# The Politics of Related Lending<sup>\*</sup>

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#### Abstract

We analyze the profitability of government-owned banks' lending to their owners. We find evidence that such lending has been used to transfer bank profits to the governments, but only in localities where the incumbent politicians face significant competition for reelection. In localities where the incumbent party has a high probability of reelection there is no such evidence. This result establishes a causal link behind extant evidence that banks' lending to controlling parties (owners and directors) can result in "looting" of the banks. We show that such looting occurs when controlling parties are at risk of losing control.

**Keywords:** politics and finance, bank regulation, related lending

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## 1 Introduction

Banks play an important role in financing governments. While banks' holdings of government bonds have attracted much attention in the ongoing sovereign debt crisis, banks' direct loans to governments also account for a substantial portion of government financing in many countries. For example, Eminescu (2011) in a study of European countries found that bank loans accounted for as much as 67% of public debt in the year 2009.<sup>1</sup> Stylized facts suggest that bank loans are a particularly common financing choice for local and regional governments outside the U.S, perhaps because of prohibitively high costs of bond issues.<sup>2</sup>

When providing financing to governments, banks are often dealing with borrowers that are endowed with coercive power. Such power derives from the many ways in which governments interact with banks: as regulators, tax authorities, and sometimes as owners. Our focus in this paper is on the latter relationship. Government ownership of banks is quite common in many countries around the world. La Porta, Lopez-de-Silanes, and Shleifer (2002) analyze a sample of 92 countries and find that, on average, government-owned banks control about 42% of the assets of a country's 10 largest banks. These findings were based on data about the year 1995, but more recent contributions confirm that government ownership of banks remains high.<sup>3</sup> When governments act in a dual capacity as owners and borrowers of banks, politicians may be tempted to take advantage of captive banks in order to obtain government financing at favorable terms. This possibility is the focus of our analysis.

Our analysis is motivated by a classic crowding-out argument: if banks are capital constrained and are forced to make loans at terms that do not cover the

<sup>&</sup>lt;sup>1</sup>Estonia and Luxembourg had the highest fraction of public debt financed with bank loans (67% and 60% respectively), consistent with the idea that such countries find it too costly to issue bonds. However, even Germany, which has a large volume of public debt and well developed capital markets, had 20% of public debt financed with bank loans.

<sup>&</sup>lt;sup>2</sup>The United States is unusual in the preferential tax treatment given to municipal bonds. In addition, Standard and Poor's (S&P) reports that, in the year 2010, it rated only 294 local and regional governments (LRGs) outside the U.S. (See S&P's "International Local And Regional Governments Default And Transition Study, 2010 Update" available on S&P's website.) This indicates that few non-U.S. LRGs have access to bond markets.

<sup>&</sup>lt;sup>3</sup>See Micco, Panizza, and Yanez (2007) and Iannotta, Nocera, and Sironi (2007).

loans' opportunity costs, then private borrowers are crowded out. From the perspective of government politicians, such crowding-out is a potential concern because it can impair a government's tax base. We hypothesize that (self-interested) government politicians internalize this cost to an extent that depends on their reelection prospects, because any impairment of a government's tax base will emerge only over time. Politicians with lower reelection prospects will therefore exercise less restraint in forcing government-owned banks to engage in unprofitable government financing.

We test our hypothesis by examining the profitability of local government financing for a sample of savings banks that are owned by Austrian municipalities. These banks are not publicly listed, and so have limited access to capital markets. We find evidence in support of our hypothesis. Using data from a number of different elections we are able to subdivide our sample between banks that are located in regions that have experienced a high degree of political competition and those that have experienced low political competition. The elected politicians in highly competitive regions have a lower probability of being reelected. The differences between these two groups in the profitability of municipal lending are striking. In the politically competitive group we find evidence that municipally-owned banks were engaging in unprofitable municipal lending. Such evidence is not present in the group of banks located in politically noncompetitive regions.<sup>4</sup>

In order to measure the profitability of the banks' municipal loans we regress the banks' returns on assets on the fraction of total assets tied down in municipal lending. The coefficient obtained is interpreted as a mark-up over unobservable loan funding costs.<sup>5</sup> However, because loan funding costs are unobservable, this interpretation hinges on a proper identification strategy. We employ a strategy that is based on a natural experiment that occurred when Austria joined the European Union (EU) in 1995 and became immediately subject to EU regulations. The EU regulations imposed new transparency requirements on public procurement, as well as strict rules against market distortions and entry barriers in municipal loan markets. Stylized facts suggest that these regulatory changes, together with EU

<sup>&</sup>lt;sup>4</sup>We of course control for many additional characteristics that may explain the differences, including per capita GDP. These controls are described in detail in the paper.

<sup>&</sup>lt;sup>5</sup>The loan funding costs include opportunity costs that are, almost by definition, unobservable.

supervision, made it harder for municipal politicians to coerce captive banks into providing municipal financing at below-market terms.<sup>6</sup> An extreme case in point is the case of the Austrian Hypo Alpe Adria bank, that was publicly criticized by the EU for lending to some Austrian municipalities at below-market terms.<sup>7</sup>

We find that, after Austria's EU accession, loans to municipalities contributed more positively than before to the operating profitability of the municipally owned banks in our sample. This result is consistent with the idea that it became harder for politicians to coerce municipally owned banks into making unprofitable loans. But, the result is also consistent with alternative explanations. In order to determine the most plausible explanation we follow a two-fold strategy. We first identify effects of government coercive power on loan profitability, using local politicians' reelection prospects as proxies for politicians' incentives to loot government-owned banks. We next test the credibility of alternative explanations for our results.<sup>8</sup>

Our identification strategy takes the form of a difference-in-difference analysis comparing two subsamples of banks: banks owned by politically competitive and politically noncompetitive municipalities.<sup>9</sup> We again find a post-EU increase in the profitability of banks' municipal lending, but now only for banks that are owned by politically competitive municipalities. This result is striking because all Austrian municipalities feature identical political institutions and election procedures, and were affected by Austria's EU accession in the same way. We can therefore rule out the possibility that our measures of political competition are merely proxies for

<sup>&</sup>lt;sup>6</sup>As part of the new rules, banks that submit losing bids to provide municipal financing can now request information about the terms of the winning bid. Competing banks can thus help to enforce the rules against market distortions. As argued by Levine (2004) such enforcement by competitors can be even more effective than enforcement by regulators.

<sup>&</sup>lt;sup>7</sup>The municipalities are located in the Austrian state of Carinthia, and this state was until recently the owner of Hypo. The European Commission's criticism of Hypos' lending practices with respect to the municipalities was the subject of a news story presented on Austrian national television on September 17, 2010. A (German) summary of the news story is available on the website for the Carinthian channel of Austria's national TV station, under http://kaernten.orf.at/stories/470364/.

<sup>&</sup>lt;sup>8</sup>Direct evidence of politicians exerting coercive power over captive banks cannot be obtained. We thus take the approach of documenting evidence that is consistent with such behavior, and then we proceed to eliminate alternative explanations.

<sup>&</sup>lt;sup>9</sup>Since the extent of a municipality's local political competition is a potentially endogenous variable, we define these two subsamples based on federal election data, rather than municipal election data. We also repeat our analysis using three different measures of political competition.

institutional differences between the municipalities. Consistent with our hypothesis, the results suggest that politicians with poor reelection prospects forced banks to engage in unprofitable government financing, but were not as free to do so after Austria joined the EU. The above-mentioned case of Hypo Alpe Adria bank's unprofitable lending to municipalities is a case in point since this bank was controlled by a government run by a party that never had an absolute majority and was relatively insecure in its reelection prospects.

In the remainder of the analysis we test the credibility of alternative explanations for our results. The most prominent alternative explanation is related to the increased competition that Austrian banks faced after Austria joined the EU. This increased competition may have resulted in a reduction of the opportunity costs that the municipal banks incurred in lending to the municipalities, causing municipal lending to become relatively more profitable.<sup>10</sup> In support of this alternative explanation, we find that political competition is positively correlated with per capita GDP which is a well-known proxy for competition in banking markets.<sup>11</sup> We thus check if our results concerning political competition could be due simply to the positive correlation between political competition and per capita GDP, and we provide evidence that this is not the case. Further possible alternative explanations and robustness checks are described in the paper. We are able to reject all of the alternative explanations, but are not able to reject our hypothesis that governmentowned banks in politically competitive regions were coerced, prior to Austria joining the EU, into providing unprofitable government financing.

Our analysis is related to the literature on "related lending", i.e., bank lending to "related" borrowers (owners and managers). Within this literature, our results are most similar to those of La Porta, Lopez-de-Silanes, and Zamarripa (2003), Laeven (2001), and Bae, Kang, and Kim (2002), in that we provide evidence consistent with a looting view of related lending. Lamoreaux (1994) and Maurer and Haber (2007),

<sup>&</sup>lt;sup>10</sup>Of course, the municipal lending market also became more competitive, so it is not clear why competition should cause municipal lending to become relatively more profitable.

