

Foreign Currency Lending - Borrower or Bank Driven?

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April 22, 2009

Abstract

Given current concerns on foreign currency exposures in emerging economies, we examine the currency denomination of bank loans. We compare the currency requested by borrowers and the currency decision subsequently made by a bank in Bulgaria prior to the current crisis. We analyze more than hundred thousand loans to sixty thousand different firms granted during the period 2003-2007. We relate the firms' desired and the bank's granted currency to firm characteristics, other loan characteristics, macroeconomic conditions and the refinancing structure of the bank. We find that the bank in our sample often grants loans in foreign currency even when a firm requests a loan in local currency. The bank prefers to lend in foreign currency especially when the firm requested a long-term loan and after the bank itself received more funding in euro. These results suggest that foreign currency borrowing in Eastern Europe may be partly supply-driven with banks hesitant to lend long-term in local currency and eager to match the currency structure of their assets and liabilities.

Keywords: foreign currency debt, banking

JEL classification numbers: G21 G30, F34, F37

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Acknowledgements:

1 Introduction

Firms in emerging markets often borrow in a foreign rather than the domestic currency. Unhedged foreign currency borrowing by the private sector is seen as a major cause of the financial crises in East Asia in the 1990's (Goldstein and Turner 2002). Currently there are strong fears that again foreign currency borrowing could jeopardize financial stability, this time in Emerging Europe. Such instability could have stark repercussions for the Western European banks which dominate lending in many of these countries.

The risks arising from foreign currency borrowing in countries like Poland, Hungary, Romania or Bulgaria are particularly worrying, as these loans are predominantly held by retail clients, i.e. households and small firms. *“The point to grasp about Eastern Europe is that ... the debt is plagued by currency mismatches because in recent years households (and to a lesser extent, corporates) have increasingly chosen to borrow in low-interest currencies ...it has shades of the Asian tigers back in 1997. One implication ... is that a sharp swing in value in the Swiss franc, say, could hurt the economies of Eastern Europe. However, another implication is that a currency swing could also affect the banks”* (Financial Times, 29/9/2007).

Realizing the potential risk to financial stability, authorities throughout Eastern Europe have recently taken measures to discourage foreign currency borrowing in the retail sector (Rosenberg and Tirpak 2008). In Hungary, Poland and Latvia, for example, banks are now forced to fully disclose the exchange rate risks involved in foreign currency borrowing and have had to tighten eligibility criteria for such loans. In Romania and Croatia on the other hand supervisory authorities have imposed stronger provisioning requirements on foreign currency compared to local currency loans. To what extent these measures may curb foreign

currency borrowing depends strongly on whether these loans are primarily demand or supply-driven.

Existing evidence for the region examines the motivation for firms (Brown, Ongena and Yesin 2009) and households (Beer, Ongena and Peter 2008) to *choose* a loan in a foreign rather than the local currency. However, the currency denomination of loans depends not only on the firms' preferred currency, but also on the loan menu which banks *offer* to them. For example if the future value of the domestic currency is unpredictable and banks are risk-averse they may be wary of extending credit, in particular long-term credit, in the local currency (Luca and Petrova 2008). But banks' supply of foreign currency loans may also depend on their own access to foreign currency refinancing (Basso, Calvo-Gonzalez and Jurgilas 2007).

In this paper we examine how the currency denomination of loans is determined in the negotiation process that takes place between small firms and one large retail lending institution in Bulgaria. Our analysis is based on 105,309 loan applications over the period 2003-2007. We compare the currency requested by the borrowers and the subsequent loan currency granted by the bank. We relate the firms' desired and the bank's granted currency to firm characteristics, other loan characteristics, macroeconomic conditions and the refinancing structure of the bank.

Our results show that foreign currency lending is not only driven by borrowers who try to benefit from lower interest rates. We find that the bank in our analysis often grants loans in a foreign currency, i.e. euro (EUR), even when a firm requests a loan in the local currency, i.e. Bulgarian leva (BGN). Our results show that the bank is more likely to change the loan currency from BGN to EUR when the firm requests a long-term loan and after the bank has received increased funding in euro. Our results thus suggest that foreign currency borrowing

in Eastern Europe may be partly supply-driven, with banks hesitant to lend long-term in local currency and eager to match the currency structure of their assets and liabilities.

2 Currency Denomination of Firm Debt: Theory and Evidence

Recent theoretical and empirical papers suggest that the loan currency choice by firms is determined by their economic exposure to foreign exchange rates, the relative cost of loans in different currencies, the volatility of exchange rates, and the potential distress costs which the firm faces in case of default. In this section we review existing theoretical and empirical studies on the currency denomination of firm debt, establishing the hypotheses for our empirical analysis and clarifying our contribution to the literature.

2.1 Theory

Goswami and Shrikande (2001) examine a model in which a corporation earns income in foreign currency and the value of this cash flow in local currency is uncertain due to exchange rate fluctuations.¹ They show that if firms face distress costs of defaulting on their debt they will choose foreign currency debt as this allows them to avoid costly default. Goswami and Shrikande (2001) assume that the uncovered interest rate parity holds, i.e. that the differences in the nominal interest rates between currencies are cancelled out by the changes in their exchange rate so that the costs of foreign currency borrowing and local currency borrowing are identical. As a consequence, interest rate differentials do not motivate foreign currency borrowing in their model.

However, a wide body of evidence suggests that this parity does not hold for many currencies (see e.g. Froot and Thaler 1990 or Isard 2006). Cowan (2006) and Brown, Ongena and Yesin (2009) consider firms' choices of loan currency in models where the cost of foreign currency debt is lower than the cost of local currency debt. The model of Cowan (2006)

¹ Economic exposure to foreign currency can also be managed with foreign exchange derivatives. See Brown (2001) and Mian (1996) for a broad discussion of corporate hedging instruments.

predicts that firms will be more likely to choose foreign currency debt the higher the interest rate differential, the larger their share of income in foreign currency and the lower their distress costs. The incentive to take foreign currency loans is weaker when the volatility of the exchange rate is higher, as this increases the default risk on unhedged loans.

Cowan (2006) assumes that investors or lenders are perfectly informed about the currency in which firms earn their income. Firms are consequently charged for the credit risk induced by taking an unhedged foreign currency loan. In reality, however, lenders may not be well informed about the income structure of their borrowers. Banks may not be able to verify the income sources of small, non-incorporated firms which do not keep detailed and audited financial records (Berger and Udell 1998). This information asymmetry may be particularly pressing in countries with weak corporate governance (Brown, Jappelli and Pagano 2008) and for foreign banks which have less knowledge about local firms (Detragiache, Tressel and Gupta 2008).

Brown, Ongena and Yesin (2009) examine the impact of bank-firm information asymmetries on loan currency choice. They show that when lenders are imperfectly informed about the currency or level of firm revenue, local currency borrowers will be more likely to choose foreign currency loans. The reason is that in a pooling “equilibrium” these borrowers are not fully charged for the credit risk involved in taking these unhedged loans.

The above models suggest that banks are risk-neutral intermediaries. However, in countries with less developed financial markets, banks (or their shareholders) may not be able to completely diversify risks. In particular, if forward markets for foreign exchange are not complete banks may behave averse towards exchange rate exposure on their balance sheet. Luca and Petrova (2008) examine a model of credit dollarization in which risk-averse banks and firms choose an optimal portfolio of foreign currency and local currency loans. In line with other portfolio-choice models of foreign currency debt (Ize and Levi-Yeyati 2003) Luca

and Petrova (2008) predict that banks will offer more foreign currency loans when the volatility of domestic inflation is high and the volatility of the real exchange rate is low. Thus, in countries where the monetary authority has not established a credible reputation for pursuing price stability this could imply that banks prefer to make loans in foreign currency. This tendency may be stronger for long-term loans than for short-term loans as long-term monetary policy may be particularly unpredictable.²

Banks are typically limited by prudential regulations in the foreign currency exposure they can take. For example in Bulgaria during our observation period the total open currency position on a bank's balance sheet could not exceed 30 percent of bank capital. In a country with underdeveloped derivative markets for foreign currency exchange, as in Bulgaria, this regulation implies that banks' supply of loans in foreign currency will be partly determined by its liabilities in these currencies. If banks cannot hedge foreign currency loans with off-balance sheet operations, then they must finance foreign currency loans with foreign currency deposits or debt. Basso, Calvo-Gonzalez and Jurgilas (2007) suggest that banks' supply of foreign currency loans will depend on their access to foreign currency debt through financial markets or from parent-banks abroad. Similarly, Luca and Petrova (2008) suggest that increases in banks' access to foreign currency deposits will lead them to offer more foreign currency loans.³

In summary, existing theory suggests that firms will be more likely to request foreign currency loans the larger the share of their income earned in foreign currency and the lower their distress costs in the case of default. Firms with local currency earnings may also be more likely to request foreign currency loans if the lender is imperfectly informed about their

² Note that this argument is not identical to that in the "original sin" literature (Eichengreen and Hausmann 1999, Hausmann and Panizza 2003), where it is argued that countries cannot finance themselves long-term in local currency because of moral hazard, i.e. they have the possibility to affect the value of their own currency.

³ For a discussion of deposit dollarization see De Nicolo, Honohan, and Ize (2005).

income structure. At the macroeconomic level, firms will more likely request foreign currency loans if the interest rate differential between local currency and foreign currency credit is high and the volatility of the exchange rate is low.

Lenders should be more willing to offer foreign currency loans when they have increased access to foreign currency liabilities in the form of debt or customer deposits. Moreover at the macroeconomic level, low credibility of domestic monetary policy may make banks reluctant to lend in local currency, especially at longer maturities.

