



FACULTEIT ECONOMIE
EN BEDRIJFSKUNDE

HOVENIERSBERG 24
B-9000 GENT

Tel. : 32 - (0)9 - 264.34.61
Fax. : 32 - (0)9 - 264.35.92

WORKING PAPER

Determinants of bank interest margins in Central and Eastern Europe.

Convergence to the West?

Sophie Claeys ¹

Rudi Vander Venet ²

2003/203

¹ Sophie Claeys, Department of Financial Economics, Ghent University, sophie.claeys@ugent.be

² Rudi Vander Venet, Department of Financial Economics, Ghent University.

Determinants of Bank Interest Margins in Central and Eastern Europe:

A Comparison with the West.*

Sophie Claeys[†] and Rudi Vander Venet

Ghent University, Department of Financial Economics, 9000 Ghent, Belgium

September 2004

JEL Classification : G21, G28, P34

Keywords: bank interest margins, transition economies, institutional reform.

*The authors thank Jan Annaert, Santiago Carbó Valverde, Mark Flannery, Koen Schoors, Peter Zajc, participants at the 2003 SUERF Colloquium, the 2003 Dublin UCD Wolpertinger Meeting and two anonymous referees for valuable comments and suggestions. The authors acknowledge financial support from the Programme on Interuniversity Poles of Attraction of the Belgian Federal Office for Scientific, Technical and Cultural Affairs, contract No. P5/2.

[†]Corresponding author: Sophie Claeys, Department of Financial Economics, W. Wilsonplein 5D, 9000 Ghent, Belgium. Phone: +32(0)9264 34 91. Fax: +32(0)9264 89 95. E-mail: Sophie.Claeys@UGent.be

Determinants of Bank Interest Margins in Central and Eastern Europe: A Comparison with the West.

Abstract

This paper investigates the determinants of bank interest margins in Central and Eastern European countries (CEEC). We assess to what extent the relatively high bank margins in transition economies can be attributed to a low degree of efficiency and non-competitive market conditions, or to changes in the regulatory banking environment. We provide a systematic comparative analysis of the determinants of interest margins of CEEC banks versus banks operating in Western European economies. Our main findings are that concentration, operational efficiency, capital adequacy and risk behavior are important determinants of margins in both West and East. Institutional reform first shifts risk behavior and increases margins before competition effects push margins down.

JEL Classification : G21, G28, P34

Keywords: bank interest margins, transition economies, institutional reform.

1 Introduction

Financial intermediation is essential for economic development. Some authors have provided evidence of a causal link between the degree of financial intermediation and subsequent economic growth (Levine and Zervos, 1998). This issue is particularly important for the Central and Eastern European transition Countries (CEEC), where the financial infrastructure had to be reconfigured after the collapse of the centrally planned system. The consensus is that these countries need a stable and efficient banking system, next to the gradual development of financial markets, in order to finance both private and public investment and expenditures. The effectiveness of the banking system in channelling funds from surplus to deficit actors is often gauged by examining the spread between lending and deposit rates and by assessing the degree of operational efficiency of the banking industry (Taci and Zampieri, 1998). Although the CEEC have made some progress since the deregulation of their banking systems, interest margins remain relatively high and the gap with Western bank markets remains substantial¹. However, the interpretation of relatively high interest margins involves a trade-off. On the one hand, high margins are associated with a low degree of efficiency and non-competitive market conditions. On the other hand, high margins may be a reflection of an inadequate regulatory banking environment and a high degree of information asymmetry. In such circumstances, high margins would be indicative of high risk premia. If, in this type of environment, competition increases, it might induce gambling behavior by banks, causing financial instability (Hellman, Murdock and Stiglitz, 2000). Beck, Demirgüç-Kunt and Levine (2003), for example, conclude that highly concentrated banking systems are less likely to suffer from crises. Therefore, in less

¹See Berglöf and Bolton, 2001; Riess, Wagenvoort and Zajc, 2002; EBRD, 1998.

developed economies relatively high bank margins may be necessary, at least temporarily, to sustain bank franchise value and avoid financial instability (Gorton and Winton, 1998).

This paper has two objectives. First, we analyze the determinants of bank interest margins in the CEEC. The main objective is to determine whether the relatively high interest margins of banks operating in transition economies are caused by economic factors, such as an often concentrated market structure and a lack of operational bank efficiency (structure-conduct-performance versus efficiency), or rather by regulatory factors and underdeveloped banking conditions (business cycle and institutional factors). If high margins were caused by market power or operational inefficiency, more competition would be the optimal solution, for example by encouraging further foreign bank entry. If high margins were caused by regulatory underdevelopment and asymmetric information, actions in terms of enterprise and bank reform would be a more pressing avenue of public policy. Hence, different causes call for different policy actions. Our setup further enables us to assess whether or not the recently observed decline in margins can be attributed to improved regulations, whereby lower margins reflect lower risk and hence indicate more financial stability, or to a change in market conditions, whereby low margins are the outcome of increased competition. The empirical analysis covers most of the 1990s, which coincides with the period following the deregulation of the CEEC banking systems. Hence, we are able to assess the effect of deregulation on interest margins.

Second, we examine to what extent bank behavior in the CEEC is similar to that observed in Western Europe. This is important for all Eastern European transition countries, but even more for the group of countries that joined the European Union in 2004. These so-called 'accession countries' have made considerable efforts to adapt their legal and financial infrastructure to ensure eligibility for EU accession. The expectation is that this process of regulatory and

economic harmonization will spur macroeconomic and financial convergence with the EU. In that framework it can also be expected that bank behavior will converge. In order to investigate this hypothesis, we provide a systematic analysis for both the CEEC banks and the banks operating in Western Europe.

In what follows, we use panel data estimation techniques to analyze bank interest margins for 36 countries in Western and Eastern Europe. The main findings are that concentration, operational efficiency, capital adequacy and risk behavior are important determinants of margins in both West and East. Our results further indicate that institutional reform first shifts risk behavior and increases margins before competition effects start to drive margins down.

The rest of the paper is organized as follows. Section 2 outlines the literature on the determinants of bank interest margins. Section 3 describes the estimation methodology and the data. Section 4 presents and interprets the main results of the regression analysis. Section 5 concludes and provides a number of policy implications.

2 Determinants of bank interest margins

Previous studies have analyzed bank margins mainly empirically, both for developed and developing countries. One strand of the literature has elaborated on the dealership model introduced by Ho and Saunders (1981) who set up a two-step estimation procedure to empirically test their model². Based on this empirical approach, Saunders and Schumacher (2000) found that over the period 1988-95 interest margins in six European countries and the US are affected

²The first step involves the estimation of a 'pure interest spread' by regressing observed margins on a number of bank-specific characteristics. In the second step, the estimated pure spreads are explained by macroeconomic and market structure variables.

by the degree of bank capitalization, bank market structure, and the volatility of interest rates. For seven Latin American countries, Brock and Suarez (2000) reported that bank spreads in the 1990s are influenced by liquidity and capital risk at the bank level, and by interest rate volatility, inflation and GDP growth at the macroeconomic level, although the results differ across countries. One drawback of the Ho and Saunders approach is that, although bank-specific variables are used to determine pure bank margins, it does not take into account the possible heterogeneity across banks, both within the same market and over different countries. In this paper we deal with bank-specific variation within the same country, as well as across countries and over time.

An alternative approach found in literature is a more eclectic single-stage regression technique based on a behavioral model of the banking firm in which various potential determinants of the interest margin are included. Demirgüç-Kunt and Huizinga (1999) used bank-level data for 80 developed and developing countries over the period 1988-95 to analyze the determinants of bank interest margins and bank profitability. Their evidence suggests a role for a large number of indicators next to bank-specific variables, such as macroeconomic conditions, bank taxation, deposit insurance regulation, overall financial structure, and several legal and institutional indicators. Our paper is also related to Demirgüç-Kunt, Laeven and Levine (2004) who assess the impact of bank regulation, bank market concentration and inflation on bank margins, as well as the role of national institutions in regulation and market structure. They use data over the period 1995-99 for a sample of 72 countries. In examining bank regulations, Demirgüç-Kunt, Laeven and Levine (2004) use the database of Barth, Caprio and Levine (2002), which gives an extensive overview of the existing bank regulatory and supervisory rules based on a survey over the period 1998-2000. Notwithstanding its large coverage, the database has the disadvantage

that it cannot be used to capture time variation in the legal and institutional environment. Therefore, in their analysis of bank margins, Demirgüç-Kunt, Laeven and Levine (2004) are compelled to look at the averages over the period 1995-99 of concentration and other measures. In this paper, we use the European Bank for Reconstruction and Development (EBRD) indices of bank and enterprise reform as proxies for the regulatory environment. Since the EBRD performs a yearly assessment of regulatory reform we are able to exploit the time-series aspect of these indices. We use a panel structure at the bank level across countries and try to gauge how market structure and market conditions as well as the institutional and regulatory environment affect bank margins. Since we focus on a sample of transition countries and a sample of Western European countries, we are able to exploit the variation in the institutional environments across these countries and over time.

Finally, our approach is firmly rooted in the industrial organization literature on bank structure and efficiency. In a similar way as has been done for overall bank profitability, the relationship between bank interest margins and market structure can be analyzed within the structure-conduct-performance (SCP) and the efficient-structure (ES) hypotheses. In the case of overall bank profitability, Berger (1995), Goldberg and Rai (1996), and Vander Venet (2002) consider four different explanations which we apply to the case of interest margins. The traditional SCP asserts that the positive relationship between margins and market structure reflects non-competitive pricing behavior in more concentrated markets. A second theory is the relative-market-power hypothesis (RMP), which states that only those banks with large market shares are able to exercise market power in pricing and consequently earn higher margins. Alternatively, two efficiency explanations may capture the positive relationship between interest margins and either market concentration or market share (Berger (1995)). The efficient-structure

(ES) hypothesis asserts that differences in interest margins are attributable to differences in operational efficiency across banks. The X-efficiency version states that banks with superior management or production technologies have lower costs and subsequently can offer more competitive interest rates on loans and/or deposits, leading to a negative relationship between operational efficiency and interest margins. Since these firms are also assumed to gain larger market shares, the market may become more concentrated as a result of competition. Hence, the correlation between market structure and margins is spurious in this case and runs via higher levels of efficiency. One way to deal with this empirically is to include measures for concentration, market share and operational efficiency simultaneously into the regression. The scale-efficiency version of the ES hypothesis allows that some firms simply produce at a more efficient scale than others, which, under competitive market conditions, will be translated into smaller margins. Again, these firms are assumed to increase their market share, which would lead to higher market concentration.

3 Methodology and Data

3.1 Methodology

We analyze the determinants of bank interest margins in a coherent and encompassing framework in order to assess the importance of micro- and macroeconomic versus regulatory determinants. Our objective is to identify whether the relatively high bank margins observed in the CEEC are primarily driven by market structure and bank-specific factors or whether they are caused by weaknesses in the regulatory framework in which the banks operate. We extend Berger (1995), Allen and Rai (1996) and Vander Venet (2002) and include four types

of variables in our regressions: (1) country-specific bank market characteristics, such as the degree of concentration, (2) country-specific macroeconomic conditions, such as inflation, real economic growth and the real short term interest rate, (3) bank-specific characteristics, such as the degree of operational efficiency, capital adequacy, market share, the proportion of loans in total assets and the proportion of demand and savings deposits in total deposits and (4) regulatory features, such as the (time-varying) degree of bank and enterprise reform in the CEEC. We estimate equations of the following form:

$$\begin{aligned}
NIM_{i,j,t} = & \alpha_0 + \alpha_1 \cdot CONC_{j,t} + \alpha_2 \cdot MS_{i,j,t} + \alpha_3 \cdot SIZE_{i,j,t} + \alpha_4 \cdot EFF_{i,j,t} \\
& + \alpha_5 \cdot CAP_{i,j,t} + \alpha_6 \cdot LTA_{i,j,t} + \alpha_7 \cdot DSDEP_{i,j,t} \\
& + \alpha_8 \cdot \Delta gdp_{j,t} + \alpha_9 \cdot inflation_{j,t} + \alpha_{10} \cdot str_{j,t} \\
& + \alpha_{11} \cdot EBRDetp_{j,t} + \alpha_{12} \cdot EBRDbank_{j,t} + \epsilon_{i,j,t}
\end{aligned} \tag{1}$$

where $NIM_{i,j,t}$ is the net interest margin of bank i in country j at time t . The NIM is calculated as the difference between interest income and interest expenses as a proportion of total earning assets³. The first four explanatory variables are included to test the relative importance of the SCP and efficiency explanations. $CONC_{j,t}$ is either the Herfindahl measure of market concentration, calculated as the sum of squared market shares in the loan market $HERF_{j,t} = \sum_{i=1}^{n_j} [(MS_{i,j,t}^{loans})^2]$ or a concentration ratio $CR_{j,t}$, calculated as the percentage of loans granted by the largest bank in the country. Based on the structure-conduct-performance

³An unbiased measure of the pure intermediation margin would be the difference between lending revenues and deposit costs for each bank, but these data are not available. However, since the other interest income (e.g. on securities) and interest expenses (e.g. on interbank borrowings) can be assumed to reflect competitive market conditions across the banks in the sample, our estimate of the interest margin is a good proxy for the intermediation margin.

argument, a positive impact of concentration on bank interest margins would be indicative of collusion. $MS_{i,j,t}$ is a measure of relative market power and is calculated as bank i 's share of assets at time t in country j 's total bank assets at time t . A positive sign would support the relative market power hypothesis, i.e. banks with a relatively high market share are more able to set prices autonomously. The efficiency ratio $EFF_{i,j,t}$ is calculated as the inverse of total overhead costs to total assets⁴. The efficient-structure hypothesis predicts a negative relationship between interest margins and efficiency. We try to capture any scale-related cost or revenue advantages by including $SIZE_{i,j,t}$, calculated as the share of total assets of bank i in country j at time t to the assets of the median bank in country j at time t ⁵. Goldberg and Rai (1996) fail to find a positive relationship between concentration and profitability and find weak support for the efficient-structure hypothesis for a sample of large banks located in 11 European countries for the period 1988-91. These findings are corroborated by those reported in Vander Venet (2002) for European banks in the 1990s. For European banking markets Maudos and de Guevara (2004) find a statistically significant positive correlation between concentration and bank interest margins for the period 1993-2000. Corvoisier and Gropp (2002) find that higher concentration may have resulted in less competitive pricing by banks located in the euro area for the period 1993-1999.