<sup>&</sup>lt;sup>11</sup>Claessens and Laeven (2004) find that the correlation coefficient between GDP per capita and the number of banks per capita is 0.69. Jaffee and Levonian (2001) regress the number of bank branches on GDP and population. They obtain an  $R^2$  of .91 and find that GDP is by far the most significant variable. Both of these studies use national level data.

in contrast, argue that banks can benefit from related lending, because such lending can mitigate informational asymmetries between banks and their borrowers.<sup>12</sup> Our work differs from this literature in that we focus on politics and bank management. It is also unlikely that the banks in our sample realized informational benefits in lending to their municipal owners, because during the time of our study these municipalities were uniformly perceived to be relatively free of default risk.<sup>13</sup>

Our work is also related to the literature on government ownership of banks. Within this literature, ours is not the first study to show that politics can affect the lending decisions of government-owned banks. Dinç (2005) finds that government-owned banks increase their lending in election years relative to private banks. Sapienza (2004) finds that Italian government-owned banks charge interest rates that vary across regions and decrease in the regional power of the party in control of the bank. Khwaja and Mian (2005) show that politically connected firms in Pakistan receive more and riskier loans from government-owned banks. Cole (2009) shows that the quantity of agricultural lending by government-owned banks tracks the electoral cycle in India. Interestingly, he also finds that the largest increases in lending volume can be found in areas in which elections are particularly close.

The paper is organized as follows. In the next section, we discuss the motivation behind our analysis and we describe the natural experiment that is at the core of our empirical analysis. In Section 3 we describe the data and provide some summary statistics. In Section 4 we present the main empirical analysis. Section 5 provides some concluding remarks.

### 2 Motivation and Research Strategy

#### 2.1 Motivation

When municipalities borrow from the banks that they own, the owners of the bank and the borrowers are the same – the municipal citizens. The citizens are not, however, the decision makers who are directly in charge of the loan decisions. The

 $<sup>^{12}</sup>$ Maurer and Haber (2007) also analyze data about Mexican banks, but from a much earlier period than in the La Porta, Lopez-de-Silanes, and Zamarripa (2003) study.

<sup>&</sup>lt;sup>13</sup>We in fact know of no Austrian municipal defaults between the end of World War II and the end of our sample period.

citizens choose a municipal politician, the mayor, to act as their agent. The mayor typically makes the borrowing decisions for the municipality, and also sits on the board of directors for the municipally owned bank.

There are two strands of literature on politics and finance that are relevant for our analysis. One of these focuses on the agency problem that is inherent in politics. A politician is elected to act in the interests of the citizens, but the citizens cannot observe everything that the politician does. A potentially significant source of agency conflicts arises from a politician's desire to be reelected. The second strand of literature assumes that politicians act in the interest of their constituencies, but within any voting region there are multiple constituencies with conflicting objectives. In what follows we briefly describe each approach and how it relates to the problem at hand. The bottom line, however, is that both of these approaches result in the same prediction: Banks that are owned by municipalities in which there is a high degree of competition between political parties are more likely to be "looted" by their municipal owners.

In the agency model the politician obtains personal benefits from reelection. The politician may take actions that appear to benefit the citizens in the short run, but that are not beneficial in the long run. If the citizens have full information and are rational and forward looking, then such actions should not benefit the politician. The citizens may not, however, have full information. They may lack information about the quality of the politician, as in Drazen and Eslava (forthcoming). In our case the citizens also lack information about the details of the municipally owned banks' business practices. They are thus unable to determine whether a good government budget outcome is the result of the politician's skill, or of hidden wealth transfers from the bank to the government. Such wealth transfers may be socially suboptimal because the bank may be capital constrained and its loans to the government may "crowd out" loans to the private sector.<sup>14</sup> While the voters will eventually notice the costs of such crowding out, these costs are hard to assess and will typically be realized in the future, while the benefits of hidden wealth transfers are realized

<sup>&</sup>lt;sup>14</sup>The banks in our sample are actually quite likely to face capital constraints because these banks are unlisted and cannot tap public equity markets.

immediately.<sup>15</sup> If the politician has a low probability of reelection, then he will not fully internalize the costs of such wealth transfers. He will focus only on the immediate benefit of improved reelection prospects. In contrast, a politician who is secure in his reelection prospects perceives a lower reelection benefit from such wealth transfers and is more apt to fully internalize the costs. This model leads us to predict that such wealth transfers ("looting" of government-owned banks) are more likely to occur in municipalities in which there is a high degree of political competition.<sup>16</sup>

An alternative modeling approach assumes that citizens are rational and have full information. Alesina and Tabellini (1990) develop such a model in which politicians act in voters' best interests, but different voters have preferences for different public goods. If there is a lot of uncertainty about which will be the next party in power, then the party currently in power will overspend and take on more debt than what would otherwise be optimal. The reason for the overspending is that the party in power does not fully internalize the cost of leaving excess debt to its successor. Alesina and Tabellini thus predict that politicians with low reelection probabilities are more likely to behave in ways that are not in the best long-run interests of citizens.<sup>17</sup> As discussed above, such politicians are also less likely to fully internalize the crowding out costs that result from coercing captive banks into financing the government debt at terms that do not cover the loans' opportunity costs. This model thus also leads us to predict that looting of government-owned banks is more likely to occur in municipalities in which there is a high degree of competition between political parties.

The predictions are consistent with a piece of stylized evidence. According to a news story presented on Austrian national television on September 17, 2010, the

<sup>&</sup>lt;sup>15</sup>The crowding out may in fact increase the local tax base in the short-run, because there will be less tax-deductible debt-financed private sector investment in real estate, etc.

<sup>&</sup>lt;sup>16</sup>Snyder (1989) presents a related prediction. He predicts that the spending of campaign resources increases with the level of competition between political parties.

<sup>&</sup>lt;sup>17</sup>This result is very similar to the above result. The main difference is that it is obtained without agency problems and asymmetric information. In a related paper Persson and Svensson (1989) assume that different parties have different preferences regarding the quantity of government spending. They argue that the party that prefers less spending will spend more when it has a lower probability of being reelected.

European Commission has criticized the Austrian Hypo Alpe Adria (Hypo) bank for lending to some Austrian municipalities at below-market terms.<sup>18</sup> The municipalities are located in the Austrian state of Carinthia, and this state was until recently the owner of Hypo.<sup>19</sup> The story is consistent with our model in that the government of Carinthia was for the last 10 years run by a party that never had an absolute majority of seats in the state assembly and that had to compete hard to stay in power (i.e., to be re-elected).

#### 2.2 The Natural Experiment

Our analysis examines the profitability of banks' lending to municipal governments that own them. Profitability depends not only on loan terms but also on costs, including opportunity costs. Opportunity costs are, almost by definition, unobservable. We address this missing variable problem by making use of a "natural experiment". A key requirement of a natural experiment is an event, the occurrence of which was independent of the variables of interest, and that caused exogenous changes in the variables of interest. By examining these changes we can analyze the relation between profitability and lending to government owners. As discussed in Meyer (1995), the relevant exogenous event in economic studies is often a change in regulations.

Our analysis is based on a natural experiment that occurred when Austria joined the European Union (EU) on January 1, 1995. As of this date Austrian municipalities were required to start obeying EU Directive 92/50EEC concerning public procurement. This directive specifies explicit rules for the public procurement of a range of services, including banking and investment services. The municipalities had to start following "open procedures [...] whereby all interested service providers may submit a tender" (Article I(d)), invite sufficiently many bidders to "ensure genuine competition" (Article 13), and base the award of contracts on "the lowest

<sup>&</sup>lt;sup>18</sup>A (German) summary of the news story is available on the website for the Carinthian channel of Austria's national TV station, under http://kaernten.orf.at/stories/470364/. Hypo Alpe Adria is not included in the data set that we use in our empirical analysis because it is a universal bank and so is not supervised by the supervisory agency from which we got our data. This agency only supervises savings banks.

<sup>&</sup>lt;sup>19</sup>Austria is divided into nine states. Carinthia is the southernmost state. The Carinthian government had control of the bank until it was nationalized in a bailout at the end of 2009.

price only" (Article 36). The directives also increased the transparency of municipal borrowing. Upon request, the municipalities have to report to competing bidders and the European Commission "the name of the successful tenderer and the reason why this tenderer was selected" (Article 12). These rules apply whenever the municipalities borrow more than about 1.5 million Euros. Prior to joining the EU Austrian municipalities were not required to follow such transparent procedures.

The rule changes that occurred when Austria joined the EU had a number of potential effects on Austrian municipalities and municipally owned banks. First, the EU rules stipulated an increase in transparency and competition in the market for government financing. This change by itself should cause all lending to municipalities to *decrease* in profitability. The second effect, however, is that municipalities could no longer use related lending to transfer wealth to the municipalities. If a municipality attempted to do so, then a competing bidder could complain to the EU about unfair lending practices. This effect should cause lending to municipalities to *increase* in profitability post-EU, but only if related lending was used to loot the banks prior to EU membership. As such, the effect that EU membership had on the profitability of related lending depends on the way in which related lending was being done prior to Austria's EU accession. According to the theories outlined in the motivation section, we expect that the profitability of related lending increased for those banks that are owned by politically competitive municipalities and decreased for those that are owned by noncompetitive municipalities.

Our research strategy thus follows a "diff-in-diff" approach. We analyze the difference between the profitability of related lending prior to EU accession (preEU) and following EU accession (postEU).<sup>20</sup> We then analyze the difference in this difference between banks that are owned by municipalities with a high level of political competition and those owned by municipalities with a low level of political competition.

If municipalities were not using related lending to loot their banks prior to joining

<sup>&</sup>lt;sup>20</sup>Both the event (joining the EU) and the rule change are exogenous to the variables of interest. Austria's decision to join the EU was based on a popular vote that was taken in June 1994. It is hard to imagine that the rule change affecting the municipal banks was a determining factor in the vote. It was also not at all clear ex-ante whether the vote would be in favor of joining, so the municipalities could not anticipate the rule changes.

the EU, then the EU-mandated competition and transparency should have caused related lending to decrease in profitability. If instead, the municipalities *were* using related lending to loot their banks, then the EU mandates should have caused related lending to become relatively more profitable. Furthermore, this increase in profitability should have occurred only for banks that are in politically competitive regions.

