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SHOULD I STAY OR SHOULD I GO? FIRMS' MOBILITY ACROSS BANKS IN THE AFTERMATH OF FINANCIAL TURMOIL

Davide Arnaudo[1], Giacinto Micucci[2], Massimiliano Rigon[1] and Paola Rossi[1]

Abstract

We study the mobility of Italian firms across different lending banks in the aftermath of Lehman Brothers' collapse, when 40 per cent of the firms analysed changed their pool of lending banks. Using a unique dataset on a sample of about 3,000 Italian firms that encompasses financial and economic records, information on the existence of credit constraints and data on lending relationships with banks, we provide evidence that mobility within the credit market helped to ease credit constraints. Firms that started new banking relationships were able to maintain or even increase their outstanding loans. These firms were generally large and credit-rationed. At the same time, access to new credit lines was more difficult for small and more opaque firms, for which a long-term relationship with their main bank has been the most effective way of overcoming financial constraints. Geographical proximity is also important in affecting credit constraints: the closer the firms are to the lending banks, the lower is the probability of their closing an existing credit relationship and start a new one.

Contents

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[1] Bank of Italy, Economic Research Unit, Milan Branch.

[2] Bank of Italy, Economic Research Unit, Ancona Branch.

1. Introduction[1]

The 2008-09 financial crisis was an exceptional event for both its magnitude and its rapid spread in the credit market. In Italy, as in many other advanced economies, bank lending to the corporate sector first slowed and then declined sharply. As a result firms faced an unexpected credit restriction in terms of cost of financing and loan availability (Del Giovane, Eramo and Nobili, 2011; Panetta and Signoretti, 2010), with a severe impact on the real economy (Gaiotti, 2013; Cingano, Manaresi and Sette, 2013).

The effects of the financial crisis on the evolution of lending to firms and on firm-bank relationships have attracted the attention of many researchers and there has been a surge of studies on the role of financial markets and the behaviour of financial intermediaries. Most of the papers focus on the main determinants of banks' behaviour during the financial turmoil. Some of the differences observed have been related to banks' size and capitalization (Foglia and Piersante, 2010; Albertazzi and Marchetti, 2010; Barboni and Rossi, 2011), funding structure (Bonaccorsi di Patti and Sette, 2012; Ivashina and Scharfstein, 2010; Iyer et al., 2014) and internal organization (Del Prete et al., 2012). Moreover, De Mitri, Gobbi and Sette (2010) looked at the characteristics of firm-bank relationships, showing that loans grew even during the crisis for borrowers with long-lasting relationships with financial intermediaries.

We look at credit relationships from a different viewpoint, since we deal with the behaviour of borrowing firms and, in particular, with their mobility in the credit market (i.e. the decision to change the pool of bank lenders, ending existing credit lines and opening new relationships). Of course, mobility in the credit markets is affected by both the supply of and the demand for sources of finance: firms cannot choose freely between alternative fund providers. As Robb and Robinson (2012) have highlighted, it is challenging to separate supply and demand in the absence of some quasi-experiment. We nevertheless take small

steps in this direction, thanks to proper sources of information that, ultimately, allow us to evaluate firms' behaviour while taking into account the supply side of the credit market.

We use information on credit supply conditions as perceived by firms, along with their demand for external financing, drawn from the Bank of Italy's survey of Italian firms. We also have balance-sheet data for every firm taken from the Italian Company Accounts Data Service (Cerved), as well as information on the main features of firm-bank relationships from data collected in the Central Credit Register (Centrale dei Rischi). Combining these three sources of information, we build a unique dataset of about 3,000 Italian firms covering the period from the beginning of the financial crisis, in the autumn of 2008, to the autumn of 2010, which is often interpreted as the end of the international financial crisis.[2]

Our analysis shows that, within six months of Lehman Brothers' collapse, a large share of firms (nearly 40 per cent of our sample) changed their pool of lending banks: about a quarter of firms closed down at least one of their lending relationships and another 23 per cent started a new one.

Firms' reactions to changes in credit conditions differed according to their need for additional funds. Firms that did not need additional credit were more likely to substitute banks or simply close credit relationships when they perceived a tightening of credit conditions. By contrast, firms facing a worsening credit supply but in need of new financing tended to increase the number of lending banks without breaking off existing relationships. We provide evidence that mobility within the credit market was helpful in easing credit constraints: firms that started new banking relationships were able to maintain or even increase their outstanding loans. Thus, the increased mobility in credit market in the aftermath of Lehman's collapse may be considered a firm strategy against the sudden and sharp contraction in credit.

Firms initiating new credit relations were generally large, while access to new credit lines was more difficult for small and more opaque firms, to which a long-term relationship with their main bank was the most effective way of overcoming financial constraints. Geographical proximity turns out to be important in affecting credit constraints: the closer are the firms to the lending banks, the lower is /the probability that they will end/ an existing

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[2] In 2011 a new financial shock due to the sovereign debt crisis within the euro area hit the Italian economy.

credit relationship. Our results also confirm the relevance of relationship lending: firms with a higher concentration of total borrowing or with long-term banking relationships were less likely to change the pool of lenders.

The rest of the paper is organized as follows. Section 2 reviews the literature on relationship lending and switching costs, Section 3 describes the database, and Section 4 reports some descriptive statistics on bank substitutions and the pattern of credit loans. Sections 5, 6 and 7 set out the econometric analysis of firm determinants of mobility in the credit market. Section 8 concludes.

2. The background literature

This article relates to two strands of literature, that on firms' mobility in the credit market and that on the 2008-09 financial crisis.

With regard to the first strand of literature, the issue of mobility is usually addressed taking into account the peculiar information problems prevailing in the credit market. Close and long-lasting relationships between borrower and bank mitigate the widespread information asymmetries present in the credit market, essentially by fostering better knowledge over time. But this type of knowledge is bank-specific and can hardly be communicated to potential new lenders in a credible fashion. Thus, the borrowing firm may become 'informationally captured' within its current banking relations and the lending banks could exploit their information advantage by charging higher rates (so called 'hold-up': Sharpe, 1990; Rajan, 1992). The firm that wants to change its bank is obliged to accept the average conditions applied to the new bank's pool of new customers. For creditworthy companies, this constitutes a switching cost, which is higher the lower is their access to alternative sources of external finance and the greater their opacity (as in the case of new, small, innovative firms).[3]

Several empirical works confirm the economic importance of switching costs; for example, Kim, Kliger and Vale (2003) quantify the cost of changing lending bank as one third

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[3] Switching costs include information provision, especially for small firms (Howorth, Peel and Wilson, 2003).

of the average rate charged on loans. More recently, Barone, Felici and Pagnini (2011) estimate that outside banks offer a discount on the lending rate applied to new customers of about 45 basis points to compensate for these costs. Ioannidou and Ongena (2010) find that outside banks tend to offer lower rates than insiders, confirming the importance of costs of information capture.

