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研究課題名（和文）銀行合併が顧客企業の活動に与える影響

研究課題名（英文）The Effect of Bank Mergers on Client Firms

研究代表者

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研究成果の概要（和文）：この研究の目的は、銀行合併発表が銀行の顧客企業に与える影響を明らかにすることである。計量経済データの分析の結果で、合併する銀行の顧客企業は、合併されたメインバンクからの貸出を大幅に減少させるということを明らかにした。企業は、メインバンクからの貸出の減少に対抗してヘッジすることができず、企業の借入金総額も大幅に減少する。ゾンビ企業は、銀行合併後にメインバンクからの貸出減少をヘッジすることは特に困難である。したがって、ゾンビ企業は、メインバンクの合併後、借入金総額が急減する。さらに、ゾンビ企業は、主要銀行による合併発表に伴い、設備投資が減少し、倒産する確率が上がる。

研究成果の概要（英文）：The focus of this study is the effect of bank merger announcements on the client firms of those banks. In general, client firms of banks that announce a merger experience a significant reduction in the supply of credit from the merged main bank. Firms are unable to hedge against this fall in credit availability from the main bank and experience a significant reduction in total firm borrowing. However, the effect of bank merger announcements on client firms exhibits substantial heterogeneity. Zombie firms find it especially difficult to hedge against the fall in credit supplied by the main bank following a bank merger announcement. Thus, the zombie firms experience a precipitous drop in total firm borrowing following the announcement of a merger by their main bank. In addition, zombie firms experience significantly shorter distance-to-default and lower firm investment following a merger announcement by their main bank.

研究分野： 金融・ファイナンス

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１．研究開始当初の背景

Finance theory holds that banks are special because of their ability to gather soft information about their client firms (Fama, 1985). Because such information builds over time, access to bank finance is particularly valuable in relationship-based banking systems where bank-firm relationships are long-term commitments. Thus bank mergers – which may trigger termination of such relationships, result in the loss of soft information or just weaken one of the merging banks’ decision authority to make use of soft information – may damage affiliated client firms’ access to bank credit.

Studies examining the effects of bank mergers on client firms generally support this hypothesis. There is evidence that client firms whose main bank merges are more likely to have their main bank relationship terminated (Degryse, Masschelein, & Mitchell, 2011; Karceski, Ongena, & Smith, 2005), suffer the loss of soft information (Ogura & Uchida, 2014), experience declines in aggregate outstanding loans and credit lines (Bonaccorsi di Patti & Gobbi, 2007) and pay higher borrowing costs (Sapienza, 2002; Uchino & Uesugi, 2012).

However, no existing study has been able to estimate the effect of bank mergers on individual loans to specific firms. This study fills that gap in the literature. Using a unique dataset that links non-financial client firm outstanding loans to the originating banks, we are able to analyze the effect of banks mergers on the supply of loans from individual banks to specific firms. Applying methodology pioneered by Khwaja and Mian (2008) and Giannetti and Simonov (2013) we control for any omitted variables that may influence firm demand for loans, isolating the effect of bank mergers on the supply of credit. This allows us to examine whether the supply of credit is affected by the announcement of a merger by the firms’ main bank. We then look at the effect of bank mergers on a number of other longer-term variables: growth in total firm borrowing, distance-to-default and firm investment.

２．研究の目的

Why do banks merge? What is the effect of bank mergers on long-run bank performance? Do bank mergers affect the supply of bank loans to client firms? Are those effects different depending on whether the merging bank is an acquirer or target in the M&A event? This research will address these four broad research questions and related issues that emerge.

３．研究の方法

In this study, bank-firm relationships are defined using the Japan Company Handbook survey data which asks firms to identify a “main bank” with which the firm has a special relationship. There is no legal definition of a main bank, but nearly every Japanese company reports having one. In our sample of 5,102 publicly listed firms in Japan, 97% declare a main bank in every year of the sample. Bank-firm relationships are usually very stable. After controlling for the effect of mergers, most of the firms in our sample stayed with the same main bank for all 23 years of the sample.

The bank-firm relationship data from the Japan Company Handbook is matched with data on bank merger announcements, loans between each bank-firm pair, and financial statements for both banks and client firms in Japan. Bank merger announcements over the sample period 1990-2012 are identified using Nikkei Telecom 21, an archive of Japan's leading newspapers. The sample is restricted to merger announcements that were completed. Firms’ outstanding loans with each individual bank, and annual financial statements are from the Nikkei NEEDS database.