### **3** Data and Descriptive Statistics

Our empirical analysis is based on bank-level data about Austrian, municipallyowned savings banks spanning the decade 1990-1999 (i.e., symmetric around the event date of the natural experiment in January 1995). This section provides details on the hand-collected data and discusses summary statistics. Before going into the details, we would like to emphasize two characteristics of the sample that make it unique and particularly well-suited to address the questions under investigation: (i) the sample is homogeneous in terms of many characteristics (political organization, bank regulation, banks' access to capital markets, etc.) and (ii) the municipal borrowers are essentially default risk-free.

#### 3.1 Financial data about the banks and municipalities

We obtained most of our bank-level data from the "Sparkassen-Pruefungsverband". This institution is under the direct supervision of the Federal Ministry of Finance, and is charged with the financial supervision of savings banks. We obtained additional data from the Austrian National Bank (OeNB). This data was used to validate and cross-check our original data from the "Sparkassen-Pruefungsverband". The data include the banks' annual balance sheets and profit and loss accounts, as well as information about the compositions of the banks' loan portfolios. The latter information, which is typically not included in balance sheets, enables us to determine the volume of banks' lending to municipalities.

Data on the terms of individual loans is not obtainable, but our focus in this study is a bit more general than loan terms. We are interested in the overall profitability of municipal lending, where profitability captures not only the effect of loan terms, but also the opportunity costs of engaging in related lending.<sup>21</sup> We collected financial information about the municipalities from Statistik Austria.<sup>22</sup> This data includes the amount of debt of each municipality per capita, the regional Gross Domestic Product per capita and growth of the regional GDP.<sup>23</sup>

To be included in our sample a bank must fulfill the following criteria: (i) the bank was active, as an independent bank, for at least 3 years before and after Austria's EU accession, and (ii) the bank was owned by a municipality during the sample period. We were able to collect data for a sample of 53 banks that satisfy these criteria. For each bank we have between 3 and 5 observations pre-EU (1990 to 1994) and between 3 and 5 observations post-EU (1995 to 1999). For each of the 53 banks we calculated the median value for each variable of interest in the pre-EU period and in the post-EU period.<sup>24</sup> Table 1 presents descriptive statistics for these values. *RoA* denotes the banks' return on assets. Total assets, *TA*, are reported in Euros in order to make the information more accessible to readers.<sup>25</sup> We divide the banks' loan portfolios into loans to municipalities and all other loans. *LM* is the ratio of municipal loans to total assets. *LnoM* is the ratio of the remaining loan portfolio to total assets, such as investments in traded securities.

The banks in our sample were generally profitable and had total assets ranging from about 32 million Euros to about 4.45 billion Euros. The mean size of the banks is somewhat larger in the post-EU period, but there is no significant difference in the mean profitability of the banks in the two periods. The fraction of the banks' assets invested in loans to municipalities (LM) did increase significantly after Austria

 $<sup>^{21}</sup>$ Our data set covers mostly small banks that do not have easy access to capital markets, so opportunity costs may be significant. Since the banks do not have publicly traded equity, we use accounting data to measure profitability.

<sup>&</sup>lt;sup>22</sup>http://www.statistik.at/web

 $<sup>^{23}</sup>$ GDP data is available only on a regional level that is somewhat coarser than the municipal level. While our main data set consists of 53 banks and municipalities, the regional GDP data is available for 24 regions.

<sup>&</sup>lt;sup>24</sup>Following Bertrand, Duflo, and Mullainathan (2004) we don't use annual observations but preand post-EU median values in our empirical analysis. In unreported robustness tests we repeat our empirical analysis with means instead of medians and with the full panel of data. Results are unchanged and available from the authors upon request.

 $<sup>^{25}</sup>$ The data is given in Austrian Schillings (ATS). When producing the numbers in Table 1 we used the exchange rate: 1 Euro = 13.76 ATS.

joined the EU, from 3.7% during the pre-EU period to 17.3% in the post-EU period. In the pre-EU period four of the banks in our sample had no loans to municipalities, and the largest value for LM was 14.8%. In the post-EU period only three banks had no loans to municipalities and the largest value for LM was 30.6%. We believe that this increase is explained largely by factors that are exogenous to our study. When Austria joined the EU, the system of inter-governmental transfers was reformed in a way that caused municipalities to bear much of the cost of Austria's EU membership. Changes in tax laws and in transfers between the federal and local governments occurred at this time and affected all Austrian municipalities. The ratio of nonmunicipal loans to total assets, LnoM, did not change significantly after Austria joined the EU, so the increase in LM is accompanied by a relative decrease in nonloan assets. Consistent with the post-EU increase in LM we also see that the municipal debt per capita, DC, increased after Austria joined the EU, although not in the same magnitude as the increase in LM. The GDP per capita did increase from the pre-EU period to the post-EU period, as we would expect.<sup>26</sup> We explore these changes further in a later section where we analyze the increases in LM to determine if there are cross-sectional differences that are relevant for our study.

#### 3.2 Data about political competition

To construct measures of political competition we use municipal-level data about the outcomes of elections for representatives in the Austrian national assembly. From the Statistik Austria website we have obtained the number of votes that voters in each municipality cast in favor of each major party in the national elections that took place in 1975, 1979, 1983, 1986, 1990 and 1994. This data enables us to determine if a municipality has strongly and persistently favored one party over all others.<sup>27</sup>

We use these data to construct three indicators of political competition. Each

<sup>&</sup>lt;sup>26</sup>The GDP per capita in our municipalities is somewhat lower than for Austria on average. For example, the per capita GDP for Austria in 1997 was 23,000 Euros. The reason for this difference is that our data set includes banks in a number of rural regions and it does not include any banks in the largest Austrian cities. Vienna, Graz, Linz and Salzburg are not represented in our sample.

<sup>&</sup>lt;sup>27</sup>There does not exist any central storage of data about elections for Austrian municipal offices. Even if such data could be obtained, it would not be useful for constructing *exogenous* measures of political competition. We use only pre-1995 data to further ensure that our measures are exogenous.

bank in our sample is assigned a value of either zero or one for each indicator, where the value one indicates that the bank is owned by a municipality with a persistent politically competitive environment.<sup>28</sup> For the first measure a municipality is defined as noncompetitive (Pol1 = 0) if the same party won each of the six elections, and by a margin of at least 10%; otherwise Pol1 = 1. According to this measure 28 of the municipalities are identified as politically competitive and 25 as noncompetitive.

For the second measure a municipality is defined as noncompetitive (Pol2 = 0)if one party obtained, on average across the six elections, at least 50% of the votes; otherwise  $Pol2 = 1.^{29}$  According to our second measure 27 of the municipalities are identified as politically competitive and 26 as noncompetitive.

The third indicator variable is based on the "victory margin" of the locally leading party. The locally leading party is the party that won the largest number of elections. In the case of a tie, the locally leading party is the party that on average won with the largest fraction. The victory margin of the leading party is the average winning margin for that party across the six elections.<sup>30</sup> We then calculate the median victory margin across the 53 municipalities. As indicated in Table 2, this median value is 13.4%. Municipalities with a victory margin below the median value are identified as "politically competitive" and are assigned a value of Pol3 = 1. Municipalities with a victory margin at or above the median are noncompetitive and are assigned a value of Pol3 = 0. According to this indicator, 26 of the municipalities are identified as politically competitive and 27 as noncompetitive. Our three measures of political competition result in similar classifications of the municipalities.<sup>31</sup>

In Table 3 we present summary statistics that enable us to examine similarities and differences across different subsets of our sample. In this table we segment the

<sup>&</sup>lt;sup>28</sup>We use the term persistent to stress that our analysis does not focus on any particular election, but rather on the effect of a persistent level of political competition that gives elected officials incentives to abstain from tax increases and keep up government services, throughout their tenures. <sup>29</sup>There are more than two parties, so a party may win with less than 50% of the vote.

<sup>&</sup>lt;sup>30</sup>The winning margin is the percent of votes won by the locally leading parting minus the percent of votes won by the second place party. The margin is positive for any election which the leading party won and negative if the party lost.

<sup>&</sup>lt;sup>31</sup>Every municipality that is classified to be politically-competitive according to measure Pol3 is also classified as being competitive according to the other two measures. Similarly, the politicallycompetitive municipalities according to Pol2 are also politically-competitive according to Pol1.

data not only between pre- and post-EU observations, but also according to the *Pol3* variable. Columns (1) and (2) of Table 3 repeat the mean values that are presented in Table 1.<sup>32</sup> Column (3) shows that the means of three of our variables exhibited significant change from the pre-EU to the post-EU period: GDP per capita, GDP growth, and the fraction of municipal loans on banks' balance sheets (*LM*). GDP per capita and *LM* were significantly larger in the post-EU period; GDP growth was significantly smaller. Columns (4) to (6) report the equivalent data for the subset of banks owned by politically noncompetitive municipalities, i.e., the 27 banks for which Pol3 = 0. Columns (7) to (9) report the equivalent data for the subset of banks owned by politically competitive municipalities, i.e., the 26 banks for which  $Pol3 = 1.^{33}$  Columns (6) and (9) report essentially the same results as found in column (3). Within each of the two subsets of banks, the same three variables experience the same (qualitative) changes.