Equation (1) further contains a vector of bank-specific characteristics, a vector of country-specific macroeconomic variables and a vector which contains regulatory variables that vary across countries and over time.

⁴The cost/assets ratio indicates how much operational costs the bank incurs for managing a given level of assets. We prefer this variable over the commonly used cost/income ratio because the latter contains the net interest margin, the dependent variable we attempt to explain. Moreover, total income also includes non-interest income, which tends to be very volatile and is often unrelated to the core financial intermediation business of banks.

⁵Since most banks in the CEEC are relatively small compared to Western European banks we do not use the log of assets to proxy for size, but take a size measure relative to that of the median bank in the country.

First, we include a number of bank-specific control variables that have been shown to be instrumental in explaining bank interest margins (Saunders and Schumacher (2000), Brock and Suarez (2000)). A first variable is the degree of bank capital adequacy, captured by $CAP_{i,j,t}$, the ratio of total equity to assets. When a bank holds excess capital above the regulatory minimum⁶, two positive effects on the interest margin can be distinguished. Since the bank has free capital it has the possibility to increase its portfolio of risky assets in the form of loans or securities. When market conditions allow the bank to make additional loans with a beneficial return/risk profile, this will, *ceteris paribus*, increase their interest margin. Moreover, since capital is considered to be the most expensive form of liabilities in terms of expected return, holding capital above the regulatory minimum is a credible signal of creditworthiness on the part of the bank. When depositors exert ‘depositor market discipline’, this may enable the bank to lower its deposit funding costs and, hence, increase its interest margin. Empirical evidence of depositor discipline is reported by Goldberg and Hudgins (2002) and by Park and Peristiani (1998) for the case of US savings and loan associations. Peria and Schmukler (1998) find evidence that market discipline also exists in developing countries, even in the presence of deposit insurance. In the CEEC, depositors have few alternatives for bank deposits; yet they are regularly confronted with information about bad asset quality in some banks and even outright bank failures. This feature will induce depositors, especially professional market participants, to act prudently and avoid depositing money in badly capitalized banks. Another well known feature is that depositors switch to supposedly safe banks in times of financial crisis. Hence, we use the degree of capitalization as a proxy for all types of arrangements that cause depositors

⁶In principle, all banks in our sample are subject to BIS-type capital adequacy regulations, they are required to hold at least 8% of capital against their risky assets. In some CEEC, capital regulations are more stringent (see Barth, Caprio and Levine, 2002).

to regard certain banks as 'safer'. Our expectation is therefore that a higher degree of capital coverage will be associated with higher interest margins.

We include two indicators of the banks' balance sheet composition in the regressions. The first is the proportion of total loans in total assets, $LTA_{i,j,t}$. We expect that a high LTA will be associated with higher interest margins due to risk and cost considerations. A higher LTA should increase revenues since loans are the most risky and, hence, the highest-yielding (in terms of expected return) type of assets. Consequently, LTA is intended to capture the bank's asset risk⁷. Loans are also the type of assets with the highest operational costs because they need to be originated, serviced and monitored. When the bank applies markup pricing for its lending rates, the interest margin will increase. The second balance sheet indicator is the proportion of demand and savings deposits in total deposits, $DSDEP_{i,j,t}$ (Berlin and Mester, 1999). Demand and savings deposits are usually relatively stable and cheap compared to borrowed funds. Hence, a bank with considerable access to this source of funding through a solid local deposit market penetration should be able to maintain high interest margins.

Second, we include variables that capture the macroeconomic environment in which the banks operate. In order to control for country-specific macroeconomic conditions, we include real GDP growth, $\Delta gdp_{j,t}$, to proxy for business cycle fluctuations, the inflation rate, calculated as the (end of year) change in CPI, $inflation_{j,t}$ and the real short term interest rate, $str_{j,t}$. Boyd et al. (2001) find evidence of a strong negative correlation between inflation and the amount of bank lending. This suggests that bank margins will increase as inflation is higher. The short term interest rate is included to capture the stance of monetary policy.

⁷A more appropriate measure which captures risk would be a non-performing loans ratio. Due to data limitations, no homogeneous proxy could be constructed for all banks.

Third, we include variables related to regulatory reform in the CEEC. This will enable us to assess how the changes in regulation of the last decade (such as financial and bank reform, financial market liberalization, the implementation of prudential regulation) have affected bank margins in the CEEC. To assess the effect of bank reform and market liberalization, we include two indices constructed by the EBRD: the transition indicator for enterprise reform, $EBRDetp_{j,t}$ and the transition indicator for banking reform, $EBRDbank_{j,t}$. Both indicators provide a ranking of the progress made in liberalization and institutional reform in the enterprise and the bank sector, respectively (EBRD, 1998, 2001). The EBRD uses the amount of budgetary subsidies, the efficiency of tax collection for social security, the share of industry in total employment and the change in labor productivity in industry to construct the index of enterprise reform. To construct the index of bank reform, the number of banks (and the share of foreign owned banks), the asset share of state-owned banks, the percentage of bad loans, credit to the private sector and stock market capitalization are considered (EBRD, 2001). When we average the EBRD indices per country over the years in our sample, we find that they are closely related to the regulatory and institutional indicators used by Demirgüç-Kunt, Laeven and Levine (2004)⁸. Not unexpectedly, this confirms that the EBRD indices accurately reflect the degree of regulatory and institutional reform. Moreover, both indicators vary over time and provide a ranking between 1 and 4, where 4 represents a level of reform that approximates the institutional standards of an industrialized market economy⁹. This enables us to analyze how changes over time in institutional reform affect bank behavior. Fries, Neven and Seabright (2002) use these measures to classify 16 transition economies into a high reform and a low reform

⁸Both $EBRDetp$ and $EBRDbank$ are positively correlated with the 'economic freedom', 'property rights' and 'KKZ institution index' variables. The $EBRDbank$ indicator is also positively correlated with 'banking freedom' and 'foreign ownership' and negatively correlated with the 'fraction entry denied', 'reserve requirements' and 'state ownership' variables defined in Demirgüç-Kunt et al. (2004).

⁹As expected, for most countries both indicators increase over time, although temporary decreases occur, e.g. in Slovakia, Latvia and Lithuania.

sample and then investigate bank performance for these two groups. We want to investigate how reform has affected the *NIM* next to the SCP and ES explanations. We therefore first introduce the EBRD indices directly in our equations and second interact them with variables which reflect bank behavior (*EFF*, *CAP*, *LTA* and *DSDEP*) to assess how different levels of institutional reform affect the sensitivity of the *NIM* with respect to these variables.

3.2 Data sources

We use a sample of 2279 banks from 36 Western and Eastern European countries over the years 1994-2001¹⁰. All bank balance sheet data and income statements are obtained from the *BankScope* database maintained by Fitch/IBCA/Bureau Van Dijk. Since we focus on bank intermediation, we use unconsolidated statements whenever possible, although in some cases we have to rely on consolidated statements because of data unavailability. The institutional bank types included are commercial banks, savings banks and cooperative banks, since these types of banks are primarily engaged in financial intermediation¹¹. To make sure that we do not omit any banks that are important players in the deposit and/or loan markets, we also include medium and long term credit banks and specialized government institutions, because they remain important in certain countries. All other types of banks, such as development banks, central or investment banks are excluded. Merged banks are considered as separate entities before the merger and as one entity afterwards. All the ratios capturing bank-specific characteristics are calculated based on the standardized global accounting format provided by *BankScope* in order to ensure comparability across countries. Data on inflation, GDP growth

¹⁰The countries included in our sample are listed in the Appendix.

¹¹For Germany we excluded the "Sparkassen". Because of their large number, inclusion of the German savings banks could bias the sample. Moreover, these savings institutions are very small, are locally oriented and rely on their state-organized head institutions for essential support functions in terms of risk management and refinancing.

and the short term interest rate are taken from IFS (IMF International Financial Statistics) and various EBRD Transition Reports. The bank and enterprise reform indicators are obtained from the EBRD Transition Reports (1998, 2001). The final dataset consists of an unbalanced panel with more than 16000 observations. Although *BankScope* is one of the most commonly used databases when dealing with bank characteristics, its coverage differs across countries, especially for the Eastern European countries. However, in all countries, the available banks account for a very large proportion (usually more than 80%) of the deposit and lending activity, on which this paper is focused (see Demirgüç-Kunt and Huizinga (1999), Cunningham (2001), Demirgüç-Kunt, Laeven and Levine (2004)). Table 1 reports the number of banks available in each of the countries and provides evidence on their size distribution.

3.3 Summary statistics

Table 2 reports the summary statistics of the variables we use in the empirical analysis. All observations more than two standard errors away from the country mean are deleted. On average, net interest margins in the West are much lower (2.9%) compared to the accession countries (4.7%) and non-accession countries (8%). Moreover, margins are much more volatile when moving from West to East. The Herfindahl index (on a scale between 0 and 1) in the Eastern European sample is on average double the value for the index in the West. The efficiency measure exhibits lower values on average for the accession and non-accession countries compared to the West. Further, bank markets in the East, especially the non-accession countries, are characterized by higher and more volatile levels of inflation and GDP growth. The correlation matrices for the different samples¹² indicate that the variables of interest show a significant

¹²The correlation matrices for the different samples are included in the Appendix (tables A1 to A5).

correlation with the net interest margin. Some of the correlations between the variables are relatively high and might cause collinearity problems in the regression analysis. For example, in all subsamples the Herfindahl index is highly correlated with market share and inflation. To assess the collinearity problem this might cause, we estimate all regressions twice using either the Herfindahl index or the concentration ratio. Correlations do not disappear when using *CR*, but go down in many cases. All subsamples further display a high correlation between market share and size. We therefore estimate all equations separately for *MS* and *SIZE* to avoid collinearity. To analyze the effect of other correlations (e.g. high correlation between inflation, gdp growth and the interest rate) we perform some additional regressions as robustness checks.

4 Regression Results

In the empirical analysis we exploit three dimensions of the data: time-variation, cross-country variation and bank-level variation. All the estimations are performed using a Random-Effects (RE) panel data estimation approach, where we assume that some unobserved heterogeneity between banks exists¹³. All the estimated equations include year and country dummies¹⁴. Country dummies are expected to capture country-related effects which are only imperfectly measurable such as differences in legislation, accounting standards and tax structures.

¹³We do not assume unobserved heterogeneity on the country level, since we want to account for unobserved bank-specific effects such as bank specialisation and ownership structure, for which we do not have homogeneous information covering all banks in our sample.

¹⁴The coefficients of the time and country dummies have been omitted from the regression output but are available upon request.

4.1 Determinants of Bank Margins

Tables 3 to 7 report the regressions results for the full sample and respective subsamples West, East, accession and non-accession. For all tables we start by reporting the results for the estimation including measures for concentration, market share, operational efficiency and scale efficiency simultaneously in order to test the relative importance of the SCP and the ES hypotheses. In the following set of regressions we first include the bank-specific control variables *CAP*, *DSDEP*, *LTA* and consecutively control for the macroeconomic environment by adding real gdp growth, inflation and the interest rate.

4.2 A Comparison with the West

Since the accession countries joined the European Union in 2004, it is important to assess whether the determinants of their banks' interest margins behave comparably to those in Western Europe and whether they show significant differences with the group of CEEC which have not joined the EU yet. To test this, we interact the determinants of interest with regional dummy variables representing accession, non-accession or East as a whole to test how they statistically differ compared to the West. The results are reported in table 8 and indicate that many determinants of the *NIM* have a more/less pronounced effect in the Eastern European countries compared with the West. We discuss these results in more detail in the following paragraphs.