2.2 Empirical Evidence

Several recent studies examine aggregate dollarization of credit in developing and transition countries. Most recently, Luca and Petrova (2008) analyze the aggregate share of foreign currency loans for 21 transition countries of Eastern Europe and the former Soviet Union between 1990 and 2003. As expected, they find that the aggregate share of foreign currency loans is positively related to aggregate export activity, interest rate differentials, domestic monetary volatility and deposit dollarization, while it is negatively related to the volatility of the exchange rate. They also find that dollarization is lower in countries with more developed foreign exchange markets, and that credit dollarization is affected by prudential regulations which stipulate tighter open position limits.

Basso, Calvo-Gonzalez and Jurgilas (2007) examine aggregate credit dollarization for 24 transition countries for the period 2000 – 2006. They find in particular that foreign funding of banks increases their share of loans in foreign currency. Earlier work by Arteta (2002) on a broad sample of low-income countries as well as Barajas and Morales (2003) on Latin America confirms the hypothesis that higher exchange rate volatility reduces aggregate credit dollarization.

Existing firm-level studies focus on the currency denomination of large firms using financial statement data. Kedia and Mozumdar (2003) find that large US corporations match loan currencies to those of their sales. Keloharju and Niskanen (2001) find that large Finnish corporations also match loan and income currencies. Moreover, they find evidence that loan denomination is driven by interest rate differentials across currencies. Martinez and Werner (2002) and Gelos (2003) show that large Mexican firms which export, and thus earn foreign currency income, use foreign currency loans as a natural hedge to economic exposure. Benavente, Johnson and Morande (2003) as well as Cowan, Hansen and Herrera (2005) find a similar result for Chilean firms. Allayannis, Brown and Klapper (2003) investigate the debt structure of large East-Asian corporations and find that interest rate differentials as well as asset type explain the use of foreign currency debt. Cowan (2006) investigating around 500 corporations in half a dozen Latin American countries arrives at similar results.

To our knowledge there is only one paper to date which studies firms' choices of loan currency using loan data. Brown, Ongena and Yesin (2009) examine the currency denomination of the most recent loan of 3,105 small firms in 24 transition countries, based on responses to the 2005 EBRD *Business Environment and Enterprise Performance Survey*. At the firm level they find strong evidence that the choice of a foreign currency loan is related to foreign currency cash flow. In contrast, they find only weak evidence that foreign currency borrowing is affected by firm-level distress costs or financial opaqueness. At the macroeconomic level the authors find no evidence that interest rate differentials and exchange rate volatility explain differences in foreign currency borrowing in their sample.

Our analysis is based on information from 105,309 loan contracts of a Bulgarian bank to micro, small and medium sized business clients over the period 2003-2007. In contrast to existing studies, our data allows us to examine to what extent the currency denomination of a loan is determined by the clients and / or the bank. We observe not only the currency

denomination of the actual loan extended, but also the currency requested by the firms. We can therefore identify how clients' demand for foreign currency loans and the bank's supply of such loans are related to firm characteristics, macroeconomic conditions and the bank's liability structure.

3 Data and methodology

Our dataset covers all annuity loans, credit lines and overdrafts extended to firms by one Bulgarian bank (henceforth called “the Bank”) between April 2003 and September 2007. In total the Bank extended 106,091 loans during this period to 61,687 different firms. For each loan disbursed we have information on the loan conditions requested by the firm, the actual loan conditions granted, as well as firm characteristics at the time of the loan application or disbursement. We exclude all observations with missing loan-level or firm-level data leaving us with 105,309 loans to 61,299 different firms. For each month during our observation period our dataset includes indicators of the refinancing structure of the Bank as well as indicators of monetary conditions and characteristics of the banking sector obtained from the Bulgarian National Bank (BNB) and the International Monetary Fund (IMF). Definitions and data sources of all variables are provided in the Appendix.

3.1 The Bank’s lending technology and loan portfolio

The core business of our Bank is to supply credit and other financial products to micro, small and medium enterprises. The Bank deals with customers in a personal, case-by-case way which is very personnel-intensive. At the heart of its lending technology is a thorough analysis of the borrower’s debt capacity.⁴ Loan negotiations for our sample of borrowers generally work as follows. When a borrower approaches the Bank, she first of all meets a Client Advisor who assesses whether the borrower meets the Bank’s basic requirements. If this is the case, the client fills in a loan application form. On this form the client indicates her preferred loan amount, maturity and *currency* as well as the purpose of the loan. The client

⁴ To gain insights into the usual loan granting process, we have conducted informal interviews with loan officers and training staff from the bank’s head office.

also has to provide information about the firm ownership, other bank relations and the free cash flow available for the repayment of the loan.

In a next step, the Bank's credit administration prepares information on the borrower's credit history with this Bank and other banks (if there is any) to check her repayment behavior and loyalty to the Bank. At the same time, the loan officer conducts a financial analysis. The financial analysis includes a personal visit to the borrower's site to screen not only the financial situation of the firm but also the borrower's (family) background, the surroundings and the property. The aim is to assess the borrower's repayment capacity.

The loan officer presents the customer's demand and his suggested loan terms together with the information gathered during the financial analysis to the Bank's credit committee, which then makes the final decision on the loan terms granted. Since the borrower's repayment capacity is the core figure in the analysis, *loan currency* and amount as well as loan maturity are determined first. The determination of interest rates and collateral requirements depends on the loan size. For "micro" loans (0 – 9,999 EUR) as well as "small" loans (10,000-49,999 EUR) collateral requirements and interest rates are fixed and are not negotiated on an individual basis. For "medium" loans (above 50,000 EUR) interest rates and collateral requirements are negotiated individually.

[Insert Table 1 here]

Table 1 provides an overview of the Bank's lending activities during our observation period. Panel A and B display the number and volume of disbursed loans by year and loan size. The overwhelming number of loans in our sample (82%) are micro loans with a volume of less than 10,000 EUR. However, considering the volume of lending, it is obvious that small loans (35%) and medium loans (33%) are of sizeable importance in our Bank's loan portfolio.

Panel A shows further that more than half of the Bank's loans are disbursed to repeat clients, i.e. borrowers who take more than one loan during our observation period. The subsample of loans to *repeat clients* will be important throughout our empirical exercise as it allows us to control for unobserved (time independent) firm-level characteristics.

Panels C and D of Table 1 show that a substantial share of the Bank's lending is in foreign currency rather than in Bulgarian leva (BGN). Loans denominated in euro (henceforth called EUR loans) account for 37% of the loan volume disbursed during our observation period.⁵ This share decreased considerably between 2003 and 2007, but even at the end of our observation period more than one-third of the disbursed loan volume was in euro. Panels C and D further reveal that the share of EUR loans varies substantially by loan size. EUR loans are negligible among micro loans. In contrast, EUR loans make up a sizeable share of small loans and constitute the large majority of medium loans.

[Insert Table 2 here]

As we have information on the firms' requested currency as well as the actual denomination of the loan granted, we are able to establish how often the Bank changes the loan currency denomination. Table 2 indicates that the frequency of currency changes depends strongly on loan size. Among micro loans almost no requests for BGN loans were changed to EUR loans, while 18% of the (admittedly few) requests for EUR loans were granted as BGN loans. The picture reverses for medium loans of which the majority is requested and granted in EUR. Moreover, nearly 29% of the medium loans requested in BGN are actually granted as EUR loans. The pattern for repeat clients resembles more that of the micro loans because the sample mainly consists of micro loans. These summary statistics

⁵ We focus our analysis on foreign currency loans denominated in EUR, since they account for 97.5% of the bank's total foreign currency lending.

provided in Table 2 suggest that the currency denomination of loans in our sample is not only determined by firms' demand but also by the Bank's supply considerations. A key part of our empirical analysis will be to examine what drives our Bank to alter the currency denomination of the loans from those requested.

3.2 Firms' demand for EUR loans

Existing theory suggests that a firm's choice for a foreign rather than a local currency loan is positively related to the revenue earned in foreign currency, the interest advantage on foreign currency funds and the opaqueness about its revenue sources. In contrast, the choice of a foreign currency loan should be negatively related to exchange rate volatility and the firm-level distress costs related to loan default. To analyze firms' demanded loan currencies in our sample, we examine a model in which the dependent variable $\Pr(EUR\ requested)_{i,k,t}$ is the probability that a firm i that is taking a loan k in period t requests a EUR loan:

$$\Pr(EUR\ requested)_{i,k,t} = a + \beta_1 L_k + \beta_2 F_{i,t} + \beta_3 M_t + e_{i,k,t} \quad (1)$$

In this model L_k and $F_{i,t}$ are vectors of loan and firm characteristics measuring foreign currency revenue, distress costs and opaqueness of firm revenues, while M_t is a vector of the monetary conditions at the time of loan disbursement.

Loan- and Firm-Level Determinants

Exchange rate depreciations can force foreign currency borrowers into default because their loan installments may rise above their free cash flow. Firms which have income in foreign currency are less likely to be affected by exchange rate depreciations and thus more likely to take foreign currency loans. We do not observe the revenue currency of firms in our

sample directly. Our proxy for foreign currency revenue is the dummy variable *EUR account* which equals one if the firm has a savings or term account in euro at the disbursement date of the loan, and equals zero otherwise. We believe firms with a EUR savings account to be more likely to have income in euro. To rule out that the existence of a savings or term account *per se* affects the firm's decision, we also include the variable *BGN account* indicating whether the firm holds a BGN savings or term account at the disbursement date of the loan.

Brown, Ongena and Yesin (2009) assume that not only foreign currency earning firms but also firms with low debt to income ratios are less likely to be affected by exchange rate depreciations and thus more likely to take foreign currency loans. We include three indicators to account for firms' debt to income ratios. Our first measure is *Disposable income* which is the firm's average monthly free cash flow at loan disbursement. Our other two measures *Requested amount* and *Requested maturity* measure the log of the requested loan amount (measured in euro) and the log of the requested loan maturity (in months) respectively. Firms requesting larger loans with shorter maturities face higher loan installments and thus have higher ratios of debt burden to income.

