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An empirical investigation of the EBRD's lending policy (1991-2003)

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Abstract

The insitutional purpose of the European Bank for Reconstruction and Development (EBRD) is to foster the transition towards open market-oriented economics.The objective of this paper is to investigate the lending policy of the bank in the period 1991-2003 as a practical device to achieve the previous target. By building up an original database with the public records of the contracts signed by the EBRD in that period, we are able to isolate the clear strategy of using the entry of foreign multinational corporations (MNEs) in transition countries as a pillar to consolidate the creation of the market system. This result is achieved by performing an empirical analysis about determinants of the credit granting for the group of local and foreign recipients.

Keywords: Credits, Investments, Multinational firms, Transition Economics.

JEL Classification: F20, P33, P36.

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1 Introduction

"The EBRD has been actively engaged in its countries of operations for nearly 20 years, guided by its mandate ti aid transition towards open, market-oriented economies to promote private and entrepreneurial initiative and to assist in structural and sectoral economic reform, including de-monopolisation, decentralisation and privatisation". (Besley et al., 2010)

The EBRD was created in 1991 just after the Soviet Bloc had collapsed. Its purpose was to assist the countries of that region in transforming their centrally-planned economic systems into market economies.

With a capital of 20 billion euros and being owned by sixty-one countries and two intergovernmental institutions, the European Union and the European Investment Bank, the *European Bank for Reconstruction and Development* (EBRD) is a peculiar investment bank. Unlike private investment banks, the EBRD has sovereign shareholders that do not receive dividends but invests in mainly private enterprises. This feature together with its stable sovereign ownership allows the EBRD to raise funds in the best conditions and, simultaneously, to face the high risks inherent in investing in the region. When the EBRD started its lending operations in 1991, the business environment of all these countries was characterized by large output fall, complete disorganization of production, macroeconomic and political instability and an inadequate banking sector (Vuylsteke, 1995). The EBRD presented as the ideal financial partner to grant credits tAccording to our estimations, the share of public clients between 1991 and 2003 did not exceed 12.5% of the total cumulated investment. Its investments are geographically restricted to the region of the former Soviet Bloc.[1]Its mandate stipulates that it must only work in countries that are committed to democratic principles. Nevertheless, some investments have been made in certain countries that are far from being fully-fledged democracies.

The objective of the bank is to maximize profits from investment projects and to do so by using all the instruments available on the financial markets to raise funds and to protect its portfolio against

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[1]As a further requirement financed investments have to respect environmental standards.

risks.[2] Nevertheless, the EBRD cannot adopt a true portfolio differentiation strategy. It must invest in a restricted geographic area and this precludes diversification of its portfolio with investments in safer places in the rest of the world. Therefore, in this respect, the EBRD faces a harder constraint than any other private investment bank, even if its sovereign shareholders virtually guarantee protection against bankruptcy. Furthermore, the management of risk had to be carried out in a very uncertain environment. The country risk was high owing to the macroeconomic turmoil. All potential borrowers lacked market experience and had no history of creditworthiness.Furtherly, the decisions made by the EBRD were not affected by competition because local banks were insolvent and foreign banks did not enter these risky markets in the early transition period (Lanine and Vander Vennet, 2007). Moreover, the public shareholders of the EBRD assigned the bank the mission to lead the financial flows to these countries and not to crowd out private investments. The EBRD was therefore in a situation of monopoly.

This exceptional situation makes the EBRD experience an interesting case study to disentangling the potential different strategies adopted to support investment in transition countries by looking at the determinant discriminating the financial credits granted to native or multinational firm. In a recent paper García- Santana (2012) discusses the importance of the lack of financial frictions for MNEs branches when undertaking FDI investment in a sample of developing countries on the base of aggregate statistics realesed by the World Bank. His arguement is quite intuitive: the truly effectivness of MNEs' FDI in triggering the creation of a competitive market in the host countries rely on the possibility that MNEs bring their own financement and do not rely on the local credit market. In this sense, the scope to support the transition process to the market economies in ex-socialist countries can be achieved by adopting a preferential strategy for financing investment of international corporation, rather than native firms. The rational of pushing MNEs' entry is widely discussed in Burstein and Monge-Naranjo

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[2]In fact, the conditions under which the EBRD operates are not totally identical to those of other investment banks. The EBRD aims at being a catalyst for financial institutions and wants to avoid crowding them out. In other words, the EBRD does not see other financial institutions as competitors. However, in the bank-client relationship, which is our concern in this paper, its objective is to maximize profits from its clients' projects, i.e., in accordance with the EBRD's statement, to apply "sound banking principles" (EBRD, 1999).

(2009) or McGrattan and Prescott (2007). Lowering barriers to foreign firms that bring technological advantages in the host economies yield a senstive increase of welfare in those territories. It has been proved that having easy access to international financial markets, international firms can borrow abroad and, hence, operate at their optimal size in the host markets (Garcia Santana, 2012). However, this framework does not fully apply to the case of the financing investments in transition countries because even international MNEs had no fully access to the open international credit market because of the high degree of risk in the countries these investment would have been carried out.

In this respect, it turns out to be interesting to assess the way the EBRD interpreted its role when supporting investment in these countries. In the light of the theories discusses above, one would expect that the EBRD's strategy would have being relaxing the constraints imposed to grant a credit to the MNEs and being more severe versus the native firms. To a certain extend, the institutional role of the EBRD is expected to adjust the imperfection of a incomplete market. This is the scope of the empirical exercise we are performing in the document. Despite of other studies performed up to the date, we had the opportuninty to build a unique database by exploiting the information about granted credits released by the bank across years. In developing our analysis we proceed as follows: in the next section we provide a wide statistical description of the EBRD-client relationship relying on the content of our database. In Section 3 we introduce our empirical strategy and perform our econometric exercise, and, finally, Section 4 concludes.

2 The EBRD-client relationship

When considering a potential client for a lending contract, the EBRD follows a very standard procedure (Vuylsteke, 1995). First, we consider the case of a contract running for one period. The bank and its client agree to sign the contract; then, the bank finances the firm, which makes the investment and pays

back the loan (plus interest) to the bank.[3]

For the purposes of this study, we built an original database from data made public by the EBRD over time. Our database includes 1788 financial contracts signed by the bank with private and public clients from 1991 to 2003. It contains information in each case on the identity and nationality of the clients, the amount of the contract in ECU/Euros, the value of the investment project, the sector of investment, the year the contract was signed, the type of contract (loan, share, equity or guarantee), and other characteristics (old clients, private/public, macro-programs...). In this section we present a brief overview of the content of our database and discuss the most relevant descriptive statistics.

2.1   The contracts

The number of contracts and the amount of annual investments were very low at the beginning of the transition process (see Figures 1 and 2). The EBRD was underusing its capital, and this was a source of criticism among the shareholders and commentators. This underuse was principally due to the severe macroeconomic downturn that affected the entire region. After these initial difficulties,the bank's aim was to strongly increase the volume of the portfolio. The recovery of most of the countries in the region helped the EBRD to sign more contracts and to make sizeable profits from 1999 onwards.