Mobility in the loan market can thus be hindered by asymmetric information and the related switching costs. Firms may try to mitigate these constraints by establishing relations with multiple banks (Ongena and Smith, 2000), which not only lowers the switching costs but also reduces the potential risks for the firm of an unexpected liquidity shock to its main bank (Detragiache, Garella and Guiso, 2000). Additional importance is attributed to this insurance motive by Degryse, Masschelein and Mitchell (2011), who find that firms with a single credit line are damaged by bank mergers, losing their relationship with the main bank.

On the other hand, according to Farinha and Santos (2002), the purpose of multiple banking is not to attenuate the hold-up problem but rather to circumvent the constraints on the acquisition of new credit deriving from a firm's poor performance or repayment difficulties. Gopalan, Udell and Yerramilli (2011) show that a shift to new financiers is associated with an increase in the availability of credit.

Although the literature on the 2008-09 financial crisis is very rich, to our knowledge the specific issue of firms' mobility in the credit market during the crisis has not yet been addressed. For the Italian case, which is more relevant to our analysis, Panetta and Signoretti (2010) document that the sharp decline in bank lending to the Italian corporate sector in the aftermath of Lehman Brothers' collapse was the result of the joint interaction of demand reductions and supply restrictions. However, the Italian credit crunch was somewhat heterogeneous, depending on pre-existing bank-firm relationships. Relationship lending was particularly important during the crisis, when banks faced a higher risk of lending to a firm whose previous credit relationship was interrupted by another bank that had some privileged information on the deterioration of the borrower's creditworthiness (Ruckes, 2004). De Mitri, Gobbi and Sette (2010) show that relationship lending mitigated the impact of the credit crunch, since lending dynamics remained positive for borrowers that enjoyed long-lasting

relationships with their banks. The importance of customer relations thus increased during the financial crisis.

Geographical proximity between the firm and the bank may also affect lending relationships. Bolton et al. (2013) point to the relevance not only of the distance between firm and bank headquarters, which may affect the ability of the bank to gather soft information, but also of the 'informational distance' within the bank, since the bank's headquarters may find it difficult to evaluate the information received from loan officers located in distant branches rather than closer ones. This may shed light on the evidence reported in Barboni and Rossi (2011), who show the essential role of local banks in alleviating difficulties in accessing credit during the crisis.

3. Data and descriptive statistics

We build a unique dataset using three sources of information on firms and banks. First, we consider firm-level data obtained from the Bank of Italy's Survey of Italian Industrial and Service Firms. This is an open panel of about 3,000 firms with at least 20 employees (Bank of Italy, 2009). The survey is fully representative of medium-sized and large firms in Italy, but small firms are under-represented. The questionnaire collects a wide range of information twice a year (in spring and autumn), such as on employment, sales (domestic and foreign), investments, etc.

We consider the five waves of the survey from autumn 2008 through autumn 2010. After the failure of Lehman Brothers, the survey added a set of questions on credit conditions. Respondents were asked to evaluate their overall financial constraints, difficulties in accessing credit, changes in interest rates and collateral requirements, and their credit demand in the last six months.

We merge the information from the survey with firms' balance-sheet and income-statement data from 2007 to 2009 collected by the Italian Chambers of Commerce and reported by the Cerved Group.

Firm-level data are then matched with the statistics from the Italian Central Credit Register (Centrale dei Rischi: CR). This dataset includes, for each firm, the amount of credit

granted by each lending bank along with the amount of credit actually used by the firm if the credit line is above a threshold, equal to €75,000 until the end of 2008 then lowered to €30,000 from the beginning of 2009. We focus on the amount of credit granted as we are interested in detecting the time-discontinuity of the lending relationship – i.e. the starting or ending point in the relationship with each bank – rather than the actual use of credit.

To pick up these discontinuities we compare all the credit lines of each firm at time t with those at time $t+1$, where the time span between two consecutive observations is six months. If a bank is among the firm's pool of lenders at time t but not at time $t+1$, we classify this occurrence as a closure at time t. Similarly, if a bank is among the lenders of a firm at time t but not at time $t-1$, then we consider it as the opening of a new credit relationship at time t. On this basis we classified firms into four groups according to the evolution of their credit relationships between t and $t+1$:

- *stay*: all the lending relationships between the firm and the lending banks remain unchanged,
- *drop*: at least one lending relationship has been closed, whereas no new relationship has been started,
- *switch*: at least one new lending relationship has been closed and at least one new one has been started,
- *open*: at least one new lending relationship has been started, without closing any of the existing ones.

We address different sources of distortions which may alter the correct identification of the four occurrences. First, we adjust for mergers and acquisitions among banks, building pro-forma consolidated data for the merged banks.[4] Second, we eliminate from the dataset firms that went bankrupt in the period 2008-10: in this case, the interruption of banking relationships was not due to any choice by the firm. Third, we do not consider as closures those credit lines whose amount granted becomes nil because the firm is classified as

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[4] From the last data available, the accounts of the banks are reconstructed backwards in order to exclude closures or openings of credit relationships due to bank mergers or acquisitions and so avoid overestimating the number of banking relationships begun or ended.

insolvent (bad loan)**.** Finally, we tackle the issue of the existence of a threshold for the inclusion of a credit line in the CR database.[5]

After the mergers, we end up with a sample of some 2,700 firms for each of the five surveys. Table 1 reports summary statistics for our variables. On average the firms are 29 years old and have about 100 employees. Gross borrowing costs amount to almost 2 per cent of total assets. About one third of the firms experience a worsening of credit conditions; 12.2 per cent reduce their credit demand, while 18.7 per cent require additional financing. On average, firms have lending relationships with 6 banks, slightly more than what is found in other studies on the Italian economy. This difference is due to the fact that our sample covers only firms with more than 19 employees, which tend to have more borrowing relationships than smaller ones.[6]
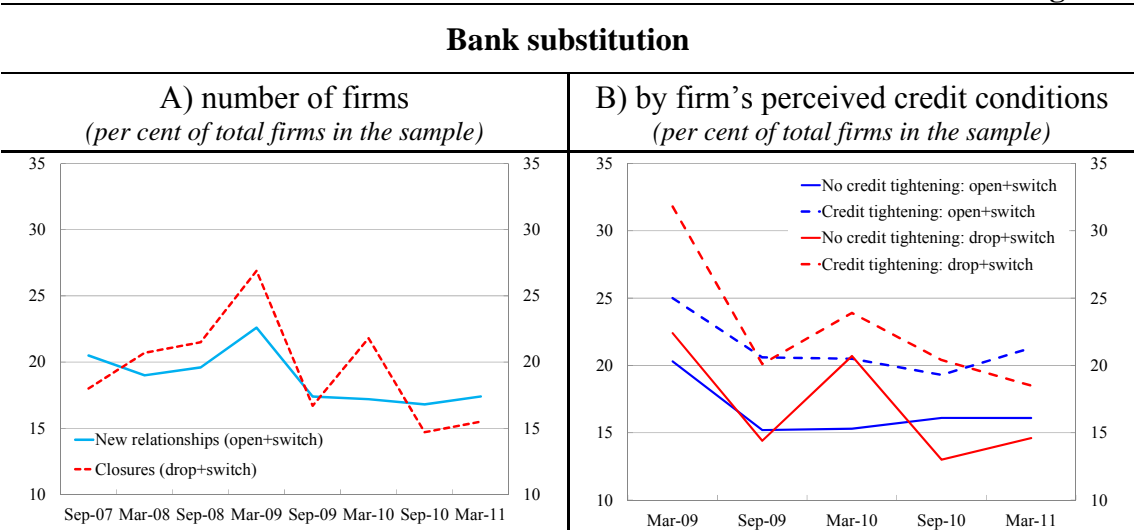
4. Bank substitution: some stylized facts

