German Institute
for Economic Research

No. 21/2010
Volume 6
July 2, 2010

DIW BERLIN

www.diw.de

Weekly Report

Access to Credit Information Promotes Market Entries of European Banks

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When granting credit, banks depend on reliable information about the creditworthiness and risk structure of potential borrowers. This information is typically gathered by national credit bureaus. Nationally established banks depend on information from credit bureaus more than ever, particularly when entering a foreign market. This DIW study (which is partially based upon research by the same authors for the European Credit Research Institute and data collected by the institute) investigates whether the existence of credit bureaus influences European bank competition and concludes that they facilitate market entry for foreign banks. In turn, the absence of credit bureaus can create significant disadvantages in competition. In this case, a market entry is then primarily possible via the purchase of an incumbent bank, because the entering institution has essentially no other opportunity to access debtor data. This study also shows that provision of data within the EU is not harmonized overall.

Credit bureaus collect and sell information on the creditworthiness of private individuals und companies. This information plays a decisive role in granting credit. Identification and payment information on debtors is typically reported by banks to credit registers, which then evaluate the data using statistical estimation procedures (rating and scoring models). When customers apply for credit or for an increase of a credit line, banks request customer profiles at one or more credit registers to evaluate creditworthiness. A loan is then priced according to this estimated creditworthiness or the bank may request additional collateral.[1]

This report examines the influence of credit registers on European bank competition. So far, credit information systems within the EU have not been harmonized. Virtually no international data traffic among private credit bureaus exists with regards to data on private individuals. However, because efforts are being made to create a level playing field across national borders in banking competition, we will first focus on the existing systematic differences between individual EU member states. Based upon this overview, we elaborate on how the establishment of credit registers affects European bank competition. For this matter, a new data set was

JEL Classification:
F37, G21, G34, L13, O16

Keywords:
Credit registers, Foreign entry
asymmetric information

1 The activity of credit registers has been the subject of great controversy in the German media, most recently in conjunction with the amendment to the Federal Data Protection Act. While the data protection law aspect of credit reporting is important, it is not the subject of this investigation.

Table 1

Credit registers in EU countries

	Public credit registers			Private credit bureaus		
		Negative data	Positive data		Negative data	Positive data
Belgium	Yes	Yes	Yes	Yes[1]	Yes	Yes
Bulgaria	Yes	–	–	Yes	–	–
Denmark	No	Does not exist	Does not exist	Yes	Yes	No
Germany	Yes	No[1]	Yes[1]	Yes	Yes	Yes
Estonia	No	Does not exist	Does not exist	Yes	Yes	Yes
Finland	No	Does not exist	Does not exist	Yes	Yes	No
France	Yes	Yes	No	Yes[1]	Yes	Yes
Greece	No	Does not exist	Does not exist	Yes	Yes	Yes
United Kingdom	No	Does not exist	Does not exist	Yes	Yes	Yes
Ireland	No	Does not exist	Does not exist	Yes	Yes	Yes
Italy	Yes	Yes	Yes	Yes	Yes	Yes
Latvia	Yes	Yes	Yes	Yes	Yes	Yes
Lithuania	Yes	Yes	Yes	Yes	Yes	No
Luxembourg	No	Does not exist	Does not exist	Yes	–	–
Malta	No	Does not exist	Does not exist	Yes	Yes	No
The Netherlands	No	Does not exist	Does not exist	Yes	Yes	Yes
Austria	Yes	No	Yes	Yes	Yes	Yes
Poland	No	Does not exist	Does not exist	Yes	Yes	Yes
Portugal	Yes	Yes	Yes	Yes	Yes	Yes
Romania	Yes	–	–	Yes	Yes	Yes
Sweden	No	Does not exist	Does not exist	Yes	Yes	Yes
Slovakia	Yes	Yes	Yes	Yes	Yes	Yes
Slovenia	Yes	Yes	Yes	Yes	–	–
Spain	Yes	Yes	Yes	Yes	Yes	Yes
Czech Republic	Yes	Yes[1]	Yes[1]	Yes	Yes	Yes
Hungary	No	Does not exist	Does not exist	Yes	Yes	No
Cyprus	No	Does not exist	Does not exist	Yes	Yes	Yes

1 Only companies.

Sources: European Commission (DG Internal Market and Services) and central bank of Slovakia.