In the last three columns of Table 3 we report t-statistics on the differences between the banks owned by politically competitive and noncompetitive municipalities. In column (10) we report the t-statistics for the differences in the pre-EU means between the politically competitive and noncompetitive subsets. In column (11) we do the same for post-EU means. Both in the pre-EU period and in the post-EU period the only highly significant difference between these two sets of banks is in the GDP per capita of the regions in which they are based. In column (12) we report t-statistics for differences in these differences: columns [(5)-(4)] - [(8)-(7)]. Our objective is to determine if the differences reported in columns (6) and (9)are significantly different between the two sets of banks. Again, we find that the only highly significant difference is in GDP per capita. Banks that are owned by politically competitive municipalities are located in regions that had higher GDP per capita both pre- and post-EU, and that exhibited greater increases in GDP per capita after Austria joined the EU. We explore this relationship in depth in a later section of the paper. Another important result presented in column (12) is the lack of significance for the difference-in-difference for LM. Lending to municipalities in-

 $<sup>^{32}</sup>$ The exception is that in Table 3 we include Log of total assets, instead of Total assets. We do this because the Log of total assets is what we use in our regression analysis.

<sup>&</sup>lt;sup>33</sup>Summary statistics are qualitatively identical if we split the sample by Pol1 or Pol2.

creased significantly from the pre- to post-EU period for both sets of banks, and there is no significant difference in this increase between banks owned by politically competitive and noncompetitive municipalities.

Table 4 presents correlations between variables that are summarized in Tables 1 and 2. Bank size is negatively correlated with LM, as is post-EU GDP growth. Bank size is positively correlated with GDP per capita and with municipal debt per capita. LM is not significantly correlated with the return on assets. LnoM is negatively correlated with the return on assets in the post-EU period. This may be due to increased competition after Austria joined the EU. Consistent with the results reported in Table 3, Victory Margin is negatively correlated with GDP per capita.<sup>34</sup>

### 4 The Empirical Analysis

We conduct our main empirical analysis in two parts. We begin by examining "first differences": the difference in bank profitability relative to related lending before and after Austria joined the EU. This part of the analysis enables us to determine if related lending did become, on average, more profitable for the municipally-owned banks after EU accession. We then proceed to a "differences-in-differences" analysis. In this second step of the analysis we examine the difference in the first differences (pre- vs. post-EU) between banks that are owned by politically competitive municipalities and those owned by politically noncompetitive municipalities. After presenting our main results we then extend the analysis in two directions. We examine changes in the volume of related lending, and we explore the relation between politics, GDP per capita and related lending. In both of these extensions we present robustness checks on our main results and discuss potential, alternative interpretations of our main results.

<sup>&</sup>lt;sup>34</sup>A higher value for Victory Margin means that the municipality is politically noncompetitive.

### 4.1 Related Lending and Bank Profitability: Pre- versus Post-EU Correlations

As discussed, EU transparency rules made it difficult for municipalities to borrow from their own banks at non-market terms. If municipalities were borrowing from their banks at below-market terms (looting the banks) prior to EU accession, then the bank profitability relative to such related lending should improve after EU accession. We check for evidence of such improvement by running the following regression:

$$RoA_{i,t} = a_{LM}LM_{i,t} + a_{E}E_{t} + a_{LM}^{E}LM_{i,t}E_{t} + a_{X}X_{i,t} + u_{i} + \epsilon_{i,t}$$
(1)

where  $RoA_{i,t}$  denotes the return-on-assets of bank *i* in period *t*,  $LM_{i,t}$  is the volume of bank *i*'s municipal lending divided by the bank's total assets,  $E_t$  is a dummy variable that equals zero (one) during the period before (after) Austria joined the EU,  $X_{i,t}$  is a vector of control variables,  $u_i$  are bank-specific fixed effects, and  $\epsilon_{i,t}$  is an error term. This initial regression does not include our political variables. The coefficient  $a_{LM}^E$ , measures the difference in the correlation between bank profitability and municipal lending before and after Austria's EU accession. This coefficient should be positive if municipalities were using related lending to loot their banks in the pre-EU period, and not in the post-EU period.

The estimates of regression (1) are presented in column  $D_1$  of Table 5. Rather than working with annual observations, we run the regression using pre- and post-EU median values of all variables.<sup>35</sup> There are 53 banks and two observations for each bank, a pre-EU median and a post-EU median. The control variables in the regressions are the log of total assets in Austrian Schillings (log(TA)),<sup>36</sup> the ratio of non-municipal loans to bank assets (LnoM), the municipal debt per capita (DC), the regional GDP per capita (GDPC), and the regional GDP growth (GDPGr).

<sup>&</sup>lt;sup>35</sup>Our estimation method is based on a suggestion of Bertrand, Duflo, and Mullainathan (2004) for difference analyses in the presence of serially correlated errors. We use medians, instead of means, in order to obtain estimates that are robust with respect to outliers. In unreported robustness tests we repeat our empirical analysis with means instead of medians and with the full panel of data. Results are unchanged and available from the authors upon request.

<sup>&</sup>lt;sup>36</sup>The data are given in Austrian Schillings (ATS). When producing the numbers in Table 1 we used the exchange rate: 1 Euro = 13.76 ATS.

The coefficient  $a_{LM}$  is significantly negative and the coefficient  $a_{LM}^E$  is significantly positive. That is, the relative profitability of related lending increased after Austria joined the EU. These results are consistent with the idea that municipalities used related lending to transfer profits out of their banks prior to Austria's membership, and that such transfers ended, or significantly decreased, after Austria joined the EU.

In Column  $D_2$  of Table 5 we confirm that the banks' municipal loans are indeed different from other loans. We re-estimate regression equation (1), but with a slightly different specification: we substitute the interacted variable  $LnoM_{i,t}E_t$  for  $LM_{i,t}E_t$ . We see that the coefficient on  $LnoM_{i,t}E_t$  is significantly negative. That is, non-municipal lending became *less* profitable after Austria joined the EU. This result is consistent with the increase in bank competition that occurred in Austria after the country joined the EU. In comparison, it is quite striking that  $a_{LM}^E$ , the coefficient on  $LM_{i,t}E_t$ , in column  $D_1$ , is significantly positive. If increased competition were the dominant effect of Austria's EU membership, then we should observe reduced profitability for all types of lending activity, resulting in a negative coefficient for  $LM_{i,t}E_t$ . One explanation for the observed positive coefficient is that the pre-EU profitability of related lending was below competitive levels. That is, municipalities were looting their banks prior to EU membership. This is, however, not the only possible explanation. As discussed above, lending to municipalities increased after Austria joined the EU. Thus an increase in profitability could also be due to realized economies of scale. Up to this point we have only measured correlations and so cannot disentangle the different interpretations. The analysis in the following sections yields a more narrow interpretation of the results.

#### 4.2 Politics and Related Lending: Causal Effects

We now examine the effect of politics on the first differences documented in the previous section. The motivation for the analysis in this section is the hypothesis put forth in Section 2.1 that politicians with lower probabilities of reelection are more likely to loot their banks. This hypothesis predicts that banks owned by municipalities with more competitive politics should have realized greater improvements in the profitability of their related lending than banks owned by municipalities with less political competition.

Our main objective in this section is to look for evidence of a causal effect (political competition) that may have induced municipalities to use related lending to transfer profits out of their banks. In order to be able to assign a causal interpretation to our results we form measures of political competition that we believe are exogenous with respect to related lending and bank profitability. To this end we focus on the persistence of political competition, rather than on any particular election, and we form measures of this persistence using data from elections that took place prior to 1995, as described in Section 3.2. Exogeneity of the political measures is, of course, only a necessary, and not a sufficient, condition for a causal interpretation of our results. We explore other explanations in later sections.<sup>37</sup>

We use the political competition variables that are summarized in Table 2 to divide the municipal banks into two groups. Those municipalities with competitive political environments (low reelection probability) are assigned a value of  $Pol_i = 1$ ; those municipalities with less competitive political environments (high reelection probability) are assigned a value of  $Pol_i = 0$ . We then employ a difference-indifference specification to determine the extent to which the results of the previous section can be explained by political competition. The following regression equation is identical to that in expression (1), except for the middle line:

$$RoA_{i,t} = a_{LM}LM_{i,t} + a_EE_t + a_{LM}^ELM_{i,t}E_t$$

$$+ a_PPol_i + a_P^EPol_iE_t + a_{P,LM}Pol_iLM_{i,t} + a_{P,LM}^EPol_iLM_{i,t}E_t$$

$$+ a_XX_{i,t} + u_i + \epsilon_{i,t},$$

$$(2)$$

The coefficient  $a_{P,LM}^E$  captures a difference-in-difference effect, i.e., the differential effect of EU membership on related lending for banks owned by politically competitive and politically noncompetitive municipalities. If our hypothesis of Section 2 is correct, then this coefficient should be positive.

The estimates for equation (2) are presented in Table 6. All of the regressions

 $<sup>^{37}</sup>$ For example, we check whether our results are driven by changes in LM around Austria's EU accession, and whether our measures of political competition can explain these changes.

in this table are GLS regressions with bank-specific random effects.<sup>38</sup> As in Table 5, there are 53 banks and two observations for each bank, a pre-EU median and a post-EU median. The control variables are also the same as in Table 5. Table 6 presents three different estimates of equation (2), one with each of the political variables that are summarized in Table 2.