Table 2 reports some descriptive statistics about bank substitution, i.e. the share of firms that modified their pool of lending banks in each period considered. The statistics cover eight semesters, starting from March 2007.

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[5] The existence of a threshold is a source of concern owing to the possible confounding effect. When the credit line falls below the threshold, it is no longer detected by the Italian Central Credit Register. Therefore, it is not possible to know whether or not there is still a relationship between the bank and the firm. Similarly, we do not know whether the credit line detected for the first time in the CR database is a genuine new relationship. Our main concern is to avoid inflating the firms' mobility, partly because of the decrease in the threshold already mentioned. We therefore continue to assume a fictitious threshold of € 75,000, which was the actual threshold until the end of 2008, in order to neutralize all movements near the threshold. If we observe a credit relationship in period t but not in period $t+1$, we consider this occurrence a real closure only if the amount of credit initially granted was greater than €75,000, that is more than twice the CR threshold since 2009. Similarly, when we observe for the first time a credit relationship in period t, we consider it a real opening only if the new credit granted is above €75,000 in order to disregard small changes in the loans granted around the CR threshold. In this way we significantly reduce the confounding effects of the threshold. Following this rule, we increase the number of observations classified as stay (rather than switch, drop or open) by 5 per cent. All the estimates were confirmed when we assumed either a fictitious threshold of €100,000 or none.

[6] Detragiache, Garella and Guiso (2000), using a sample from the Survey of Industrial Firms by Mediocredito Centrale, show that the median firm has credit relationships with five different banks. However, the mode of the distribution of the number of credit relationships is equal to 3.

Between 2007 and 2011, on average about one third of the firms in the sample changed their pool of lending banks. In particular, 13 per cent either reduced the number of credit relationships ('drop' in Table 2) or started new relationships without closing the existing ones ('open' in Table 2). Finally, approximately 6 per cent of firms replaced at least one bank with a new one ('switch' in Table 2). In the six months following the collapse of Lehman Brothers, credit market mobility greatly increased: almost 40 per cent of the firms in the sample changed at least one of their lending banks, much more than in previous periods. The share of firms closing at least one lending relationship was about 16 per cent during the crisis, while about 23 per cent of firms included a new bank among the pool of their lenders, in most cases replacing another bank ('open' and 'switch' in Table 2). As shown in panel A of Figure 1, after this peak mobility in the credit market returned to levels comparable with the previous period.

Figure 1

Bank substitution

A) number of firms *(per cent of total firms in the sample)*	B) by firm's perceived credit conditions *(per cent of total firms in the sample)*

Sources: Based on data from Bank of Italy surveys, Company Accounts Data Service, and Central Credit Register.

Our statistical evidence shows that 'switching' or 'opening' strategies were effective in offsetting difficulties in accessing the credit market. On average, total loans increased for the firms that started a new credit relationship with a bank, while the fall in total loans was sharper for firms that lost one or more credit relationships (Table 3 and Figure 2).

In order to test this descriptive evidence we run a simple regression in which the dependent variable is the rate of growth in either credit granted or credit drawn. The

regressors are dummies for firms closing, switching or opening credit relationships (*drop*, *switch*, *open*); the baseline is therefore represented by firms that do not change their pool of lending banks. The three dummies are then interacted with a dummy for the crisis (*d_crisis*), equal to one after the failure of Lehman Brothers. We use semi-annual data from 2007 through 2010. Time dummies and firms' fixed effects are also added.

Figure 2

Rate of growth in credit granted
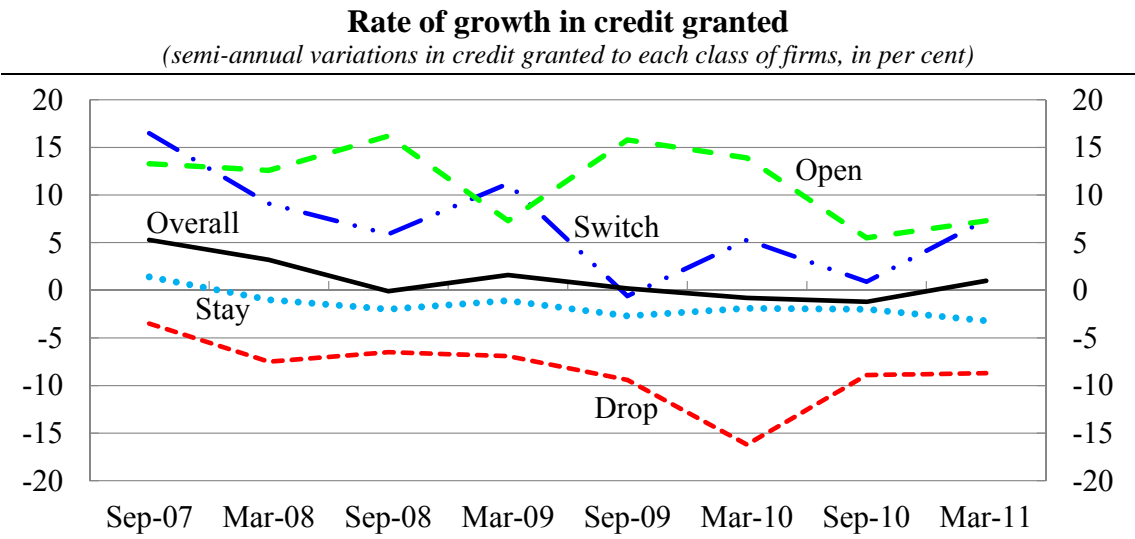*(semi-annual variations in credit granted to each class of firms, in per cent)*

Sources: Based on data from Bank of Italy surveys, Company Accounts Data Service, and Central Credit Register.

Table 4 shows that switching and opening strategies are commonly associated with an increase in both credit granted and credit actually used by firms. By contrast, closures are correlated with a credit reduction. Although in the aftermath of the crisis all firms showed a lower rate of growth in credit granted (the interaction terms with *d_crisis* are always negative), the growth in credit is still slightly positive for switching firms and definitely positive for opening firms.