Theory predicts firms with low distress costs in the case of default to be more likely to request foreign currency loans (Goswami and Shrikande 2001 and Cowan 2006). We include three indicators of firm-level distress costs in our analysis. Our first indicator is *Leverage*, which measures the firm's total liabilities as a share of its total assets. Being highly levered leads to higher distress costs since it is very costly for firms to obtain emergency financing when facing default (Cowan 2006). Our second indicator of distress costs is the dummy variable *Fixed capital loan* which equals one if the purpose of the loan is to finance a tangible fixed capital investment, and equals zero otherwise. Since the tangible asset may be liquidated in case of default, distress costs (e.g. the volume of required emergency funding) may be lower for these loans.

Firms in which the owner or manager have higher private values of continuing their business also face higher distress costs in the case of default (Froot, Scharfstein and Stein 1993). We expect this private value to be higher in sole proprietorships than in incorporated companies. Our third indicator of distress costs *Sole proprietorship* therefore equals one if the firm is a sole proprietorship and equals zero otherwise.

We include one direct indicator for the degree of information asymmetry between the firm and the Bank. The variable *Duration* measures the length of the bank-borrower relationship in months since their first contact. We expect that the Bank can gain private information about the firm's revenue potential by observing the firm's past repayment behavior or its usage of other bank products. Both should be positively correlated with duration.

At the firm level we introduce two further control variables which may be indicators of foreign currency income, distress costs or financial opaqueness. As larger and older firms are more likely to have export income, less likely to default due to a given foreign currency loan and more likely to be financially transparent than smaller and younger firms, we include the log of total firm *Assets* (measured in euro) as an indicator of firm size and firm *Age* (log of age in years) as firm-level control variables. To capture all remaining differences in firm characteristics our regressions contain seven *Industry dummies*. Besides, the industry dummies may be taken as an additional indicator of foreign currency earnings since foreign currency income is more likely in certain industries (e. g. trade or transport).

Monetary conditions

We expect that firms are more likely to request foreign currency loans if the interest rate differential on foreign currency loans is high, expected exchange rate volatility is low and domestic inflation volatility is high. In our analysis of firms' (and the Bank's) decisions we control for changes in these monetary conditions in two ways: First we use year-month fixed

effects, which allows us to control for changes in unobserved country-level determinants. Second, we replace these time fixed effects with three direct indicators of the monetary conditions prevailing at the time of loan disbursement.⁶ These indicators are based on data obtained from the Bulgarian National Bank.

We first account for the interest rate differential between local and foreign currency credit. For each month during our observation period we calculate the *Interest differential* by subtracting the interbank rate in EUR from the interbank rate in BGN. We use this market based measure of interest rate differentials, as it gives us a measure of the “risk-free” interest rate advantage on foreign currency funds. Using instead actual lending rates from our Bank may confound the interest advantage with varying risk premia on BGN and EUR loans.

Our second indicator accounts for expected volatility of the BGN/EUR exchange rate since a higher volatility increases the default risk of unhedged loans reducing the incentive to borrow in foreign currency. It is important to point out that Bulgaria introduced a currency board in July 1997 which fixed the exchange rate towards the EUR. This currency board held throughout our observation period, so that there was almost no actual exchange rate volatility. However, this by no means implies that firms or banks in Bulgaria were confident that depreciations of the Bulgarian lev were not to be expected. Indeed, Valev (2007) reports survey evidence suggesting that 17% of the Bulgarians believed the currency board might collapse within the next 12 months. Considering a period of 5 years more than 28% of respondents expected the currency board to collapse. These expectations are mirrored in differences in the term structure of interest rates in Bulgaria for BGN and EUR deposits. During most of our observation period, the term structure for BGN deposits is steeper than that for EUR deposits, suggesting that market participants thought a devaluation of the lev

⁶ The firm’s request for a loan and thus the currency choice is naturally prior to the date of loan disbursement. Since the Bank’s loan granting procedure is well established and clear-cut, the time span between loan application and disbursement is normally short and macroeconomic conditions should not have changed considerably in the meantime.

was possible. Our measure of expected exchange rate volatility is based on these observed differences in the term structure of interest rates. The variable *Term spread differential* is calculated as the long-term to short-term spread on corporate deposits in BGN minus the corresponding spread on corporate deposits in EUR.

Ize and Levy-Yeyati (2003) predict that firms will be more likely to take out foreign currency loans when the volatility of domestic inflation is high. We measure *Inflation volatility* as the variance of monthly changes in the consumer price index over the twelve months prior to the beginning of the quarter in which the loan was disbursed.

Finally, given that we are examining loan decisions at one bank which does offer foreign currency loans, we expect that the demand for foreign currency loans at our Bank may depend on the possibilities of firms getting similar loans at other banks. We control for the firms' possibilities to obtain foreign currency loans from alternative providers with the variable *Foreign currency loans* which measures in each month the share of corporate loans in the entire Bulgarian banking system which are denominated in foreign currency.

3.3 The Bank's supply of EUR loans

In the second part of our empirical exercise, we study how the Bank's choice to grant a foreign currency loan is influenced by loan and firm characteristics, as well as by monetary conditions and its own access to funding in local and foreign currency. Our dependent variable is $\Pr(\text{EUR granted} \mid \text{EUR requested} = 0; 1)_{i,k,t}$ which is the probability that the Bank grants a loan k to firm i in period t in EUR rather than BGN conditional on the firm's requested currency. Thus, we estimate the following empirical model separately for loans requested in BGN and EUR:

$$\Pr(\text{EUR granted} \mid \text{EUR requested} = 0; 1)_{i,k,t} = \alpha + \beta_1 L_k + \beta_2 F_{i,t} + \beta_3 M_t + \beta_4 B_t + \epsilon_{i,k,t} \quad (2)$$

In this model the vectors L_k , $F_{i,t}$ and M_t include loan characteristics, firm characteristics and indicators of monetary conditions, while the vector B_t captures indicators of the Bank's funding structure at the time when a loan is disbursed.

The Bank's decision to grant a loan in local or foreign currency will depend on the expected credit risk for either type of loan. We use *EUR account*, *BGN account*, *Leverage*, *Disposable income*, *Requested amount*, *Requested maturity* and *Fixed capital loan* to control for observable credit risk. Again, *Duration* is a direct measure of informational asymmetries between the borrower and the Bank, while *Age*, *Sole proprietorship* and *Assets* may control for credit risk or for the transparency of the firm. We also include *Industry dummies* to control for unobserved differences in credit risk across sectors.

The Bank's decision to grant loans in local or foreign currency should depend on the markup it can earn on either loan type. In our model of the Bank's choice we therefore include a measure of how profitable it is for the Bank to intermediate funds in BGN compared to EUR. The variable *Spread differential* measures the difference between the intermediation spread in BGN and EUR, whereby the (risk-free) intermediation spreads are calculated as the interbank rate minus the average deposit rates in BGN or EUR respectively. Like all our indicators of monetary conditions this indicator is based on data obtained from the Bulgarian National Bank.

Luca and Petrova (2008) suggest that banks will offer more foreign currency loans when the volatility of the real exchange rate is low and the volatility of domestic inflation is high. To capture this intuition we include the variables *Term spread differential* and *Inflation volatility* in our model of the Bank's choice. We also include the variable *Foreign currency loans* which measures the competition our Bank faces in the foreign currency loan market.

Basso, Calvo-Gonzalez and Jurgilas (2007) suggest that banks with increased access to foreign currency funds should offer more foreign currency loans. We measure the Bank's access to foreign currency funds with the variable *EUR liabilities* which we calculate as the Bank's liabilities denominated in EUR as a share of its total liabilities. Empirical evidence for transition countries suggests that customer deposits in foreign currency may have a stronger impact on credit "dollarization" than foreign currency debt sourced from financial institutions or capital markets (Luca and Petrova, 2008). To control for this potential composition effect of the Bank's foreign currency refinancing, we introduce *EUR debt* which is the Bank's debt denominated in EUR as a share of its EUR liabilities. As it is likely that the Bank updates its internal financial statements not more frequently than on a monthly basis, we calculate both variables based on information from the month prior to loan disbursement.

3.4 Summary Statistics

Table 3 provides summary statistics for our loan- and firm-level determinants of foreign currency borrowing.⁷ Panel A reports statistics for the full sample. Panel B presents sample means by loan groups and shows that loan maturity, loan purpose and firm characteristics vary strongly with loan size. Larger loan amounts are accompanied by requests for longer maturities and a higher proportion of fixed capital financing. The usage of savings and term accounts is similar for micro, small and medium loans. However, firms with micro loans save considerably more in local than in foreign currency, while the fraction of foreign currency accounts increases for firms with small and medium loans. Panel B further shows that firms with micro loans are on average the youngest (8.34 vs. 9.86 for medium loans), smallest (23,305 EUR compared to 774,651 EUR for medium loans) and the least levered (14% vs.

⁷ In the table we present the untransformed values for the variables *Requested amount*, *Requested Maturity*, *Age*, *Assets* and *Disposable income*.

27% for medium loans) in the sample. Their average monthly disposable income is only 365 EUR (10,741 EUR for medium loans), 96% of them are sole proprietorships (vs. 25% of firms with medium loans), and the duration of their relationship with the Bank is less than half of the duration for firms having medium loans (8.90 months compared to 20.76 months). Again, statistics for the full sample and the repeat clients are closest to those for micro loans since most of the loans in the sample are micro.

[Insert Table 3 here]

Panel C of the table displays sample means by requested and granted loan currency. The first column of the panel includes loans for which the requested and granted currency is BGN, while the second column includes loans which were requested in BGN but granted in EUR. Comparing the two columns we see that in those cases where the loan currency is changed from BGN to EUR the requested loan amount is higher and the loan is more often intended for fixed capital financing. In cases where BGN requests are granted in EUR the firm more often has a EUR savings account, is larger, has a higher disposable income and a longer relationship with the Bank. Hence, the Bank's decision to alter loan currency from BGN to EUR seems to be correlated with lower observable credit risk and greater financial transparency of the firm. Using a Student's t-test reveals that all differences in sample means are significant on the 0.01-level.

