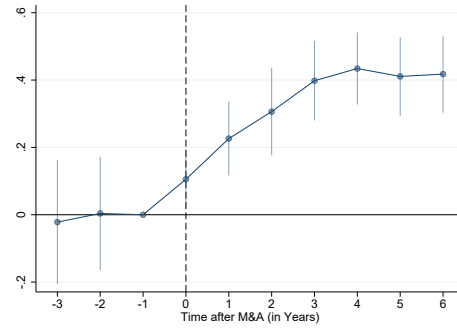
(d) Acquirer Branch Average Loan Officer Ability

Figure 5: Employees Unobservable Ability - Always Active branches

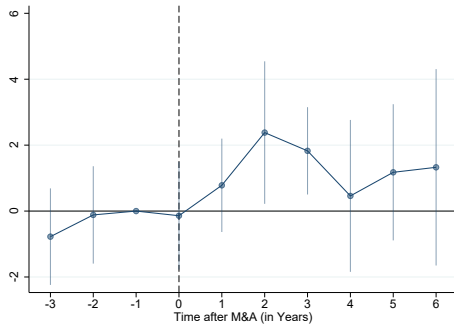
Notes: i) Reported 95% confidence intervals are based on Standard errors clustered at branch-M&A and bank-time-M&A level (ii) All dependent variables are the Inverse Hypersine Transformation of the original variables (iii) The variables on branch deposits and employees in this table are the growth rate between t and 2006 of the original variable. Branch closing is an indicator variable equal to one if the branch closes. Branch Assets on Internal Capital Markets is the ratio of branch assets in the internal capital markets to the total liabilities. (iii) All dependent variables are the Inverse Hypersine Transformation of the original variables (iii) Branch Controls \times Year FE include bins of branch total assets, total deposits, and employees in 2006. Bank Controls \times Year FE include bins of total assets, total deposits, liquidity ratio, and capital ratio in 2006. Other control variables include branch and city-time fixed effects.



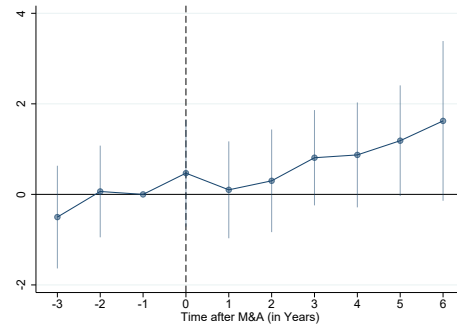
(a) Target Branch Lending per Employee



(b) Acquirer Branch Lending per Employee



(c) Target Branch Profit per Employee



(d) Acquirer Branch Profit per Employee

Figure 6: Productivity Measures - Always Active branches

Notes: i) Reported 95% confidence intervals are based on Standard errors clustered at branch-M&A and bank-time-M&A level (ii) All dependent variables are the Inverse Hypersine Transformation of the original variables (iii) The variables on branch deposits and employees in this table are the growth rate between t and 2006 of the original variable. Branch closing is an indicator variable equal to one if the branch closes. Branch Assets on Internal Capital Markets is the ratio of branch assets in the internal capital markets to the total liabilities. (iv) All dependent variables are the Inverse Hypersine Transformation of the original variables (v) Branch Controls \times Year FE include bins of branch total assets, total deposits, and employees in 2006. Bank Controls \times Year FE include bins of total assets, total deposits, liquidity ratio, and capital ratio in 2006. Other control variables include branch and city-time fixed effects.

A Additional Tables

Table 12: Robustness Check - Just Acquirer as Control Group

	Lending	Employees	L. Off. Ability	<i>Lending</i> <i>Employees</i>	<i>Deposits</i> <i>Employees</i>	Reveneues	T. Costs
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Post M&A × Target	-0.211** (0.087)	-0.310*** (0.055)	0.020 (0.028)	0.099 (0.059)	0.141 (0.095)	-0.114 (0.076)	-0.419*** (0.151)
Post M&A × Acquirer	0.322*** (0.064)	-0.036 (0.025)	0.123*** (0.021)	0.357*** (0.060)	0.243*** (0.055)	0.238*** (0.050)	0.471*** (0.072)
Observations	68586	68586	68586	68586	68586	68586	68586
R Squared	0.902	0.939	0.790	0.887	0.856	0.874	0.892
Branch X Date M&A FE	✓	✓	✓	✓	✓	✓	✓
City x Time X Date M&A FE	✓	✓	✓	✓	✓	✓	✓
Branch Size X Time X Date M&A FE	✓	✓	✓	✓	✓	✓	✓
Market Power Controls X Post	✓	✓	✓	✓	✓	✓	✓