Bank substitution, especially the opening of new lending relationships, was more frequent among firms with tight credit conditions (Table 5 and panel B of Figure 1). A t-test confirms that the difference is statistically significant. This evidence suggests that bank substitution was a response by firms to difficulties in accessing credit during the financial crisis.

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In the next section we identify the main features correlated with firms' choice to change the pool of banking lenders, once we have taken into account the supply side of the credit market.

5. The estimated equation and definition of the variables

In order to detect the characteristics of firms that may affect bank substitution, we estimate a multinomial logistic model (equation 1) along the lines of Degryse, Masschelein and Mitchell (2011):

$$\ln\left[\frac{p(Y_{i,t}=m)}{p(Y_{i,t}=0)}\right] = \alpha_0 + \alpha_1 credit\_tightening_{i,t} + \alpha_2 credit\_demand_{i,t} + \\ + \alpha_3 conc_{i,t} + \alpha_4 F_{i,t} + \varepsilon_{i,t} \tag{1}$$

The index i identifies the firm and t the period when the survey is conducted. The index m can take four values, depending on the status of the firm's credit relationships six months later. As in the definitions set out above:

$$\begin{cases} Y_{i,t} = 0 & \text{Stay} \\ Y_{i,t} = 1 & \text{Drop} \\ Y_{i,t} = 2 & \text{Switch} \\ Y_{i,t} = 3 & \text{Open} \end{cases}$$

Note that the dependent variable is forward-looking. That is, the value at time t depends on how credit lines behave over the following six months. All the regressions are pooled and standard errors are clustered at firm level. As a robustness check, the estimates were also replicated separately in each period; there were no significant differences in the results (not reported but available upon request).

The dependent variable is constructed using the data on overall total credit granted. However, because longer-term credit relationships obviously have considerable inertia, we also define the dependent variable considering only short-term loans. Again, there are no substantial differences in the results, so in the rest of the paper we show exclusively the estimates based on total loans.

Finally, as a further robustness check, we estimate equation 1 using a *multinomial probit model*, which does not require the assumption of independence of irrelevant alternatives. All results are confirmed.

As mentioned, we focus the analysis on the period following the autumn of 2008 as information from the Survey of Industrial and Service Firms allows us to take into account demand and supply side conditions only from this date. To control for supply conditions, we include the dummy variable *credit_tightening*, which takes the value 1 if the firm reports a tightening of credit conditions in the six months preceding the interview. The 'forward-looking' feature of the dependent variable, combined with the 'backward-looking' nature of the *credit_tightening* dummy limits the possibility of our results suffering from reverse causality. Although this is firms' self-reported assessment, we are confident that *credit_tightening* is a good proxy for actual supply conditions in the credit market. We also control for differences on the demand side. *Credit_demand* in equation 1 includes two dummy variables (*credit_demand_up* and *credit_demand_down*), which take value 1 when the demand for credit has increased or decreased in the previous six months. In this way we can disentangle the effects due to an increase or a reduction in the demand for new loans.

In $conc_{i,t}$ we include variables that better qualify the relationship between the firm and the banking system, namely the number of banks that lend to each firm (*number_banks)* and the degree of concentration of the loans granted to the firm (*herfindahl_index)*. Since both variables are a measure of credit concentration, they are highly correlated and therefore we use them alternatively in equation (1).

$F_{i,t}$ contains firm-level variables. In order to take into account the differences in firms' financial conditions and earning capacity, we include financing costs (*financial_costs*) and gross operating profits (earnings before interest, tax, and depreciations, *ebitda*), both normalized on total assets. Firm size is proxied by the logarithm of the workforce (*size*). We introduce this control as we are aware that changing banking partners may be more costly for small firms because they are usually more dependent on bank credit and more opaque. Similarly, we also control for the firm's age (*age*; in logs) and its legal form (*limited_liability_firm*). Moreover, we take into account whether firms belong to an industrial group (*industrial_group)*: this latter variable should control for the possibility that a firm will

relying on intra-group finance, which may provide additional funds and help to weaken the direct relationship with the banking sector. Finally, the *exporting_firm* dummy singles out firms that export a significant part (at least one third) of their output. In all the regressions we add controls for survey years, alongside dummies for the firm's sector and geographical location.

6. Results

Table 6 reports the estimates obtained by running the multinomial logit model. The estimates are then replicated using a multinomial probit model (Table 7). The marginal effects are evaluated at the average of the variables.

The variable *credit_tightening* is always positive and highly significant (Table 6, regressions 1 and 2). Closing, switching and opening credit relationships are more likely when a firm faces a tightening of credit supply conditions. The marginal effect is greater when we consider closures and openings as opposed to switching, but even for the latter it remains positive and significant.

Firms' reactions are also related to credit demand. The estimated marginal effect for the dummies *credit_demand_up* and *credit_demand_down* show that an increase in financing needs reduces the probability of closures and increases the probability of new openings. These results suggest that one way in which firms try to overcome credit shortage is by looking for new banking partners.

To explore this issue more carefully, we consider the interaction of demand and supply in the credit market using a variable *supply_demand* which can take four different values: *supply_demand*=0 when the credit demand of firms is stable or decreasing and firms do not face a tightening of credit conditions; *supply_demand*=1 when firms face a worsening of credit conditions and their demand for financing is stable or decreasing; *supply_demand*=2 when firms do not face a worsening of credit conditions but they have increased their demand for credit; finally, *supply_demand*=3 when the firm has increased its demand for credit and faces a tightening of credit conditions. As shown in Table 8, there is a clear interplay between demand and supply conditions which affects firms' behaviour. Firms that do not need

additional credit are more likely to substitute banks or simply close credit relationships when they perceive a tightening of credit conditions. By contrast, firms facing a worsening of credit supply but in need of new financing seek a new credit relationship without closing existing ones.

Our proxies for lending relationships are statistically significant in all specifications. We find that a higher degree of concentration of loans is related to a lower mobility of firms (*herfindahl_index*; Table 6, regression 1); similarly, our findings show that firms are less willing to change the composition of the pool of banks when it consists of a small number of lenders (*number_banks*; Table 6, regression 2).

Firm size is positively correlated with the probability of changing banking partners; this is the expected result as larger firms are generally more transparent and better equipped to interact with financial intermediaries. Among the other characteristics of firms we observe the expected signs. For example, earning capacity is positively related to the probability of starting a new credit relationship and negatively related to the probability of shrinking the pool of lending banks. Firms with higher financial costs are more likely to move in the credit market, both closing and opening relationships. Companies belonging to an industrial group, which could rely on lending within the group, have a greater probability of interrupting at least one of their existing credit relationships. Finally, the time dummies reveal that the frequency of closures has decreased since the autumn of 2008, the climax of the financial crisis, while the frequency of new openings remained stable until the last semesters of the sample period.