Panel C further displays statistics for loans requested in EUR and granted in either BGN (column 3) or EUR (column 4). Comparing the two columns we again find that sample means are significantly different between the two groups. Specifically, we find that in cases where the Bank alters loan currency from EUR to BGN the requested loan size is smaller, the requested maturity is shorter and the loan is less often intended for fixed capital financing. In

cases where requested EUR loans are granted in BGN we also find that firms are smaller, have less disposable income, are more often sole proprietorships and more likely to have a local currency savings account. Thus again, it seems that firms which are granted local currency loans (rather than the requested foreign currency loan) can be characterized by higher credit risk and lower financial transparency.

Panel D presents pairwise correlations between the loan and firm characteristics. Not surprisingly, *Disposable income*, *Assets* and *Requested amount* are positively correlated. All other variables show very low levels of correlation.

Table 4 presents summary statistics for monetary conditions and the Bank's funding structure. Panel A provides sample means by year and shows that over the entire sample period, there was a positive interest rate advantage on EUR versus BGN funds in Bulgaria. In 2004 and 2005 this *Interest differential* exceeded 1%, whereas it came down to only 0.12% in 2007. While these interest rate differentials are based on short-term interbank rates, they do suggest that the interest rate advantage on foreign currency funds is smaller in Bulgaria during our observation period than in other transition countries (see e.g. Brown, Ongena and Yesin 2009). Our measure for expected exchange rate volatility (*Term spread differential*) suggests that fears of a depreciation of the BGN by market participants were also limited. Indeed, in 2007 the term structure of EUR interest rates is actually steeper than that of BGN interest rates. Finally, *Inflation volatility* declined from 1.50% in 2003 to 0.81% in 2007.

[Insert Table 4 here]

Panel A further shows that throughout our observation period banks in Bulgaria had a strong incentive to intermediate EUR funds rather than BGN funds. The negative *Spread differential* in each year suggests that intermediating EUR funds was more profitable for

banks. It is therefore not too surprising that the share of *Foreign currency loans* in the whole banking system rose from 55% to 65% over the sample period.

Table 4 shows that our Bank's funding in foreign currency increased sharply between 2003 and 2004, and then remained relatively constant during the remainder of our observation period. The composition of the Bank's foreign currency refinancing changed substantially over the sample period. In 2003 79% of its EUR liabilities was debt sourced from other banks, International Financial Institutions or the capital market. In 2007 in contrast, customer deposits accounted for 61% of the Bank's EUR liabilities.

Panel B of Table 4 reports pairwise correlations for our macroeconomic variables and indicators of the Bank's funding structure. While most of the correlations are moderate, *Foreign currency loans* displays a high negative correlation with *Inflation volatility*, which contradicts the theoretical prediction of Ize and Levy-Yeyati (2003).

4 Results

4.1 Firms' demand for EUR loans

Tables 5 and 6 display our results for firms' decisions to request foreign currency loans. In both tables we present estimates for five different samples. Estimates for the full sample are provided in column (1). We then split the sample by micro, small and medium loans to study differences in these loan groups and report results in columns (2) to (4). Finally, column (5) displays results for repeat clients. For all specifications we report coefficients from logit estimations.⁸ The tables display both logit coefficients and marginal effects, the latter in square brackets. Standard errors presented in round brackets are adjusted for clustering at the firm level. For the subsample of repeat clients in column (5) we introduce firm-fixed effects to account for unobserved firm-level heterogeneity. For this subsample we drop *Age* because it increases parallel to *Duration* over a sequence of several loans. We also drop *Sole proprietorship* as there is almost no within-panel variance.

[Insert Table 5 here]

The results presented in columns (1) to (4) of Table 5 show that the determinants of foreign currency loan demand are consistent across sub-samples. As expected the choice of a foreign currency loan is positively related to our indicator of foreign currency revenue. Firms with a *EUR account* are more likely to demand a EUR loan. In contrast, having a *BGN account* does not influence the decision. Thus, it is the currency of the account which drives the decision and not the existence of a savings or term account per se. For medium loans, having a *EUR*

⁸ We opt for logit estimations to be able to introduce firm-fixed effects in the regressions for repeat clients. We reran all other regressions using probit estimations and found qualitatively the same results.

account does not influence the decision to demand foreign currency, while having a BGN account lowers the probability to ask for a EUR loan by 24.2%. One possible explanation may be that firms taking out medium loans all earn some of their income in EUR to allow them to demand foreign currency loans. For those firms it is therefore the actual fraction of BGN income that drives the decision.

Considering the impact of firms' debt to income ratios we find mixed results. Contrary to our expectations, firms with higher disposable incomes are less likely to take foreign currency loans while firms with higher requested loan amounts are more likely to request foreign currency loans. An explanation for this result could be that the *absolute* interest rate advantage on foreign currency funds increases with requested loan size and thus encourages more firms to demand such loans. In line with our predictions we find that firms requesting longer maturities (and thus having smaller installments) are more likely to request foreign currency loans.

The evidence on the influence of distress costs on foreign currency is in line with theoretical predictions. As predicted, there is a significantly positive relation between *Fixed capital loan* and the probability to request foreign currency. Firms that use their loans to finance fixed assets face less distress costs in case they default on their loan because the underlying asset may be liquidated. Confirming theoretical predictions as well, sole proprietorships, which we expect to have a higher private value of their business and therefore higher distress costs, are less likely to request foreign currency loans. Our third indicator of distress costs, firm *Leverage*, also confirms our predictions, being negatively correlated with foreign currency demand. However, this result is only weakly significant.

The significantly positive coefficient of *Duration* shows that firms with longer bank-borrower relationships are more likely to request a foreign currency loan. This contradicts our prediction that more opaqueness in the bank-firm relationship may encourage (local currency

earning) firms to request foreign currency loans. One explanation for this finding is that firms anticipate that banks may only offer foreign currency loans to firms they know well. A further explanation could be that firms with longer bank relationships are more sophisticated and more likely to have investment opportunities which generate foreign currency income.

Larger firms are also more likely to request foreign currency loans. This may be a further hint that firms with lower distress costs are more likely to demand foreign currency. The *Age* of the firm is negative and significant for firms which take medium loans. One possible explanation may be that age captures general differences in the financing behavior and risk attitude between old firms stemming from communist times and younger firms founded after transition had started and that these differences become more explicit for larger loans.

Our *Industry* dummies show that firms in all industries are more likely to request foreign currency loans than firms in agriculture which is our baseline industry (not reported in the table). Moreover, exactly those industries which we expect to be more likely to earn foreign currency income such as Trade, Transport and Construction (as houses are often paid in EUR) display the largest economic relevance. This provides further evidence that foreign currency earnings increase a firm's likelihood to request a foreign currency loan.

The results for the subsample of repeat clients in column (5) confirm in general our findings above. Concerning other loan characteristics, a larger loan size, a longer maturity and a loan being intended for fixed capital investment increases the likelihood of a firm requesting foreign currency. Considering firm-level characteristics, we find again that larger firms are more likely to request foreign currency loans. In contrast to our results in columns (1-4) our panel analysis suggests a positive and statistically significant influence of *Leverage* on the firm's decision to take a foreign currency loan. This result contradicts our prediction that firms with higher distress costs should be less likely to choose EUR loans.

[Insert Table 6 here]

In Table 5 we control for macroeconomic influences on firms' currency choice using time fixed effects. The regressions presented in Table 6 replace these time effects with direct measures of interest rate differentials, exchange rate volatility, inflation volatility and competition in the banking sector. In the table we do not report estimates for loan and firm characteristics as they do not differ qualitatively from those in Table 5.

As predicted, firms are more likely to request EUR loans when the interest rate advantage on EUR funds is higher. The positive and statistically significant coefficient of *Interest rate differential* in columns (1-4) suggests that firms taking micro, small and medium loans consider the interest rate differential when choosing their requested loan currency. This finding is however not confirmed by our panel analysis in column (5).

In contrast, we do not find evidence that the volatility of the exchange rate as measured by the *Term Spread Differential* or domestic *Inflation volatility* have a consistent impact on firms' loan currency decision. The influence of domestic inflation seems to strongly depend on the loan group. Within small loans the demand for EUR loans increases, as expected, when inflation volatility is high. However, for micro loans we find the opposite result.

As predicted, the possibility to borrow in foreign currency from other financial institutions reduces the probability that firms demand foreign currency loans from our Bank. This result is statistically significant for firms taking micro and small loans, but not for firms taking medium loans. A possible explanation for this difference across loan size is that throughout our observation period foreign currency loans were more readily available for larger than for smaller loan amounts.

4.2 The Bank's supply of EUR loans

Tables 7 and 8 display our results for the Bank's decision to grant a foreign currency loan. We examine the Bank's decision conditional on the firm's request for either a BGN or EUR loan. Table 7 presents results for firms which request local currency (BGN) loans, while Table 8 presents results for firms which request foreign currency (EUR) loans. In both tables, Panel A examines the impact of loan and firm characteristics, while Panel B examines the impact of monetary conditions and bank funding. In each panel we present estimates for five different samples as in Tables 5 and 6. Estimates for the full sample are provided in column (1), estimates for the subsamples of micro, small and medium loans are presented in columns (2- 4), and estimates for repeat clients are listed in column (5). As above, all specifications report coefficients from logit estimations with the tables displaying both logit coefficients and marginal effects, with the latter in square brackets. Standard errors presented in round brackets are adjusted for clustering at the firm level.