DIW Berlin 2010

Private credit bureaus maintain databases on private individuals and companies.

created at the European Credit Research Institute that maps national bank competition from 1990 to 2007.

Credit bureaus in the EU vary from country to country

The credit registers in the EU member states are not harmonized. As stated, there is currently no international data traffic is in place, particularly among private credit bureaus. Due to the purpose of establishing similar conditions for bank competition across Europe, it is worthwhile to examine more closely the institutional differences that exist in the individual member states.

The variety of European institutions is particularly reflected in the organization and regulation of credit registers. For example, public credit registers only exist in 14 of the 27 member states.[2] They are part of the central banks and serve different purposes, e.g., monitoring of systemic risks, monitoring of individual banks, and statistical purposes. The reporting participants are financial institutions that are licensed by the relevant central bank. The information stored on borrowers by public credit registers varies as well from country to country (Table 1).

Unlike public credit registers, private credit bureaus are, in most countries, institutions to which banks can report debtor data *voluntarily*. In some EU states, companies outside of the financial sector also report information, because they bear a payment risk.[3]

Additional differences between EU states arise from the variance in the reporting thresholds, that is whether and what level of total indebtedness is reported at what minimum threshold. The data retention periods and type of data reported differ as well across countries. Data protection laws define which data may be reported and collected in each country. One fundamental distinction to be made here is positive and negative data.[4] Negative data refers to information on payment problems, while positive data shows that borrowers regularly paid off their debt in compliance with the contract. Both data types are risk data, although only problematic borrowers are stored in negative credit registers.

The different development of credit registers within the EU countries is a result of the differences in economic development in the countries (for example, the German credit register *Evidenzzentrale für Millionenkredite* was founded in 1934, during the Great Depression). Cultural and legal differences have influenced the different developments as well.

European Commission: obstacles exist in the access to credit information

At the European level, there is an increased discussion about the influence of credit registers on

2 These member states are: Austria, Belgium, Bulgaria, the Czech Republic, France, Germany, Italy, Lithuania, Latvia, Portugal, Romania, Slovakia, Slovenia and Spain.

3 European Commission (DG Internal Market and Services): Report of the Expert Group of Credit Histories. May 2009, ec.europa.eu/internal_market/consultations/docs/2009/credit_histories/egch_report_en.pdf.

4 In countries such as France, Denmark and Finland, only negative data is collected by credit bureaus. The public credit registers in Italy, Latvia and Lithuania collect positive and negative data, whereas only positive data is reported in Germany and Austria.

European bank competition. Credit registers are regulated by the European Data Protection Directive (95/46/EC) and the Consumer Credit Directive (2008/48/EC).[5] National data protection laws, bank laws and central bank laws are also relevant for credit reporting. The European Consumer Credit Directive requires member states to guarantee that lenders from other member states have access to credit information databases under the same conditions as incumbent banks in the country. However, the European Commission stated in a report that the basic principle of non-discriminatory and reciprocal access to credit registers is not yet fully operational and that significant obstacles are in place for cross-border data transfers.[6] In its report, the Commission summarizes the aspects which are particularly critical with regard to credit registers. Thus, the following aspects are important:

- the activity a company must conduct to be allowed to report clients to the credit register
- whether a bank license is required and national presence (domestic residence) necessary for access permission
- whether and how reciprocity is required in data reporting and data withdrawal
- the application of data protection law
- which access conditions are required (for example, fees, membership)