4.3 General Results

The estimation results for the full sample (table 3) lend support to the SCP hypothesis: both coefficients on *HERF* and *CR* are positive and highly significant in all regressions that control for bank-specific variables next to time and country effects. An increase in market concentration has a positive effect on bank margins which is indicative of collusion. When controlling for macroeconomic variables, *HERF* becomes insignificant¹⁵. In the West sample, we also find evidence of collusion in all the estimated specifications. When turning to the East samples the results become less distinct. No clear results on concentration effects emerge and most coefficients become negative when controlling for macroeconomic variables. These findings seem unexpected since it is usually assumed that Western European bank markets are competitive, due to extensive efforts of financial deregulation, regulatory harmonization and the convergence of the monetary and macroeconomic environment¹⁶. However, our findings only corroborate previous results. De Bandt and Davis (2000) conclude that European bank markets were characterized by monopolistic competition before EMU, while Corvoisier and Gropp (2002) find that for loans and demand deposits, increased concentration due to consolidation in European banking may have resulted in less competitive pricing by banks. For a sample of six European countries and the US, Saunders and Schumacher (2000) also find evidence of a non-competitive market structure which materializes in an extra rent above the intermediation spread. For the East subsamples however, our results run counter to Gondat-Larralde and Lepetit (2001), who find a positive relationship between market concentration of banks and their performance

¹⁵Demirgüç-Kunt, Laeven and Levine (2004) find that once they control for regulatory change, the positive relation between the Herfindahl index and margins breaks down. The country dummies and macro variables capture part of these institutional elements.

¹⁶Milestones in the bank market integration process are the Second Banking Directive (1989), the Single Market Program (1993), the harmonization of capital adequacy rules through various directives, and the introduction of the euro (1999).

for a sample of eight CEEC over the period 1992-96, confirming the SCP hypothesis. One explanation for the negative concentration effect found in the East subsamples can be the high concentration of foreign banks which exhibit lower interest margins (Peria and Mody, 2004). When we redefine the accession countries sample such that it only includes Poland, the Czech Republic and Hungary (countries which are widely assumed to be most representative for the accession countries), we do find evidence of a concentration effect on margins similar to the West¹⁷.

The relative market share hypothesis (RMP) does not receive much support in neither the full sample nor the West regressions. The coefficient on *MS* becomes insignificant when we control for bank-specific and macroeconomic variables. For the East and non-accession regressions we find some evidence in favour of the RMP hypothesis (last columns of tables 5 and 7). A higher market share results in higher interest margins, which indicates that banks have market power in these markets. For the full and West samples we further find evidence of a scale-related advantage which reduces margins. *SIZE* is always negative and significant. The coefficient on the efficiency ratio enters the equations negatively and is highly significant for the full sample, supporting the efficient structure hypothesis. For a sample of 5 transition economies, Gondat-Larralde and Lepetit (2001) find that higher levels of efficiency improve bank profitability. Our result is in line with Vander Venet (2002) who finds that higher efficiency reduces interest margins significantly in a sample of Western European countries. In accordance with theory, a higher operational efficiency induces banks to pass the lower costs on to their customers in the form of lower loan rates and/or higher deposit rates, thereby lowering the interest margin. The finding that *MS* is insignificant implies that this behavior holds for

¹⁷These results are reported in the Appendix (table A6).

all banks, also for the largest ones. Table 8 indicates that the efficiency effect is significantly larger in the East compared to the West (significant negative interaction terms $EFF * Reg$). This means that efficiency gains in the East are passed through to the banks' customers. The estimates for the subsamples indicate that the efficiency effect is present in all samples, but not (yet) in the non-accession bank sector (table 7). In the non-accession countries the efficiency effect disappears when we control for bank and macro variables¹⁸. In many CEEC, entry of foreign banks has played an important role in the bank reform process by increasing levels of efficiency (see e.g. Claessens, Demirgüç-Kunt and Huizinga, 2001). However, since we do not have comprehensive ownership data on all banks in our sample, we were unable to test formally for the effect of foreign ownership on bank margins.

From this section we can conclude that in the West the SCP hypothesis cannot be rejected. This corroborates previous results for European banking. In Eastern Europe, bank interest margins are primarily determined by operational efficiency rather than market structure.

4.4 Bank-specific and Macroeconomic conditions

We now consider the bank-specific and macroeconomic control variables. A noteworthy feature is the role of bank capital. The capital-to-assets ratio enters all regressions positively and is strongly significant (see also Brock and Suarez (2000), Saunders and Schumacher (2000) and Demirgüç-Kunt, Laeven and Levine (2004)). This finding is consistent with the interpretation that capital serves as a signal of the banks' creditworthiness in both the Western and Eastern European bank markets. In the Eastern European bank markets, however, the capital ratio

¹⁸The high correlations between efficiency and the other explanatory variables might be an issue of concern. However, when we re-estimate the equations without EFF , the results with respect to the other variables remain unaltered.

has a coefficient at least twice as large compared to that reported for Western European banks. Table 8 reveals that this difference is statistically significant. An increase of one standard deviation of capital to assets adds approximately 0.39 percent to the *NIM* in Western European bank markets compared to 1.4 percent in Eastern Europe on average¹⁹. The higher sensitivity of margins with respect to *CAP* can be explained by the existence of depositor discipline in transition banking. This may decrease the deposit cost of well capitalized banks, leading to higher interest margins. The extra effect in non-accession countries is systematically higher compared to the accession countries (see the coefficient on *CAP*Reg* in table 8). This indicates that in an environment characterized by lower levels of reform (see the summary statistics for non-accession in table 2), the notion of capital adequacy might become innocuous in the sense that what is revealed on the balance sheet conveys little about a bank's real capital adequacy. Holding capital in excess of what is required is then often the only solution to signal solvency and inspire depositor trust. Once the legal environment improves (in accession countries), depositor confidence grows and the 'credible amount' of capital needed to signal creditworthiness can be reduced.

The *LTA* ratio has a positive and significant effect on the *NIM*, albeit more pronounced in the Eastern European bank markets. Since loans are the most risky and cost-intensive asset class, this finding supports the hypothesis that more lending results in wider margins and reflects the banks' ability to integrate risk and cost considerations in their loan pricing behavior. The fact that the coefficient is much larger and statistically different in accession and non-accession countries (see table 8) indicates that a substantial part of the interest margin in transition banking can be considered as a compensation for risk taking. The estimated coefficient for the

¹⁹Table A26 in the Appendix shows how we calculate these changes in the net interest margin.

variable capturing the deposit composition of bank funding is positive and significant in all but the non-accession subsamples. This indicates that having access to a stable and relatively cheap source of deposit funding translates into a distinct advantage in terms of realized interest margins.

Adding the GDP growth variable to the estimation shows how the *NIM* significantly depends on the prevailing business cycle conditions. The positive association between the business cycle and bank margins is mainly a characteristic of the Western European bank markets. For these markets, higher economic growth is associated with higher margins, as a reflection of more lending and lower default rates. In Eastern Europe no such relationship is found; the coefficient on economic growth is insignificant. For the non-accession countries it is negative and significant. This can be explained by the relatively high volatility of the business cycle in transition economies where periods of economic growth are sometimes interrupted by periods of crisis. This illustrates how economic uncertainty and asymmetric information may keep margins low. The positive coefficient on inflation, both in Western and Eastern European bank markets, supports the hypothesis that disinflation has a negative effect on net interest margins. This corroborates the hypothesis that lower inflation (and decreasing inflation expectations) have a more pronounced downward effect on long-term compared to short-term interest rates, leading to declining intermediation margins. The short term interest rate has a positive and significant effect on margins in all but the non-accession subsample.

4.5 Regulatory and Institutional properties

We now investigate how institutional reform affects bank margins and its determinants in the CEEC. First, we introduce the EBRD indices of bank and enterprise reform directly in our

equations. The results are shown in tables 9 and 10 for accession and non-accession countries²⁰. When entered directly into the equation, the EBRD index for bank reform (*EBRDbank*) is never significant. This could be the net result of the ambiguous nature of the effect of bank reform on bank margins, since sound banking may spur lending, but it may also cause weaker depositor discipline. The EBRD index on enterprise reform (*EBRDetp*) is significantly positive for the non-accession bank markets, indicating that as asymmetric information problems decline, banks are more willing to grant loans (since they can better identify good from bad borrowers), which leads to higher margins and profitability. This finding stresses the prime importance of policy measures to diminish the asymmetric information problems associated with adverse selection and moral hazard in transition banking.

Second, we investigate how institutional reforms affects the sensitivity of the *NIM* with respect to the bank-specific determinants in the CEEC. From our previous results we inferred that operational inefficiency and risk-taking behavior are important determinants of high margins in the Eastern European bank market and that capital plays an important signaling role in banks' creditworthiness in both accession and non-accession countries. But how does the stance of enterprise and bank reform influence these effects? To provide an answer to these questions, these bank-specific variables are interacted with the two reform indices to test whether reforms put bank behavior and bank margins more on a Western European track. By including interaction terms we can test whether different levels of enterprise and bank reform make the *NIM* more sensitive to these variables. Because of the high correlations between the EBRD indices and the other variables, we introduce the interaction terms one by one in the regressions. The results are reported in tables 9 and 10. In the non-accession countries, both interaction terms

²⁰We only report the results with the regulatory variables for the Herfindahl index. The results with the concentration ratio are very similar and are available upon request.

with *LTA* and *DSDEP* enter the equation positively, while in the accession countries these interaction terms enter negatively or become insignificant. This indicates that in the accession countries it becomes more difficult for banks to maintain their local market power to impose low deposit rates and high loan rates once the corporate sector becomes more competitive and transparent. This does not necessarily imply that banks take more risk. Fries et al. (2002) find that in countries with a significant progress in bank and enterprise reform, there is no evidence of excessive risk taking by banks. The interaction term of *LTA* with the reform variables may capture part of the shift in loan portfolio towards more risky projects or the effects of increased competition. We find that for lower levels of insitutional reform (non-accession countries) more reform increases bank risk behavior (positive sign on the interaction term) while for more advanced levels of reform (accession countries) competition in the credit sector has a downward effect on margins. In the non-accession countries the overall level of bank and enterprise reform is lower such that the interaction with the *LTA* and EBRD variables probably captures the shift in the loan portfolio towards more risky and high return loans which increase the interest margin. In both the accession and non-accession regressions, the interaction of *EFF* with the enterprise reform variable is positive and significant. Hence, the sensitivity of the net interest margin with respect to cost-efficiency decreases with reform in the corporate sector. The interaction terms with *CAP* are never significant.

4.6 Robustness

To test whether our results are robust to the estimation technique we employ, we carry out a set of robustness checks. All these results are reported in the Appendix.

One set of checks is related to the inclusion of country dummies. When leaving these out we

can either 1) estimate the equations assuming unobserved heterogeneity on the country level (under the assumption of Random (RE) or Fixed Effects (FE)) or 2) estimate the equations assuming unobserved heterogeneity on the bank level (under the assumption of RE or FE), where the macroeconomic variables and the concentration ratio should then suffice to account for country-specific effects. When performing these four sets of regressions for the different subsamples, we find that for the regressions with unobserved bank heterogeneity (tables A7 to A11) all results with respect to concentration, RMP and efficiency are confirmed. The scale-related effects found for the West are not robust for the bank-specific FE representation. All other conclusions remain valid. When assuming unobserved country heterogeneity (tables A12 to A16) the coefficients for *HERF* and *MS* change for the West subsample. This means that *HERF* partially captures some of the country-specific unobserved effects such as differences in legislation, accounting standards and tax structures. For the East subsample all previous results are corroborated. In the accession sample, we find some evidence of an RMP effect. All other coefficients remain qualitatively similar. For the non-accession sample the coefficients of *EFF* and *SIZE* become unstable; the results for *CAP* and *LTA* remain valid.

A second check is related to the inclusion of time dummies. We accounted for time effects by including time dummies. However, these might not fully account for the changes that occurred during the 90s. When we perform cross-country regressions per individual year (tables A17 to A20), we observe changes in coefficient size and sign for *MS* and *HERF*, which suggests that the changing environment in the banking sector during the 90s has affected margins dissimilarly over different years. The results for the West sample indicate that in the beginning of our sample, concentration had a positive impact on margins. From 1998 onwards, the positive relation between concentration and margins disappears. For the East subsamples we find that *EFF*, *CAP* and inflation are the most important determinants of the *NIM* across time.

A third check assesses the effect of the correlations between the macroeconomic variables and *HERF*. When we alternate *gdp* growth, inflation and the interest rate in the equation (tables A21 to A25), we find that the results for the different hypotheses (SCP, RMP and ES) are largely corroborated. The collusion results in the West remain valid. In the East, no clear pattern on collusion emerges. There still remains only weak evidence for the RMP hypothesis in the East. Size and significance of the bank-specific variables remain unaltered in all but one regression over all subsamples. Size and significance of the macroeconomic variables may change depending on the specification used. The positive inflation effect remains valid in all estimations and even emerges for the non-accession regressions when leaving out *str* or *gdp*.