In Table 7 we examine the probability that the Bank grants a EUR loan after the firm has requested a BGN loan. The results displayed in Panel A of the table show that the Bank is more likely to change the loan currency when the *Requested amount* is larger, the *Requested maturity* is longer and the loan is intended for fixed capital financing. The Bank's inclination to alter the firm's currency request is particularly relevant for firms with medium loans. For example, if the loan is a fixed capital loan the Bank's probability to grant EUR is increased by 44%.

Results on the firm characteristics suggest that the Bank is mainly concerned with observable credit risk when deciding on whether to grant the loan in BGN or change it to a EUR loan. The Bank is more likely to switch the loan currency to EUR if the firm has a *EUR account*, but less likely to switch if the firm has a *BGN account*. These results indicate that a key determinant of switching the loan to foreign currency is the firm's revenue share in foreign currency.

The positive coefficients of *Assets* and *Disposable income* suggest that the Bank is more likely to switch the loan currency to EUR for larger firms and firms with more disposable income. Interestingly, the coefficient of *Disposable income* is only significant for micro loans. This result can be explained by the fact that micro loans are mainly extended to micro firms which are less likely to have foreign currency income. As shown in Brown, Ongena and Yesin (2009) disposable income is particularly important in determining the ability of a firm to repay a foreign currency loan if the firm only has revenues in local currency. Further firm-level control variables also suggest that the Bank is most concerned about the credit risk involved in switching micro loans from local to foreign currency. Thus, when asking for a micro loan, firms which are older, which are not sole proprietorships and which have interacted with the Bank for longer are more likely to be granted a foreign currency loan although they requested a local currency loan.

[Insert Table 7 here]

In Panel A of Table 7 we control for the impact of monetary conditions and bank funding with time fixed effects. In Panel B of the table we replace these time effects with direct measures of the Bank's funding structure, interest rate spreads, exchange rate and inflation volatility as well as competition in the banking sector.

The results presented in Panel B clearly indicate that the Bank's funding structure affects its probability of switching a local currency loan request to a foreign currency loan. The EUR share of the Bank's refinancing (*EUR liabilities*) increases the Bank's likelihood to extend EUR loans to firms that requested BGN loans. For each 1%-increase in the EUR share of the Bank's total liabilities, the likelihood of the Bank to change the loan to a EUR loan increases by 0.3% for micro loans, by 38% for small loans and by 71% for medium loans. These results

suggest that whenever reasonable the Bank alters the firm's request and lends in foreign currency to avoid a currency mismatch on its own balance sheet.

Our results also suggest that the changing composition of the Bank's foreign currency liabilities affected its decision to grant EUR loans. The more EUR debt in comparison to EUR deposits the Bank holds, the less likely it is to grant EUR loans to firms that requested BGN loans. This result suggests that while the Bank attempted to match the currency structure of its liabilities and assets, it may have been more reluctant to lend EUR funds obtained from international financial institutions to more risky clients than EUR funds obtained from customers.

Our results show that the relative mark-up on EUR funds does not affect the Bank's choice to change loan currencies. The coefficient of *Spread differential* is not significant for the group of micro, small or medium loans. Furthermore, the prevailing monetary conditions do not seem to have a substantial influence on the Bank's currency choice. As expected, we find that our measure of the volatility of the exchange rate (*Term spread differential*) relates negatively to the Bank's likelihood to alter a firm's currency request, but only for micro loans. We do not find evidence for the prediction that higher *Inflation volatility* leads to more foreign currency lending. Finally, competition from other providers of foreign currency loans decreases the Bank's likelihood to grant EUR loans when a firm requests a local currency loan.

[Insert Table 8 here]

In Table 8 we examine the probability that firms which demanded a foreign currency loan are also granted a foreign currency loan. Panel A presents results for loan- and firm-level explanatory variables. Our results confirm that the Bank is more likely to grant a foreign

currency loan when the requested loan is large, of longer maturity and intended for fixed capital investment. However, in contrast to our findings for firms which requested BGN loans, we find this relation only to be robust for the *Fixed capital loan* variable.

The results in Panel A further confirm our earlier findings that larger firms and firms with longer bank relationships are more likely to receive a foreign currency loan, while sole proprietorships are less likely to do so. For micro loans, differences in firms' foreign currency earnings still determine the probability that the Bank grants a EUR loan. Having a *EUR account* makes it more likely for the Bank to meet the firm's foreign currency request because the firm can credibly prove to have foreign currency earnings by saving in foreign currency and because observable currency risk is lower. In addition, having a *BGN account* decreases the Bank's likelihood to grant a EUR micro loan by 17.3%. For small and medium loans, hardly any of the firm-level variables turn out to significantly influence the Bank's choice to meet the firm's currency request. This may be explained by the fact that there is practically no variation in the outcome for these loan groups since the Bank altered the firm's currency request for only 5.7% of small loans and 2.2% of medium loans.

In Panel A of Table 8 we control for the impact of monetary conditions and bank funding with time fixed effects. In Panel B we again replace these time effects with direct measures of the Bank's funding structure, interest rate spreads, exchange rate and inflation volatility as well as competition in the banking sector. In contrast to our findings in Table 7 the results suggest that increased access to foreign funds *per se* does not influence the Bank's decision to extend a loan in foreign currency. However, we do find that an increase in the share of foreign currency liabilities coming from debt increases the probability of the Bank granting a EUR loan. Thus, the likelihood of a firm which requests a EUR loan of getting such a loan increases if the Bank has a larger share of liabilities in foreign currency from international financial institutions or the capital market.

The results in Panel B of Table 8 further show that the monetary condition influencing the Bank's currency choice most is our indicator for exchange rate volatility (*Term spread differential*). As predicted, lower exchange rate risk increases the probability that the Bank meets a firm's request for a foreign currency loan.

[Insert Table 9 here]

The results displayed in Panel B of Tables 7 and 8 suggest that our Bank's liability structure has a significant impact on its decision to lend in foreign currency. However, our findings above also indicate that the impact of the Bank's access to foreign currency liabilities may have a different effect on firms which request a local currency loan than on firms that request a EUR loan. The analysis presented in Table 9 examines the differential effect of the Bank's liability structure depending on the firms requested currency. The table reports the results of OLS regressions for the pooled sample of loans requested in BGN and EUR. In this analysis the dependent variable is the Bank's currency choice *EUR granted* which is regressed on the dummy variable *BGN requested* (which is 1 for loans which were requested in local currency and 0 for loans requested in EUR), the bank funding variables *EUR liabilities* and *EUR debt*, and the interaction effects *EUR liabilities * BGN requested* and *EUR debt * BGN requested*. In all regressions we further include the loan, firm and macroeconomic explanatory variables used in Panel B of Tables 7 and 8.

The results in Table 9 suggest that the impact of the Bank's liability structure on its lending decisions varies strongly by loan size. For small and medium loans we find a significantly positive coefficient of *EUR liabilities* and an insignificant interaction term *EUR liabilities * BGN requested* suggesting that an increase in the size of foreign currency liabilities raises the probability of the Bank lending in foreign currency, independent of the firm's requested

currency. For these loan groups the insignificant coefficient of *EUR debt*, and the negative coefficient of *EUR debt * BGN requested* further suggest that a larger share of foreign currency liabilities to financial institutions and the capital market lowers the probability of the Bank changing a firm's loan from BGN to EUR. Thus for small and medium loans it seems that EUR funding raises Bank lending in EUR, but the Bank is more reluctant to extend EUR to firms that wanted BGN if this funding comes from more sophisticated creditors.

For micro loans we find that an increase in the size of foreign currency funding does not raise the Banks probability of lending in foreign currency to firms that requested EUR or BGN. For these micro loans the positive coefficient of *EUR debt* suggests that an increase in foreign currency debt (versus foreign currency deposits) raises the probability of the Bank lending in EUR. The equally negative interaction term *EUR debt * BGN requested* suggests however that this effect does not apply to firms which requested BGN loans. These results may be explained by the fact that the Bank may have received foreign currency debt from international financial institutions with the goal of lending these funds to micro-enterprises. While these creditors may provide EUR funds for directed lending they may also put strict limits on the credit risk involved in the loans the Bank extends.

5 Conclusions

In this paper we examine the currency denomination of loans extended to small firms by one retail bank in Bulgaria. Our analysis is based on credit file data for 105,309 loans over the period 2003-2007. In contrast to existing studies, our data allows us to disentangle demand and supply side drivers of the currency denomination of loans. We observe not only the actual currency denomination of the loan extended, but also the loan currency that was requested by the firms. We can therefore identify how clients' demand for foreign currency loans and the Bank's supply of such loans are related to firm characteristics, macroeconomic conditions and the Bank's liability structure.

Our results show that foreign currency lending is not only driven by borrowers who try to benefit from lower interest rates. We find that the bank in our analysis often grants loans in euro, even when a firm requests a loan in Bulgarian leva. Our results show that the bank is more likely to change the loan currency when the firm requests a long-term loan and after the bank has received increased funding in euro. Our results thus suggest that foreign currency borrowing in Eastern Europe is at least partly supply-driven, with banks hesitant to lend long-term in local currency and eager to match the currency structure of their assets and liabilities.

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Appendix. Variable Definitions and Data Sources

Data sources: IFS: International Financial Statistics of the International Monetary Fund. BNB: Bulgarian National Bank.