The results of estimating equation (2) are quite striking. The coefficient  $a_{P,LM}^E$  is significantly positive, as predicted, and the coefficient  $a_{LM}^E$  is now insignificant. The effect that we documented in the analysis of first differences of the previous section occurs only for those banks that are owned by politically competitive municipalities. That is, we find evidence consistent with municipalities using related lending to transfer profits out of their banks *only* for municipalities in which there is a *competitive* political environment. For those municipalities in which the incumbent party faces a high reelection probability we find no such evidence. These results are consistent with the predictions that we developed in Section 2.1.

To gauge the economic importance of these results, consider a government-owned bank that has an average amount of lending to municipalities and that is located in a politically competitive municipality. Such a bank would have, on average across the sample period, municipal loans equal to about 10.5% of assets.<sup>39</sup> This level of municipal lending resulted in a return on assets that was lower by approximately 0.62% (0.105\*0.059).<sup>40</sup> The event of Austria joining the EU increased this bank's median return on assets in the 5 years post-EU by approximately the same amount. Based on the mean bank size, as reported in Table 1, this translates to about 2.8 million Euros per bank in the post-EU period.<sup>41</sup>

<sup>&</sup>lt;sup>38</sup>We present the results with random, instead of fixed, effects because the political variables do not vary over time and so their independent effects (coefficient  $a_P$ ) cannot be estimated in a fixed effects framework. Fixed effects estimates for the coefficient  $a_{P,LM}^E$  are qualitatively similar to the random effect estimates in Table 6.

<sup>&</sup>lt;sup>39</sup>Table 1 shows that the mean level of lending to municipalities normalized by total assets is 3.7% (17.3%) pre-Eu (post-EU). The average of these is 10.5%. In Table 3 we saw that the level of municipal lending does not vary significantly with our political variables.

<sup>&</sup>lt;sup>40</sup>The coefficient estimates used in this paragraph are taken from the third column of Table 6. The number 0.059 is reported in row " $LM + LM \times POL$ "). Compared to banks in politically non-competitive municipalities, this bank's return on assets was lower by approximately 0.5% (0.105\*0.045).

<sup>&</sup>lt;sup>41</sup>As discussed in Section 3.1, these costs can take the form of lending at below market terms and/or opportunity costs if related lending squeezes out other lending opportunities.

One alternative interpretation of these results is that all municipal banks were looted prior to Austria's EU accession, but the EU rules were effective only in a subset of municipalities, namely the ones with political competition. This story, however, suggests that, prior to Austria's EU accession, the effect of LM on bank profitability should be independent of the level of political competition. This prediction is strongly rejected by the data. Table 6 shows a strong difference in the pre-EU effect of LM on profitability across municipalities: the pre-EU level of LMis significantly negatively related to bank profitability only in the case of politically competitive municipalities (see the results in row " $LM + LM \times POL$ ").

Table 6 also shows that banks in politically competitive municipalities underperformed by 0.6% on average after Austria joined the EU. In order to examine the effect of politics alone, we estimated a specification similar to equation (2), but without any of the terms containing  $LM_{i,t}$ . We found that the political variables by themselves (i.e., not interacted with the volume of the banks' related lending, LM) have much weaker explanatory power for bank profitability.<sup>42</sup> That is, political competition seems to affect the profitability of these government-owned banks predominantly through their related lending.

As we did in Section 4.1, we again check that municipal loans are different from all other loans. To do this we perform a robustness check that is similar to that presented in Column  $D_2$  of Table 5. We re-estimate regression equation (2), but with the following change: for all of the interacted variables containing  $LM_{i,t}$ we substitute the equivalent interacted variable containing  $LnoM_{i,t}$  instead. These estimates are reported in Table 7. As in Column  $D_2$  of Table 5, we find that loans to municipalities are different from loans to other entities. Not only is the coefficient on  $LnoM_{i,t}E_t$  negative and significant in two of the three columns, but none of the coefficients for political variables are significant. It is only the volume of lending to municipalities (the related lending) that results in a pattern that is consistent with our hypothesis.

 $<sup>^{42}\</sup>mathrm{We}$  don't report these estimation results in the paper. They can be obtained directly from the authors.

#### 4.3 Volume of Municipal Lending

We have in the previous section documented a relation between reelection probabilities (political competition) and the profitability of related lending. We now check for any relation between political competition and the *volume* of related lending. We have already shown (in Table 3) that the volume of lending to municipalities increased significantly from the pre-EU to the post-EU period. This increase occurred for all but three banks in our sample. We have learned that this increase followed from changes in tax rules and transfers between the federal and local governments that affected all Austrian municipalities when Austria joined the EU. We also showed in Column (12) of Table 3 that there is no significant difference in the average increase between banks owned by politically competitive and noncompetitive municipalities. In order to be certain that the latter result is robust, we run the following regression:

$$LM_{i,t} = b_R RoA_{i,t} + b_E E_t + b_P Pol_i + b_P^E Pol_i E_t + b_X X_{i,t} + u_i + \epsilon_{i,t}$$
(3)

where all of the variables are as defined before, and the control variables  $X_{i,t}$  are the same as in the previous regressions.

The estimates for equation (3) are presented in Table 8. All of the regressions in this table are GLS regressions with bank-specific random effects. The three columns represent three different estimates of equation (3), one with each of the political variables that are summarized in Table 2. In each of these three columns we see that  $b_E$  is significantly positive. This result is consistent with Table 3 where we showed a significant increase in LM post-EU. Most importantly, political competition does not explain the changes in the volume of related lending: neither  $b_P$  nor  $b_P^E$  is significantly different from zero in any of the columns of Table 8.

We next conduct a robustness check to make sure that our results regarding bank profitability do not depend on the post-EU increase in the volume of the banks' lending to their owners. We re-estimate our main regression, equation (2), but we hold constant the banks' lending to their owners at pre-EU levels. I.e., we estimate our regressions as if there was no change in the level of each bank's related lending. Table 9 summarizes the results for the first differences specification (column 1) and the differences-in-differences specification with different proxies for political competition (columns 2 to 4). Our prior results regarding bank profitability remain intact: municipal lending increased in profitability after Austria joined the EU, but only for banks that are owned by politically competitive municipalities. The coefficients of the triple interaction term (pre-EU  $LM \ge Pol \ge Post-EU$ ) are similar to those of the corresponding triple interaction term in Table 6. This robustness check alleviates concerns that our prior estimates may have been biased due to possibly endogenous changes in the variable LM.

#### 4.4 GDP and Political Competition

Our above analysis documents that Austria's EU accession was associated with changes in the profitability of municipally-owned banks' lending to their owners, and that those changes were associated with political competition. In this section we explore the latter association further. As discussed in Section 2, Austria's EU accession resulted in both an increase in the transparency of the banks' lending to their owners, and a removal of entry barriers in banking markets. These two effects are related in that the increase in transparency was meant to ensure public procurement at competitive market prices, and such prices can only be observed in the presence of competition.

Moreover, an increase in competition likely had direct effects on the profitability of the banks in our sample and, thus, gives rise to an alternative interpretation of our results; namely, that the increase in competition may have resulted in a reduction of the opportunity costs that the municipal banks incurred in lending to the municipalities. Such a reduction may have caused municipal lending to become relatively more profitable. This interpretation, however, hinges on the assumption that the municipal lending market did not become as competitive as the non-municipal lending market, and it is not obvious why this should have been the case. Nevertheless, it is important to empirically test this alternative explanation. We thus check whether our results are robust to controlling for changes in the profitability of the markets in which the banks in our sample operated.

For this robustness check we use regional economic output (GDP per capita) as a

proxy for the profitability of a regional banking market and the corresponding post-EU increase in competition. The statistics in Table 3 reveal that the more politically competitive municipalities within our sample are located in regions that experienced on average larger post-EU increases in per capita GDP. Given this correlation, we must ask whether the effects that we attribute to differences in political competition are instead due to differences in the effects of Austria's EU accession on regional GDP per capita.

In order to directly compare GDP per capita and political competition we form an indicator variable for GDP per capita. HiGDPC is equal to one if a bank is located in a region with pre-EU per capita GDP that is above the median for our sample, and zero otherwise. Table 10 presents summary statistics on the joint distributions of HiGDPC and our three political variables.<sup>43</sup> It is clear that HiGDPC and our political competition variables are correlated, but not perfectly.

We begin the analysis of this section by attempting to reproduce our main results using HiGDPC instead of our political variables. That is, we reestimate equation (2), but we replace all occurrences of the political competition indicator variable with HiGDPC. The results, presented in the first column of Table 11, are quite similar to our main results that are presented in Table 6. Most importantly, the coefficient for the interacted term  $LM \ge HiGDPC \ge$  Post-EU is positive and significant. That is, we are able to replicate the results of Table 6 using GDP per capita instead of political competition as one of our main variables of interest. This result is not surprising given the high level of correlation between HiGDPC and our political variables. In order to determine which of these variables captures the more important relation for our analysis we next examine segmented samples of our data.