5 Conclusion

The goal of this paper is twofold. First, we investigate the determinants of bank interest margins in Central and Eastern European countries. We assess to what extent the relatively high margins of banks in transition economies can be attributed to a low degree of efficiency and non-competitive market conditions (efficiency versus structure-conduct-performance), or to changes in the regulatory environment in which the banks operate (bank and enterprise reform). Second, we provide a systematic comparative analysis of the determinants of interest margins of CEEC banks versus banks operating in Western European economies. This enables us to assess to what extent the determinants of interest margins in the CEEC are similar to those found in Western bank markets. Furthermore, we assess how institutional reform, proxied by the EBRD indices of bank and enterprise reform, has affected the determinants of bank interest margins in the CEEC. We produce separate results for the group of accession countries that joined the EU in 2004. Our main findings can be summarized as follows. The structure-conduct-performance

(SCP) hypothesis cannot be rejected in the Western European bank markets, whereas we do not find evidence supporting the concentration hypothesis in Eastern Europe. Higher operational efficiency is reflected in lower bank interest margins in both Western European bank markets and accession countries, but not (yet) in the non-accession bank markets. Hence, the efficient-structure hypothesis is only corroborated in the more developed bank markets. Capital adequacy is an important determinant of bank margins, both in developed and transition bank markets. But the positive effect of capital adequacy on bank margins is at least twice as large in the transition countries. The pricing of lending risk plays an important role in explaining high interest margins in the CEEC. However, as reform in the corporate sector proceeds, better screening and monitoring and increased competition tend to erode interest margins.

In general we only find weak evidence in favor of the SCP or RMP hypotheses in the Eastern European bank markets, while efficiency effects show up significantly and are comparable to the West, especially in the accession countries. The finding that interest margins are not determined by bank market structure is probably a reflection of the rapid development of bank lending in transition economies and increased competition following the entry of foreign banks. The evidence supporting the efficient structure hypothesis is good news for depositors and borrowers, since the improvement of operational bank efficiency is, at least partly, passed on to the customers. Capital turns out to be an important determinant of bank margins, both in the West and the East, but the quantitative effect is much larger in the CEEC. We interpret this finding as evidence of the disciplining role of capital. Our results also stress the importance of binding capital adequacy rules as a means to prevent banks from taking excessive risks and as a tool for maintaining depositor confidence. Combined, these results indicate that banking in the transition economies of the CEEC is on a virtuous path: increasing efficiency benefits

customers, while capital adequacy ensures systemic stability. In the absence of banking crises, this type of banking environment should stimulate economic growth.

With respect to the regulatory and institutional environment, we find that reform may initially increase risk behavior in a situation of underdeveloped banking conditions (non-accession countries). However, for more advanced countries (accession countries), competition effects in lending tend to lower interest margins. We also find that banks can hold lower levels of capital and still maintain depositor confidence in countries with a higher degree of institutional reform (accession versus non-accession). Our results imply that the behavior of banks in Eastern European countries gradually converges to the one observed for their Western counterparts. As the quality of bank and enterprise reform progresses, this finding becomes more pronounced. Hence, the policy implication is that regulators and financial supervisors in transition economies should foster reform in the corporate sector in order to reduce asymmetric information. Consequently, banks will be able and more willing to screen, lend and monitor, leading to increased credit availability. If a sufficient degree of competition in the banking markets can be maintained, interest margins will probably converge to Western European levels.

6 References

Allen, Linda, Rai, Anoop, 1996. Operational efficiency in banking: an international comparison. *Journal of Banking and Finance* 20, 655-672.

Barth, James R., Caprio, Gerard, Levine, Ross, 2002. Bank regulation and supervision: what works best? NBER Working Paper, No. 9323.

Beck, Thorsten, Demirgüç-Kunt, Asli, Levine, Ross, 2003. Bank concentration and crises, NBER Working Paper No. 9921.

Berger, Allen N., 1995. The profit-structure relationship in banking: tests of market-power and efficient-structure hypotheses. *Journal of Money, Credit and Banking* 27, 404-431.

Berlin, Mitchell, Mester, Loretta J., 1999. Deposits and relationship lending. *Review of Financial Studies* 12(3), 579-607.

Boyd, John H., Levine, Ross, Smith, Bruce D., 2001. The impact of inflation on financial sector performance. *Journal of Monetary Economics* 47, 221-248.

Brock, Philip L., Suarez, Liliana R., 2000. Understanding the behavior of bank spreads in Latin America. *Journal of Development Economics* 63, 113-134.

Claessens, Stijn, Demirgüç-Kunt, Asli, Huizinga, Harry, 2001. How does foreign entry affect domestic banking markets? *Journal of Banking and Finance* 25, 891-911.

Corvoisier, Sandrine, Gropp, Reint, 2002. Bank concentration and retail interest rates. *Journal of Banking and Finance* 26, 2155-2189.

Cunningham, Alastair, 2001. Assessing the stability of emerging market economies' banking systems. *Financial Stability Review* 11, 187-192.

De Bandt, Olivier, Davis, Philip E., 2000. Competition, contestability and market structure in European banking sectors on the eve of EMU. *Journal of Banking and Finance* 24(6), 1045-1066.

Demirgüç-Kunt, Asli, Huizinga, Harry, 1999. Determinants of commercial bank interest

margins and profitability: some international evidence. *World Bank Economic Review* 13 (2), 379-408.

Demirgüç-Kunt, Asli, Laeven, Luc, Levine, Ross, 2004. Regulations, market structure, institutions, and the cost of financial intermediation. *Journal of Money, Credit and Banking*, 36(3 Part 2), 593-622.

EBRD, 1998. *Transition Report: Financial sector in transition*. London, European Bank for Reconstruction and Development.

EBRD, 2001. *Transition Report: Energy in transition*. London, European Bank for Reconstruction and Development.

Fries, Steven, Neven, Damien, Seabright, Paul, 2002. Bank performance in transition economies. EBRD Working Paper, No. 76.

Goldberg, Lawrence G., Rai, Anoop, 1996. The structure-performance relationship for European banking. *Journal of Banking and Finance* 20(4), 745-771.

Goldberg, Lawrence G., Hudgins, Sylvia C., 2002. Depositor discipline and changing strategies for regulating thrift institutions. *Journal of Financial Economics* 63(2), 263-274.

Gondat-Larralde, Céline, Lepetit, Laetitia, 2001. The impact of market structure and efficiency on bank profitability: an empirical analysis of banking industries in Central and Eastern Europe, in: Dickinson, D.G., Mullineux, A.W. (Eds.), *Financial and monetary integration in the New Europe. Convergence between the European Union and Central and Eastern Europe*, Edward Elgar, 2001.

Gorton, Gary, Winton, Andrew, 1998 Banking in transition economies: does efficiency require instability? *Journal of Money, Credit, and Banking* 30(3), 621–650.

Hellman, Thomas F., Murdock Kevin C. and Stiglitz, Joseph E., 2000. Liberalization, moral hazard in banking and prudential regulation: Are capital requirements enough? *The American Economic Review* 90, 147-165.

Ho, Thomas S. Y., Saunders, Anthony, 1981. The determinants of bank interest margins: theory and empirical evidence. *Journal of Financial and Quantitative Analysis* 16, 581-600.

Levine, Ross, Zervos, Sara, 1998. Stock markets, banks, and economic growth. *American Economic Review* 88(3), 537-558.

Maudos, Joaquín, de Guevara, Juan Fernández, 2004. Factors explaining the interest margin in the banking sectors of the European Union. *Journal of Banking and Finance* 28, 2259–2281.

Park, Sangyun, Peristiani, Stavros, 1998. Market discipline by thrift depositors. *Journal of Money, Credit, and Banking* 30(3), 347-364.

Peria, Maria S. M., Schmukler, Sergio L., 1998. Do depositors punish banks for bad behavior? Market discipline in Argentina, Chile, and Mexico. *World Bank Paper* 2058. Washington DC.

Peria, Maria S. M., Mody, Ashoka, 2004. How foreign participation and market concentration impact bank spreads: Evidence from Latin America. *Journal of Money, Credit, and Banking* 36(3 Part 2), 511-537.

Riess, Armin, Wagenvoort Rien, Zajc, Peter, 2002. Practice makes perfect: a review of banking in Central and Eastern Europe. *European Investment Bank Papers* 7(1), 31-53.

Saunders, Anthony, Schumacher, Liliana, 2000. The determinants of bank interest margins: an international study. *Journal of International Money and Finance* 19, 813-832.

Taci, Anita, Zampieri, Emilia, 1998. Efficiency in the Czech banking sector. CERGE-EI Discussion Paper No. 4/98, Charles University, Prague.

Vander Venet, Rudi, 2002. Cost and profit efficiency of financial conglomerates and universal banks in Europe. *Journal of Money, Credit and Banking* 34(1), 254-282.

TABLE 1

Average number of banks per country (1994-2001) and distribution of assets

country	No. of banks (average)	mean(assets)	sd(assets)	p25(assets)	p75(assets)
Albania	3	160,0	329,0	24,1	109,3
Austria	112	2128,6	5783,8	176,4	1108,8
Belarus	8	258,4	284,2	41,5	346,6
Belgium	51	5271,5	18976,0	209,4	2051,4
Bosnia	9	57,2	59,6	20,3	71,1
Bulgaria	17	193,9	283,8	32,7	215,6
Croatia	34	290,4	551,7	48,2	258,0
Czech	18	2557,0	4108,9	312,1	1707,6
Denmark	81	636,4	1890,4	78,0	432,2
Estonia	4	788,0	1040,9	116,8	987,6
Finland	5	22315,4	41677,3	1598,0	24903,7
France	294	5568,7	17783,5	413,0	4317,2
Germany	188	8349,4	23036,2	232,3	3099,0
Greece	11	6868,6	10262,0	382,8	10316,6
Hungary	22	949,3	1403,2	191,9	1226,7
Iceland	6	990,3	992,5	268,9	1340,9
Ireland	27	5869,5	10741,3	1108,7	4282,9
Italy	304	2451,9	6297,5	172,0	1807,7
Latvia	16	150,7	211,5	33,3	165,8
Lithuania	7	240,9	364,8	32,4	310,8
Luxembourg	89	3886,2	6624,9	384,5	4164,3
Macedonia	9	102,9	144,9	19,4	108,9
Netherlands	37	6809,0	19859,2	490,2	4711,8
Norway	34	2496,7	4889,8	334,3	2179,2
Poland	30	1642,4	3165,3	144,4	1490,7
Portugal	21	5276,4	9304,1	536,2	4711,3
Romania	12	277,7	473,4	36,0	338,8
Russia	54	398,0	810,4	39,1	309,3
Slovakia	14	926,6	1299,2	167,5	777,0
Slovenia	16	648,1	913,7	144,1	757,5
Spain	131	3835,7	7730,0	338,4	3923,9
Sweden	14	16472,7	22982,8	1257,5	34143,4
Switzerland	217	1738,4	7160,4	95,9	792,7
UK	100	9332,4	28210,8	234,5	3774,1
Ukraine	20	136,3	200,4	23,1	131,9
Yugoslavia	8	246,6	255,2	47,3	267,0

Note: Data taken from Bankscope. All variables are averaged over the years 1994-2001 and are expressed in million euro.

TABLE 2

Summary Statistics

Variable	Full Sample			Western Europe		
	Obs	Mean	Std. Dev.	Obs	Mean	Std. Dev.
Net Interest Margin	11754	3.43	3.56	10102	2.88	1.87
Herfindahl Index	11754	0.1	0.08	10102	0.09	0.07
Concentration Ratio	11754	0.21	0.11	10102	0.19	0.1
Market Share	11754	0.01	0.04	10102	0.01	0.03
Size	11754	382	1076	10102	407	1147
Efficiency	11753	0.56	0.83	10102	0.61	0.88
Capital to Assets	11754	10.17	7.64	10102	9.14	6.42
Loans to Assets	11754	50.36	23.19	10102	51.82	23.78
Dem. and Sav. Deposits	10989	62.88	31.21	10096	63.45	31.33
GDP growth	11754	2.53	2.92	10102	2.45	1.43
Inflation	11751	6.71	30.47	10102	1.92	1.09
Interest Rate	11624	1.13	21.56	10102	2.58	1.27

Variable	Eastern Europe			Accession Countries			Non-Accession Countries		
	Obs	Mean	Std. Dev.	Obs	Mean	Std. Dev.	Obs	Mean	Std. Dev.
Net Interest Margin	1652	6.78	7.47	619	4.72	3.4	1033	8.02	8.84
Herfindahl Index	1652	0.19	0.11	619	0.17	0.07	1033	0.19	0.12
Concentration Ratio	1652	0.33	0.12	619	0.31	0.08	1033	0.35	0.14
Market Share	1652	0.05	0.09	619	0.06	0.09	1033	0.04	0.09
Size	1652	233	411	619	230	311	1033	235	461
Efficiency	1651	0.25	0.26	619	0.34	0.34	1032	0.2	0.18
Capital to Assets	1652	16.45	10.8	619	11.13	6.5	1033	19.64	11.58
Loans to Assets	1652	41.45	16.64	619	42.66	16.02	1033	40.72	16.97
Dem. and Sav. Deposits	893	56.35	29.13	503	43.25	24.83	390	73.26	25.34
GDP growth	1652	3	6.93	619	4.03	2.59	1033	2.39	8.47
Inflation	1649	36.04	74.9	619	10.36	7.41	1030	51.47	91.19
Interest Rate	1522	-8.5	58.6	603	3.53	5.61	919	-16.39	74.24
EBRDdetp	1652	2.34	0.58	619	2.9	0.27	1033	2	0.45
EBRDbank	1652	2.54	0.7	619	3.13	0.33	1033	2.19	0.62

Note: Detailed information on country classification, definitions and sources of variables is available in the Appendix.