Although the Commission recognizes that some of these conditions are justified, it also maintains that some could potentially restrict access. As an example for such potential restriction, the Commission lists the condition set by the public credit registers of Austria, Spain, Portugal and Latvia that financial institutions must have a banking license and a national presence. Another recent development is the decision by the European Court of Justice (ECJ) in 2006[7] which clarifies the conditions under which an exchange of creditworthiness data among competitors does not constitute an infringement of EU competition law. The Supreme Court of Spain (Tribunal Supremo) transferred the decision to the European Court of Justice to seek a clarification on the matter with regard to the Spanish credit information system. The ECJ established that the Spanish system is in principle acceptable, if relevant markets are not highly concentrated, the system does not allow identification of other participants, and the access conditions are non-discriminatory. The Court also established that reducing the uncertainty of borrower credit risk actually *encourages* competition. Furthermore, the ECJ ordered the national courts to determine, if the conditions for an exception under Art. 81 (3) EC are given and that for such an exemption the advantages and disadvantages of these types of arrangements needed to be balanced. So far no robust scientific findings have been available on the following questions:

- whether and how the creation of credit information systems affects European bank competition
- whether there are differences between public and private systems and whether they imply a difference for cross-border market entries
- whether it makes a difference if a credit register distributes positive and negative data on debtors, or only negative data

A new data set delivers findings on EU market entries from banks

Based upon economic theory, it is known that information on the potential risk of a debtor improves the transparency of credit granting. For example, information on the repayment history reduces information asymmetries, decreases moral hazard as well as credit rationing. Contractual externalities play a special role in this context: a debtor can incur debts at several institutions and thereby put the repayment of all the debtor's contracts at risk, if there is the threat of over-indebtedness.[8] Therefore, it is in the interest of lenders to gain knowledge about pre-existing credit contracts and the size of a borrower's total indebtedness.

Expanding on this point, the European Credit Research Institute together with DIW Berlin, University of Rome (Tor Vergata) and Graduate School *Human Behaviour in Social and Economic Change* (GSBC) in Jena has created a new database.[9] The database allows the analysis of the interaction of credit information systems and market entries

5 Directive 2008/48/EC of the European Parliament and of the Council of April 23, 2008 on credit agreements for consumers and repealing Council Directive 87/102/EEC.

6 Report on the retail banking sector inquiry - Commission Staff Working Document accompanying the Communication from the Commission – Sector Inquiry under Art 17 of Regulation 1/2003 on retail banking (Final Report) [COM(2007) 33 final].

7 Judgment of the Court (Third Chamber) of November 23, 2006. Asnef-Equifax, Servicios de Informacion sobre Solvencia y Credito, SL v Asociacion de Usuarios de Servicios Bancarios (Ausbanc). Case C-238/05, European Court Reports, 2006, I-11125.

8 Bennardo, A., Pagano, M., Piccolo, S.: Multiple-Bank Lending, Creditor Rights and Information Sharing. CSEF Working Papers 211, February 2009.

9 The data collection was financed by ECRI. Work on this data base, however, was also conducted at DIW Berlin and GSBC Jena.

Table 2

Decrease in market concentration (CR3) due to the introduction of a credit register

	Public credit register			Private credit bureau		
	Before the introduction	After the introduction	Difference	Before the introduction	After the introduction	Difference
Reform group[1]	0.76	0.65	−0.11***	0.77	0.74	−0.03
Control group I[2]	0.69	0.70	0.01	0.69	0.71	0.02*
Difference	−0.07***	−0.05	−0.12***	0.08**	0.03***	−0.05
Reform group[1]	0.76	0.65	−0.11***	0.77	0.74	−0.03
Control group II[3]	0.72	0.73	0.01	0.69	0.71	0.02
Difference	0.04**	−0.08	−0.12***	0.08**	0.06**	−0.05

1 Countries that introduced a private or public credit register between 1990 and 2007.
2 EU 27 countries without establishment of credit registers.
3 New member state countries without establishment of credit registers.

Statistical significance with probabilities of error of 10%=*, 5%=**, 1%=***.