According to the information available on the EBRD website, the bank designed different kinds of contract. They all represent the financial instruments by which the bank participates in the realization of the investment project proposed by the borrower. These contracts differ not only in the maturity of the credits but also in other characteristics, which we will discuss below. First, in Table 1, we provide a general overview of the different kinds of contract signed by the bank and the frequency of the contracts:

[Table 1 about here]

Three main categories of credit instrument can be distinguished: loan, guarantee, and share and

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[3]In this section, for the sake of simplicity, we intend 'loan' to mean any kind of credit contract the bank may propose.
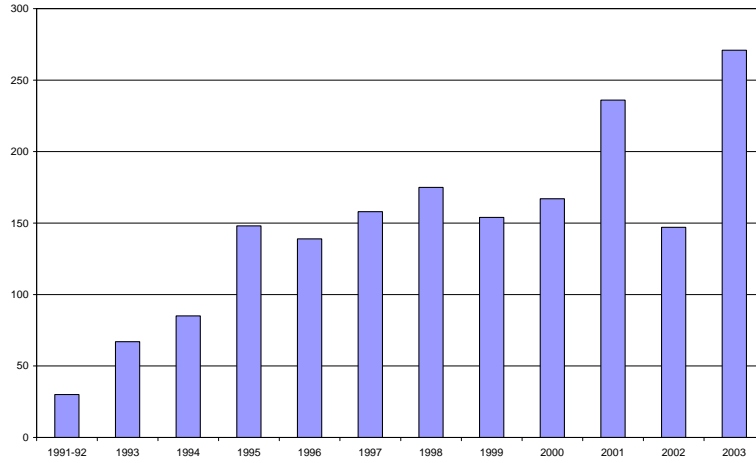
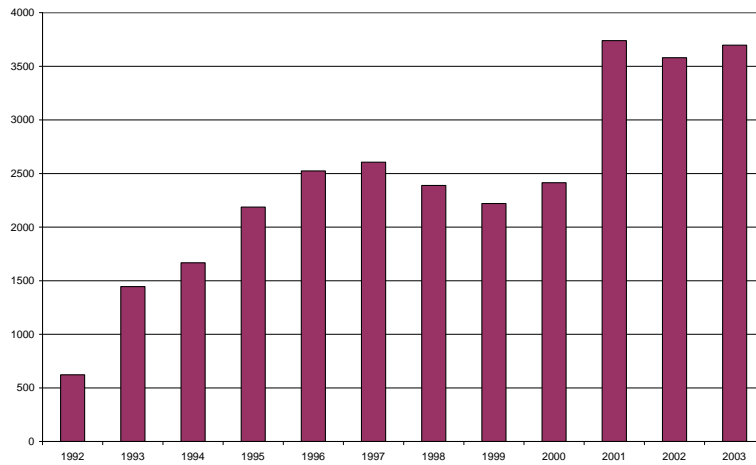Figure 1: Number of contracts signed by the EBRD between 1991 and 2003.

Figure 2: EBRD Investments by year (ECU/€ million)

equity contracts. Loans were the financial contract most frequently used by the EBRD between 1991 and 2003 (Table 1). A loan is generally considered as a short-term contract, lasting five years on average, and tailored to meet the particular requirements of the project. The credit risk is usually taken by the bank or partially syndicated to the market. A loan may be securitized by a borrower's asset and/or converted into shares or may be equity-linked. The second important category of contract includes share and equity. Share-type contracts were mainly signed at the beginning of the EBRD's activity, while equity contracts represent a broader category of financial contracts including share contracts. An equity investment can be undertaken in various forms, including subscription to ordinary shares. When the EBRD takes an equity stake, it expects an appropriate return on its investment. The bank usually sells its equity investment on a non-recourse basis, has a clear exit strategy and only takes a minority position.[4] The third category of credit instruments refers to guarantee contracts. They were used mainly at the end of our dataset period. Through this type of contract, the bank helps borrowers with gaining access to financial sources through the provision of guarantes (EBRD, 1999).

Table 2 and 3 show descriptive statistics on the total values of projects that were selected by the EBRD and the share that it effectively financed. In most accepted projects, the EBRD is not the only lending source.[5] Statistical information is given for the total population and for two periods, one at the outset of transition (1993-1995) and the other at the end of the sample period (2000-2003). The total project value of loans is always higher than that of shares, but both decreased over time. The median bank lending in loan contracts remained unchanged over time, while it declined in share contracts. Figure 3 compares the fraction of the total project value financed by the EBRD for share and loan contracts. This fraction increases proportionally with the total project value but the increase is more pronounced for shares than for loans. As a shareholder, the bank can control the management

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[4]Equity is considered to be a non-contingent contract.

[5]The contracts issued by the EBRD always require a co-financed part. This may be through cash financing from the firm or, in other cases, from a consortium of commercial banks. However, the involvement of commercial banks in the credit process is strictly subject to EBRD participation. Hence, even in this case, the EBRD plays the role of dominant agent.

of the firm, and this implies a reduction in uncertainty associated with imperfect information about the firm's behavior. The bank tends to augment its participation with the size of the project value in share contracts in order to protect itself against the risk. As for loans, the collateral allows for a control of risk.

[Table 2 about here]

[Table 3 about here]

We also split the population into two subgroups of firms:[6] a first group consisting of firms that had obtained one credit over the sample period (around 1270 firms) and a second group consisting of firms that had signed more than one contract (around 100 firms). Tables 4 and 5 show data for single-contract and several-contract firms respectively. The median bank lending fraction for several-contract firms is always more important than for single-contract firms. These differences may be associated with reputation premia.

[Table 4 about here]

[Table 5 about here]

In order to learn more about the attitude of the EBRD toward risk, we consider the likelihood of a contract type granted by the bank that is chosen against other possible ones conditional on the total investment size and the amount of credit supplied by the bank. In this way, we expect some information on the bank's risk behavior when it finances large projects. To do so, we run a multilogit estimation by regressing the 13 contract types against all available information: the investment size, the size of credit, the London Interbank Offered Rate (LIBOR) and democracy indexes and the country of origin's GDP per capita level. Then, we compute the probabilities for the two most frequently types of signed contract (loans and equity/share) in both subsamples (single-contract subsample and more-than-one-contract subsample). The results are graphically represented in Figures 4 and 5. The probability of

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[6]This split in the population will be essential to test the role of memory on bank behavior in the econometric exercise.
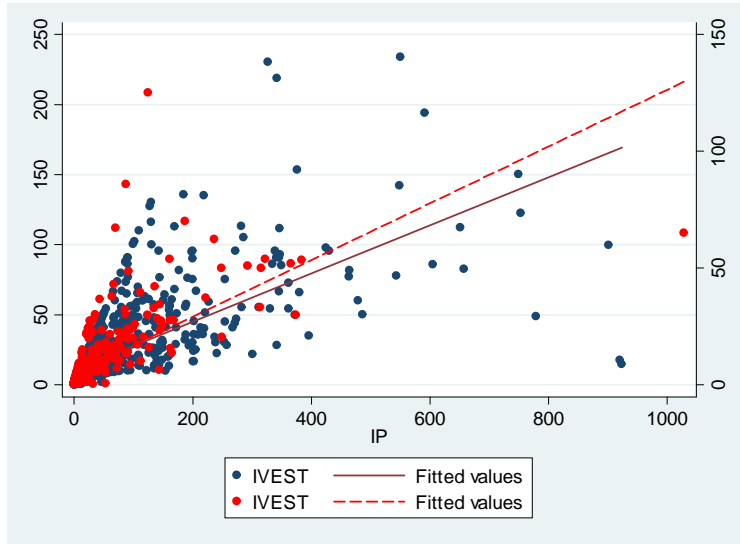
Figure 3: Fraction of EBRD financing in share and loan contracts (red points and dashed line for shares, and blue points and solid line stand for loans)

signing one contract type (either loan or equity/share) conditional on the investment size is shown in a graph on the left of each figure, and the probability of signing one contract type conditional on the credit size is represented on the right. Let us define $\underline{\mathbf{w}}_i$ as the vector of the characteristics associated with the client (i) that can influence the EBRD's decision to grant her one type of contract ($Y = j$) rather than another. The model of the EBRD's contract choice can be defined by:

$$\mathrm{Prob}(Y_i = j \mid \underline{\mathbf{w}}_i) = \frac{\exp(\underline{\mathbf{w}}_i' \alpha_j)}{\sum_{j=1}^{13} \exp(\underline{\mathbf{w}}_i' \alpha_j)}, \quad j = 1...13.$$
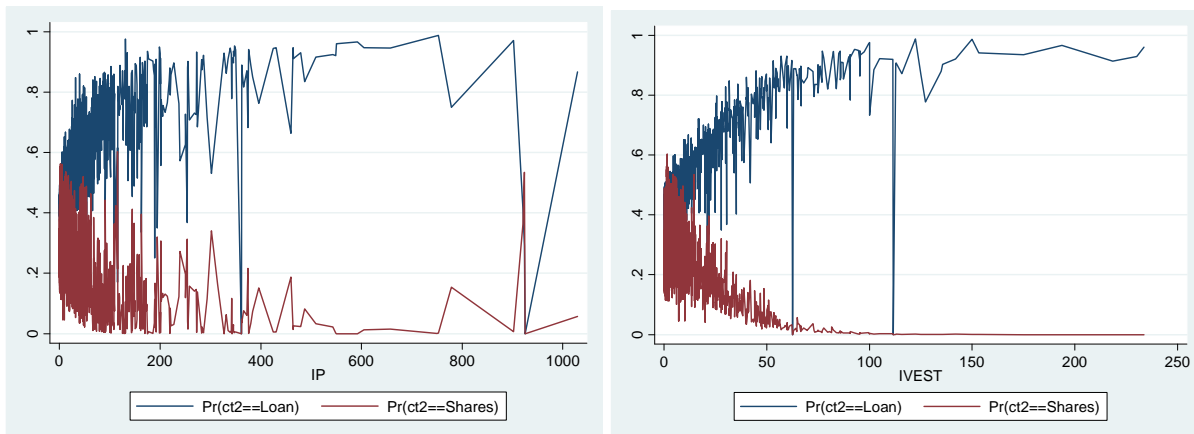
Figure 4: Multilogit probabilities for the subsample of unique contracts
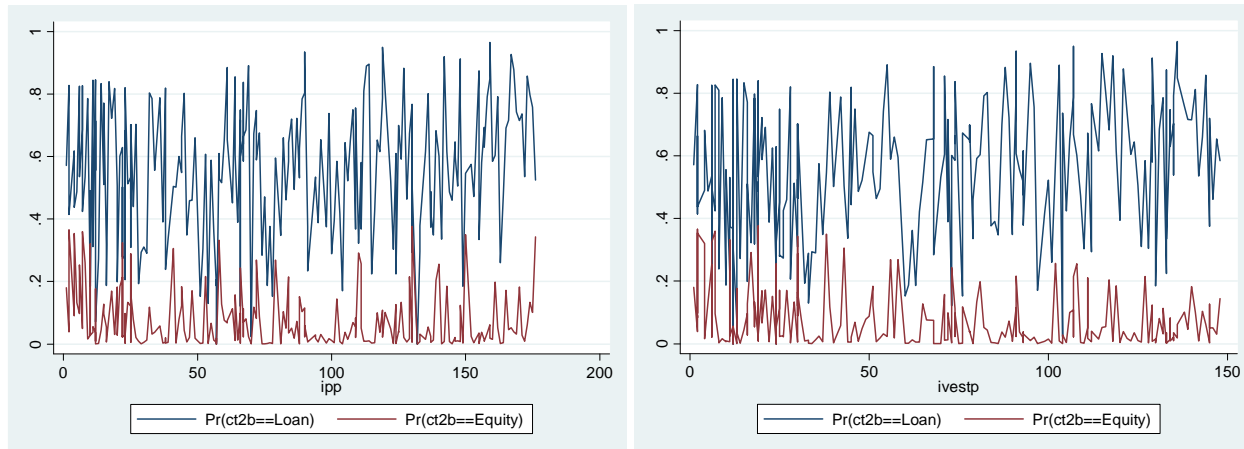
Figure 5: Multilogit probabilities for the subsample of more than one contract

The multilogit predictions show that there is a higher probability of the bank granting a loan rather than a share or equity contract in respect of any size of investment or credit. However, there is a clear difference in the distribution between the two subsamples. In the single-contract subsample, the probability of granting a loan increases with the size of investment or credit, while in the more-than-one-contract subsample, the probabilities follow a random walk instead. This difference in the distribution of probabilities may signal that the EBRD does not behave in the same way for a first contract as for a second (or further) contract. The bank certainly has less client information for a first contract than for a second and, hence, the first contract carries more risk. The bank seems to adjust its lending policy in the face of this higher risk. These results suggest the hypothesis that the EBRD's lending policy does not consist of offering a formatted menu but rather of granting credits tailored on the basis of client information and possibly on the basis of whether it is for a first or further contract.

2.2 Countries and sectors

There are two criteria that can account for the geographical distribution of contracts between 1991 and 2003: market size (population size or income per-capita), and political regime. Figures 6 shows

the geographical distribution of EBRD investments in cumulated terms per-capita by country. The Central European countries, which are the most developed countries of the population and which led the transition process, received the largest per capita financing (around 300000 euros for Slovenia, Croatia and Estonia), while the Central Asian countries lag behind significantly. The Central Asian countries have not only a poor business climate but also non-democratic institutions.
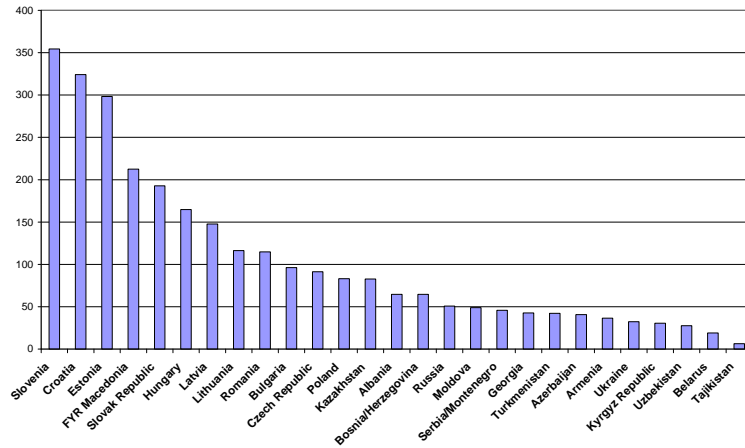
Figure 4:

Figure 6: Cumulated EBRD investments per capita by country (€ thousands).

[Table 6 about here]

We perform other statistics to get more evidence. We split the distribution into three sub-periods (1991-1995, 1996-1999 and 2000-2003). Table 6 shows that at the beginning of the transition process, almost half of the investments went to the early starters, Central Europe and the Baltic states. Their share later reduced to roughly one-third of the total. During the transition process, Russia received an increasing proportion of EBRD investment and its share remained stable. South-Eastern Europe saw a progressive increase in its share of EBRD investment during the period. The relative share of Eastern Europe and the Caucasus decreased. Finally, the Central Asian countries reached a noticeable share between 1996 and 1999 which fell by half in the final period.

As for the distribution by sector (Table 7) [7] at the beginning of the transition, most of EBRD investment went to Finance, Telecom, Oil/Gas/Natural Resources and Other sectors.[8] The objective was to finance infrastructure and the restructuring of the banking and the manufacturing sectors. Thereafter, the focus of the bank switched to the financing of the creation of small and medium enterprises (SMEs).