TABLE 3

Panel Estimations for Bank Margins for the Full Sample of Western and Eastern European Banks

Variables	SCP versus EFF			bank-specific controls			macro-economic controls		
HERF	4.0865*** [0.5361]	3.7219*** [0.5255]	8.3098*** [0.4732]	8.2660*** [0.4705]	0.5704 [0.4211]	0.5769 [0.4190]	0.5935** [0.2485]	0.5931** [0.2483]	
CR		1.9195*** [0.3574]			3.8526*** [0.2909]	3.8559*** [0.2905]			
MS	-3.0482*** [0.8943]	-2.2312** [0.8832]	-0.5742 [0.7205]		0.3854 [0.7206]		0.1951 [0.6234]	0.2431 [0.6207]	
SIZE		-0.0002*** [0.0000]		-0.0001* [0.0000]		-0.0001* [0.0000]		-0.0001** [0.0000]	-0.0001** [0.0000]
EFF	-0.4255*** [0.0552]	-0.3980*** [0.0557]	-0.2185*** [0.0351]	-0.2103*** [0.0354]	-0.2213*** [0.0352]	-0.2117*** [0.0355]	-0.2495*** [0.0313]	-0.2481*** [0.0312]	-0.2382*** [0.0315]
CAP			0.0920*** [0.0040]	0.0914*** [0.0040]	0.0919*** [0.0040]	0.0908*** [0.0040]	0.0743*** [0.0035]	0.0745*** [0.0035]	0.0735*** [0.0035]
LTA			0.0188*** [0.0014]	0.0187*** [0.0014]	0.0188*** [0.0014]	0.0186*** [0.0014]	0.0193*** [0.0013]	0.0193*** [0.0013]	0.0192*** [0.0013]
DSDEP			0.0071*** [0.0011]	0.0070*** [0.0011]	0.0075*** [0.0011]	0.0073*** [0.0011]	0.0042*** [0.0009]	0.0042*** [0.0009]	0.0041*** [0.0009]
gdp							0.0047 [0.0105]	0.0025 [0.0105]	0.0016 [0.0105]
inflation							0.1562*** [0.0064]	0.1546*** [0.0064]	0.1545*** [0.0064]
str							0.1271*** [0.0062]	0.1258*** [0.0062]	0.1258*** [0.0062]
Country dummies	yes	yes	yes	yes	yes	yes	yes	yes	yes
Time dummies	yes	yes	yes	yes	yes	yes	yes	yes	yes
Observations	11753	11753	10989	10989	10989	10989	10937	10937	10937
Number of banks	2279	2279	2066	2066	2066	2066	2063	2063	2063
R-squared	0.04	0.04	0.13	0.13	0.11	0.11	0.17	0.17	0.17

Note: The dependent variable is bank net interest margin. The explanatory variables are the Herfindahl index, concentration ratio, market share, size and efficiency. Control variables are the capital-to-assets ratio, the loans-to-assets ratio, the share of demand and savings deposits in total deposits, yearly change in gdp, inflation and the short term interest rate. Standard errors are given in brackets. *, ** and *** indicate significance levels of 10, 5 and 1 percent, respectively.

TABLE 4

Panel Estimations for Bank Margins for the Sample of Western European Banks

Variables	SCP versus EFF			bank-specific controls			macro-economic controls			
HERF	2.0329*** [0.3121]	1.9828*** [0.3118]	2.3435*** [0.3084]	2.3116*** [0.3083]	1.5148*** [0.1772]	1.4990*** [0.1771]	1.3809*** [0.3071]	1.3672*** [0.3071]	0.9244*** [0.1771]	0.9183*** [0.1770]
CR		1.3494*** [0.1793]	1.3246*** [0.1792]		-1.1088* [0.5915]	1.4990*** [0.1771]	-0.6993 [0.5815]		-0.6816 [0.5813]	
MS	-1.5655*** [0.6046]	-1.5276** [0.6041]								
SIZE		-0.0001*** [0.0000]	-0.0001*** [0.0000]	-0.0001*** [0.0000]		-0.0001*** [0.0000]		-0.0001*** [0.0000]		-0.0001*** [0.0000]
EFF	-0.3275*** [0.0232]	-0.3054*** [0.0234]	-0.2386*** [0.0226]	-0.2264*** [0.0228]	-0.2371*** [0.0226]	-0.2250*** [0.0227]	-0.2269*** [0.0223]	-0.2173*** [0.0224]	-0.2258*** [0.0223]	-0.2162*** [0.0224]
CAP			0.0592*** [0.0028]	0.0580*** [0.0028]	0.0594*** [0.0028]	0.0581*** [0.0028]	0.0605*** [0.0028]	0.0595*** [0.0028]	0.0606*** [0.0028]	0.0596*** [0.0028]
LTA			0.0123*** [0.0009]	0.0122*** [0.0009]	0.0122*** [0.0009]	0.0121*** [0.0009]	0.0155*** [0.0009]	0.0155*** [0.0009]	0.0155*** [0.0009]	0.0154*** [0.0009]
DSDEP			0.0026*** [0.0007]	0.0025*** [0.0007]	0.0026*** [0.0007]	0.0024*** [0.0007]	0.0031*** [0.0006]	0.0029*** [0.0007]	0.0030*** [0.0006]	0.0029*** [0.0007]
gdp							0.0728*** [0.0096]	0.0709*** [0.0096]	0.0715*** [0.0096]	0.0695*** [0.0096]
inflation							0.1539*** [0.0139]	0.1535*** [0.0138]	0.1514*** [0.0139]	0.1510*** [0.0139]
str							0.1372*** [0.0096]	0.1367*** [0.0096]	0.1369*** [0.0096]	0.1364*** [0.0096]
Country dummies	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Time dummies	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Observations	10102	10102	10096	10096	10096	10096	10096	10096	10096	10096
Number of banks	1833	1833	1832	1832	1832	1832	1832	1832	1832	1832
R-squared	0.10	0.11	0.14	0.14	0.14	0.14	0.17	0.17	0.17	0.17

Note: The dependent variable is bank net interest margin. The explanatory variables are the Herfindahl index, concentration ratio, market share, size and efficiency. Control variables are the capital-to-assets ratio, the loans-to-assets ratio, the share of demand and savings deposits in total deposits, yearly change in gdp, inflation and the short term interest rate. Standard errors are given in brackets. *, **, and *** indicate significance levels of 10, 5 and 1 percent, respectively.

TABLE 5

Panel Estimations for Bank Margins for the Sample of Eastern European Banks

Variables	SCP versus EFF			bank-specific controls			macro-economic controls			
HERF	-2.7984 [2.1172]	-2.8948 [2.0309]	-4.9101*** [1.6845]	18.5425*** [3.2616]	18.9156*** [3.1488]	10.0123*** [2.7242]	-11.0419*** [3.5263]	-8.3953*** [3.3534]	-5.8885** [2.5873]	-5.3262** [2.5785]
CR			-0.9306 [2.5826]	-0.0551 [2.6661]		3.0754 [2.5936]	5.5318** [2.4961]		3.622 [2.3725]	
MS	-1.3125 [2.6508]	-0.0010* [0.0005]								
SIZE					0.0007 [0.0007]	0.0005 [0.0007]		0.0001 [0.0007]		0.0001 [0.0007]
EFF	-3.2201*** [0.6818]	-3.0941*** [0.6836]	-3.2249*** [0.6803]	-1.4297** [0.5593]	-1.4759*** [0.5594]	-1.4545** [0.5665]	-1.2795*** [0.4478]	-1.2198*** [0.4497]	-1.2868*** [0.4497]	-1.2504*** [0.4508]
CAP				0.1555*** [0.0214]	0.1602*** [0.0215]	0.1583*** [0.0216]	0.1352*** [0.0197]	0.1276*** [0.0197]	0.1312*** [0.0197]	0.1269*** [0.0197]
LTA				0.0494*** [0.0127]	0.0498*** [0.0128]	0.0509*** [0.0128]	0.0552*** [0.0113]	0.0561*** [0.0114]	0.0535*** [0.0113]	0.0546*** [0.0114]
DSDEP				0.0276*** [0.0091]	0.0272*** [0.0091]	0.0287*** [0.0092]	0.0174** [0.0080]	0.0179** [0.0080]	0.0172** [0.0080]	0.0175** [0.0080]
gdp							-0.0389 [0.0556]	-0.0477 [0.0556]	-0.0478 [0.0558]	-0.0504 [0.0558]
inflation							0.1426*** [0.0335]	0.1391*** [0.0335]	0.1344*** [0.0335]	0.1349*** [0.0335]
str							0.1026*** [0.0302]	0.1001*** [0.0302]	0.0973*** [0.0303]	0.0975*** [0.0303]
Country dummies	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Time dummies	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Observations	1651	1651	1651	893	893	893	841	841	841	841
Number of banks	446	446	446	234	234	234	231	231	231	231
R-squared	0.09	0.09	0.09	0.25	0.25	0.22	0.23	0.23	0.22	0.22

Note: The dependent variable is bank net interest margin. The explanatory variables are the Herfindahl index, concentration ratio, market share, size and efficiency. Control variables are the capital-to-assets ratio, the loans-to-assets ratio, the share of demand and savings deposits in total deposits, yearly change in gdp, inflation and the short term interest rate. Standard errors are given in brackets. *, ** and *** indicate significance levels of 10, 5 and 1 percent, respectively.

TABLE 6

Panel Estimations for Bank Margins for the Sample of Banks in Accession Countries

Variables	SCP versus EFF			bank-specific controls			macro-economic controls			
HERF	-12.4039*** [4.2111]	-12.0100*** [4.1959]	0.0928 [7.1788]	0.669 [7.2060]	0.8191 [3.3226]	0.7618 [3.3185]	-12.9793* [7.7293]	-12.3887 [7.7377]	-0.5954 [3.4426]	-0.5643 [3.4346]
CR	-5.2578** [2.3689]	-5.2977** [2.3675]			3.463 [2.9758]				2.2587 [3.0155]	
MS	2.4019 [2.4243]		3.2747 [3.0206]				2.1044 [3.0317]			
SIZE	0.0003 [0.0005]	0.0003 [0.0005]		0.0005 [0.0006]		0.0006 [0.0006]		0.0007 [0.0006]		0.0007 [0.0006]
EFF	-1.4804*** [0.3638]	-1.4845*** [0.3665]	-1.4607*** [0.3789]	-1.4842*** [0.3809]	-1.4746*** [0.3798]	-1.5000*** [0.3819]	-1.4684*** [0.3729]	-1.5062*** [0.3744]	-1.4827*** [0.3746]	-1.5247*** [0.3760]
CAP			0.0949*** [0.0261]	0.0944*** [0.0262]	0.0939*** [0.0259]	0.0928*** [0.0259]	0.0958*** [0.0260]	0.0981*** [0.0260]	0.0964*** [0.0260]	0.0989*** [0.0259]
LTA			0.0539*** [0.0111]	0.0543*** [0.0111]	0.0537*** [0.0111]	0.0541*** [0.0111]	0.0582*** [0.0110]	0.0583*** [0.0110]	0.0576*** [0.0111]	0.0577*** [0.0111]
DSDEP			0.0164* [0.0099]	0.0166* [0.0099]	0.0161 [0.0099]	0.0163* [0.0099]	0.0212** [0.0100]	0.0208** [0.0100]	0.0210** [0.0100]	0.0205** [0.0100]
gdp							0.0781 [0.0636]	0.0725 [0.0631]	0.0637 [0.0642]	0.0583 [0.0638]
inflation							0.2382*** [0.0452]	0.2405*** [0.0451]	0.2152*** [0.0438]	0.2189*** [0.0437]
str							0.1446*** [0.0401]	0.1447*** [0.0400]	0.1460*** [0.0404]	0.1460*** [0.0403]
Country dummies	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Time dummies	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Observations	619	619	503	503	503	503	487	487	487	487
Number of banks	142	142	123	123	123	123	122	122	122	122
R-squared	0.18	0.18	0.26	0.27	0.26	0.27	0.3	0.3	0.3	0.3

Note: The dependent variable is bank net interest margin. The explanatory variables are the Herfindahl index, concentration ratio, market share, size and efficiency. Control variables are the capital-to-assets ratio, the loans-to-assets ratio, the share of demand and savings deposits in total deposits, yearly change in gdp, inflation and the short term interest rate. Standard errors are given in brackets. *, **, and *** indicate significance levels of 10, 5 and 1 percent, respectively.