We also run regressions (not shown but available upon request) with additional firm variables, which may anticipate firms' economic performance; however, these additional controls do not produce any significant effect on mobility in the credit market. This is the case of R&D expenditure, either normalized on total sales or on total investment; similarly, two dummy variables to control whether a firm has made foreign direct investments in previous years or whether it has upgraded its product lines, both based on the Bank of Italy survey performed in autumn 2007, turn out to have no explanatory power.

7. A further look at the role of bank-firm relationships

One of the findings of the previous section is that the characteristics of the relationships with the lending banks seem to play a crucial role in affecting the mobility of firms in the credit market. Therefore, in this section we further investigate the features of bank-firm relationships beyond the concentration of credit lines already discussed.

Among the regressors, in Table 9 we now include the length of the bank-firm relationship, a common proxy for the intensity of the credit relationship (*length*).[7] We consider both the average length of the relationship with the pool of lending banks (regression 1) and the length of the relationship with the main bank, i.e. the bank with the largest share of the outstanding loans to the firm (regression 2). We also include a measure of the distance between the bank's and the firm's headquarters (*distance*) to verify whether geographical proximity to the firm is relevant to lending decisions (as suggested by Agarwal and Hauswald, 2010; Alessandrini, Presbitero and Zazzaro, 2009; Mistrulli and Casolaro, 2010). Again, we consider the average distance from the pool of lending banks and the distance from the main bank (regressions 1 and 2 respectively). In regressions 3 and 4 we add also various controls for bank characteristics, again on average or with respect to the main bank. These are dummies for the small banks; the bank's capitalization defined as the ratio of the bank's capital to the individual requirement under Basel II (*bank_capital*); the bank's credit quality, given by the ratio of bad to total loans (*bad_loans_share*); and the ratio of retail deposits to total assets (*deposit_to_asset*) to control for the bank's liquidity position.

The results, reported in Table 9, are in line with our a-priori. The length of the credit relationship has a significant effect in reducing the firm's mobility: it reduces the probability of closures as well as of switching or opening. This is consistent with the literature on relationship lending (Ongena and Smith, 2000; Berger and Udell, 2006), according to which banks with closer relationships with their clients are more inclined to support them even during economic downturns. The proximity between firms and banks is also important in reducing the likelihood/ that a credit relationship may be interrupted. In other words, the

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[7] To compute the duration of the credit relationship we date it from the first time, after the year 2000, in which it appears in the Credit Register.

shorter the distance between a firm and its lending banks, the less likely are both the closure and the switching of credit relationships.

We find that firms are less likely to open and close a credit relationship with a small bank, consistently with a strand of literature suggesting that smaller banks generally have more stable relationships with their clients (Berger and Udell, 1995; Berger and Udell, 2002). Among other variables, bank capital is slightly significant (it reduces the probability of closures but only in specification 3 and at the 10 per cent significance level). The likelihood that a credit relationship may be closed decreases with the riskiness of bank loans and we find a negative impact of the variable *deposit_to_asset* only on the switching probability.

8. Conclusions

The ability to change the pool of lending banks turns out to have been crucial in guaranteeing access to external financing during the credit crunch, which occurred soon after Lehman Brothers' collapse. We draw this conclusion looking at the Italian credit market, which is an interesting laboratory owing to the prominence of bank lending among the external sources of financing compared with the other developed countries.

Using a unique dataset on a sample of about 3,000 Italian firms, which encompasses financial and economic records, information on the existence of credit constraints, and data on lending relationships with banks, our analysis shows not only that closures of current credit relationships increased during the financial crisis but also that openings of new credit lines intensified, in a context of a greater mobility. We also provide evidence that mobility within the credit market was helpful in easing credit constraints. The firms that were able to start new credit relationships increased their overall borrowing even in the immediate aftermath of Lehman Brothers' failure. However, because of asymmetric information between borrowers and lenders, the ability of banks and firms to initiate new relationships is imperfect. Our study documents that credit market mobility was uneven, affected by the characteristics of borrowing firms and lending banks and by the existence of relationship lending built up over time.

Firms that started new banking relationships were generally large, while access to new credit lines was more difficult for small and more opaque firms, to which a long-term

relationship with the main bank has been the most effective way of overcoming financial constraints. Finally, geographical proximity between borrowing firms and lending banks was significant in maintaining continuity of relations.

These patterns raise new questions beyond the scope of this research as mobility in the credit market during the economic downturn may have increased the credit risk for more active banks. Hence, the medium-term effects of borrower mobility within the loan market during the financial crisis is an interesting issue to be addressed in further research.

Table 1

Descriptive statistics

Variable definition	No. Obs.	Mean	Median	s.d.	Source
Perceived credit conditions					
Tightening of overall credit conditions (*credit_tightening*)	13605	0.336	0.000	0.472	Bank of Italy's surveys
Financing needs					
Increasing credit demand (1/0; *credit_demand_up*)	13605	0.187	0.000	0.390	Bank of Italy's surveys
Decreasing credit demand (1/0; *credit_demand_down*)	13605	0.122	0.000	0.327	Bank of Italy's surveys
Relationship with the banking system					
Concentration of credit granted (*herfindahl_index*) among lending banks	13605	0.358	0.270	0.251	Central Credit Register
Number of lending banks (*number_banks*)	13605	6.302	5.000	4.382	Central Credit Register
Average length of banking relationships (*length*)	13605	6.716	7.087	1.905	Central Credit Register
Average distance from lending banks (*distance*, in hundreds km)	13605	2.068	1.471	1.749	Central Credit Register
Main bank relationship length (*length*)	13605	7.193	8.250	2.577	Central Credit Register
Main bank distance (*distance*, in hundreds km)	13605	2.041	1.264	2.253	Central Credit Register
Firms' characteristics					
Size (*employees in logs*)	13605	4.609	4.344	1.218	Bank of Italy's surveys
Exporting firm (1/0)	13605	0.652	1.000	0.476	Bank of Italy's surveys
Age (*in logs*)	13605	3.379	3.401	0.662	Bank of Italy's surveys
Limited liability firm (1/0)	13605	0.947	1.000	0.223	Bank of Italy's surveys
Industrial group (1/0)	13605	0.421	0.000	0.494	Bank of Italy's surveys
Financial costs over total assets	13605	0.017	0.015	0.014	Company Accounts
Ebitda over total assets	13605	0.071	0.066	0.094	Company Accounts