3 Empirical strategy

The EBRD selects one of the thirteen different available contracts (Table 1) when deciding to finance the investment project of a firm. The one selected should be the contract that reduces as much as possible the asymmetric information between the principal and the agent. The objective of the econometric analysis is to identify the screening device that enables the bank to discriminate between the firms and to select the contract that will incite them to behave well.

According to the level of significance of the fixed effects, we are able to check (i) the degree of heterogeneity that they account for and (ii) the importance of the reputation effect captured by an ad-hoc fixed effect in the case of established clients.

3.1 Econometric specification

In order to run our econometric exercise, we match data referring to a few characteristics of the contracts signed by the bank with other data referring to the environment in which the investment project has been run. In this way, we can capture the degree of the investment risk (country and credit risks). According to the theoretical literature, in the credit market, reputation is a crucial variable. In a framework accounting for asymmetric information between borrowers and lenders, Boot et al. (1991)

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[7] A complete list of all the sectors is included in Appendix A.

[8] More evidence about the role of EBRD in supporting the transformation of the local banking system is widely discussed in Fang et alii. 2011.

conclude that, for borrowers with a good reputation, there is a unique equilibrium, in which each borrower is offered an unsecured loan contract. In contrast, borrowers with a bad reputation are offered a secured contract with collateral that is lost only upon default. When private information on borrower type is added, the problem turns out to be of an adverse selection type: agents are required to self-report. If borrower quality and effort are substitutes, low-quality borrowers post collateral in order to commit to higher effort. In the empirical test that Boot et al. (1991) propose, a key result deserves attention: a decrease in collateral costs or an increase in loan size yields a lower utilization of collateral at equilibrium. Larger loans are more likely to have a lower level of collateral as well as loans with longer maturity. The size of the loan can be interpreted as a signal of borrower quality. Other factors occurring in the client–bank relationship can also be interpreted as signals of the quality of the borrower, such as the structure of the contracts signed by the two counterparts. A bank can usually discriminate between clients by proposing different contracts to them. The contracts can be grouped by type according to their 'nature' but, nevertheless, each of them is often tailored to the client's needs. Looking at the most widespread class of contracts, Inderst and Mueller (2006) investigate the optimality of debt versus equity contracts. Debt contracts are optimal when the lender is conservative and equity contracts are optimal when aggressive. Debt contracts are suitable for financing profitable projects that are likely to break even on public information alone, while less profitable projects are financed with equity. In addition, debts are proven to mitigate moral hazard and other problems that arise from asymmetric information. For instance, investments by small firms in tangible assets such as equipment or properties are expected to be financed with debts.[9] Furthermore, these authors analyze the sub-optimality of a lender's decision to propose a contract (to a potential borrower) by choosing it from a menu of contracts after having observed (ex-ante) a public signal. The menu choice always creates a problem because a lender would

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[9]In the case of transition countries, Roland (2000) argues that early in transition, macroeconomic stabilization programs led to a drastic cut in budgetary subsidies and bank finance became an important channel of soft budget constraint as soft bank credits replaced subsidies. This shift led to an increase of bad loans held by the banks. Bank were usually very reluctant to exchange debt with equity (in Poland, for instance, bank recapitalization were conditional on restructuring bad loans by means of debt equity swaps).

always choose a contract ex-post optimal for her. Nevertheless, given that the lender optimally restricts herself to a single contract to avoid ex-post self-dealing, it is optimal to offer a single contract that the client accepts or rejects on the basis of the contract's conditions. There is no adjustment of the loan terms after the screening, and this guarantees the optimality of the decision. The authors provide empirical evidence supporting this result. Loans are often granted at standardized terms and borrowers, in particular small firms, are often charged with the same rate of interest (because of an implicit same risk premium).

According to the general theoretical framework discussed above, our empirical strategy grants a lot to the privious contributions. We consider that the amount of the credit contract is supposed to be the result of a combination of the market conditions and the expected return of the investment.

The variables referring to the environment are: the measure of income level in the host market (GDP per capita), an indicator for political institutions (degree of democracy, DEM), time dummies and, finally, a dummy for public clients. In fact, a public client is more likely to be considered as a solvent client. Concerning the contract, in addition to the value of the credit (IV) granted by the EBRD to the firm, we consider the type of contract, the year it was signed and the return of the investment of that firm that can be approximated, for a solvent firm, by the value of its productive investment (IP, available in the database). This investment value is the minimum level of return of any successful productive investment by the firm, which corresponds to its capacity for repayment. When adopting this hypothesis, we are following and extending the results achieved by Holmström (1999) who proved that the investment decision, and the distinguishing characteristics of this investment, represent a way to disclose the unknown characteristics of an agent when working under the dynamics perspective of a reputation effect.

The maturity of a credit is different for each category of contract and the type of contract is an approximate indicator of the credit maturity, as mentioned in the previos Section. Finally, we know that the interest rate charged by the EBRD is equal to the LIBOR (London Interbank Offered Rate) plus

a risk premium. The value of the LIBOR allows us to capture the current conditions of the financial markets. From the firm's point of view, the LIBOR is an approximated measure of the effort required to establish its reputation as being solvent. From the bank's point of view, any changes in the LIBOR will affect the credit supply to the firm. In addition, for the specific case of loan contracts, the LIBOR can approximate the rate of return of the bank's investment.

As for the risk premium, the data from the EBRD are not available. However, this does not represent an obstacle for the issue we are studying. The borrowing cost cannot be an unambiguous indicator of the type of borrowers. In our exercise, we overcome this problem by introducing individual fixed effects, which control for the omitted variable bias. A description of the variables is given in Box 1.

[Box 1 about here]

We formulate the empirical model as follows. Let us define the dependent variable (value of the credit) as Y (IV) and $\underline{X} = (IP, Public, DEM, Libor, GDP)$ as the vector of the independent variables. Each entry of the dependent variable, the size of the credit for financing an investment project (IP), is defined as y_{itjs}, with $i = firm$, $t = year$, $j = host\ country$, $s = sector$. We also include an interaction term $(Dem_{jt} * year_t)$ between the democracy index and the time dummies. This term is meant to track the possible changes of the variable democracy over time in each country. Therefore, the equation we consider can be defined as:

$$
\begin{aligned}
IV_{itjs} \;=\; & \alpha_0 + \beta_1 IP_{itjs} + \beta_2 Public_i + \beta_3 Dem_{jt} + \beta_4 Libor_t + \beta_5 GDP_{jt} + \qquad\qquad (1) \\
& \beta_6 (Dem_{jt} * year_t) + \varepsilon_{itjs}.
\end{aligned}
$$

Our database is not a true panel, but rather a pooling of independent cross sections over time. Hence, we need to control for heterogeneity problems As argued in Wooldridge (2006), this pooled

structure implies that the dependent variable may have different distributions in different time periods and, to control for this, we need to introduce some time-fixed effects (μ_t). The same reasoning applies to the sector dimension, for which we include some sector-fixed effects (μ_s). In addition, as shown, for instance, in Baltagi (2008), we also need to include the unobservable time-invariant individual-specific effect (μ_i) to control for the heterogeneity problem as much as possible. Controlling for all these effects allows to decompose the error term (ε_{itjs}) in the following way:

$$\varepsilon_{itjs} = \mu_i + \mu_t + \mu_s + \nu_{itjs}, \tag{2}$$

where μ_i is the unobservable time-invariant individual-specific effect, μ_t the time fixed effect, μ_s the sector fixed effects and ν_{itjs} denotes the remaining disturbances, which are now expected to be $IID(0, \sigma_\nu^2)$. By inserting the error decomposition into the previous equation, we obtain the following equation:

$$
\begin{aligned}
IV_{itjs} &= \alpha_0 + \beta_1 IP_{itjs} + \beta_2 Public_i + \beta_3 Dem_{jt} + \beta_4 Libor_t + \beta_5 GDP_{jt} + \\
&\quad \beta_6(Dem_{jt} * year_t) + \gamma_1 \mu_i + \gamma_2 \mu_t + \gamma_3 \mu_s + \nu_{itjs}.
\end{aligned} \tag{3}
$$