Variable	Definition	Source
<i>Dependent variables</i>		
EUR requested	Firm requested EUR loan (1=yes, 0=no)	Bank
EUR granted	Bank granted EUR loan (1=yes, 0=no)	Bank
<i>Loan characteristics</i>		
Requested amount	Requested loan amount (Log EUR)	Bank
Requested maturity	Requested loan maturity (Log months)	Bank
Fixed capital loan	Loan is for fixed capital financing (1=yes, 0=no)	Bank
<i>Firm characteristics</i>		
EUR account	Firm holds EUR savings or term account at disbursement date (1=yes, 0=no)	Bank
BGN account	Firm holds BGN savings or term account at disbursement date (1=yes, 0=no)	Bank
Age	Firm age at disbursement date (Log years)	Bank
Sole proprietorship	Firm is sole proprietorship at disbursement date (1=yes, 0=no)	Bank
Assets	Total assets of firm at disbursement date (Log EUR)	Bank
Leverage	Total debt as share of total assets of firm at disbursement date (%)	Bank
Disposable income	Total disposable income per month at disbursement date (Log EUR)	Bank
Duration	Time since first contact between bank and client at disbursement date (Months)	Bank
Industry	Industry dummies which are one if firm belongs to one of the following sectors: Construction, Manufacturing, Trade, Transport, Tourism, Other services. Baseline industry is Agriculture.	Bank
<i>Monetary conditions & Competition</i>		
Interest differential	Interbank rate BGN minus interbank rate EUR (for a maturity of 7-30 days) (%)	BNB
Term spread differential	Term spread on BGN corporate deposits minus term spread on EUR corporate deposits (%)	BNB
Spread differential	Difference in BGN interbank rate and BGN household term deposits rate minus difference in EUR interbank rate and EUR household term deposits rate (%)	BNB
Inflation volatility	Variance of monthly changes in the consumer price index over 12 months prior to beginning of the quarter in which loan is disbursed (%)	IFS
Foreign currency loans	Share of foreign currency loans to corporations in total banking system (%)	BNB
<i>Bank characteristics</i>		
EUR liabilities	EUR liabilities as share of bank's total liabilities in month before loan disbursement (% end of month)	Bank
EUR debt	EUR debt as share of bank's EUR liabilities in month before loan disbursement (% end of month)	Bank

Table 1. Loan disbursements

This table displays statistics on the bank's loan portfolio. Results are provided for the full sample and the following subsamples: *Micro loans*: Loans with loan amounts up to 10,000 EUR. *Small loans*: Loans with loan amounts over 10,000 EUR and up to 50,000 EUR. *Medium loans*: Loans with loan amounts over 50,000 EUR. *Repeat clients*: Loans disbursed to firms that take out more than one loan from the bank during the observation period.

Panel A. Number of loans disbursed

	Full sample	Micro loans	Small loans	Medium loans	Repeat clients
2003	10,765	9,491	1,059	215	7,564
2004	18,625	16,412	1,841	372	14,295
2005	23,215	19,211	3,466	538	17,751
2006	28,161	22,874	4,688	599	18,598
2007	24,543	18,814	5,228	501	10,987
Total	105,309	86,802	16,282	2,225	69,195

Panel B. Volumes of loans disbursed (in Million EUR)

	Full sample	Micro loans	Small loans	Medium loans	Repeat clients
2003	69.9	21.3	21.6	26.2	49.1
2004	122.9	41.2	36.4	45.3	96.2
2005	188.8	60.5	60.8	67.5	145.0
2006	221.6	77.2	75.0	69.4	161.0
2007	212.0	63.0	89.2	59.9	117.1
Total	814.3	263.2	282.9	268.1	568.5

Panel C. EUR loan share (of total number of loans disbursed (in %))

	Full sample	Micro loans	Small loans	Medium loans	Repeat clients
2003	5.56	1.20	32.67	64.65	5.37
2004	5.51	1.44	28.90	69.09	5.39
2005	5.19	1.13	18.38	65.06	5.23
2006	4.88	0.77	16.94	67.78	5.73
2007	6.52	0.95	21.00	64.47	8.83
Average	5.51	1.06	20.92	66.29	5.98

Panel D. EUR loan share (of volume of loans disbursed (in %))

	Full sample	Micro loans	Small loans	Medium loans	Repeat clients
2003	43.90	4.08	43.34	76.77	44.72
2004	42.10	4.22	40.18	78.13	41.90
2005	37.69	2.51	30.13	76.06	37.12
2006	34.33	1.69	29.61	75.78	37.54
2007	33.70	2.17	30.90	71.04	42.85
Average	36.93	2.58	32.54	75.29	39.88

Table 2. Requested vs. Granted Loan Currency

This table displays statistics on requested and granted loan currencies. Results are provided for the full sample and the following subsamples: *Micro loans*: Loans with loan amounts up to 10,000 EUR. *Small loans*: Loans with loan amounts over 10,000 EUR and up to 50,000 EUR. *Medium loans*: Loans with loan amounts over 50,000 EUR. *Repeat clients*: Loans disbursed to firms that take out more than one loan from the bank during the observation period.

		Requested currency									
		Full sample		Micro loans		Small loans		Medium loans		Repeat clients	
		BGN	EUR	BGN	EUR	BGN	EUR	BGN	EUR	BGN	EUR
Granted currency	BGN	99,208 (94.21%)	296 (0.28%)	85,735 (98.77%)	144 (0.17%)	12,749 (78.30%)	126 (0.77%)	724 (32.54%)	26 (1.17%)	64,861 (93.74%)	194 (0.28%)
	EUR	1,866 (1.77%)	3,939 (3.74%)	268 (0.31%)	655 (0.75%)	1,304 (8.01%)	2,103 (12.92%)	294 (13.21%)	1,181 (53.08%)	1,146 (1.66%)	2,994 (4.33%)
Total number of loans		101,074	4,235	86,003	799	14,053	2,229	1,018	1,207	66,007	3,188
% of loans for which currency was changed		1.85	6.99	0.31	18.02	9.28	5.65	28.88	2.15	1.74	6.09

Table 3. Loan- and Firm Characteristics

This table reports summary statistics for our loan- and firm-level variables. See the appendix for definitions and sources of all variables. Note that for all otherwise log-transformed variables the statistics are calculated by using the original values.

Panel A. Summary statistics

	Minimum	25%-percentile	Median	75%-percentile	Maximum
<i>Loan characteristics</i>					
Requested amount	4	1,790	3,579	7,669	1,700,000
Requested maturity	1	12	24	36	8,000
Fixed capital loan	0	0	1	1	1
<i>Firm characteristics</i>					
EUR account	0	0	0	0	1
BGN account	0	0	0	0	1
Age	0	4	8	12	107
Sole proprietorship	0	1	1	1	1
Assets	2	5,164	13,210	37,792	40,372,628
Leverage	0	0	0.07	0.23	1
Disposable income	0.13	53	180	557	1,154,455
Duration	0	0	2	16	71

Panel B. Sample means by loan group

Sample means are provided for the full sample and the following subsamples: *Micro loans*: Loans with loan amounts up to 10,000 EUR. *Small loans*: Loans with loan amounts over 10,000 EUR and up to 50,000 EUR. *Medium loans*: Loans with loan amounts over 50,000 EUR. *Repeat clients*: Loans disbursed to firms that take out more than one loan from the bank during the observation period.

	Full sample	Micro loans	Small loans	Medium loans	Repeat clients
<i>Loan characteristics</i>					
Requested amount	8,679	3,517	18,990	134,591	9,233
Requested maturity	32.23	29.95	41.55	53.02	29.94
Fixed capital loan	0.51	0.50	0.60	0.63	0.47
<i>Firm characteristics</i>					
EUR account	0.008	0.007	0.010	0.018	0.009
BGN account	0.030	0.031	0.028	0.026	0.031
Age	8.45	8.34	8.84	9.86	9.10
Sole proprietorship	0.90	0.96	0.65	0.25	0.89
Assets	57,910	23,305	144,451	774,651	64,270
Leverage	0.15	0.14	0.19	0.27	0.16
Disposable income	852	365	2,096	10,741	937
Duration	9.86	8.90	13.51	20.76	13.83

Panel C. Sample means by requested / granted loan currency

***, ** and * indicate sample means to be significantly different from each other at the 0.01, 0.05 and 0.10-level respectively using a Student's t-test.

Requested currency Granted currency	BGN			EUR		
	BGN	EUR		BGN	EUR	
<i>Loan characteristics</i>						
Requested amount	5,703	39,310	***	27,896	67,676	***
Requested maturity	31.01	54.39	***	39.96	51.86	***
Fixed capital loan	0.50	0.74	***	0.46	0.70	***
<i>Firm characteristics</i>						
EUR account	0.007	0.019	***	0.020	0.025	
BGN account	0.031	0.013	***	0.041	0.021	**
Age	8.41	8.98	***	8.80	9.22	*
Sole proprietorship	0.92	0.54	***	0.65	0.44	***
Assets	40,600	223,398	***	193,155	405,340	***
Leverage	0.14	0.22	***	0.19	0.22	***
Disposable income	649	2,857	***	2,284	4,905	**
Duration	9.47	14.20	***	13.77	17.48	***

Panel D. Pairwise correlations

	Requested amount	Requested maturity	Fixed capital loan	Forex account	BGN account	Age	Sole proprietorship	Assets	Leverage	Disposable income	Duration
Requested amount	1.000										
Requested maturity	0.101	1.000									
Fixed capital loan	0.057	0.174	1.000								
EUR account	0.027	0.005	0.007	1.000							
BGN account	0.001	0.019	0.033	0.091	1.000						
Age	0.033	-0.002	-0.004	0.015	0.031	1.000					
Sole proprietorship	-0.336	-0.013	0.035	0.006	0.042	0.066	1.000				
Assets	0.488	0.016	-0.016	0.014	-0.008	0.059	-0.297	1.000			
Leverage	0.109	0.046	-0.005	-0.006	-0.020	-0.028	-0.142	0.113	1.000		
Disposable income	0.313	-0.001	-0.037	0.002	-0.007	0.018	-0.181	0.458	0.086	1.000	
Duration	0.121	-0.006	-0.060	0.081	0.054	0.210	-0.100	0.125	0.165	0.072	1.000

Table 4. Macroeconomic Conditions and Bank Characteristics

This table displays summary statistics for our bank- and country-level variables. See the appendix for definitions and sources of all variables.