Table 2

Bank substitution

	2007/03 2007/09	2007/09 2008/03	2008/03 2008/09	2008/09 2009/03	2009/03 2009/09	2009/09 2010/03	2010/03 2010/09	2010/09 2011/03
Number of firms (as percentage of total firms in the sample)								
Stay (no changes)	67.1	66.4	66.0	61.4	71.2	67.7	72.2	71.4
Drop (firms that close at least one credit relation, without opening new ones)	12.4	14.6	14.4	16.1	11.5	15.2	11.1	11.2
Switch (firms that open at least one credit relation and close at least one)	5.6	6.1	7.1	10.8	5.2	6.6	3.6	4.3
Open (firms that open at least one credit relation, without closing any)	14.9	12.9	12.5	11.8	12.2	10.6	13.2	13.1
Overall mobility (drop, open or switch)	32.9	33.6	34.0	38.6	28.8	32.3	27.8	28.6
Number of observations	2,701	2,706	2,621	2,702	2,906	2,455	3,044	2,498
Number of bank-firm credit relations opened or closed (as percentage of total credit relations)								
Credit relations closed	3.5	4.2	4.2	5.5	3.2	4.4	2.8	3.1
with medium and large banks	3.1	4.1	4.6	6.5	3.5	4.5	2.8	2.8
with small banks	4.6	4.4	3.5	3.3	2.5	4.3	2.7	3.5
Credit relations opened	4.1	4.0	3.2	5.0	3.0	4.0	2.7	3.9
with medium and large banks	3.3	3.1	2.4	4.2	2.2	3.3	2.5	3.5
with small banks	5.9	6.1	5.2	6.8	4.9	5.4	3.1	4.7
Number of observations	16,798	16,870	16,657	14,985	15,597	13,860	16,106	14,085

Sources: Bank of Italy surveys, Company Account Data Service, and Central Credit Register.
Data on the periods prior to September 2008, for which not all the information on the perceived credit conditions used in the estimates are available, have been computed on the same sample of firms used in the econometric estimates.
Data are computed after correcting for mergers and acquisitions among banks and keeping a stable threshold, equal to 75,000 Euros, along the sample period.

Table 3

Rate of growth in credit granted

(Semi-annual variations in credit granted to each class of firms, in percentage).

	2007/03 2007/09	2007/09 2008/03	2008/03 2008/09	2008/09 2009/03	2009/03 2009/09	2009/09 2010/03	2010/03 2010/09	2010/09 2011/03
Stay (no changes)	1.4	-1.0	-2.0	-1.1	-2.7	-1.9	-2.0	-3.2
Drop (firms that close at least one credit relation, without opening new ones)	-3.5	-7.5	-6.5	-6.9	-9.4	-16.2	-8.9	-8.7
Switch (firms that open at least one credit relation and close at least one other)	16.5	9.1	5.9	11.2	-0.6	5.3	0.9	7.4
Open (firms that open at least one credit relation, without closing any)	13.3	12.6	16.2	7.3	15.8	13.9	5.5	7.3
Overall	5.3	3.2	-0.1	1.6	0.2	-0.8	-1.2	1.0

Sources: Bank of Italy surveys, Company Accounts Data Service, and Central Credit Register.
Data on the periods prior to September 2008, for which not all the information on the perceived credit conditions used in the estimates are available, have been computed on the same sample of firms used in the econometric estimates.
Data are computed after correcting for mergers and acquisitions among banks and keeping a stable threshold, equal to 75,000 Euros, along the sample period.

Table 4

Credit growth by firms dropping, switching, or opening new credit relationships

	Growth in credit granted	Growth in credit drawn
drop	-0.128 ***	-0.149 ***
	(0.014)	(0.049)
switch	0.046 ***	0.152 ***
	(0.014)	(0.055)
open	0.208 ***	0.140 ***
	(0.016)	(0.041)
drop*d_crises	-0.084 ***	0.050
	(0.021)	(0.065)
switch*d_crises	-0.036 **	-0.095
	(0.017)	(0.066)
open*d_crises	-0.040 **	0.038
	(0.020)	(0.052)
wave_200709	0.006	0.096 ***
	(0.009)	(0.035)
wave_200803	-0.013	-0.007
	(0.008)	(0.031)
wave_200809	-0.032 ***	-0.022
	(0.009)	(0.034)
wave_200903	-0.033 ***	-0.100 ***
	(0.009)	(0.031)
wave_200909	-0.038 ***	-0.026
	(0.012)	(0.035)
wave_201003	-0.040 ***	-0.036
	(0.009)	(0.032)
wave_201009	-0.040 ***	0.051
	(0.010)	(0.036)
Observations	21506	19544
R^2	0.082	0.009

Sources: Bank of Italy surveys, Company Accounts Data Service, and Central Credit Register.
Panel estimations with firm- and time-fixed effects. The dependent variable is the semi-annual growth rate of credit granted (first equation) or actually disbursed (second equation). The dummy variables *drop*, *switch* and *open* identify firms that close at least one credit relation (without opening new ones), firms that open at least one credit relation and close at least one other, and firms that open at least one credit relation (without closing any). The dummy variable d_crises identifies the half-years post the Lemhan Brothers collapse. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively (based on heteroskedastic-robust standard errors)

Table 5

Bank substitution, by firm's perceived credit conditions

	2008/09 2009/03	2009/03 2009/09	2009/09 2010/03	2010/03 2010/09	2010/09 2011/03
Firms that do not report a tightening in overall credit conditions					
Stay (no changes)	66.7	74.8	69.9	74.3	73.0
Drop (firms that close at least one credit relation, without opening new ones)	13.0	10.0	14.8	9.7	10.9
Switch (firms that open at least one credit relation and close at least one other)	9.4	4.4	5.9	3.3	3.7
Open (firms that open at least one credit relation, without closing any)	10.9	10.8	9.4	12.8	12.4
Overall mobility (drop, open or switch)	33.3	25.2	30.1	25.7	27.0
Number of observations	1,420	1,783	1,580	2,360	1,893
Firms that report a tightening in overall credit conditions					
Stay (no changes)	55.5	65.5	63.5	64.8	66.5
Drop (firms that close at least one credit relation, without opening new ones)	19.5	13.8	16.0	15.9	12.2
Switch (firms that open at least one credit relation and close at least one other)	12.3	6.3	7.9	4.5	6.3
Open (firms that open at least one credit relation, without closing any)	12.7	14.3	12.6	14.8	15.0
Overall mobility (drop, open or switch)	44.5	34.5	36.5	35.2	33.6
Number of observations	1,282	1,123	875	684	605

Sources: Bank of Italy surveys, Company Accounts Data Service, and Central Credit Register.
Data are computed after correcting for mergers and acquisitions among banks and keeping a stable threshold, equal to 75,000 Euros, along the sample period.

Table 6

Multinomial logit regressions: continuing, dropping, switching, and opening credit relationships.
Credit concentration and firm characteristics.