The choice of the variable μ_i turns out to be crucial for obtaining independence between the residuals and the dependent variable. In a standard panel effect, the variable μ_i would be simply identified with firm-fixed effects. In our estimations we are alternating firm and contracts fixed effects in the full sample and the sample of local firms, while in the case of MNE we are just considering contracts fixed effects (because of the number of available information).The contract type is in fact time-invariant according to the EBRD statements. The theoretical framework indicates the contract type as one of the possible ways to identify the firm-type. Therefore, we expect to get different results in case we are applying the same model to our different subsamples. In particular, in the light of the theory discusses by García-

Santana (2011),it is also likely that all other regressors will loose part of their statistical significant in the case of MNE with respect to the other cases. If it were true, this would confirm the hypotheisis that EBRD considered the MNE as one of the principal building block to fund a market economy during the transition in CEECs irrispectie of the place but just focusing on the quality of the project they are willing to run. In this respect, they granted them credits just on the base of their reputation or project or sector of activity without taking in seriuos consideration the variables associated with the economic environment in the host economy.

Therefore, the specification used for the estimation can be written as:

$$IV_{itjs} = \alpha_0 + \beta_1 IP_{itjs} + \beta_2 DI_j + \beta_3 Dem_{jt} + \beta_4 (Libor_t) + \beta_5 GDP_{jt} \tag{4}$$

$$+ \beta_6 (Dem_{jt} * year_t) + \gamma_1 FE_i + \gamma_2 Year_t + \gamma_3 Sector_s + \nu_{itjs}$$

[Table 8 about here]

Table 8 gives descriptive statistics for some of these variables for the overall period and for two specific years: 1993 and 2003. The dependent variable is the financing amount (IV) granted by the EBRD. This is one of the variables in the bank's profit function, which depends negatively on the riskiness of the project.[10] It reflects both the screening process and the incentive mechanism that take place between clients. The measure of political institutions is taken from the Polity IV project (2007). This is an index varying between zero (for an absolute autocracy) and ten (for a fully-fledged democracy).[11] In our population this index declines over time because the EBRD financed democracies of Central and Eastern Europe at the beginning of the transition and later started to finance autocratic countries from Central Asia. The variation of the LIBOR corresponds to the historical values of the

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[10] See Stiglitz and Weiss (1981) on credit rationing.
[11] See the Polity IV website for details on how the scores are computed: www.systemicpeace.org/polity/polity4.htm.

credit market during the period.

According to the theoretical results discussed in Section 2, we expect that all independent variables in equation (4), except the LIBOR, will have a positive sign. An increase in the LIBOR implies a decrease in the amount of credit. In order to test the level of individual heterogeneity, we apply the technique of pooled OLS versus fixed effects.[12] Then, we are introducing firm-fixed effects and later we are refining the results by selecting a bunch of time invariant fixed effects. In all the contracts signed by the EBRD, the type of contract is an individual time invariant characteristic.

3.2 Results

Our database contains all contracts signed by the bank during the period 1991-2003. First, we concentrate on the full sample and, then, we split it into two groups: one-contract firms and several-contract firms. In order to test the reputation effect, we run regressions separately for each group of firms. We proceed first by assessing whether the fixed effect model should be preferred to the pooled OLS (with the F-test) and to the random effect model (with the Hausman test). In all the regressions we control for heteroskedasticity by applying either the White or the cluster correction. Then, we test the different measures of individual fixed effects.

3.2.1 The full sample

We first consider all contracts as though they are totally independent. Then, we identify the main factors that can influence the size of the credits granted by the EBRD. In Table 9, we show the output of the OLS estimations for the pool of observations when considering dummies by year, by sector and an interaction term (dem*years), which takes into account the transition of the political regime in the host countries towards democracy. In order to control for heteroskedasticity problems, we correct the residuals with either the White or the cluster method. The cluster method is appropriate since it allows

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[12]The econometric estimations were computed with the Stata 10 package.

us to take into consideration the fact that one firm can apply for more than one contract.

The results we obtain are robust overall. The proxy of the repayment capacity (IP) and the GDP per capita of the host country have a positive impact on the size of credit. Being a public borrower also has a positive impact on the size of credit, which can be interpreted as a guarantee for being a solvent client. In contrast, the LIBOR and the democracy index display negative signs. As for the LIBOR, the result simply confirms that the size of the credit is inversely related to the interest rate level. The negative sign associated with the democracy index indicates that the EBRD invests increasingly over time in the less democratic countries (see Subsection 3.2). This can be explained by the fact that at the beginning of the transition the EBRD granted few credits but mostly in more democratic countries then increased its supply of credits to all types of regimes, and, finally, kept investing a great deal in less democratic countries because the more democratic ones started to be financed by the private investment banks. Finally, the statistical tests run for the time and sector dummies state that those variables are not always statistically significant. Thus, time, sector or transition dynamics are not discriminating factors influencing the size of credit granted by the bank. As one could expect, the adoption of firm fixed effects in the estimation of the full sample turns out to be always extremely significant. It is also worth notice to consider that the cluster error correction strategy betters the quality of the estimation, making the time, sector and interaction fixed effects significant. The main difference concerning the results lies in the negative coefficient in correspondence of the public client. If this results were a simple consequence of the cohexistence of various kind of contracts in the same database (for which the identity of the client may have a different impact), it should disappear when splitting the sample. Another interesting results is the positive and strongly significant coefficient associated with the existence of a democratic regime in the country hosting the investments. This results should confirm that the strenght of a property right system is an interesting incentives for granting credits. Finally, as a last consideration for this first battery of estimations, the importance of adopting the cluster error correction devices stresses that there exist some latent component across the contracts that we need to take into consideraton and,

possibly, disentangling.

We repeat the same exercise by including a type of fixed effect at firm level: the type of contract. As we discuss comprehensively in the first part of the study, most of the contracts offered by the bank are standardized. Therefore, it is likely that the type of the contract signed by the client is somewhat the result of the bank's screening process, and it is automatically defined by the contractual condition a firm is required to fulfill. The estimations run by using these fixed effects (Table 10) confirm the previous results. The regressors (when statistically significant) improve their degree of significance. According to the F-test, the fixed effect estimation has to be preferred to the pooled OLS when including the interaction term. Again, the size of the investment, the identity of the client and the level of the GDP per capita in the host market have a positive impact on the size of credit. Finally, we establish that the fixed effects cover almost three-quarters of the variance. This result suggests that there really is a device to discriminate between clients and helps to explain the differences in the amount of credit granted by the bank.[13]

Having considered the full sample, we now want to go further by splitting the sample into two subsamples in order to verify the results' robustness. The first subsample includes only local firms while the second one is composed by MNEs.

[Table 9 about here]

[Table 10 about here]

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[13]In addition, in an exteded version of this study ([authors], 2009) we perform a further robustness check. Another characteristic that may be very important for the bank's lending decisions is the fraction of the borrower's capital owned by an international firm. These international firms are usually considered as well established clients and may contribute to reducing the investment project's risk evaluation by the EBRD. We wanted to check whether this international factor affects the bank's behavior. We built an ad-hoc dummy (dummy MNE) distinguishing the 617 projects with at least one international partner from those with none. The specification performs well but the new dummy is never statistically significant.