Panel A. Sample means by year

	2003	2004	2005	2006	2007
<i>Monetary conditions & Competition</i>					
Interest differential	0.68	1.07	1.04	0.63	0.12
Term spread differential	0.33	-0.20	0.12	0.34	-0.33
Spread differential	-1.18	-1.45	-1.32	-1.22	-1.14
Inflation volatility	1.50	1.07	0.61	0.99	0.81
Foreign currency loans	0.55	0.61	0.67	0.64	0.65
<i>Bank characteristics</i>					
EUR liabilities	0.27	0.43	0.42	0.44	0.37
EUR debt	0.79	0.75	0.68	0.64	0.39

Panel B. Pairwise correlations

	Interest differential	Term spread differential	Spread differential	Inflation volatility	Foreign currency loans	EUR liabilities	EUR debt
Interest differential	1.000						
Term spread differential	-0.123	1.000					
Spread differential	0.124	0.064	1.000				
Inflation volatility	-0.214	0.200	-0.052	1.000			
Foreign currency loans	0.112	-0.186	0.004	-0.906	1.000		
EUR liabilities	0.207	-0.064	-0.103	-0.544	0.708	1.000	
EUR debt	0.379	0.126	-0.092	0.432	-0.493	-0.060	1.000

Table 5. Foreign currency loan demand: firm-level determinants

This table reports results from logit regressions for the full sample and subsamples based on different loan groups. The dependent variable *EUR requested* equals one if the firm requested a EUR loan and equals zero otherwise. All explanatory variables are defined in the appendix. Regressions in columns (1) to (4) include a constant, industry dummies and time fixed effects. Column (5) includes firm fixed effects and time fixed effects. Standard errors are reported in parentheses and account for clustering at the firm-level. Marginal effects calculated at sample means are presented in brackets. ***, **, * denote significance at the 0.01, 0.05 and 0.10-level.

	(1)	(2)	(3)	(4)	(5)
	Full	Micro	Small	Medium	Repeat
	sample	loans	loans	loans	clients
Method	Logit	Logit	Logit	Logit	Logit
Requested amount	1.258 *** (0.040) [0.008]	1.962 *** (0.101) [0.003]	1.703 *** (0.062) [0.114]	0.960 *** (0.104) [0.237]	1.015 *** (0.064)
Requested maturity	0.359 *** (0.048) [0.002]	0.081 (0.095) [0.000]	0.349 *** (0.057) [0.023]	0.318 *** (0.084) [0.079]	0.588 *** (0.073)
Fixed capital loan	0.613 *** (0.057) [0.004]	0.210 ** (0.086) [0.000]	0.673 *** (0.077) [0.043]	1.232 *** (0.139) [0.298]	0.952 *** (0.110)
EUR account	1.028 *** (0.164) [0.011]	1.273 *** (0.278) [0.004]	1.088 *** (0.186) [0.114]	0.419 (0.434) [0.100]	0.144 (0.499)
BGN account	-0.268 (0.172) [-0.002]	0.027 (0.235) [0.000]	-0.004 (0.189) [-0.000]	-1.005 ** (0.457) [-0.242]	-0.415 (0.415)
Age	-0.028 (0.041) [-0.000]	0.016 (0.066) [0.000]	0.026 (0.055) [0.002]	-0.344 *** (0.118) [-0.085]	
Sole proprietorship	-0.461 *** (0.071) [-0.004]	-0.971 *** (0.123) [-0.002]	-0.388 *** (0.075) [-0.027]	0.189 (0.135) [0.047]	
Assets	0.438 *** (0.029) [0.003]	0.577 *** (0.050) [0.001]	0.373 *** (0.038) [0.025]	0.337 *** (0.069) [0.083]	0.257 ** (0.102)
Leverage	-0.255 * (0.131) [-0.002]	-0.079 (0.232) [-0.000]	-0.044 (0.162) [-0.003]	-0.112 (0.299) [-0.028]	0.697 ** (0.326)
Disposable income	-0.165 *** (0.025) [-0.001]	-0.078 * (0.044) [-0.000]	-0.152 *** (0.033) [-0.010]	-0.277 *** (0.060) [-0.069]	-0.016 (0.091)
Duration	0.014 *** (0.002) [0.000]	0.007 * (0.004) [0.000]	0.017 *** (0.002) [0.001]	0.012 *** (0.004) [0.003]	0.002 (0.051)
Observations	105,309	86,802	16,282	2,225	5,206
Pseudo R ²	0.450	0.271	0.272	0.204	0.389
Industry fixed effects	yes	yes	yes	yes	no
Firm fixed effects	no	no	no	no	yes
Time fixed effects	year-month	year-month	year-month	year-month	year-quarter

Table 6. Foreign currency loan demand: country-level determinants

This table reports results from logit regressions for the full sample and subsamples based on different loan groups. The dependent variable *EUR requested* equals one if the firm requested a EUR loan and equals zero otherwise. Regressions include the loan and firm-level explanatory variables *Requested amount*, *Requested maturity*, *Fixed capital loan*, *EUR account*, *BGN account*, *Age*, *Sole proprietorship*, *Assets*, *Leverage*, *Disposable income* and *Duration*. All explanatory variables are defined in the appendix. Regressions in columns (1) to (4) also include industry dummies and a constant, while column (5) includes firm fixed effects. Standard errors are reported in parentheses and account for clustering at the firm-level. Marginal effects calculated at sample means are presented in brackets. ***, **, * denote significance at the 0.01, 0.05 and 0.10-level.

	(1)	(2)	(3)	(4)	(5)
	Full	Micro	Small	Medium	Repeat
Method	sample	loans	loans	loans	clients
	Logit	Logit	Logit	Logit	Logit
Interest rate differential	0.283 *** (0.026) [0.002]	0.245 *** (0.047) [0.000]	0.334 *** (0.034) [0.024]	0.239 *** (0.070) [0.059]	-0.018 (0.063)
Term spread differential	0.010 (0.028) [0.000]	0.022 (0.049) [0.000]	0.023 (0.037) [0.002]	-0.042 (0.068) [-0.010]	0.034 (0.052)
Inflation volatility	0.123 (0.136) [0.001]	-0.477 * (0.246) [-0.001]	0.465 *** (0.178) [0.033]	0.130 (0.334) [0.032]	0.554 ** (0.277)
Foreign currency loans	-7.528 *** (1.220) [-0.050]	-12.211 *** (2.121) [-0.021]	-6.178 *** (1.573) [-0.438]	-2.066 (2.885) [-0.511]	4.175 (2.593)
Observations	105,309	86,802	16,282	2,225	5,206
Pseudo R ²	0.439	0.252	0.250	0.189	0.382
Loan characteristics	yes	yes	yes	yes	yes
Firm characteristics	yes	yes	yes	yes	yes
Firm fixed effects	no	no	no	no	yes
Time fixed effects	no	no	no	no	no

Table 7. Foreign currency loan supply: Firms requesting BGN loans

This table reports results from logit regressions for the subsample of loans where the firm requested a local currency (BGN) loan. The dependent variable *EUR granted* equals one if the bank granted a EUR loan and equals zero otherwise. All explanatory variables are defined in the appendix. Regressions in columns (1) to (4) include a constant, industry dummies and time fixed effects. Column (5) includes firm fixed effects and time fixed effects. Standard errors are reported in parentheses and account for clustering at the firm-level. Marginal effects calculated at sample means are presented in brackets. ***, **, * denote significance at the 0.01, 0.05 and 0.10-level.

Panel A. Loan and firm characteristics

Method	(1) Full sample Logit	(2) Micro loans Logit	(3) Small loans Logit	(4) Medium loans Logit	(5) Repeat clients Logit
Requested amount	1.291 *** (0.049) [0.003]	1.427 *** (0.132) [0.001]	1.779 *** (0.081) [0.076]	0.327 * (0.175) [0.050]	0.978 *** (0.114)
Requested maturity	0.744 *** (0.064) [0.001]	0.522 *** (0.152) [0.000]	0.605 *** (0.070) [0.026]	0.789 *** (0.153) [0.121]	1.126 *** (0.135)
Fixed capital loan	0.906 *** (0.085) [0.002]	0.533 *** (0.146) [0.000]	0.662 *** (0.095) [0.027]	2.664 *** (0.286) [0.440]	1.265 *** (0.185)
EUR account	1.247 *** (0.239) [0.005]	1.848 *** (0.350) [0.003]	1.118 *** (0.272) [0.080]	0.598 (0.587) [0.108]	0.424 (0.713)
BGN account	-1.186 *** (0.264) [-0.001]	-0.718 (0.484) [-0.000]	-0.927 *** (0.266) [-0.027]	-2.002 ** (0.792) [-0.166]	-0.827 (0.854)
Age	-0.005 (0.045) [-0.000]	0.186 * (0.106) [0.000]	-0.012 (0.053) [-0.001]	-0.168 (0.198) [-0.026]	
Sole proprietorship	-0.294 *** (0.081) [-0.001]	-0.963 *** (0.178) [-0.001]	-0.215 ** (0.084) [-0.010]	0.017 (0.239) [0.003]	
Assets	0.351 *** (0.033) [0.001]	0.641 *** (0.068) [0.000]	0.215 *** (0.041) [0.009]	0.177 (0.144) [0.027]	0.430 ** (0.193)
Leverage	-0.039 (0.148) [-0.000]	0.461 (0.297) [0.000]	0.087 (0.169) [0.004]	0.346 (0.496) [0.053]	0.958 * (0.532)
Disposable income	0.061 ** (0.030) [0.000]	0.125 * (0.067) [0.000]	0.008 (0.035) [0.000]	0.137 (0.102) [0.021]	-0.160 (0.144)
Duration	0.001 (0.002) [0.000]	0.007 * (0.004) [0.000]	0.001 (0.002) [0.000]	0.014 * (0.007) [0.002]	0.070 (0.083)
Observations	101,074	79,944	14,053	1,003	2,657
Pseudo R ²	0.406	0.250	0.235	0.351	0.541
Industry fixed effects	yes	yes	yes	yes	no
Firm fixed effects	no	no	no	no	yes
Time fixed effects	year-month	year-month	year-month	year-month	year-quarter

Panel B. Indicators of bank funding and monetary conditions

All regressions include the loan and firm-level explanatory variables *Requested amount*, *Requested maturity*, *Fixed capital loan*, *EUR account*, *BGN account*, *Age*, *Sole proprietorship*, *Assets*, *Leverage*, *Disposable income* and *Duration*.