	Regression 1			Regression 2		
	drop vs stay	switch vs stay	open vs stay	drop vs stay	switch vs stay	open vs stay
credit_tightening	0.017 ***	0.007 *	0.016 **	0.014 **	0.007 *	0.015 **
	(0.006)	(0.004)	(0.006)	(0.006)	(0.004)	(0.007)
credit_demand_down	0.017 *	0.004	-0.008	0.015 *	0.004	-0.008
	(0.009)	(0.005)	(0.008)	(0.009)	(0.005)	(0.008)
credit_demand_up	-0.017 ***	0.002	0.030 ***	-0.018 ***	0.003	0.031 ***
	(0.007)	(0.004)	(0.008)	(0.007)	(0.004)	(0.008)
herfindahl_index	-0.161 ***	-0.123 ***	-0.100 ***	---	---	---
	(0.137)	(0.010)	(0.014)			
number_banks	---	---	---	0.011 ***	0.006 ***	0.007 ***
				(0.000)	(0.000)	(0.000)
financial_costs	0.830 ***	0.271 **	0.669 ***	0.480 *	0.080	0.454 **
	(0.273)	(0.129)	(0.212)	(0.280)	(0.150)	(0.214)
ebidta	-0.177 ***	0.007	0.077 **	-0.175 ***	0.016	0.087 ***
	(0.038)	(0.019)	(0.031)	(0.039)	(0.021)	(0.031)
size	0.021 ***	0.011 ***	0.020 ***	0.012 ***	0.006 ***	0.015 ***
	(0.002)	(0.002)	(0.003)	(0.003)	(0.002)	(0.003)
exporting_firm	0.004	0.005	0.002	0.002	0.004	0.001
	(0.007)	(0.004)	(0.007)	(0.007)	(0.004)	(0.007)
age	0.002	0.006 **	-0.013 ***	0.003	0.007 **	-0.013 ***
	(0.004)	(0.003)	(0.005)	(0.004)	(0.003)	(0.005)
limited_liability_firm	0.043 ***	0.000	-0.032 **	0.044 ***	0.001	-0.031 **
	(0.011)	(0.007)	(0.015)	(0.011)	(0.008)	(0.015)
industrial_group	0.033 ***	0.004	0.008	0.028 ***	0.002	0.004
	(0.007)	(0.004)	(0.007)	(0.007)	(0.004)	(0.007)
wave_200903	-0.053 ***	-0.047 ***	0.004	-0.055 ***	-0.053 ***	0.004
	(0.009)	(0.006)	(0.008)	(0.009)	(0.007)	(0.008)
wave_200909	-0.020 **	-0.035 ***	-0.006	-0.020 **	-0.039 ***	-0.006
	(0.010)	(0.006)	(0.008)	(0.010)	(0.007)	(0.009)
wave_201003	-0.053 ***	-0.058 ***	0.024 ***	-0.058 ***	-0.065 ***	0.002 **
	(0.009)	(0.006)	(0.009)	(0.009)	(0.007)	(0.009)
wave_201009	-0.056 ***	-0.053 ***	0.025 ***	-0.060 ***	-0.059 ***	0.024 ***
	(0.009)	(0.007)	(0.009)	(0.010)	(0.007)	(0.009)
Geographic area dummies	Yes	Yes	Yes	Yes	Yes	Yes
Sectoral dummies	Yes	Yes	Yes	Yes	Yes	Yes
Observations	13605			13605		
Wald χ^2 (p-value)	1265.79 (0.000)			1404.75 (0.000)		
Pseudo R^2 (McFadden)	0.0624			0.0684		
Akaike Information criterion	1.789			1.777		
Count R^2	0.632			0.632		

Sources: Bank of Italy surveys, Company Accounts Data Service, and Central Credit Register.
Multinomial logit regressions where the base case is relationship continuation (stay). The coefficients are the estimates of the marginal change in the independent variable compared with the base case. For the dummy variables we report the change of 1. Definitions of the variables are in Table 1. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively (based on heteroskedastic-robust standard errors).

Table 7

Multinomial probit regressions: continuing, dropping, switching, and opening credit relationships. Credit concentration and firm characteristics.

	Regression 1			Regression 2		
	drop vs stay	switch vs stay	open vs stay	drop vs stay	switch vs stay	open vs stay
credit_tightening	0.017***	0.008**	0.016**	0.013**	0.007*	0.015**
	(0.006)	(0.004)	(0.007)	(0.006)	(0.004)	(0.007)
credit_demand_down	0.019**	0.005	-0.008	0.017*	0.003	-0.009
	(0.009)	(0.006)	(0.009)	(0.009)	(0.005)	(0.008)
credit_demand_up	-0.019***	0.003	0.031***	-0.020***	0.003	0.032***
	(0.007)	(0.004)	(0.008)	(0.007)	(0.004)	(0.008)
herfindahl_index	-0.159***	-0.124***	-0.093***	---	---	---
	(0.135)	(0.010)	(0.014)			
number_banks	---	---	---	0.011***	0.007***	0.007***
				(0.000)	(0.000)	(0.000)
financial_costs	0.797***	0.289**	0.625***	0.507*	0.057	0.457**
	(0.270)	(0.139)	(0.218)	(0.260)	(0.150)	(0.214)
ebidta	-0.173***	0.017	0.080**	-0.173***	0.023	0.087***
	(0.038)	(0.021)	(0.032)	(0.037)	(0.021)	(0.031)
size	0.021***	0.012***	0.020***	0.012***	0.006***	0.015***
	(0.003)	(0.002)	(0.003)	(0.003)	(0.002)	(0.003)
exporting_firm	0.004	0.006	0.002	0.002	0.005	0.002
	(0.008)	(0.004)	(0.007)	(0.008)	(0.004)	(0.007)
age	0.003	0.007**	-0.013***	0.003	0.008**	-0.013***
	(0.004)	(0.003)	(0.005)	(0.005)	(0.003)	(0.005)
limited_liability_firm	0.043***	0.000	-0.033**	0.046***	0.000	-0.032**
	(0.011)	(0.008)	(0.015)	(0.011)	(0.008)	(0.015)
industrial_group	0.035***	0.005	0.007	0.030***	0.002	0.003
	(0.007)	(0.004)	(0.007)	(0.007)	(0.004)	(0.007)
wave_200903	-0.050***	-0.052***	0.005	-0.052***	-0.056***	0.005
	(0.009)	(0.007)	(0.008)	(0.009)	(0.007)	(0.008)
wave_200909	-0.016	-0.040***	-0.005	-0.017	-0.042***	-0.006
	(0.010)	(0.007)	(0.009)	(0.010)	(0.007)	(0.009)
wave_201003	-0.052***	-0.063***	0.026***	-0.055***	-0.068***	0.025***
	(0.009)	(0.007)	(0.009)	(0.009)	(0.007)	(0.009)
wave_201009	-0.054***	-0.058***	0.026***	-0.056***	-0.062***	0.026***
	(0.010)	(0.007)	(0.009)	(0.010)	(0.007)	(0.009)
Geographical dummies	Yes	Yes	Yes	Yes	Yes	Yes
Sectoral dummies	Yes	Yes	Yes	Yes	Yes	Yes
Observations	13605			13605		
Wald χ^2 (p-value)	1288.11 (0.000)			1424.51 (0.000)		
Akaike Information criterion	1.789			1.777		
Count R^2	0.632			0.632		

Sources: Bank of Italy surveys, Company Accounts Data Service, and Central Credit Register.
Multinomial probit regressions where the base case is a relationship continuation (stay). The coefficients are the estimates of a marginal change in the independent variable compared with the base case. For the dummy variables we report the change of 1. Definitions of the variables are in Table 1. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively (based on heteroskedastic-robust standard errors).