In the second and third columns of Table 11 we repeat the analysis of the first

<sup>&</sup>lt;sup>43</sup>We form indicator variables mainly because the results in the difference-in-difference regressions are easier to interpret with indicator variables. Out of our 53 banks 25 have HiGDPC = 1 and 28 have HiGDPC = 0. The reason for the uneven split is that our GDP data is regional and there are multiple banks in some regions. There are 25 banks that are strictly above the median and 22 that are strictly below. We assign the 6 banks that are exactly at the median the value HiGDPC = 0. Of these 6, 5 are in politically noncompetitive municipalities and one is in a politically competitive municipality. We also conducted the analysis presented in this section with these 6 banks assigned the value HiGDPC = 1. The results were qualitatively identical.

column, but with our data set segmented according to the political competition variable Pol3. The coefficient for the interacted term  $LM \ge HiGDPC \ge Post-EU$  is positive, but not significant in either subset. Once we have controlled for political competition, GDP per capita has no explanatory power for our main results concerning the post-EU change in the profitability of municipal lending. It thus appears as if the results found in the first column of Table 11 occur only because of the correlation between GDP per capita and political competition. To check this we next present a similar segmented analysis, but in reverse.

The regression results presented in Table 12 are equivalent to those of Table 11, except that the *Pol*3 variable is used in place of *HiGDPC* in the regressions, and in the second and third columns the sample is segmented according to *HiGDPC*.<sup>44</sup> The first column of Table 12 is thus identical to the last column of Table 6. We again focus on the triple interaction term:  $LM \ge Pol \ge Post$ -EU. In the second column, which presents the results for the subset of banks located in regions with above-the-median GDP per capita, the coefficient for this interacted term is positive and significant. That is, after controlling for GDP per capita, political competition does have significant explanatory power for our main results concerning the post-EU change in the profitability of municipal lending. The triple interacted term, however, is not significant for the sample of banks located in regions with low GDP per capita.

In summary, we find evidence that is consistent with a political explanation for municipalities transferring profits out of their banks when the banks engage in related lending to the municipalities. It seems, however, that the increased transparency of related lending around Austria's EU accession only curtailed the looting of banks located in regions with relatively high GDP per capita. Our evidence is consistent with the idea that such regions attracted entry of banks to compete with municipally-owned incumbent banks, and to thus establish benchmarks for the terms at which the latter banks could lend to their owners.<sup>45</sup>

 $<sup>^{44}</sup>$ We also performed the analysis of Tables 11 and 12 using the variables *Pol*1 and *Pol*2, instead of *Pol*3. The results are qualitatively identical to what we present here.

<sup>&</sup>lt;sup>45</sup>This interpretation is consistent with Levine (2004) and articles in the Austrian popular press; for example, the looting example mentioned at the end of section 2.1. In the case of Hypo Group Alpe Adria, this article specifically mentions the mechanism of granting below market rate loans

## 5 Conclusion

This paper extends the current understanding of the common situation in which governments act in a dual role as owners and borrowers of banks. Most importantly, we document a link between "looting" through related lending and the probability that a related borrower's position of control with respect to the bank will endure. Using a unique data set about municipally-owned banks we find evidence consistent with the "looting" explanation of related lending: that is, evidence that related lending has been used to transfer profits out of the banks. But, such evidence is present only for banks that are owned by municipalities in which there is a competitive political environment. For banks owned by politically noncompetitive municipalities there is no such evidence. These results are consistent with our hypothesis that incumbent politicians who are more likely to lose reelection are also more likely to use related lending to transfer profits from a government-owned bank to the government coffers. These transfers can be damaging , as they crowd out private borrowers. Politicians in politically competitive municipalities, however, do not internalize these longerterm costs.

By documenting evidence of looting through related lending in a developed country with high legal standards, we extend the discussion of related lending beyond the scope of emerging markets with low governance standards. Our results suggest that in markets with a high rule of law mandating transparency for government banking transactions can be valuable. It is quite possible, however, that for this transparency to be truly effective, it is necessary also to have stakeholders with incentives to monitor, such as competing banks.

to the owning municipality. It also confirms that the Commission of the European Union actively enforces EU regulation. And, consistent with our discussion of the role of GDP per capita and competition, the Hypo Group Alpe Adria bank is located in a geographic area with relatively low economic wealth. This might explain why the looting behavior was still going on many years after Austria joined the EU.

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Table 1: Summary statistics of financial variables. For each of the 53 banks a median value was calculated for each variable of interest for the years from 1990 to 1994 (pre-EU) and a second median was calculated for the years from 1995 to 1999 (post-EU). This table reports summary statistics for these median values. Three stars next to the means in the bottom panel indicate differences between pre-EU and post-EU means that are significant at the 1% level.

L	Delote EO				
Variable		Mean	Std. Dev.	Median	Ν
Return on assets	RoA	0.008	0.003	0.008	53
Total assets (Mil.Euros)	TA	343	666	164	53
Municipal loans/total assets	LM	0.037	0.033	0.033	53
Non Municipal loans/total assets	LnoM	0.728	0.067	0.726	53
Muni. Debt per Capita (Thou. Euros)	DC	1.104	0.913	0.898	53
GDP per Capita (Thou. Euros)	GDPC	15.159	3.913	14.000	53
GDP Growth	GDPGr	0.056	0.011	0.056	53

	After EU				
Variable		Mean	Std. Dev.	Median	N
Return on assets	RoA	0.008	0.004	0.007	53
Total assets (Mil.Euros)	TA	456	836	213	53
Municipal loans/total assets	LM	$0.173^{***}$	0.074	0.181	53
Non Municipal loans/total assets	LnoM	0.730	0.065	0.737	53
Muni. Debt per Capita (Thou. Euros)	DC	1.390	1.038	1.184	53
GDP per Capita (Thou. Euros)	GDPC	$18.68^{***}$	4.858	16.800	53
GDP Growth	GDPGr	0.032***	0.007	0.032	53

Before EU

Table 2: Summary statistics of political variables. All of the political variables (Pol) were created using data from six elections for local representatives to the national government. The six elections took place before 1995 (1975, 1979, 1983, 1986, 1990 and 1994). Victory Margin (VM) is the average across the six elections of the percent of votes won by the locally leading party (i.e., the party that won most of the 6 elections) minus the percent of votes won by the second place party (in individual years this victory margin can be negative). Competitive (Pol1) is equal to zero if the same party won each of the six elections, and by a margin of at least 10%; otherwise Pol1 is equal to one. Non-Dominant winner (Pol2) is equal to zero if one party obtained, on average across the six elections, at least 50% of the votes; otherwise Pol2 is equal to zero. Pol3 is equal to zero if the Victory Margin (VM) is equal to one (zero) for any political variable indicates a high (low) level of political competition.

Variable		Mean	Std. Dev	v. Median	Ν
Victory Margin (%)	VM	18.3	14.6	13.4	53
		# equ	al to 1	# equal to 0	
Competitive	Pol1		28	25	53
Non-dominant winner	Pol2		27	26	53
Low-Absolute Difference	Pol3		26	27	53

Table 3: Summary statistics of financial variables. For each of the 53 banks a median value is calculated for each variable of interest for the years from 1990 to 1994 (pre-EU) and a second median is calculated for the years from 1995 to 1999 (post-EU). This table reports raw sample means of these median values across banks. There are 53 banks in the "All Municipalities" category. The classification into "Pol. Non-Comp. Muni." (politically noncompetitive municipalities) and "Pol. Comp. Muni." (politically competitive municipalities) is based on the <i>Pol3</i> variable, as described in Table 2. There are thus 27 banks in the noncompetitive category and 26 in the competitive category. Columns (3), (6) and (9) report t-statistics of the differences between the post-EU and the pre-EU values: columns (2) - (1), (5) - (4), and (8) - (7). Columns (10) and (11) report t-statistics of the differences between columns (4) and (7) and columns (5) and (8). Column (13) monte t statistics of the differences in differences between columns (4) and (7) and columns (5) and (8). Column
(1) - (2)

	(1)	(2)	(3)	(4)	(5)	(9)	(2)	(8)	(6)	(10)	(11)	(12)
	All N	Aunicipali	cies	Pol. No	n-Comp.	Muni.	Pol. (	Comp. Mu	ıni.	(4)-(7)	(5)-(8)	
	Pre-EU	Post-EU	tstat	Pre-EU	Post-EU	tstat	Pre-EU	Post-EU	tstat	tstat	tstat	tstat
Return on assets $(RoA)$	0.0083	0.0076	-1.04	0.0081	0.0078	-0.31	0.0085	0.0073	-1.12	-0.51	0.41	0.95
Log of total assets $(Log(TA))$	21.490	21.823	1.60	21.223	21.560	1.64	21.768	22.096	0.93	-1.89	-1.88	0.28
Municipal loans/total assets $(LM)$	0.0372	0.1734	12.2	0.0444	0.1713	7.49	0.0297	0.1757	10.0	1.67	-0.21	-0.94
Nonmuni loans/tot assets $(LnoM)$	0.7277	0.7298	0.16	0.7209	0.7373	1.06	0.7349	0.7220	-0.61	-0.75	0.85	1.56
Muni debt per capita $(DC)$	1.1044	1.3901	1.51	1.1085	1.4410	1.35	1.1000	1.3372	0.80	0.03	0.36	0.61
GDP per capita $(GDPC)$	15.159	18.679	4.11	13.389	16.363	4.62	16.998	21.085	2.93	-3.76	-4.02	-3.05
GDP growth $(GDPGr)$	0.0558	0.0320	-12.84	0.0570	0.0301	9.43	0.0545	0.0340	-8.94	0.83	-1.98	-1.64

Table 4: **Cross-correlations.** For each of the 53 banks a median value was calculated for each variable of interest for the years from 1990 to 1994 (pre-EU) and a second median was calculated for the years from 1995 to 1999 (post-EU). This table reports cross-correlations. Significance levels are given in parentheses.