Notes i) Standard errors clustered at branch-M&A and bank-time-M&A level ii) All dependent variables are the Inverse Hypersine Transformation of the original variables iii) Branch Size variables include the number of employees, total assets, and market share quartiles before the M&A. iii) All dependent variables are the Inverse Hypersine Transformation of the original variables iii) Market power controls are an indicator variable if the local market overlapped target and acquirer presence and the new conglomerate local market share before the M&A. iv) * p<0.10, * p<0.05, ** p<0.01.

B AKM Decomposition

In this section, we describe how we decompose the earnings in a [Abowd et al. \(1999\)](#) framework. This framework allows us to decompose the workers' ability (unobservables) from workers' observables and bank-branch unobservables.

We augment Mincer's framework proposed in [Alvarez et al. \(2018\)](#) in the Brazilian setting to incorporate local, bank, and branches level components. This allows us to control for workers' changes in observables, local economic conditions, and branch changes from their returns in Mincer equation.

To do so, we regress the log of monthly real earnings on worker observables interacted with municipality-time dummies, occupation interacted with bank-time dummies, and branch-time dummies. Specifically, we include as workers observables: experience¹⁵, worker tertiary education indicator variable, worker age, and worker gender. Our setting also controls for possible bank-occupation differential earnings and branches change in earnings over time:

$$\begin{aligned} \log(y_{it}) = & \sum_{m=1}^{N_{mun}} \sum_{t=1}^T (\beta_{mt}^1 age_{it} + \beta_{mt}^2 edu_{it} + \beta_{mt}^3 exp_{it} + \beta_{mt}^4 gender_{it}) \\ & + \sum_{b=1}^{N_{banks}} \sum_{t=1}^T \beta_{bt} occupation_{it} + \sum_{j=1}^{N_{branches}} \sum_{t=1}^T \beta_{jt} + \alpha_i + \varepsilon_{it}. \end{aligned} \quad (2)$$

In our setting, the first summation incorporates observable changes in workers' characteristics, the second set of parameters incorporates bank changes in worker compensation, and the third set incorporates possible heterogeneity at the branch level that can be time-varying. Finally, α_i represents the time-invariant worker component of the earnings that are not explained by all the other components, which we interpret as worker ability.

Our sample consists of the connected group of banks in Brazil between 2003-2015, which in the end comprises all the commercial banks registered in the country. The identification of worker effects comes from the relatively high mobility of workers across bank branches under the long period considered: more than 75% of the workers. All our measures of workers' ability rely on the assumptions of exogenous mobility of workers across branches conditional on observables and local shocks ([Card et al., 2013](#); [Flabbi et al., 2019](#)).

¹⁵Measured by the years of working experience in the banking sector.

C Data and variables description

Classification of target and acquirer branches. After a M&A, the branches of the target bank change their 14-digit tax ID number, which is the ID we use to merge with other datasets. Therefore, we need to obtain the new tax ID of target branches to observe the balance sheet and labor information after the consolidation. We use monthly data on the address of the branches and part of the sort code to identify the new 14-digit tax ID. The data we use to perform this operation can be downloaded at <https://www.bcb.gov.br/estabilidadefinanceira/agenciasconsorcio>.

Branch balance sheet and income statement data. We use the following variables: total assets (verbete_399_total_do_ativo), loans outstanding (verbete_160_operacoes_de_credito), loss provision (verbete_174_prov_p/_oper_creditos), assets in internal capital markets (verbete_140_rel_interfinanc_e_interdepend), total deposits (verbete_401_servicos_publicos¹⁶ + verbete_420_depositos_de_poupanca + verbete_432_depositos_a_prazo), total revenues (verbete_711_contas_credoras) and total costs (verbete_712_contas_devedoras). This data is monthly available at <https://www4.bcb.gov.br/fis/cosif/estban.asp?frame=1>.

Matched branch-employee data. We use the *Relação Anual de Informações Sociais* (RAIS) data. The identified microdata is not publicly available, but it can be requested to the Ministry of Labor. We observe the universe of formal employees in Brazil at the establishment level (in the case of banks, a branch is an establishment).

¹⁶This item aggregates all demand deposits.