3.2.2 Local firms

The results of the F-test and the Hausman test show that the fixed effect model should be preferred to the pooled and random effects models (Table 11). Still preferring the cluster-error correction version of the estimations, the firm-individual fixed effects perform very well, but also the contracts fixed effects, beyond of being significant as well, disclose interesting insights. The fraction of the variance due to fixed effects (ρ) is particularly high (0.93 for Firm-fixed effects and 0.70 for Contract-fixed effects). The estimate of ρ suggests that almost three-quarters of the variation in the amount of financing is related to the different types of contract (Baltagi, 2008 and Baum, 2006). In the fixed effect estimations, the coefficients of all the explanatory variables (when they are statistically significant) display the expected sign. The firm's repayment capacity is always highly significant. All dummy variables are always statistically significant. The public identity of a client turns out to be important because a public client may be considered by the bank as less risky than a private one, when granting just one credit (and this result differentiates this group of contracts from the full sample). The significance of the interaction term between democracy (DEM) and the time dummy means that the more democratic a country is over time, the larger the size of the financing offered by the bank. We include this term in the first column of Table 11 and this variable turns out not be significant. This result tends to confirm the official claim that the EBRD promotes democratic institutions in transition countries regardless of the position of a country in the transition process. The time dimension does not seem to be relevant in a few of our specification; again this could embed a general idea of the EBRD's mission to foster transition in a long run perspective. The time dimension adquires statistical significance each time we perform our regression including contract fixed effects and, above all, when correcting errors with clustering by contracts. In line with the interpretation we provided above and the suggestion of the theoretical litterature, we should expect that the EBRD was expected to face the higher risk associated with the financing of activities in the host markets at the beginning of the activity. Therefore the choice of a

specific group of contracts rather than others has to be considered as a strategy to control and protect itselfs for that general risk. In this respect the contract choice is more sentitive to time that firms fixed effects.

To sum up, for local firms the fixed effects by type of contract turn out to be a good measure for identifying some elements of the financing strategy of the bank in time. Each contract signed by the bank is granted according to the individual characteristics of the client. This captures the optimal behavior of the bank in the face of both adverse selection and moral hazard when it signs a first contract with a firm that it has selected.

[Table 11 about here]

[Table 12 about here]

3.2.3 Multinational firms

In our full sample the total number of credits granted to project with a MNE is the unique borrower is relatively small. Therefore, we need to adapt the empirical specification defined for local firms in order to cope with the loss of degree of freedom. However, despite of these technical limitations, we think of being important to focus on this specific group of firms to draw some conclusions about the importance of favouring the entry of MNE in transition countries as a pillar to support the creation of a market economy. Referring to descriptive statistics in Table 8 we easily realize that the average size of a credit granted to a MNE, the size of the total investment as well as the financing share is lower for MNE with respect to local firms. According to the theory proposed by Burstain (2009) or Garcia-Santana (2011), MNEs have the possibility to ask for credits on the international markets or pay in cash part of their investment. Results about our econometric estimations are presented in Tables 13-14. The only variable that is always statistical significant (with a positive coefficient) is the size of the investment they ask for financing. Being a public company (as a borrower) is almost irrelevant and the level of interest rates (LIBOR) is significant (with the expected sign just in two cases. Time dummies are

often significant, but sector dummies no except for the finance sector. Because of the reduced size of the sample, we can control just for contract fixed effects. Their inclusion in the estimations does not change radically the results (their ρ is around 0.30 and the value is lower to that of estimations of local firms) but it helps in shrinking the standard errors. The interpretation of the results for the group of credits granted to MNE identifies that their investment projects where financed only on their quality and sector of destination. The EBRD seems to be extremely prone to grants credit to MNEs when they are targeting to operate in the finance sector in the host economies. Here, time matters: there is a clear association between the type of contract granted to the MNE and the time they were signed. Our estimations assess that the EBRD counted a lot on the presence of foreign banks for creating a capital market in transition countries. In this respect we provide a quantitative result of the conclusion discussed by Roland (2000) according to which private foreign banks entered in transition countries to replace the general mono-bank (active during the socialist system) with the purpose to reinforce the transition and create solid banking system.

[Table 13 about here]

[Table 14 about here]

4 Conclusions

The dataset we built from the European Bank for Reconstruction and Development allows us to focus on the strategy adopted by the EBRD in granting credits with resect to the type of applicant. The EBRD was in a situation of monopoly in many transition countries, and the purpose of the activity was to support the transition to a market economy rather than making profits. The EBRD's shareholders are sovereign and assigned to the bank its mission to foster and not to crowd out financial flows towards the private sector in these countries. According to our results, the EBRD's lending policy considered the option to grant credits to international MNEs as a pillar to consolidate the transition to a market

economy and, being those investments centered in the banking and finance system, they were expected to help in forming a modern local credit system. Instead, when referring to the credits granted to local firms, our results unveil a complete different financing scheme adopted by the bank. Granting credit to local firms is strongly influenced by the type of investment, the reputation of an applicant (being a public institution or not) and the host market. The need to cope with high credit risk unambiguously forced the bank to adopt measures of protection by using a client-screening scheme. As discussed in the economic literature, there is no unique scheme available to be implemented. In our sample, a screening device as general as the type of contract turned out to be an efficient tool. However, in line with Besley et al. (2010), our assessment offers elements to evaluate the need for potential changes of the EBRD credit policy in the future. Since the creation, the EBRD priorities were encapsulated in the transition impact. In the early stage of the transition, the selection criteria for granting credits were relatively clear: the priorities were clear (creation of the market economy), but nowadays other concerns as social and economic cohesion or occupational safety should be taken into consideration.

The availability of this missing information would yield further interesting conclusions. First, we could refine the structure of the exercise we proposed by bettering the measurement of a few variables. Second, controlling for the rate of success of the financed projects, it would be possible to bring more insights about the possible association between the optimally of the credit-screening process and the effective impact of financed investments on host-market economies.

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LIST OF TABLES

Table 1: EBRD contracts and their frequency (1991-2003)

(Source: EBRD, Calculus: authors)

Contract	Freq.	%
Debt	1	0.06
Equity	141	7.92
Guarantee	100	5.62
Line of Credit	7	0.39
Loan	949	53.31
Loan/Line of credit	1	0.06
Loan/Shares	96	5.39
Loan/Guarantee	1	0.06
Senior debt	72	4.04
Shares	404	22.70
Shares/Loan	2	0.11
Shares/Loan/Share	1	0.06
Share/Loan/Guarantee	1	0.06
Subordinated debt	4	0.22
TOTAL	**1780**	**100**

Table 2: Descriptive statistics on loans (value € mill.)

(Source: EBRD, Calculus: authors)

	Variable	Obs	Mean	Std. Dev	Median	Min	Max
Total sample[1]							
	Bank financing	945	21.25	27.76	12.7	0.1	233.76
	Tot. project value	936	60.81	109.94	29.25	0.1	923.9
Up to 1995							
	Bank financing	219	19.98	23.53	10.90	0.2	142
	Tot. project value	220	68.24	115.81	31.85	0.5	923.9
From 2000 onwards							
	Bank financing	438	21.19	31.36	10.00	0.1	233.76
	Tot. project value	427	50.60	94.94	15.00	0.1	750

Table 3: Descriptive statistics on shares (value € mill.)