Sources: European Commission, DG Internal Market and Services, central bank of Slovakia, ECRI and DIW Berlin calculations. **DIW** Berlin 2010

The introduction of a public credit register decreases market concentration by eleven percentage points on average.

by foreign banks into national markets. The dat set maps national bank competition using different measures for competition, including the return on assets and net interest margin. The database is based on time series from 1990 to 2007, which tracks the creation and development of credit registers in the 27 EU member states. We have compiled them together with entries by European credit institutions into other EU markets through merger and acquisition or the opening of new branch offices.

Credit registers influence bank competition

The data provides information on when a public or private credit register was founded between 1990 and 2007 and whether positive or negative data on private individuals and companies are collected in a country. An index was generated to reflect the data collection on private individuals and companies in the statistical analysis.[10] We have also collected data on the number and founding of the largest credit bureaus in the EU, as an indicator for the maturity of the market for credit information. The largest credit bureaus are market leaders in the field of risk information. In Germany, this includes companies such as Schufa Holding AG, Bürgel and Creditreform.

We have combined the historical data on European credit information systems with bank competition data. For this data, cross-border market entries from banks via merger and acquisition as well the annual change in the number of opened branches of foreign credit institutes in member states were of interest.[11] Both variables were examined individually as well as merged (as proportion of branch entries in total European market entries).

We differentiated between the *concentration* and *intensity* of bank competition in the national banking markets and measured both with *different* indicators. Concentration in the banking market was measured using the market share of the three largest banks (concentration ratio 3, CR3). Return on assets, return on equity and net interest margins were used to measure intensity of competition.

In order to consider the influence of other factors on market entries, we have also prepared time series on various other national indicators, including the GDP per capita, inflation, legal origin of law, outstanding credit volumes measured as a percentage of GDP, and economic freedom existing in a country.[12] The special feature of our data set is that it allows, for the first time, robust conclusions about the connection between market entries by banks and credit information systems.

In order to analyze this, we have grouped the countries according to where a public or private credit register was founded between 1990 and 2007 (this is the so-called reform group, referred to as Group 1 below). We have combined countries in which no credit register was founded into a second group (control group, referred to as Group 2 below). The effect that the establishment of a credit register has on the selection of the market entry mode by banks can now be measured by comparing the average of the first group before and after the establishment with the averages of the second group: This is done by subtracting the Group 2 average from the Group 1 average (difference-in-difference analysis).[13]

10 When data is collected on private individuals or companies, the index is 1; if both are available, the index is 2. This data was indexed for both private and public credit register.

11 Source: National authorities and ECB Statistical Data Warehouse.

12 Sources were: IWF, Djankov et al. 2007, World Bank and Heritage Foundation.

13 The groups may also be sorted based upon other indicators, such as high or low market concentration. The strength of this method is that it is not a simple comparison of averages of the dependent variable (i.e. market entries) before and after the creation of a credit register. Rather, all changes that occurred in both groups at the same time (and which are not connected to the creation of a credit register) are deducted by subtracting the average of the control group from the reform group.

Table 3

Increase in the share of branch entries (in total cross-border entries)[1] due to the introduction of a credit register

	Public credit register			Private credit bureau		
	Before the introduction	After the introduction	Difference	Before the introduction	After the introduction	Difference
EU 27						
Low concentration[2]	0.18	0.3	0.12**	0.16	0.25	0.09
High concentration[2]	0.46	0.34	–0.12**	0.51	0.4	–0.11
Difference	–0.28***	–0.04	0.24***	–0.35***	–0.15***	0.20*
New member states						
Low concentration[2]	0.14	0.25	0.11*	0.1	0.3	0.20***
High concentration[2]	0.44	0.3	–0.14**	0.75	0.43	–0.32
Difference	–0.30***	–0.05	0.25*	–0.65	–0.13**	0.52**

1 Proportion of market entries resulting from the founding of branch offices in relation to total market entries.
2 The three largest banks have a market share more than 60 percent.
Statistical significance with probabilities of error of 10%=*, 5%=**, 1%=***.

Sources: European Commission, DG Internal Market and Services, central bank of Slovakia, ECRI and DIW Berlin calculations. **DIW** Berlin 2010

The introduction of credit registers increases the share of market entry through branches by more than 20 percentage points on average.