Table 8

Multinomial logit regressions: continuing, dropping, switching, and opening credit relationships.
Interaction between credit tightening and demand.

	drop vs stay	switch vs stay	open vs stay
supply_demand = 1 (1;0)	0.019 ***	0.010 **	0.019 ***
	(0.007)	(0.004)	(0.007)
supply_demand = 2 (0;1)	-0.020 **	0.006	0.040 ***
	(0.009)	(0.006)	(0.011)
supply_demand = 3 (1;1)	-0.004	0.006	0.043 ***
	(0.009)	(0.005)	(0.011)
herfindahl_index	-0.162 ***	-0.123 ***	-0.099 ***
	(0.014)	(0.010)	(0.142)
financial_costs	0.867 ***	0.278 **	0.650 ***
	(0.273)	(0.127)	(0.014)
ebidta	-0.179 ***	0.007	0.079 **
	(0.039)	(0.019)	(0.031)
size	0.021 ***	0.011 ***	0.020 ***
	(0.003)	(0.002)	(0.003)
exporting_firm	0.004	0.005	0.001
	(0.007)	(0.004)	(0.007)
age	0.003	0.006 **	-0.013 ***
	(0.004)	(0.003)	(0.005)
limited_liability_firm	0.043 ***	0.000	-0.031 **
	(0.011)	(0.007)	(0.015)
industrial_group	0.033 ***	0.004	0.008
	(0.007)	(0.004)	(0.007)
Wave dummies	Yes	Yes	Yes
Geographic area dummies	Yes	Yes	Yes
Sectoral dummies	Yes	Yes	Yes
Observations		13605	
Wald χ2 (p-value)		1259.20 (0.000)	
Pseudo R^2 (McFadden)		0.062	
Akaike Information criterion		1.789	
Count R^2		0.632	

Sources: Bank of Italy surveys, Company Accounts Data Service, and Central Credit Register.
Multinomial logit regressions where the base case is a relationship continuation (stay). The coefficients are the estimates of a marginal change in the independent variable compared with the base case. For the dummy variables we report the change of 1. Definitions of the variables are in Table 1. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively (based on heteroskedastic-robust standard errors).

Table 9

Multinomial logit regressions: continuing, dropping, switching, and opening credit relationships. Credit relation and bank characteristics.

	Reg. 1: Average Bank-firm relation measures			Reg 2: Main Bank-firm relation measures			Reg 3: Average Bank-firm relation and average bank variables			Reg 4: Main Bank-firm relation and main bank variables		
	drop vs stay	switch vs stay	open vs stay	drop vs stay	switch vs stay	open vs stay	drop vs stay	switch vs stay	open vs stay	drop vs stay	switch vs stay	open vs stay
credit_tightening	0.017***	0.008**	0.017**	0.017***	0.008**	0.016**	0.018***	0.007*	0.016**	0.017***	0.008**	0.016**
	(0.006)	(0.004)	(0.007)	(0.006)	(0.004)	(0.007)	(0.006)	(0.004)	(0.007)	(0.006)	(0.004)	(0.007)
credit_demand_down	0.018*	0.004	-0.007	0.017**	0.004	-0.008	0.015	0.003	-0.007	0.020**	0.005	-0.009
	(0.009)	(0.005)	(0.008)	(0.009)	(0.005)	(0.008)	(0.009)	(0.005)	(0.009)	(0.009)	(0.005)	(0.008)
credit_demand_up	-0.018***	0.001	0.030***	-0.018***	0.002	0.030***	-0.023***	0.002	0.032***	-0.017**	0.001	0.031***
	(0.007)	(0.004)	(0.008)	(0.007)	(0.004)	(0.008)	(0.007)	(0.004)	(0.009)	(0.007)	(0.004)	(0.008)
herfindahl_index	-0.161***	-0.121***	-0.102***	-0.163***	-0.122***	-0.100***	-0.148***	-0.107***	-0.086***	-0.160***	-0.123***	-0.094***
	(0.014)	(0.009)	(0.014)	(0.014)	(0.010)	(0.014)	(0.014)	(0.009)	(0.015)	(0.014)	(0.010)	(0.015)
length	-0.003*	-0.003***	-0.005***	-0.002*	-0.002***	-0.000	-0.005**	-0.003**	-0.005***	-0.002*	-0.002**	0.000
	(0.002)	(0.001)	(0.002)	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)	(0.002)	(0.001)	(0.001)	(0.001)
distance	0.005**	0.008***	0.001	0.002**	0.003***	0.002	0.005*	0.004***	0.000	0.002	0.002*	-0.001
	(0.002)	(0.001)	(0.002)	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)	(0.003)	(0.002)	(0.001)	(0.002)
small_bank							-0.022*	-0.003	-0.030**	-0.004	0.002	-0.026***
							(0.014)	(0.008)	(0.014)	(0.008)	(0.005)	(0.001)
bank_capital							-0.013*	0.004	0.003	-0.002	0.000	-0.002
							(0.008)	(0.005)	(0.007)	(0.004)	(0.002)	(0.004)
bad_loans_share							-0.605**	-0.093	0.177	-0.335**	-0.058	0.034
							(0.280)	(0.182)	(0.268)	(0.146)	(0.088)	(0.148)
deposit_to_asset							-0.027	-0.067***	0.016	0.000	-0.033**	-0.023
							(0.042)	(0.025)	(0.043)	(0.023)	(0.013)	(0.024)
Firm controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Wave dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Geographic area dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sectoral dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	13605			13605			12086			13392		
Wald χ2 (p-value)	1310.39 (0.000)			1294.19 (0.000)			1037.32 (0.000)			1289.03 (0.000)		
Pseudo R2 (McFadden)	0.065			0.064			0.059			0.065		
Akaike Information criterion	1.785			1.788			1.723			1.785		
Count R2	0.632			0.632			0.630			0.632		

Sources: Bank of Italy surveys, Company Accounts Data Service, and Central Credit Register.
Multinomial logit regressions where the base case is a relationship continuation (stay). The coefficients are the estimates of a marginal change in the independent variable compared with the base case. For the dummy variables we report the change of 1. Definitions of the variables are in Table 1. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively (based on heteroskedastic-robust standard errors).

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