(Source: EBRD, Calculus: authors)

	Variable	Obs	Mean	Std. Dev	Median	Min	Max
Total sample							
	Bank financing	402	9.05	13.93	3.2	0.1	125
	Tot. project value	402	34.57	76.98	8.2	0.1	1028.9
Up to 1995							
	Bank financing	84	10.14	11.82	5.9	0.1	53.4
	Tot. project value	84	35.92	59.96	18.6	0.7	384.1
From 2000 onwards							
	Bank financing	100	7.45	11.95	3.1	0.3	53.7
	Tot. project value	99	26.87	63.57	4.8	0.5	365.8

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[1] The difference between the number of observation in bank financing and total project value is due to lack of data for one of the two variables.

Table 4: Descriptive statistics on single contracts (value € mill.)

(Source: EBRD, Calculus: authors)

	Variable	Obs	Mean	Std. Dev	Median	Min	Max
Total sample							
	Bank financing	1369	17.73	25.53	8.8	0.1	233.8
	Value project	1353	55.02	106.34	17.1	0.1	1028.9
Up to 1995							
	Bank financing	279	17.86	22.18	9.1	0.1	142
	Value project	279	68.95	122.65	27.5	0.5	924.8
From 2000 onwards							
	Bank financing	596	18.08	29.05	7.9	0.1	233.8
	Value project	596	44.8	87.60	10.09	0.1	750

Table 5: Descriptive statistics on several-contract firms (value € mill.)

(Source: EBRD, Calculus: authors)

	Variable	Obs	Mean	Std. Dev	Median	Min	Max
Total sample							
	Bank financing	405	11.97	17.75	6.6	0.5	130
	Tot. project value	395	28.7	56.3	8.7	0.5	651.3
Up to 1995							
	Bank financing	59	16.47	20.83	8.8	0.5	109.8
	Tot. project value	59	36.25	53.61	20.8	1.3	329.6
From 2000 onwards							
	Bank financing	219	11.78	18.87	5.6	0.1	130
	Tot. project value	202	28.63	65.32	7.9	0.1	651.3

Table 6: Descriptive statistics: Cumulated investment by region (%)

(Source: EBRD, Calculus: authors)

Regions	1991-1995	1996-1999	2000-2003
Russia	19.9	29.1	28.8
Central Europe and Baltic States	45.9	32.9	36.0
Eastern Europe and the Caucasus	11.8	11.9	7.5
South-Eastern Europe	16.8	13.5	20.5
Central Asia	5.6	12.6	7.2

Table 7: Descriptive statistics: Cumulated investment by sector (%)

(Source: EBRD, Calculus: authors)

Sector	1991-1995	1996-1999	2000-2003
Finance	19.6	27.0	30.2
Environment	..	4.1	..
Food	2.6	8.1	9.0
Telecom	14.5	6.8	4.9
Energy	9.5	9.7	8.9
Oil/Gas/Nat.Res.	10.8	10.3	8.4
Transport	8.8	3.4	16.1
Others	34.3	30.6	22.4

BOX 1: **LIST OF VARIABLES**

Contract	Type of contract signed by the EBRD (13 possible contracts)
DEM	Index of democratic level in the country hosting the investment (Polity IV, 2007)
DF	Dummy for finance and banking sector
PUBLIC	Dummy variable for presence of a public client or other interests of the bank in the project
GDP	Gross domestic product per-capita of the host country (IMF statistics, 2007)
IP	Total value of the investment project
IV	Value of the investment financed by the EBRD
Libor	Average annual value of LIBOR interest rate at 12 months.
Sector	Dummy by sector
Year	Time dummy

Table 8: Descriptive statistics

	Variable	**Obs**	**Mean**	**Std. Dev**	**Min**	**Max**
Sample						
	Libor	1788	4.23	1.45	2.17	9.91
	GDP per-capita ($)	1706	2706.5	2143.6	151.48	13937.4
	Polity IV index (DEM)	1662	6.5	2.85	0	10
	EBRD Credit Value (€ mill.)	1766	16.5	24.2	0	233.7
	Total project value (€ mill.)	1750	49.23	97.87	0	1028.9
	Financing share	1728	0.6	0.33	0.009	1
1993						
	Libor	71	7.24	0	7.24	7.24
	GDP per-capita ($)	68	2167	1519.7	225.8	6801.8
	Polity IV index (DEM)	68	7.32	2.45	0	10
	EBRD Credit Value (€ mill.)	71	20.36	23.9	0.1	100.12
	Total project value (€ mill.)	71	69.98	96.95	1.3	464.7
	Financing share	71	0.43	0.28	0.04	1
2003						
	Libor	272	2.17	0	2.17	2.17
	GDP per-capita ($)	260	3292.8	2539.6	248.2	13937.4
	Polity IV index (DEM)	254	6.61	3.04	0	10
	EBRD Credit Value (€ mill.)	270	13.69	23.7	0.1	230.2
	Total project value(€ mill.)	271	33.26	77.4	0.1	750
	Financing share	270	0.69	0.34	0.01	1
MNE						
	EBRD Credit Value (€ mill.)	167	9.91	14.62	0.045	95.411
	Total project value(€ mill.)	158	26.31	41.73	0.045	255
	Financing share	156	0.57	0.356	0.049	1
Local						
	EBRD Credit Value (€ mill.)	1599	17.18	24.84	0	233.76
	Total project value(€ mill.)	1592	51.51	101.5	0	1029
	Financing share	1572	0.61	0.333	0.009	1

Table 9: Econometric results: Full sample

Method of estimation: Pooled OLS, Value in brackets: Std Error,

Dependent variable: IV

	OLS	OLS	OLS	OLS
C	13.17 (5.77)**	7.68(5.89)	13.61(5.11)**	8.08(2.26)**
IP	0.16 (0.019)***	0.16(0.02)***	0.16 (0.008)***	0.16(0.008)***
PUBLIC	7.55(2.34)***	7.40(2.37)***	7.55(2.04)***	7.48(1.90)***
Dem	-0.25(0.14)*	-1.65(0.79)**	-0.25(0.02)***	-0.14(0.18)
Libor	-1.72 (0.69)**	0.26(0.82)	-1.72 (0.16)***	-1.67(0.25)***
GDP	0.0006(0.0002)**	0.0005(0.0003)**	0.0006(0.0002)***	0.0005(0.0002)**
Dummy years	yes	yes	yes	yes
Dummy sectors	yes	yes	yes	yes
DEM*years	no	yes	no	yes
Tests:				
D. Years=0	2.93***	0.50	26647***	234.71***
D. Sectors=0	4.97***	4.14***	$1.4 \ 10^5$***	$1.4 \ 10^5$***
DEM*year=0		1.22*		1747.38***
DEM*year=D. Years		1.14		1499.96***
Robustness errors	Heterosk.	Heterosk	Clusters	Clusters
Adj. R-Square	0.51	0.51	0.51	0.52
OBS	1620	1620	1614	1614

*** 1% significance level; ** 5%; * 10%

Table 10
Econometric results: full sample
Method of estimation: Fixed effects, Value in brackets: Std Error,