Credit bureaus reduce the concentration in the banking market

As Table 2 shows, the difference in market concentration, before and after the introduction of a public credit register is statistically significant: CR3 decreases by an average of eleven percentage points. The concentration has not significantly changed in markets, where no credit register was introduced during the same period. The differences between the groups indicate that a public credit register reduces the CR3 on average. The introduction of a second large credit bureau, however, reduces the concentration only to a smaller degree.[14] One reason for this may be that private credit bureaus are a voluntary risk analysis instruments and may therefore have weaker effects in general.

An additional control group (control group 2), which only contains the new members of the EU, was created to incorporate differences that may have resulted from countries joining the EU. The results, however, remain robust.

Table 3 shows (separately for public registers and private credit bureaus) how the establishment of a credit register affects market entries. Additional sorting according to concentration ratios permits an association with the assumption of the European Court of Justice that credit information systems in markets with low concentrations should be unobjectionable.

The results show the robust influence of the establishment of a credit register on cross-border market entries in Europe. The proportion of market entries by branching as a proportion of total cross-border entries by banks, serves as the independent variable. The proportion of branch entries increases after the introduction of a public register in countries with low degrees of market concentration. The difference between both country groups is statistically significant (24 percentage points on average).

Estimations that incorporate mergers and acquisitions *as well as branching individually* in the analysis turn out somewhat weaker, but confirm the assumption that the establishment of credit registers facilitates cross-border market entries in Europe, particularly, if subsidiaries are founded.

Other statistical procedures confirm the results as well

By using multivariate estimation procedures, we included additional variables in the analysis, which could have an influence on cross-border market entries in Europe. This includes variables such as inflation, GDP per capita, the legal origin of commercial law and the ratio of domestic credit provided by the banking sector over GDP. We have used various indicators of cross-border market entries as independent variables: merger and acquisitions, the

14 The market entry of the second largest credit bureau was incorporated into the univariate analysis for technical reasons, particularly in order to guarantee sufficient variation in this variable.

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ISSN 1860-3343
Translated from the German.

change in the number of branch entries into a market and the proportion of branches in the total cross-border entries.

The independent variables are the information indexes (positive and negative information) as well as net interest margin, which serves as a competition indicator.[15] These procedures confirm the positive effect of credit registers on market entries via branching. Furthermore, they also confirm the influence different types of information (positive and negative) have on cross-border market entry modes. The collection of both types of data, positive and negative, increases cross-border entries.

Conclusion

The activity and effect of credit information systems that collect and distribute data on private borrowers is typically considered from two perspectives: the perspective of credit market development and the perspective of data protection. The main questions related to these two perspectives are the scope of data collections on natural and legal persons and for what purposes they should be distributed. This report adds a third perspective: it shows that credit registers influence cross-border market entry modes of foreign banks by facilitating such entry within the EU. This effect is generated independent from credit market development in a country, inflation rates, economic development or legal origin of commercial law. From the perspective of competition, therefore, the activity of credit registers shows a positive contribution.

Thus, countries that want to strengthen European bank competition should consider the establishment of a public credit register at their central bank. These types of institutions currently exist in 14 of the 27 EU member states. Public credit registers are also important from the perspective of financial market stability and risk monitoring.

Private credit bureaus, in turn, have weaker effects on bank competition. This could be a sign that national regulatory authorities should focus more on the scope and quality of data collections. During the course of our investigation, we encountered a series of problems associated with the data collection on private credit bureaus. It is generally difficult to obtain detailed information on their activity, for example. In order to provide researchers and the public with better information on these institutions, regulatory authorities ought to require greater disclosure about their activities in future.

More research is required on how credit information systems can be harmonized and whether such an effort is worthwhile. Europe still has a long path ahead to harmonize these systems.

(First published as "Zugang zu Kreditinformationen fördert Markteintritte europäischer Banken", in: Wochenbericht des DIW Berlin Nr. 22/2010.)

15 Various estimation procedures were used based on the dependent variable, including Poisson regression, Tobit regression and fixed effect models.