The final data set yields 367,307 total observations of individual loans between bank-firm pairs over the period 1990 to 2012. The individual loans are then matched up with data on the firms receiving the loans and the lending banks, as well as announcements of bank mergers during the sample period.

Of the 161 banks in the sample, 64 banks have experienced a merger during the sample period. The median bank that merges does so only once, although there is one bank that was involved in 4 mergers.

Of the 4,450 firms in the sample, 2,177 firms, are credit constrained (working capital ratio in the bottom 25% of the sample in any given year) at some point in the sample. 1,012 firms, are not only credit-constrained, but qualify as sick “zombie” firms at some point in the sample period. We adopt Peek and Rosengren's (2005) definition of credit constrained and sick firms, which is working capital ratio in the bottom 25% of the sample in any given year for both credit constrained and zombie firms, and ROA in the bottom 25% of the sample in any given year and annual stock return in the bottom 1/3 of the sample in any given year for sick firms. The idea is that firms with low working capital may face temporary liquidity shortages and difficulty paying short-term debts. These firms are credit constrained and presumably bank dependent, but are not necessarily fundamentally unsound. Sick firms, on the other hand, are not only credit constrained, but also fundamentally unsound. Evidence that these kinds of firms are more likely to receive additional or cheaper bank credit (Peek & Rosengren, 2005), a practice that keeps otherwise insolvent borrowers alive, has led them to be called “zombie” firms (Caballero, Hoshi, & Kashyap, 2008). Note that the credit constrained and zombie firms are not necessarily small firms and in fact on average have higher annual sales than the other firms in the sample. There is evidence that forbearance lending to zombie firms has brought enormous economic costs to the Japanese economy (Caballero et al., 2008).

The final data set described above has three dimensions: individual banks b, individual client firms i, and time t. It is this rich, three-dimensional panel that allows us to isolate the supply of credit from firm demand for loans. The three dimensions to the data mean that in regression analysis the researcher can potentially control for two out of three dimensions to the data: bank fixed effects, firm fixed effects, or time fixed effects. Following an approach first proposed by Khwaja and Mian (2008) in a natural experimental setting and then later adopted by Giannetti and Simonov (2013) in non-experimental setting, we create an interaction term between firm fixed effects and time fixed effects.This firm-year fixed effect adds a unique intercept for each firm-year, controlling for all firm-side factors, even those that may vary by year, such as demand for loans.

Having controlled for any omitted firm-side factors, we can then use the growth in lending from individual banks to individual firms in each time period to capture the supply of credit from bank b to firm i in period t. In the credit supply analysis, we are also able to include bank fixed effects to investigate within-bank variation in credit supply before and after merger events.

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４．研究成果

Our empirical analysis shows the effect of bank merger announcements on banks' supply of credit to their client firms in the year of announcement, as well as the longer-term impacts of bank merger announcements on the supply of credit in not only the year of a bank merger announcement, but also the following three years. The main takeaway from is that the announcement of a merger by a firm's declared main bank on average results in a highly statistically significant cut in the supply of credit from the main bank to the client firm. The cut in credit supply ranges from an estimated -1.7% reduction in the short to medium run to a cumulative -2.3% cut in the long-run. Credit-constrained firms are especially hard hit in the long-run, experiencing a further -2.1% cut in the supply of credit from the main bank, for a total estimated reduction in credit supply of -3.9%.

Another interesting result is the empirical support we find for the "evergreening" theory that Japanese banks keep alive credit-constrained, sick, bank-dependent zombie firms. Our analysis shows that zombie firms in general enjoy highly statistically significant higher credit supply from their declared main bank on the order of 5.0%-5.7%.

Having established that bank merger announcements result in cuts in the supply of credit from the affiliated firms' main bank, we next investigate whether bank merger announcements affect other long-term outcomes for firms.

The results show that bank merger announcements have a statistically significant negative impact on the growth of total firm borrowing, firm distance to default, and firm investment. These negative impacts are all statistically and economically significantly higher for credit constrained firms, and higher again for credit constrained, sick, zombie firms.

５．主な発表論文等

（研究代表者、研究分担者及び連携研究者には下線）

〔雑誌論文〕（計　5　件）

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〔図書〕（計　0　件）

〔産業財産権〕

○出願状況（計　0　件）

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