TABLE 7

Panel Estimations for Bank Margins for the Sample of Banks in Non-Accession Countries

Variables	SCP versus EFF			bank-specific controls			macro-economic controls			
HERF	-5.6376** [2.8073]	-5.4772** [2.6842]	13.4941** [6.4847]	14.5280** [6.1567]	4.5802 [5.4144]	5.4816 [5.3782]	-20.7630*** [6.0972]	-15.8731*** [5.7075]	-12.1782** [4.8613]	-11.8818** [4.8684]
CR										
MS	-0.4541 [3.5854]		0.8122 [4.4158]		3.3461 [4.2304]		10.2811*** [3.8921]		6.2437* [3.6129]	
SIZE		-0.0008 [0.0007]		0.0012 [0.0016]		0.0009 [0.0016]		-0.0021 [0.0015]		-0.0018 [0.0015]
EFF	-9.6567*** [1.6782]	-9.4076*** [1.6838]	-3.0174 [2.4887]	-2.999 [2.3906]	-3.4258 [2.4929]	-2.9499 [2.4018]	-2.2957 [2.2541]	-0.8354 [2.2398]	-1.99 [2.2588]	-1.0248 [2.2356]
CAP			0.1937*** [0.0333]	0.1999*** [0.0342]	0.1953*** [0.0335]	0.1959*** [0.0343]	0.1418*** [0.0300]	0.1197*** [0.0307]	0.1356*** [0.0303]	0.1188*** [0.0309]
LTA			0.0528** [0.0255]	0.0551** [0.0257]	0.0576** [0.0256]	0.0606** [0.0258]	0.0711*** [0.0234]	0.0648*** [0.0238]	0.0654*** [0.0235]	0.0632*** [0.0238]
DSDEP			0.0272* [0.0149]	0.0272* [0.0149]	0.0291* [0.0150]	0.0295** [0.0150]	0.0159 [0.0126]	0.0163 [0.0127]	0.0132 [0.0127]	0.0135 [0.0128]
gdp							-0.2695** [0.1164]	-0.2832** [0.1180]	-0.2233* [0.1178]	-0.2406** [0.1185]
inflation							0.0573 [0.0673]	0.057 [0.0675]	0.0768 [0.0697]	0.0789 [0.0696]
str							0.0143 [0.0618]	0.0176 [0.0621]	0.0378 [0.0636]	0.0405 [0.0636]
Country dummies	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Time dummies	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Observations	1032	1032	390	390	390	390	354	354	354	354
Number of banks	304	304	111	111	111	111	109	109	109	109
R-squared	0.11	0.11	0.29	0.28	0.27	0.27	0.24	0.25	0.22	0.24

Note: The dependent variable is bank net interest margin. The explanatory variables are the Herfindahl index, concentration ratio, market share, size and efficiency. Control variables are the capital-to-assets ratio, the loans-to-assets ratio, the share of demand and savings deposits in total deposits, yearly change in gdp, inflation and the short term interest rate. Standard errors are given in brackets. *, ** and *** indicate significance levels of 10, 5 and 1 percent, respectively.

TABLE 8

Panel Estimations for Bank Margins Including Regional Interactions

Variables	West versus East			West versus Accession			West versus Non-Accession		
HERF	1.4185*** [0.4441]	1.4148*** [0.4439]	1.2691*** [0.3661]	1.2541*** [0.3659]	1.5224*** [0.4026]	1.5334*** [0.4024]	0.9718*** [0.2316]	0.9734*** [0.2313]	
CR		0.9360*** [0.2559]	0.9276*** [0.2557]	0.8705*** [0.2109]	0.8607*** [0.2108]		-0.6916 [0.7634]		
MS	-0.7283 [0.8392]	-0.7116 [0.8400]	-0.6153 [0.6860]	-0.6275 [0.6861]					
SIZE		-0.0001*** [0.0000]	-0.0001*** [0.0000]	-0.0001*** [0.0000]	-0.0001*** [0.0000]	-0.0001*** [0.0000]		-0.0001*** [0.0000]	
EFF	-0.2259*** [0.0316]	-0.2153*** [0.0315]	-0.2306*** [0.0254]	-0.2203*** [0.0256]	-0.2192*** [0.0256]	-0.2258*** [0.0293]	-0.2242*** [0.0293]	-0.2130*** [0.0295]	
CAP	0.0600*** [0.0039]	0.0589*** [0.0040]	0.0601*** [0.0039]	0.0596*** [0.0032]	0.0596*** [0.0032]	0.0597*** [0.0036]	0.0599*** [0.0036]	0.0587*** [0.0036]	
LTA	0.0160*** [0.0013]	0.0158*** [0.0013]	0.0159*** [0.0013]	0.0165*** [0.0011]	0.0164*** [0.0011]	0.0151*** [0.0012]	0.0152*** [0.0012]	0.0151*** [0.0012]	
DSDEP	0.0032*** [0.0009]	0.0030*** [0.0009]	0.0031*** [0.0009]	0.0029*** [0.0008]	0.0029*** [0.0008]	0.0030*** [0.0008]	0.0030*** [0.0008]	0.0029*** [0.0008]	
gdp	0.0232** [0.0105]	0.0200* [0.0105]	0.0194* [0.0106]	0.0635*** [0.0097]	0.0610*** [0.0097]	0.0126 [0.0108]	0.0062 [0.0108]	0.0135 [0.0108]	0.0088
inflation	0.1680*** [0.0068]	0.1663*** [0.0068]	0.1634*** [0.0069]	0.1967*** [0.0078]	0.1837*** [0.0075]	0.1495*** [0.0079]	0.1469*** [0.0079]	0.1559*** [0.0081]	0.1564***
str	0.1316*** [0.0064]	0.1305*** [0.0064]	0.1287*** [0.0065]	0.1287*** [0.0082]	0.1295*** [0.0082]	0.1198*** [0.0072]	0.1188*** [0.0072]	0.1258*** [0.0074]	0.1272*** [0.0074]

(Continued)

TABLE 8

Continued

Variables	West versus East (Ctd)			West versus Accession (Ctd)			West versus Non-Accession (Ctd)			
HERF*Reg	-8.5353*** [1.2015]	-6.9095*** [1.1526]	-4.8900*** [0.8606]	-7.4834*** [2.2190]	-6.7489*** [2.2308]	-0.0209 [1.0981]	-9.8322*** [1.2238]	-8.0340*** [1.1564]	-9.2619*** [1.0110]	-9.1109*** [1.0093]
CR*Reg	4.9691*** [1.2800]		3.4860*** [1.2428]	0.3488 [1.5694]		0.1539 [1.5669]	7.7069*** [1.3275]		6.3414*** [1.2646]	
SIZE*Reg		-0.0002 [0.0003]	-0.0001 [0.0003]		0.0007*** [0.0003]	0.0008*** [0.0003]		-0.0020*** [0.0004]		-0.0022*** [0.0004]
EFF*Reg	-1.1819*** [0.1642]	-1.1427*** [0.1648]	-1.1827*** [0.1644]	-1.1394*** [0.1381]	-1.1872*** [0.1388]	-1.1225*** [0.1382]	-2.6724*** [0.6789]	-1.9499*** [0.6753]	-2.7592*** [0.6783]	-2.1372*** [0.6744]
CAP*Reg	0.0705*** [0.0084]	0.0653*** [0.0084]	0.0678*** [0.0084]	0.0508*** [0.0110]	0.0554*** [0.0109]	0.0522*** [0.0109]	0.0784*** [0.0092]	0.0641*** [0.0092]	0.0763*** [0.0091]	0.0640*** [0.0092]
LTA*Reg	0.0391*** [0.0044]	0.0400*** [0.0044]	0.0387*** [0.0044]	0.0462*** [0.0045]	0.0461*** [0.0045]	0.0469*** [0.0046]	0.0336*** [0.0063]	0.0306*** [0.0064]	0.0355*** [0.0063]	0.0319*** [0.0064]
DSDEP*Reg	0.0165*** [0.0031]	0.0169*** [0.0031]	0.0163*** [0.0031]	0.0202*** [0.0038]	0.0198*** [0.0038]	0.0200*** [0.0038]	0.0119*** [0.0036]	0.0120*** [0.0036]	0.0101*** [0.0036]	0.0101*** [0.0036]
Country dummies	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Time dummies	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Observations	10937	10937	10937	10583	10583	10583	10450	10450	10450	10450
Number of banks	2063	2063	2063	1954	1954	1954	1941	1941	1941	1941
R-squared	0.19	0.19	0.19	0.22	0.22	0.22	0.16	0.16	0.16	0.16

Note: Reg indicates a dummy variable for the respective regions East, Accession and Non-Accession. Standard errors are given in brackets. *, ** and *** indicate significance levels of 10, 5 and 1 percent, respectively.

TABLE 9

Panel Estimations for Bank Margins for the Sample of Banks in Accession Countries - Regulatory Variables and Interactions

Variables	regulatory controls			regulatory interaction: EFF			regulatory interaction: CAP					
HERF	-14.2482*	-13.7957*	-11.0451	-10.4424	-6.8058	-5.743	-11.6196	-10.8587	-9.9336	-9.9178	-13.0563*	-12.4572
	[7.8961]	[7.8965]	[7.8487]	[7.8567]	[7.7205]	[7.7295]	[8.0161]	[8.0293]	[8.0901]	[8.0728]	[7.7370]	[7.7453]
MS	2.0267		2.0475		1.3547		1.9878		2.831		2.178	
	[2.9942]		[3.0378]		[3.0228]		[3.0447]		[2.9849]		[3.0411]	
SIZE		0.0007		0.0007		0.0009		0.0007		0.0006		0.0007
		[0.0006]		[0.0006]		[0.0006]		[0.0006]		[0.0006]		[0.0006]
EFF	-1.4683***	-1.5067***	-1.4453***	-1.4833***	-36.0240***	-37.3612***	-4.8656	-5.2863	-1.4982***	-1.5254***	-1.4733***	-1.5089***
	[0.3744]	[0.3758]	[0.3727]	[0.3743]	[8.4686]	[8.4672]	[5.3675]	[5.3593]	[0.3739]	[0.3754]	[0.3734]	[0.3749]
CAP	0.0929***	0.0953***	0.0947***	0.0970***	0.0900***	0.0949***	0.0960***	0.0985***	0.3784*	0.3343*	0.1755	0.1622
	[0.0259]	[0.0258]	[0.0260]	[0.0260]	[0.0258]	[0.0256]	[0.0261]	[0.0260]	[0.2050]	[0.2029]	[0.1844]	[0.1836]
LTA	0.0593***	0.0595***	0.0585***	0.0586***	0.0605***	0.0604***	0.0583***	0.0584***	0.0553***	0.0560***	0.0582***	0.0583***
	[0.0111]	[0.0111]	[0.0110]	[0.0110]	[0.0109]	[0.0109]	[0.0110]	[0.0110]	[0.0110]	[0.0110]	[0.0110]	[0.0110]
DSDEP	0.0212**	0.0206**	0.0195*	0.0190*	0.0212**	0.0201**	0.0210**	0.0204**	0.0202**	0.0203**	0.0217**	0.0212**
	[0.0100]	[0.0100]	[0.0101]	[0.0101]	[0.0099]	[0.0098]	[0.0100]	[0.0100]	[0.0100]	[0.0100]	[0.0101]	[0.0101]
gdp	0.0597	0.052	0.0525	0.0468	0.0508	0.0454	0.0708	0.0645	0.1017	0.0911	0.0817	0.0753
	[0.0672]	[0.0666]	[0.0663]	[0.0659]	[0.0627]	[0.0621]	[0.0646]	[0.0641]	[0.0663]	[0.0656]	[0.0642]	[0.0637]
inflation	0.2584***	0.2633***	0.2272***	0.2294***	0.2589***	0.2623***	0.2327***	0.2344***	0.2133***	0.2197***	0.2397***	0.2417***
	[0.0510]	[0.0509]	[0.0458]	[0.0458]	[0.0445]	[0.0444]	[0.0460]	[0.0459]	[0.0487]	[0.0486]	[0.0453]	[0.0453]
str	0.1531***	0.1541***	0.1414***	0.1415***	0.1558***	0.1558***	0.1451***	0.1452***	0.1346***	0.1367***	0.1445***	0.1446***
	[0.0412]	[0.0411]	[0.0401]	[0.0400]	[0.0394]	[0.0392]	[0.0401]	[0.0400]	[0.0411]	[0.0410]	[0.0401]	[0.0400]
EBRDdetp	0.9211	1.0375										
	[1.0587]	[1.0534]										
EBRDbank			1.0431	1.0477								
			[0.7790]	[0.7778]								
EFF *EBRDdetp					11.5235***	11.9512***						
					[2.8206]	[2.8189]						
EFF*EBRDbank							1.1218	1.2478				
							[1.7671]	[1.7638]				
CAP*EBRDdetp									-0.0988	-0.0832		
									[0.0707]	[0.0703]		
CAP*EBRDbank											-0.0256	-0.0207
											[0.0587]	[0.0586]
Country dummies	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Time dummies	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Observations	487	487	487	487	487	487	487	487	487	487	487	487
Number of banks	122	122	122	122	122	122	122	122	122	122	122	122
R-squared	0.3	0.31	0.32	0.33	0.33	0.34	0.3	0.3	0.3	0.3	0.3	0.3