	$\mathbf{Pre-EU}  (N=53)$								
Variables	RoA	log(TA)	LM	LnoM	DC	GDPC	GDPGr		
Log(TA)	-0.461								
	(0.00)								
LM	0.170	-0.245							
	(0.22)	(0.08)							
LnoM	-0.137	0.272	-0.686						
	(0.33)	(0.05)	(0.00)						
DC	-0.070	0.315	0.140	-0.078					
	(0.62)	(0.02)	(0.32)	(0.58)					
GDPC	-0.029	0.478	-0.220	0.240	0.226				
	(0.84)	(0.00)	(0.11)	(0.08)	(0.10)				
GDPGr	0.036	-0.174	0.098	-0.217	0.067	-0.511			
	(0.80)	(0.21)	(0.49)	(0.12)	(0.63)	(0.00)			
VM	0.055	-0.188	0.193	0.004	-0.050	-0.324	-0.023		
	(0.69)	(0.17)	(0.17)	(0.98)	(0.72)	(0.02)	(0.87)		

Post-EU (N=53)

				( )	/		
Variables	RoA	log(TA)	LM	LnoM	DC	GDPC	GDPGr
Log(TA)	-0.297						
	(0.03)						
LM	0.088	-0.251					
	(0.53)	(0.07)					
LnoM	-0.483	0.266	-0.387				
	(0.00)	(0.05)	(0.00)				
DC	-0.034	0.193	0.061	0.226			
	(0.81)	(0.17)	(0.67)	(0.10)			
GDPC	0.031	0.529	-0.227	0.090	0.109		
	(0.83)	(0.00)	(0.10)	(0.52)	(0.44)		
GDPGr	0.056	0.169	-0.292	0.145	-0.118	0.238	
	(0.69)	(0.23)	(0.03)	(0.30)	(0.40)	(0.09)	
VM	0.149	-0.179	-0.102	0.247	0.018	-0.312	-0.026
	(0.29)	(0.20)	(0.47)	(0.07)	(0.90)	(0.02)	(0.85)

Table 5: Related Lending and Bank Profitability: Pre- versus Post-EU Correlations. OLS regressions with bank-specific fixed effects. The dependent variable is return on assets, RoA. TA is total assets. LM is the ratio of municipal loans to total assets. The post-EU variable is equal to one if the observation is after 1995 and zero otherwise. The loan variable in specification  $D_1$  ( $D_2$ ) is lending to municipalities (lending to non-municipalities). For each bank there is one observation pre-EU and one observation post-EU. t statistics are given in parentheses.

dependent variable = $RoA$	$D_1$	$D_2$
Log(TA)	-0.004	-0.004
	(-1.22)	(-1.20)
Municipal loans/TA, $LM$	-0.039**	0.001
	(-2.25)	(0.21)
Post-EU dummy	-0.000	$0.015^{**}$
	(-0.06)	(2.40)
$LM \ge \text{Post-EU}(\mathbf{a}_{\mathbf{LM}}^{\mathbf{E}})$	$0.045^{**}$	
	(2.62)	
Non-Municipal loans/TA, LnoM	-0.025***	-0.004
	(-3.13)	(-0.55)
$LnoM \ge Post-EU$		-0.017**
		(-2.02)
Muni. Debt per Capita, $DC$	-0.002***	-0.002**
	(-2.89)	(-2.48)
Muni. GDP per Capita, GDPC	-0.000	-0.000
	(-0.35)	(-0.35)
Muni. GDP Growth, GDPGr	0.025	0.028
	(0.70)	(0.77)
Constant	0.119	0.103
	(1.64)	(1.34)
R-squared (within)	0.434	0.403
Observations	106	106
Groups (number of banks)	53	53
* p<0.10, ** p<0.05, *** p<0.01		

Table 6: Politics and Related Lending: Causal Effects. GLS regressions with bank-specific random effects. The dependent variable is return on assets, RoA. TA is total assets. LM is the ratio of municipal loans to total assets. The post-EU variable is equal to one if the observation is after 1995 and zero otherwise. We use three variables to identify politically competitive municipalities: Pol1, Pol2 and Pol3 are defined in detail in Table 2. For each bank there is one observation pre-EU and one observation post-EU. The row " $LM + LM \ge Pol$ " contains tests of the sum of the corresponding coefficients. z statistics are given in parentheses.

dependent variable = $RoA$	Pol1	Pol2	Pol3
Log(TA)	-0.001***	-0.001***	-0.001***
	(-2.79)	(-2.87)	(-2.84)
Municipal loans/TA, $LM$	-0.013	-0.013	-0.014
	(-0.88)	(-0.86)	(-0.94)
Post-EU dummy	-0.000	0.000	-0.000
	(-0.04)	(0.06)	(-0.08)
Political variable, <i>Pol</i>	0.001	0.002	0.002
	(1.08)	(1.19)	(1.20)
$LM \ge \text{Post-EU}(\mathbf{a_{LM}^E})$	0.012	0.010	0.013
	(0.78)	(0.64)	(0.86)
$Pol \ge Post-EU$	-0.006***	-0.006***	-0.006***
	(-2.93)	(-2.87)	(-2.89)
$LM \ge Pol$	-0.041	-0.036	-0.045*
	(-1.57)	(-1.38)	(-1.74)
$LM \ge Pol \ge Post-EU (\mathbf{a}_{\mathbf{P},\mathbf{LM}}^{\mathbf{E}})$	$0.057^{**}$	$0.056^{**}$	$0.059^{**}$
,	(2.29)	(2.20)	(2.38)
Non-Municipal loans/TA, $LnoM$	-0.024***	-0.022***	-0.024***
	(-3.76)	(-3.51)	(-3.89)
Muni. Debt per Capita, $DC$	-0.000	-0.000	-0.000
	(-0.82)	(-0.66)	(-0.77)
Muni. GDP per Capita, $GDPC$	$0.0003^{**}$	$0.0003^{**}$	$0.0003^{**}$
	(2.47)	(2.24)	(2.46)
Muni. GDP Growth, $GDPGr$	0.022	0.021	0.023
	(0.86)	(0.79)	(0.90)
Constant	$0.047^{***}$	$0.047^{***}$	$0.048^{***}$
	(4.74)	(4.72)	(4.80)
R-squared	0.451	0.414	0.454
Observations	106	106	106
Groups (number of banks)	53	53	53
$LM + LM \ge Pol$	-0.054**	-0.050**	-0.059**
	(-2.15)	(-1.93)	(-2.31)
* p<0.10, ** p<0.05, *** p<0.01			

Table 7: Politics and Lending to Other Clients. GLS regressions with bankspecific random effects. The dependent variable is return on assets, RoA. TA is total assets. LM is the ratio of municipal loans to total assets. The post-EU variable is equal to one if the observation is after 1995 and zero otherwise. We use three variables to identify politically competitive municipalities: Pol1, Pol2 and Pol3 are defined in detail in Table 2. For each bank there is one observation pre-EU and one observation post-EU. z statistics are given in parentheses.

dependent variable $= RoA$	Pol1	Pol2	Pol3
Log(TA)	-0.001***	-0.001***	-0.001***
	(-3.41)	(-3.41)	(-3.42)
Non-Municipal loans/TA, $LnoM$	-0.013	-0.012	-0.012
	(-1.34)	(-1.20)	(-1.26)
Post-EU dummy	$0.023^{**}$	0.012	$0.015^{*}$
	(2.44)	(1.33)	(1.76)
Political variable, <i>Pol</i>	-0.011	-0.009	-0.010
	(-1.28)	(-1.08)	(-1.21)
$LnoM \ge Post-EU$	-0.030**	-0.015	-0.020*
	(-2.41)	(-1.30)	(-1.72)
$Pol \ge Post-EU$	-0.004	0.011	0.006
	(-0.35)	(0.99)	(0.54)
$LnoM \ge Pol$	0.016	0.014	0.015
	(1.35)	(1.17)	(1.25)
$LnoM \ge Pol \ge Post-EU$	0.002	-0.017	-0.010
	(0.16)	(-1.12)	(-0.72)
Municipal loans/TA, $LM$	0.001	-0.001	-0.001
	(0.16)	(-0.26)	(-0.10)
Muni. Debt per Capita, $DC$	-0.000	-0.000	-0.000
	(-0.30)	(-0.12)	(-0.22)
Muni. GDP per Capita, $GDPC$	$0.0003^{**}$	$0.0002^{**}$	$0.0003^{**}$
	(2.42)	(2.13)	(2.49)
Muni. GDP Growth, $GDPGr$	0.032	0.025	0.030
	(1.21)	(0.90)	(1.10)
Constant	$0.043^{***}$	$0.043^{***}$	$0.042^{***}$
	(3.68)	(3.65)	(3.65)
R-squared	0.409	0.353	0.388
Observations	106	106	106
Groups (number of banks)	53	53	53
* p<0.10, ** p<0.05, *** p<0.01			

Table 8: Volume of Municipal Lending. GLS regressions with bank-specific random effects. The dependent variable is the ratio of municipal loans to total assets, LM. TA is total assets. The post-EU variable is equal to one if the observation is after 1995 and zero otherwise. We use three variables to identify politically competitive municipalities: Pol1, Pol2 and Pol3 are defined in detail in Table 2. For each bank there is one observation pre-EU and one observation post-EU. z statistics are given in parentheses.