	(1)	(2)	(3)	(4)	(5)
	Full	Micro	Small	Medium	Repeat
Method	sample	loans	loans	loans	clients
	Logit	Logit	Logit	Logit	Logit
EUR liabilities	6.318 *** (1.019) [0.014]	4.621 ** (2.298) [0.003]	7.947 *** (1.210) [0.377]	4.465 * (2.670) [0.710]	9.335 *** (2.385)
EUR debt	-4.290 *** (0.334) [-0.009]	-2.355 *** (0.745) [-0.001]	-5.022 *** (0.413) [-0.238]	-1.024 (0.866) [-0.163]	-6.945 *** (1.556)
Spread differential	0.088 (0.111) [0.000]	-0.235 (0.238) [-0.000]	0.032 (0.128) [0.002]	0.448 (0.297) [0.071]	0.376 * (0.209)
Term spread differential	-0.002 (0.040) [-0.000]	-0.222 ** (0.088) [-0.000]	0.051 (0.047) [0.002]	0.035 (0.111) [0.006]	-0.049 (0.100)
Inflation volatility	-0.648 *** (0.185) [-0.001]	-0.815 * (0.417) [-0.000]	-0.579 *** (0.211) [-0.027]	0.385 (0.604) [0.061]	0.106 (0.499)
Foreign currency loans	-24.911 *** (2.495) [-0.055]	-23.901 *** (5.829) [-0.013]	-27.517 *** (2.874) [-1.305]	-8.332 (7.062) [-1.325]	-20.595 *** (5.649)
Observations	101,074	85,199	14,053	1,018	2,657
Pseudo R ²	0.393	0.228	0.207	0.308	0.522
Loan characteristics	yes	yes	yes	yes	yes
Firm characteristics	yes	yes	yes	yes	yes
Firm fixed effects	no	no	no	no	yes
Time fixed effects	no	no	no	no	no

Table 8. Foreign currency loan supply: Firms requesting EUR

This table reports results from logit regressions for the subsample of firms that requested EUR loans. The dependent variable *EUR granted* equals one if the bank granted a EUR loan and equals zero otherwise. All explanatory variables are defined in the appendix. Regressions in columns (1) to (4) also include *Industry* dummies and a constant, while column (5) includes firm fixed effects. Standard errors are reported in parentheses and account for clustering at the firm-level. Marginal effects calculated at sample means are presented in brackets. ***, **, * denote significance at the 0.01, 0.05 and 0.10-level.

Panel A. Loan and firm characteristics

	(1)	(2)	(3)	(4)	(5)
	Full	Micro	Small	Medium	Repeat
	sample	loans	loans	loans	clients
Method	Logit	Logit	Logit	Logit	Logit
Requested amount	0.323 *** (0.093) [0.011]	-0.077 (0.206) [-0.008]	0.571 ** (0.277) [0.025]	0.515 (0.472) [0.005]	0.712 (0.751)
Requested maturity	0.150 (0.109) [0.005]	0.043 (0.190) [0.005]	0.269 (0.167) [0.012]	-0.098 (0.396) [-0.001]	2.057 * (1.113)
Fixed capital loan	1.064 *** (0.186) [0.045]	0.490 * (0.271) [0.052]	1.235 *** (0.282) [0.069]	2.913 *** (0.623) [0.073]	6.298 ** (2.435)
EUR account	0.208 (0.474) [0.007]	1.257 * (0.650) [0.085]	-0.210 (0.563) [-0.010]		
BGN account	-0.595 (0.362) [-0.027]	-1.125 ** (0.466) [-0.173]	-0.214 (0.646) [-0.010]		
Age	-0.036 (0.111) [-0.001]	-0.021 (0.172) [-0.002]	-0.019 (0.171) [-0.001]	-0.547 * (0.304) [-0.005]	
Sole proprietorship	-0.259 * (0.156) [-0.009]	-0.286 (0.329) [-0.029]	-0.330 (0.229) [-0.014]	0.426 (0.647) [0.003]	
Assets	0.492 *** (0.074) [0.017]	0.903 *** (0.129) [0.095]	0.348 *** (0.121) [0.015]	0.242 (0.272) [0.002]	-0.682 (2.576)
Leverage	-0.300 (0.381) [-0.010]	0.340 (0.653) [0.036]	-0.440 (0.573) [-0.019]	-0.908 (1.010) [-0.008]	-2.680 (3.744)
Disposable income	-0.072 (0.068) [-0.002]	-0.096 (0.119) [-0.010]	-0.002 (0.113) [-0.000]	-0.069 (0.225) [-0.001]	1.194 (1.012)
Duration	0.010 ** (0.005) [0.000]	0.002 (0.010) [0.000]	0.009 (0.007) [0.000]	0.024 ** (0.012) [0.000]	1.420 ** (0.682)
Observations	4,235	775	1,778	1,042	214
Pseudo R ²	0.196	0.236	0.135	0.206	0.742
Industry fixed effects	yes	yes	yes	yes	no
Firm fixed effects	no	no	no	no	yes
Time fixed effects	year-month	year-month	year-month	year	year-quarter

Panel B. Indicators of bank funding and monetary conditions

Regressions include the loan- and firm-level explanatory variables *Requested amount*, *Requested maturity*, *Fixed capital loan*, *EUR account*, *BGN account*, *Age*, *Sole proprietorship*, *Assets*, *Leverage*, *Disposable income* and *Duration*.

	(1)	(2)	(3)	(4)	(5)
Method	Full sample Logit	Micro loans Logit	Small loans Logit	Medium loans Logit	Repeat clients Logit
EUR liabilities	0.521 (2.020) [0.020]	-2.016 (3.073) [-0.232]	2.493 (3.073) [0.095]	1.334 (6.103) [0.011]	5.386 (7.877)
EUR debt	1.916 *** (0.682) [0.074]	2.674 ** (1.212) [0.307]	1.084 (0.970) [0.041]	4.552 ** (2.186) [0.037]	6.371 (6.572)
Spread differential	-0.188 (0.185) [-0.007]	-0.029 (0.314) [-0.003]	-0.407 (0.261) [-0.015]	0.165 (0.427) [0.001]	-0.316 (0.690)
Term spread differential	-0.189 ** (0.086) [-0.007]	-0.079 (0.145) [-0.009]	-0.276 ** (0.121) [-0.010]	-0.623 *** (0.217) [-0.005]	-0.479 (0.301)
Inflation volatility	-0.334 (0.457) [-0.013]	0.289 (0.794) [0.033]	-0.691 (0.631) [-0.026]	-1.129 (1.541) [-0.009]	-1.591 (2.129)
Foreign currency loans	-5.426 (5.118) [-0.209]	-0.357 (8.114) [-0.041]	-12.938 * (7.590) [-0.492]	1.594 (16.307) [0.013]	-29.481 (21.147)
Observations	4,235	794	2,229	1,042	214
Pseudo R ²	0.170	0.177	0.101	0.233	0.474
Loan characteristics	yes	yes	yes	yes	yes
Firm characteristics	yes	yes	yes	yes	yes
Firm fixed effects	no	no	no	no	yes
Time fixed effects	no	no	no	no	no

Table 9. Interaction effects of bank funding and requested currency

This table reports results from OLS regressions including the interaction effects of our indicators of the Bank's funding structure with the dummy variable *BGN requested* (equals one if the firm requested a BGN loan and equals zero otherwise). All regressions include the loan characteristics *Requested amount*, *Requested maturity*, and *Fixed capital loan*; the firm characteristics *EUR account*, *BGN account*, *Age*, *Sole proprietorship*, *Assets*, *Leverage*, *Disposable income* and *Duration*; and the macroeconomic indicators *Spread differential*, *Term spread differential*, *Inflation volatility* and *Foreign currency loans*.

	(1)	(2)	(3)	(4)	(5)
	Full	Micro	Small	Medium	Repeat
	sample	loans	loans	loans	clients
Method	OLS	OLS	OLS	OLS	OLS
BGN requested	-0.709 *** (0.033)	-0.624 *** (0.125)	-0.522 *** (0.051)	-0.447 *** (0.112)	-0.575 *** (0.025)
EUR liabilities	0.092 (0.068)	-0.255 (0.197)	0.445 *** (0.104)	0.444 ** (0.185)	0.189 *** (0.053)
EUR liabilities * BGN requested	-0.055 (0.067)	0.266 (0.197)	-0.066 (0.106)	0.048 (0.256)	-0.113 ** (0.052)
EUR debt	0.082 *** (0.029)	0.418 *** (0.122)	0.010 (0.042)	0.081 (0.059)	-0.002 (0.026)
EUR debt * BGN requested	-0.138 *** (0.029)	-0.427 *** (0.122)	-0.305 *** (0.043)	-0.207 ** (0.090)	-0.127 *** (0.023)
Constant	0.780 *** (0.040)	0.644 *** (0.127)	-0.028 (0.138)	0.342 (0.352)	0.664 *** (0.042)
Observations	105,309	86,802	16,282	2,225	69,195
Adj. R ²	0.647	0.585	0.571	0.621	0.465
Loan characteristics	yes	yes	yes	yes	yes
Firm characteristics	yes	yes	yes	yes	yes
Firm fixed effects	no	no	no	no	yes
Macroeconomic indicators	yes	yes	yes	yes	yes
Time fixed effects	no	no	no	no	no