Dependent variable: IV

	Fixed effects	Fixed effects	Fixed effects	Fixed effects
C	1.66 (19.18)	5.15 (6.37)	3.34 (9.95)	5.15 (2.19)**
IP	0.27 (0.027)***	0.16(0.005)***	0.27 (0.04)***	0.16(0.007)***
PUBLIC	-26.62 (5.81)***	6.81 (1.77)***	-26.62 (14.10)*	6.81 (1.38)***
Dem	5.03 (3.49)	-0.79 (1.02)	5.02 (0.26) ***	-0.79 (0.48)
Libor	-0.52 (3.54)	0.77 (1.13)	-0.52 (2.22)	0.77 (0.46)
GDP	0.00001 (0.0009)	0.0005 (0.0002)**	0.00001 (0.0009)	0.0005 (0.0002)**
Dummy years	yes	yes	yes	yes
Dummy sectors	yes	yes	yes	yes
DEM*years	yes	yes	yes	yes
Fixed effects	Firm	C13	Firm	C13
Tests:				
Hausman Test (χ^2)		17.18***		
F-test: fixed vs pooled		4.65***		
D. Years=0		3.84***	5.27***	$1.4 \ 10^5$***
D. Sectors=0		2.87***	5.54***	1582***
DEM*year=0		0.28	57.96***	$1.4 \ 10^5$***
σ_u	26.18	28.05	28.09	28.05
ρ	0.92	0.73	0.93	0.73
Robustness errors	White	White	Cluster	Cluster
R-Square (within)	0.63	0.49	0.63	0.50
OBS	1620	1614	1620	1614
Groups		13		13

*** 1% significance level; ** 5%; * 10%

Table 11

Econometric results: Local firms

Method of estimation: OLS, Value in brackets: Std Error,

Dependent variable: IV

	OLS	**OLS**[a]	**OLS**
C	4.68 (3.44)	10.14 (3.04)***	10.26 (3.00)***
IP	0.156 (0.189)***	0.15 (0.02)***	0.15 (0.008)***
PUBLIC	6.98(2.40)***	7.19 (2.38)***	7.18 (2.00)***
Dem	-0.32(0.63)	-0.24 (0.149)	-0.23 (0.039)***
Libor	0.383 (0.822)	-1.77 (0.69)**	-1.77 (0.17)***
GDP	0.006(0.003)**	0.0006 (0.0002)**	0.0006 (0.0002)**
Dummy years	yes	yes	yes
Dummy sectors	yes	yes	yes
DEM*years	yes	no	no
Fixed effects			
Tests:			
F-test: fixed vs pooled			
D. Years=0	0.77	2.95***	28040***
D. Sectors=0	5.22***	5.63***	28469***
DEM*year=0	1.39		
DEM*year=D. Years	1.22		
σ_u			
ρ			
Robustness errors	White	Cluster (Firm)	Cluster (Contract)
R-Square (within)	0.51	0.51	0.51
OBS	1477	1477	1472

*** 1% significance level; ** 5%; * 10%.

[a] On the base of the statistics in the previous column we perform the analysis only with time dummies.

Table 12
Econometric results: Local firms
Method of estimation: Fixed effects, Value in brackets: Std Error,
Dependent variable: IV

	Fixed effects	Fixed effects	Fixed effects	Fixed effects
C	-19.35 (13.51)	-19.35 (10.93)*	10.28 (4.84)**	10.28 (1.48)***
IP	0.284(0.30)***	0.284 (0.05)***	0.158 (0.005)***	0.158 (0.007)***
PUBLIC	- 20.71 (5.72)***	-20.71 (12.54)*	6.60 (1.86)***	6.60 (1.52)***
Dem	2.67 (1.59)*	2.67 (1.82)	-0.177 (0.18)	-0.177 (0.04)***
Libor	0.77 (1.078)	0.77(0.88)	-1.98 (0.221)	-1.98 (0.186)***
GDP	-0.0001 (0.0009)	-0.0001 (0.0002)	0.006(0.003)***	0.006(0.003)***
Dummy years	yes	yes	yes	yes
Dummy sectors	yes	yes	yes	yes
Fixed effects	Firm	Firm	Contract	Contract
Tests:				
F-test: fixed vs pooled	5.26***		3.66***	
D. Years=0	0.46	1.31	3.80***	$2.6\ e^{5}$***
D. Sectors=0	0.51	41.60***	3.24***	95091***
σ_u	28.40	28.40	26.91	26.91
ρ	0.93	0.93	0.70	0.70
Robustness errors	White	Cluster	White	Cluster
R-Square (within)	0.59	0.59	0.49	0.49
OBS	1477	1472	1472	1472

*** 1% significance level; ** 5%; * 10%.

Table 13

Econometric results: Multinational firms[2]
Method of estimation: OLS, Value in brackets: Std Error,
Dependent variable: IV

	OLS	OLS	OLS	OLS
C	4.63 (3.39)	3.94 (2.15)*	4.61 (1.38)**	3.91 (1.67)*
IP	0.32 (0.04)***	0.32 (0.036)***	0.32 (0.02)***	0.32 (0.016)***
PUBLIC	0.022(1.83)	0.31 (1.89)	-0.11 (1.76)	0.199 (1.62)
Dem	-0.22 (0.21)	-0.22 (0.21)	-0.22 (0.12)	-0.22 (0.11)*
Libor	-0.378(0.77)	-0.65 (0.48)	-0.38 (0.30)	-0.65 (0.16)***
GDP	0.0002(0.0002)	0.00014(0.0002)	0.0002 (0.0001)	0.0001 (0.0001)
DF		1.68 (0.96)*		1.71 (1.54)
Dummy years	yes	yes	yes	yes
Dummy sectors	yes	no	yes	no
D. Years= 0	1.7*	1.3	320.84***	145.48***
D. Sectors=0	1.3		28.70***	
DF=0		3.04*		1.22
Robustness errors	White	White	Cluster	Cluster
			(Contracts)	(Contracts)
R-Square (within)	0.80	0.79	0.80	0.78
OBS	143	143	142	142

*** 1% significance level; ** 5%; * 10%

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[2]The lack of sufficient observations prevents from introducing the interaction term between democracy variabe and time dummies.

Table 14
Econometric results: Multinational firms
Method of estimation: Fixed effects, Value in brackets: Std Error,
Dependent variable: IV

	Fixed effects	Fixed effects	Fixed effects	Fixed effects
C	2.80 (3.16)	2.8 (1.61)	3.25 (3.53)	3.26 (1.64)*
IP	0.31 (0.018)***	0.31 (0.019)***	0.31(0.017)***	0.31 (0.021)***
PUBLIC	3.24 (7.61)	3.24 (1.04)**	2.66 (7.43)	2.66 (0.99)**
Dem	-0.11 (0.31)	-0.11 (0.09)	-0.11 (0.303)	-0.12 (0.084)
Libor	-0.71 (0.72)	-0.71 (0.21)**	-0.365 (0.754)	-0.366 (0.294)
GDP	0.0002 (0.0003)	0.0002 (0.0001)	0.0002 (0.0003)	0.0002 (0.0001)
DF	1.54 (1.53)	1.54 (1.39)		
Dummy years	yes	yes	yes	yes
Dummy sectors	no	no	yes	yes
Fixed effects	Contract	Contract	Contract	Contract
Tests:				
F-test: fixed vs pooled	2.01*		2.34**	
D. Years$= 0$	1.06	2.3 e^{8***}	1.09	894***
D. Sectors=0			2.43**	225.10***
DF=0	1.02	1.23		
σ_u	4.46	4.46	4.79	4.79
ρ	0.29	0.29	0.33	0.33
Robustness errors	White	Cluster	White	Cluster
R-Square (within)	0.78	0.78	0.79	0.79
OBS	142	142	142	142

*** 1% significance level; ** 5%; * 10%

A   Appendix: List of sectors

The following table shows all the sectors that firms asking for a finance belong to:

Banking, Finance and holding	Local services (water, waste...)
Chemical (including Pharmaceutical)	Media
Education and other public services	Manufacturing
Electronic and Hi-Tech	Metal
Energy	Natural resources
Environment	Oil and gas
Food and beverage (incl. agriculture)	Real estate
Health and personal care	Telecommunication
Hotels and tourism	Trade and retail
Infrastructure (transport)	Vehicles