dependent variable = $LM$	Pol1	Pol2	Pol3
Log(TA)	-0.006	-0.006	-0.006
	(-0.97)	(-1.00)	(-0.94)
Profitability, RoA	-0.800	-0.946	-0.771
	(-0.50)	(-0.59)	(-0.48)
Post-EU dummy	$0.102^{***}$	$0.105^{***}$	$0.107^{***}$
	(5.05)	(5.28)	(5.40)
Political variable, <i>Pol</i>	-0.004	-0.0002	0.0004
	(-0.29)	(-0.01)	(0.03)
$Pol \ge Post-EU$	0.027	0.023	0.020
	(1.30)	(1.15)	(0.96)
Non-Municipal loans/TA, $LnoM$	-0.352***	-0.360***	-0.362***
	(-4.26)	(-4.41)	(-4.42)
Muni. Debt per Capita, $DC$	$0.011^{**}$	$0.010^{**}$	$0.010^{*}$
	(1.97)	(1.98)	(1.91)
Muni. GDP per Capita, <i>GDPC</i>	-0.003*	-0.003*	-0.003*
	(-1.75)	(-1.80)	(-1.75)
Muni. GDP Growth, $GDPGr$	-1.199**	-1.196**	-1.192**
	(-2.22)	(-2.22)	(-2.19)
Constant	$0.523^{***}$	$0.534^{***}$	$0.525^{***}$
	(3.85)	(3.91)	(3.85)
R-squared	0.795	0.792	0.792
Observations	106	106	106
Groups (number of banks)	53	53	53
* p<0.10, ** p<0.05, *** p<0.01			

Table 9: **Robustness Test.** OLS regression with bank-specific fixed effects (No Pol column) and GLS regressions with bank-specific random effects (remaining columns). The dependent variable is return on assets, RoA. TA is total assets. LM is the ratio of municipal loans to total assets. The post-EU variable is equal to one if the observation is after 1995 and zero otherwise. For each bank, we replace its post-EU level of LM with its pre-EU level in these specifications; i.e., pre-EU LM varies across banks but is constant across time. We use three variables to identify politically competitive municipalities: Pol1, Pol2 and Pol3 are defined in detail in Table 2. For each bank there is one observation pre-EU and one observation post-EU. z statistics are given in parentheses.

dependent variable = $RoA$	No Pol	Pol1	Pol2	Pol3
Log(TA)	-0.004	-0.001***	-0.001***	-0.001***
	(-1.35)	(-2.63)	(-2.76)	(-2.69)
pre-EU LM	~ /	-0.006	-0.002	-0.006
-		(-0.29)	(-0.11)	(-0.31)
Post-EU dummy	0.001	-0.001	-0.001	-0.001
v	(0.46)	(-0.55)	(-0.77)	(-0.54)
Political variable, <i>Pol</i>		0.002	0.003*	0.002
		(1.42)	(1.82)	(1.49)
pre-EU LM x Post-EU	0.042**	0.023	0.025	0.023
-	(2.46)	(1.37)	(1.50)	(1.43)
$Pol \ge Post-EU$		-0.003**	-0.003**	-0.004***
		(-2.57)	(-2.04)	(-2.95)
pre-EU LM x <i>Pol</i>		-0.056*	-0.062**	-0.058*
-		(-1.76)	(-1.96)	(-1.84)
pre-EU LM x $Pol$ x Post-EU		$0.058^{**}$	0.049*	0.061**
-		(2.15)	(1.80)	(2.32)
Non-Municipal loans/TA, LnoM	-0.026***	-0.027***	-0.025***	-0.027***
- , , ,	(-3.24)	(-4.53)	(-4.28)	(-4.61)
Muni. Debt per Capita, $DC$	-0.002***	-0.000	-0.000	-0.000
<b>1 1</b> <i>i i</i>	(-3.07)	(-0.78)	(-0.54)	(-0.76)
Muni. GDP per Capita, GDPC	-0.0002	0.0002**	$0.0002^{*}$	0.0003**
	(-0.56)	(2.18)	(1.92)	(2.27)
Muni. GDP Growth, GDPGr	0.023	0.017	0.017	0.019
,	(0.65)	(0.65)	(0.66)	(0.75)
Constant	0.128*	0.049***	0.049***	0.049***
	(1.78)	(4.96)	(5.00)	(4.99)
Bank Specific Effects	Fixed	Random	Random	Random
R-squared	0.419	0.419	0.373	0.431
Observations	106	106	106	106
Groups (number of banks)	53	53	53	53
* p<0.10, ** p<0.05, *** p<0.01				

Table 10: Distribution of High-GDPC municipalities and politically competitive municipalities. A banks is assigned HiGDPC=1 if the region in which it is located had pre-EU GDP per Capita that was larger than the median pre-EU GDP per capita in our sample of banks. *Pol* variables are defined in Table 2.

	HiGDPC=0	HiGDPC=1
Pol1=0	18	7
Pol1=1	10	18
Pol2=0	19	7
Pol2=1	9	18
Pol3=0	20	7
Pol3=1	8	18

Table 11: **GDP per capita, Politics and Related Lending.** GLS regressions with bank-specific random effects. The dependent variable is return on assets, RoA. TA is total assets. LM is the ratio of municipal loans to total assets. The post-EU variable is equal to one if the observation is after 1995 and zero otherwise. HiGDPC is defined in Table 10. For each bank there is one observation pre-EU and one observation post-EU. In the second and third columns the sample is segmented according to Pol3, which is defined in Table 2. z statistics are given in parentheses.

dependent variable = $RoA$	Full Sample	Pol3=1	Pol3=0
Log(TA)	-0.001***	-0.001***	-0.001
	(-2.63)	(-2.66)	(-1.24)
Municipal loans/TA, $LM$	-0.017	$-0.054^{*}$	-0.001
	(-1.07)	(-1.65)	(-0.04)
Post-EU dummy	-0.000	-0.001	-0.001
	(-0.23)	(-0.15)	(-0.77)
$LM \ge Post-EU$	0.017	0.052	0.009
	(1.05)	(1.53)	(0.54)
$HiGDPC \ge Post-EU$	-0.003*	-0.005	$0.006^{**}$
	(-1.67)	(-1.47)	(1.97)
$LM \ge HiGDPC$	-0.051**	-0.012	0.001
	(-2.02)	(-0.30)	(0.03)
$LM \ge HiGDPC \ge Post-EU$	$0.063^{**}$	0.047	-0.036
	(2.37)	(1.15)	(-0.79)
Non-municipal loans/TA, LnoM	-0.024***	-0.028***	-0.017*
	(-3.96)	(-3.37)	(-1.91)
Muni. Debt per Capita, $DC$	-0.000	-0.000	-0.001*
	(-0.55)	(-0.05)	(-1.88)
HiGDPC	$0.003^{**}$	$0.004^{*}$	-0.000
	(2.24)	(1.95)	(-0.19)
Muni. GDP Growth, $GDPGr$	0.014	$0.086^{*}$	-0.006
	(0.46)	(1.90)	(-0.16)
Constant	$0.050^{***}$	$0.055^{***}$	$0.042^{**}$
	(4.99)	(4.35)	(2.39)
R-squared	0.425	0.687	0.446
Observations	106	52	54
Groups (number of banks)	53	26	27
* p<0.10, ** p<0.05, *** p<0.01			

Table 12: **Politics, GDP per capita and Related Lending.** GLS regressions with bank-specific random effects. The dependent variable is return on assets, RoA. TA is total assets. LM is the ratio of municipal loans to total assets. The post-EU variable is equal to one if the observation is after 1995 and zero otherwise. Pol3 is defined in Table 2. For each bank there is one observation pre-EU and one observation post-EU. In the second and third columns the sample is segmented according to HiGDPC, which is defined in Table 10. z statistics are given in parentheses.

dependent variable $= RoA$	Full Sample	HiGDPC=1	HiGDPC=0
Log(TA)	-0.001***	-0.002***	-0.001
	(-2.84)	(-3.16)	(-0.62)
Municipal loans/TA, $LM$	-0.014	-0.007	0.004
	(-0.94)	(-0.20)	(0.21)
Post-EU dummy	-0.000	0.004	-0.001
	(-0.08)	(1.33)	(-0.61)
Political variable, <i>Pol</i> 3	0.002	$0.004^{*}$	0.001
	(1.20)	(1.85)	(0.29)
$LM \ge Post-EU$	0.013	-0.016	0.007
	(0.86)	(-0.39)	(0.38)
$Pol3 \ge Post-EU$	-0.006***	-0.011***	0.000
	(-2.89)	(-3.67)	(0.03)
$LM \ge Pol3$	-0.045*	-0.080*	-0.031
	(-1.74)	(-1.76)	(-0.86)
$LM \ge Pol3 \ge Post-EU$	$0.059^{**}$	$0.131^{***}$	0.017
	(2.38)	(2.78)	(0.43)
Non-Municipal loans/TA, $LnoM$	-0.024***	-0.034***	-0.013
	(-3.89)	(-3.83)	(-1.57)
Muni. Debt per Capita, $DC$	-0.000	0.000	-0.001*
	(-0.77)	(0.22)	(-1.74)
Muni. GDP per Capita, <i>GDPC</i>	$0.000^{**}$	0.000	0.000
	(2.46)	(0.98)	(0.14)
Muni. GDP Growth, $GDPGr$	0.023	0.046	0.007
	(0.90)	(1.17)	(0.16)
Constant	$0.048^{***}$	$0.063^{***}$	0.029
	(4.80)	(5.27)	(1.37)
R-squared	$0.454^{***}$	$0.704^{***}$	0.440
Observations	106	50	56
Groups (number of banks)	53	25	28