(Continued)

TABLE 9

Continued

Variables	regulatory interaction: LTA			regulatory interaction: DSDEP			
HERF	-12.0899 [7.7200]	-11.589 [7.7286]	-12.3145 [7.7701]	-11.7562 [7.7776]	-10.1712 [8.1849]	-9.6711 [8.1990]	[7.8656] [7.8689]
MS	2.4575 [3.0303]		2.1098 [3.0395]		2.5578 [2.9131]		2.1272 [3.0019]
SIZE		0.0006 [0.0006]		0.0007 [0.0006]		0.0007 [0.0006]	0.0007 [0.0006]
EFF	-1.5047*** [0.3723]	-1.5371*** [0.3738]	-1.4554*** [0.3732]	-1.4930*** [0.3748]	-1.5084*** [0.3751]	-1.5479*** [0.3769]	-1.4890*** [0.3745]
CAP	0.0968*** [0.0259]	0.0982*** [0.0259]	0.0957*** [0.0260]	0.0979*** [0.0260]	0.0932*** [0.0256]	0.0943*** [0.0255]	0.0972*** [0.0258]
LTA	0.1781*** [0.0636]	0.1730*** [0.0635]	0.0176 [0.0516]	0.0192 [0.0516]	0.0562*** [0.0109]	0.0563*** [0.0109]	0.0577*** [0.0110]
DSDEP	0.0234** [0.0101]	0.0231** [0.0101]	0.0202** [0.0101]	0.0199** [0.0101]	0.0664* [0.0387]	0.0655* [0.0387]	0.0429 [0.0480]
gdp	0.1029 [0.0647]	0.0954 [0.0642]	0.0656 [0.0654]	0.0604 [0.0650]	0.1014 [0.0674]	0.0943 [0.0670]	0.082 [0.0665]
inflation	0.2052*** [0.0482]	0.2090*** [0.0482]	0.2341*** [0.0454]	0.2366*** [0.0454]	0.2103*** [0.0510]	0.2131*** [0.0509]	0.2423*** [0.0462]
str	0.1366*** [0.0402]	0.1372*** [0.0401]	0.1442*** [0.0401]	0.1443*** [0.0400]	0.1375*** [0.0413]	0.1380*** [0.0413]	0.1485*** [0.0406]
LTA*EBRDetp	-0.0418* [0.0219]	-0.0400* [0.0218]					
LTA*EBRDbank		0.0127 [0.0158]		0.0122 [0.0158]			
DSDEP*EBRDetp					-0.0158 [0.0129]	-0.0156 [0.0129]	
DSDEP*EBRDbank							-0.0068 [0.0146]
Country dummies	yes	yes	yes	yes	yes	yes	yes
Time dummies	yes	yes	yes	yes	yes	yes	yes
Observations	487	487	487	487	487	487	487
Number of banks	122	122	122	122	122	122	122
R-squared	0.31	0.31	0.3	0.3	0.3	0.3	0.3

Note: The dependent variable is bank net interest margin. The explanatory variables are the Herfindahl index, concentration ratio, market share, size and efficiency. Control variables are the capital-to-assets ratio, the loans-to-assets ratio, the share of demand and savings deposits in total deposits, yearly change in gdp, inflation and the short term interest rate. Standard errors are given in brackets. *, ** and *** indicate significance levels of 10, 5 and 1 percent, respectively.

TABLE 10

Panel Estimations for Bank Margins for the Sample of Banks in Non-Accession Countries - Regulatory Variables and Interactions

Variables	regulatory controls			regulatory interaction: EFF			regulatory interaction: CAP					
HERF	-17.1604*** [6.0670]	-13.1931** [5.6380]	-25.7632*** [7.1214]	-20.2820*** [6.7423]	-18.6944*** [6.0225]	-14.2904** [5.6250]	-21.0608*** [6.2738]	-16.6217*** [5.9504]	-20.9708*** [6.2097]	-15.4984*** [5.7641]	-21.5783*** [6.3640]	-17.1800*** [6.0418]
MS	7.4556* [3.9124]		10.3514*** [3.8886]		9.2982** [3.8496]		10.2286*** [3.9037]	10.6284*** [3.9585]		10.2078*** [3.8998]		
SIZE		-0.0012 [0.0015]		-0.002 [0.0015]		-0.0019 [0.0015]		-0.0021 [0.0015]		-0.0019 [0.0015]		-0.0021 [0.0015]
EFF	-2.6007 [2.2398]	-1.6517 [2.2259]	-2.375 [2.2577]	-0.9171 [2.2440]	-46.2585*** [13.6719]	-4.2014 [9.6981]	-4.2014 [9.6981]	-4.9077 [9.7940]	-2.3743 [2.2232]	-0.8535 [2.2148]	-2.3031 [2.2582]	-0.854 [2.2450]
CAP	0.1285*** [0.0298]	0.1137*** [0.0301]	0.1409*** [0.0300]	0.1193*** [0.0307]	0.1384*** [0.0297]	0.1181*** [0.0302]	0.1421*** [0.0302]	0.1204*** [0.0308]	0.1876 [0.1528]	0.0985 [0.1502]	0.0755 [0.1498]	0.0239 [0.1511]
LTA	0.0538** [0.0237]	0.0486** [0.0238]	0.0718*** [0.0234]	0.0656*** [0.0238]	0.0595** [0.0235]	0.0533** [0.0235]	0.0710*** [0.0235]	0.0647*** [0.0238]	0.0718*** [0.0237]	0.0643*** [0.0240]	0.0708*** [0.0235]	0.0643*** [0.0238]
DSDEP	0.0107 [0.0125]	0.0106 [0.0125]	0.0144 [0.0126]	0.015 [0.0127]	0.0161 [0.0124]	0.0165 [0.0125]	0.0161 [0.0126]	0.0167 [0.0127]	0.016 [0.0126]	0.0162 [0.0127]	0.016 [0.0126]	0.0164 [0.0127]
gdp	-0.2139* [0.1152]	-0.2158* [0.1169]	-0.2213* [0.1216]	-0.2386* [0.1236]	-0.2321** [0.1149]	-0.2436** [0.1163]	-0.2656** [0.1184]	-0.2753** [0.1197]	-0.2656** [0.1176]	-0.2778** [0.1190]	-0.2570** [0.1199]	-0.2661** [0.1211]
inflation	0.0636 [0.0658]	0.0637 [0.0660]	0.0555 [0.0671]	0.0553 [0.0674]	0.0563 [0.0659]	0.0558 [0.0661]	0.058 [0.0674]	0.0583 [0.0676]	0.0551 [0.0682]	0.0568 [0.0683]	0.0609 [0.0678]	0.0621 [0.0680]
str	0.0104 [0.0605]	0.0121 [0.0606]	0.0101 [0.0617]	0.0137 [0.0620]	0.0069 [0.0606]	0.0096 [0.0608]	0.0147 [0.0619]	0.0184 [0.0621]	0.0123 [0.0626]	0.0169 [0.0627]	0.0176 [0.0623]	0.0223 [0.0625]
EBRDdetp	7.9381*** [2.2846]	8.4807*** [2.2830]										
EBRDbank			2.6625 [1.9738]	2.4041 [1.9855]								
EFF *EBRDetp					20.4657*** [6.2732]	21.1790*** [6.3018]	0.839 [4.1423]	1.7827 [4.1720]				
EFF*EBRDbank												
CAP*EBRDetp									-0.019 [0.0663]	0.0105 [0.0657]	0.0245 [0.0544]	0.0354 [0.0547]
CAP*EBRDbank												
Country dummies	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Time dummies	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Observations	354	354	354	354	354	354	354	354	354	354	354	354
Number of banks	109	109	109	109	109	109	109	109	109	109	109	109
R-squared	0.28	0.28	0.25	0.25	0.28	0.29	0.24	0.25	0.24	0.25	0.25	0.26

(Continued)

TABLE 10

Continued

Variables	regulatory interaction: LTA			regulatory interaction: DSDEP				
HERF	-17.6071*** [6.1278]	-13.3239** [5.6986]	-25.7775*** [6.7575]	-20.7226*** [6.4145]	-19.6023*** [6.1211]	-14.9798*** [5.7098]	-22.2465*** [6.6881]	-16.8882*** [6.2861]
MS	8.2803** [3.9190]		10.0896*** [3.8824]		9.2954** [3.9320]		10.3006*** [3.8966]	
SIZE		-0.0014 [0.0015]		-0.0019 [0.0015]		-0.0017 [0.0015]		-0.002 [0.0015]
EFF	-2.4071 [2.2487]	-1.3043 [2.2338]	-2.5016 [2.2478]	-1.0753 [2.2337]	-2.2164 [2.2570]	-0.9313 [2.2395]	-2.2251 [2.2612]	-0.7895 [2.2464]
CAP	0.1355*** [0.0298]	0.1188*** [0.0303]	0.1421*** [0.0299]	0.1214*** [0.0306]	0.1393*** [0.0300]	0.1201*** [0.0306]	0.1424*** [0.0301]	0.1204*** [0.0308]
LTA	-0.2013** [0.1012]	-0.2285** [0.1007]	-0.0792 [0.0912]	-0.0824 [0.0917]	0.0671*** [0.0236]	0.0612** [0.0238]	0.0718*** [0.0235]	0.0655*** [0.0239]
DSDEP	0.0145 [0.0125]	0.0147 [0.0125]	0.0164 [0.0125]	0.0168 [0.0126]	-0.0771 [0.0605]	-0.0884 [0.0608]	-0.0117 [0.0525]	-0.0035 [0.0530]
gdp	-0.2153* [0.1166]	-0.2191* [0.1183]	-0.1986 [0.1233]	-0.2111* [0.1254]	-0.2618** [0.1161]	-0.2714** [0.1177]	-0.2606** [0.1177]	-0.2762** [0.1196]
inflation	0.0634 [0.0663]	0.0636 [0.0665]	0.061 [0.0672]	0.0605 [0.0675]	0.058 [0.0670]	0.0577 [0.0672]	0.0584 [0.0674]	0.0577 [0.0676]
str	0.0146 [0.0609]	0.017 [0.0611]	0.0118 [0.0617]	0.0149 [0.0620]	0.011 [0.0616]	0.0133 [0.0618]	0.0153 [0.0619]	0.0183 [0.0621]
LTA*EBRDetp	0.1161*** [0.0420]	0.1257*** [0.0420]						
LTA*EBRDbank			0.0582* [0.0341]	0.0572* [0.0344]				
DSDEP*EBRDetp					0.0389 [0.0248]	0.0438* [0.0249]		
DSDEP*EBRDbank							0.0102 [0.0188]	0.0073 [0.0190]
Country dummies	yes	yes	yes	yes	yes	yes	yes	yes
Time dummies	yes	yes	yes	yes	yes	yes	yes	yes
Observations	354	354	354	354	354	354	354	354
Number of banks	109	109	109	109	109	109	109	109
R-squared	0.27	0.28	0.25	0.25	0.25	0.26	0.24	0.25

Note: The dependent variable is bank net interest margin. The explanatory variables are the Herfindahl index, concentration ratio, market share, size and efficiency. Control variables are the capital-to-assets ratio, the loans-to-assets ratio, the share of demand and savings deposits in total deposits, yearly change in gdp, inflation and the short term interest rate. Standard errors are given in brackets. *, ** and *** indicate significance levels of 10, 5 and 1 percent, respectively.

Appendix

Description of Variables and Data Sources

Net Interest Margin ¹	Difference between interest income and interest expenses as a proportion of total earning assets (%)
Herfindahl Index ¹	The sum of squared market shares in the loan market in country j at time t (between 0 and 1)
Concentration Ratio ¹	The amount of loans granted by the largest bank in country j at time t to total bank loans in country j at time t (ratio)
Market Share ¹	A measure of relative market power. Calculated as bank i's share of assets at time t in country j's total bank assets at time t (between 0 and 1)
Size ¹	The share of total assets of bank i in country j at time t to the assets of the median bank in country j at time t (%)
Efficiency ¹	The inverse of total overhead costs to total assets of bank i in country j at time t (%)
Capital to Assets ¹	The ratio of total equity to assets of bank i in country j at time t (%)
Loans to Assets ¹	The ratio of total loans to assets of bank i in country j at time t (%)
Dem. and Sav. Deposits ¹	The proportion of demand and savings deposits in total deposits of bank i in country j at time t (%)
GDP growth ^{2,3}	Real GDP growth (YOY) in country j at time t (%)
Inflation ^{2,3}	The (end of year) change in CPI in country j at time t (%)
Interest Rate ³	The real short term interest rate. Calculated as the nominal interest rate minus inflation in country j at time t (%)
EBRD Bank Reform ²	Index based on the number of banks (and the share of foreign owned banks), the asset share of state-owned banks, the percentage of bad loans, credit to the private sector and stock market capitalization (between 1 and 4)
EBRD Enterprise Reform ²	Index based on the amount of budgetary subsidies, the efficiency of tax collection for social security, the share of industry in total employment and the change in labor productivity in industry (between 1 and 4)

¹ Source: Fitch/IBCA/Bureau Van Dijk's Bankscope and own calculations

² Source: EBRD Transition reports

³ Source: IMF International Financial Statistics

Countries Included in the Subsamples

Western Europe	Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom
Accession	Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovak Republic, Slovenia
Non-accession	Albania, Belarus, Bosnia, Bulgaria, Croatia, Macedonia, Romania, Russia, Ukraine, Yugoslavia
Eastern Europe	All countries included in Accession and Non-accession

Appendix: Correlation Matrices and Robustness
Results.

TABLE A1

Correlation Matrix for the Full Sample of Western and Eastern European Banks

	Net Interest Margin	Herfindahl Index	Conc. Ratio	Market Share	Size	Efficiency	Capital to Assets	Loans to Assets
Net Interest Margin	1							
Herfindahl Index	0.1844*	1						
Concentration Ratio	0.1623*	0.9526*	1					
Market Share	0.1177*	0.4322*	0.3401*	1				
Size	-0.1127*	-0.0183*	-0.0183*	0.1249*	1			
Efficiency	-0.2383*	-0.0400*	-0.0441*	-0.0032	0.1816*	1		
Capital to Assets	0.3408*	0.1685*	0.1914*	-0.0094	-0.1726*	-0.2242*	1	
Loans to Assets	0.0544*	-0.0421*	0.0128	-0.0473*	-0.0045	-0.1071*	-0.1223*	1
Dem. and Sav. Deposits	0.1320*	0.0089	0.0538*	-0.0274*	-0.0775*	-0.2222*	0.1380*	0.2023*
GDP growth	-0.1088*	0.0578*	0.0494*	0.1069*	-0.0261*	0.0908*	-0.0615*	-0.0532*
Inflation	0.2531*	0.2910*	0.2638*	0.1507*	-0.0229*	-0.0676*	0.1400*	-0.1056*
Interest Rate	-0.0603*	-0.1899*	-0.1660*	-0.0760*	0.0053	0.0283*	-0.0660*	0.0451*

	Dem. and Sav. Deposits	GDP growth	Inflation	Interest Rate
Dem. and Sav. Deposits	1			
GDP growth	-0.2494*	1		
Inflation	0.0088	-0.2956*	1	
Interest Rate	-0.0407*	0.1560*	-0.8502*	1

Source: Bankscope and IFS. * indicates significance at 5 percent.

TABLE A2

Correlation Matrix for the Sample of Western European Banks

	Net Interest Margin	Herfindahl Index	Conc. Ratio	Market Share	Size	Efficiency	Capital to Assets	Loans to Assets
Net Interest Margin	1							
Herfindahl Index	-0.0028	1						
Concentration Ratio	-0.0435*	0.9558*	1					
Market Share	-0.0596*	0.3083*	0.2256*	1				
Size	-0.1752*	0.0086	0.0066	0.2092*	1			
Efficiency	-0.3380*	0.0305*	0.0260*	0.0731*	0.1763*	1		
Capital to Assets	0.2532*	0.0287*	0.0529*	-0.1075*	-0.1832*	-0.2120*	1	
Loans to Assets	0.2578*	0.0490*	0.1175*	-0.0049	-0.0136	-0.1391*	-0.0961*	1
Dem. and Sav. Deposits	0.1553*	-0.0016	0.0570*	-0.0485*	-0.0828*	-0.2330*	0.1442*	0.2254*
GDP growth	-0.0739*	0.1051*	0.0729*	0.1081*	-0.0528*	0.2116*	-0.1347*	-0.1696*
Inflation	0.2506*	-0.0353*	-0.1441*	0.0852*	-0.0532*	-0.0441*	0.0398*	-0.1213*
Interest Rate	0.2462*	-0.1154*	-0.2096*	0.1030*	-0.0522*	-0.0928*	-0.0227*	-0.1241*
	Dem. and Sav. Deposits	GDP growth	Inflation	Interest Rate				
Dem. and Sav. Deposits	1							
GDP growth	-0.2598*	1						
Inflation	-0.1060*	0.0701*	1					
Interest Rate	0.0134	0.0095	0.3967*	1				

Source: Bankscope and IFS. * indicates significance at 5 percent.

TABLE A3

Correlation Matrix for the Sample of Eastern European Banks

	Net Interest Margin	Herfindahl Index	Conc. Ratio	Market Share	Size	Efficiency	Capital to Assets	Loans to Assets
Net Interest Margin	1							
Herfindahl Index	0.0797*	1						
Concentration Ratio	0.0637*	0.9216*	1					
Market Share	0.0171	0.4535*	0.3340*	1				
Size	-0.0627*	-0.03	-0.0033	0.2725*	1			
Efficiency	-0.2178*	0.0455	-0.0538*	0.0658*	0.1337*	1		
Capital to Assets	0.2832*	0.0614*	0.0871*	-0.1739*	-0.1682*	-0.1981*	1	
Loans to Assets	-0.0274	-0.1140*	-0.1187*	0.0263	-0.0116	-0.0133	0.0043	1
Dem. and Sav. Deposits	0.3021*	0.3333*	0.3201*	0.1281*	-0.0478	-0.2550*	0.2897*	-0.2976*
GDP growth	-0.1682*	-0.0136	-0.0138	0.0856*	0.0094	0.0597*	-0.0760*	0.1257*
Inflation	0.1393*	0.3069*	0.2874*	0.0329	0.0042	-0.0768*	0.0198	-0.1673*
Interest Rate	-0.0036	-0.2707*	-0.2375*	-0.0363	-0.0068	0.0772*	-0.019	0.0993*
EBRDetp	-0.2516*	-0.2690*	-0.3116*	-0.0856*	-0.0031	0.2587*	-0.2816*	0.1263*
EBRDbank	-0.2006*	-0.2165*	-0.2866*	-0.035	-0.0446	0.1748*	-0.1988*	0.0827*

	Dem. and Sav. Deposits	GDP growth	Inflation	Interest Rate	EBRDetp	EBRDbank
Dem. and Sav. Deposits	1					
GDP growth	-0.2394*	1				
Inflation	0.2693*	-0.3933*	1			
Interest Rate	-0.1624*	0.1997*	-0.8666*	1		
EBRDetp	-0.5626*	0.0309	-0.3368*	0.1855*	1	
EBRDbank	-0.4329*	-0.0078	-0.3189*	0.1698*	0.8687*	1

Source: Bankscope and IFS. * indicates significance at 5 percent.

TABLE A4

Correlation Matrix for the Sample of Banks in Accession Countries

	Net Interest Margin	Herfindahl Index	Conc. Ratio	Market Share	Size	Efficiency	Capital to Assets	Loans to Assets
Net Interest Margin	1							
Herfindahl Index	-0.0174	1						
Concentration Ratio	-0.0646	0.8867*	1					
Market Share	0.0793*	0.5178*	0.3586*	1				
Size	0.0295	-0.0703	-0.0733	0.4415*	1			
Efficiency	-0.2180*	-0.1682*	-0.1361*	-0.0902*	0.1670*	1		
Capital to Assets	0.2205*	0.0152	0.0328	-0.1371*	-0.1716*	-0.0608	1	
Loans to Assets	0.0362	0.0364	0.0599	0.0698	0.0884*	0.0155	0.0283	1
Dem. and Sav. Deposits	0.1924*	0.3243*	0.2106*	0.2513*	-0.0324	-0.1900*	0.019	-0.4694*
GDP growth	-0.0157	-0.1328*	-0.069	-0.1155*	0.0212	0.0609	0.0605	0.0308
Inflation	0.3481*	0.0344	0.0478	0.0689	-0.0089	-0.0162	0.0756	-0.0743
Interest Rate	-0.028	-0.4359*	-0.3485*	-0.2590*	0.0615	0.1963*	0.0736	0.1238*
EBRDetp	-0.2798*	-0.1947*	-0.2307*	-0.0686	0.1007*	0.1991*	-0.1481*	0.1319*
EBRDbank	-0.1253*	-0.2468*	-0.3966*	0.0049	0.0531	0.0118	-0.1066*	0.1059*

	Dem. and Sav. Deposits	GDP growth	Inflation	Interest Rate	EBRDetp	EBRDbank
Dem. and Sav. Deposits	1					
GDP growth	-0.0467	1				
Inflation	-0.0121	-0.1425*	1			
Interest Rate	-0.4186*	0.1141*	-0.2791*	1		
EBRDetp	-0.4278*	0.1742*	-0.1490*	0.1680*	1	
EBRDbank	-0.2793*	0.039	-0.1329*	0.0679	0.5004*	1

Source: Bankscope and IFS. * indicates significance at 5 percent.

TABLE A5

Correlation Matrix for the Sample of Banks in Non-Accession Countries

	Net Interest Margin	Herfindahl Index	Conc. Ratio	Market Share	Size	Efficiency	Capital to Assets	Loans to Assets
Net Interest Margin	1							
Herfindahl Index	0.0752*	1						
Concentration Ratio	0.0446	0.9307*	1					
Market Share	0.0272	0.4568*	0.3571*	1				
Size	-0.0815*	-0.0214	0.0121	0.2158*	1			
Efficiency	-0.2193*	0.0653*	0.0695*	0.1952*	0.1545*	1		
Capital to Assets	0.2256*	0.0359	0.0291	-0.1673*	-0.1877*	-0.1653*	1	
Loans to Assets	-0.0281	-0.1608*	-0.1713*	-0.0022	-0.0495	-0.0829*	0.0289	1
Dem. and Sav. Deposits	0.2475*	0.2605*	0.2295*	0.096	0.0492	-0.1340*	0.1104*	-0.1849*
GDP growth	-0.1577*	0.0092	0.0122	0.1164*	0.0091	0.0322	-0.0457	0.1476*
Inflation	0.0848*	0.3282*	0.2845*	0.0675*	0.0034	-0.0061	-0.1023*	-0.1930*
Interest Rate	0.0345	-0.2847*	-0.2320*	-0.0607	-0.0071	0.0438	0.0528	0.1062*
EBRDetp	-0.1247*	-0.3353*	-0.3082*	-0.2642*	-0.0228	0.0299	0.0335	0.1273*
EBRDbank	-0.0786*	-0.2091*	-0.2173*	-0.1488*	-0.0775*	-0.0162	0.1018*	0.0492

	Dem. and Sav. Deposits	GDP growth	Inflation	Interest Rate	EBRDetp	EBRDbank
Dem. and Sav. Deposits	1					
GDP growth	-0.2448*	1				
Inflation	0.3245*	-0.3878*	1			
Interest Rate	-0.1598*	0.1750*	-0.8685*	1		
EBRDetp	-0.2332*	-0.1113*	-0.2347*	0.1003*	1	
EBRDbank	-0.1209*	-0.1248*	-0.2132*	0.0884*	0.8102*	1

Source: Bankscope and IFS. * indicates significance at 5 percent.

TABLE A6

Panel Estimations for Bank Margins for the Sample of Banks in Poland, Hungary and the Czech Republic

Variables	SCP versus EFF			bank-specific controls			macro-economic controls		
HERF	14.0346 [10.9912]	15.2886 [10.9720]	11.9583 [11.1069]	13.6918 [10.9994]	35.0415*** [11.3369]	35.4186*** [11.2993]	10.2029** [4.3607]	10.6008** [4.3439]	
CR	9.1147** [3.9837]	9.7275** [3.9886]	10.9014*** [4.1264]	11.6636*** [4.0888]			4.4959 [4.8124]		
MS	1.6351 [5.0855]	1.543 [4.9725]	3.4948 [5.0174]	2.9004 [4.9522]	4.0864 [4.8228]				
SIZE	0.0005 [0.0005]	0.0006 [0.0005]	0.0008* [0.0005]	0.0009* [0.0005]	0.0009* [0.0005]	0.0004 [0.0004]	0.0004 [0.0004]	0.0005 [0.0004]	
EFF	-1.0088*** [0.2258]	-1.0361*** [0.2267]	-0.9965*** [0.2257]	-1.0273*** [0.2264]	-1.0222*** [0.1928]	-1.0363*** [0.1940]	-1.0113*** [0.1958]	-1.0278*** [0.1968]	
CAP			0.0729*** [0.0241]	0.0789*** [0.0243]	0.0669*** [0.0240]	0.0659*** [0.0220]	0.0644*** [0.0220]	0.0664*** [0.0222]	
LTA			0.0216** [0.0094]	0.0214** [0.0094]	0.0281*** [0.0097]	0.0409*** [0.0090]	0.0441*** [0.0092]	0.0443*** [0.0092]	
DSDEP			0.0013 [0.0078]	0.001 [0.0078]	0.0021 [0.0076]	0.0066 [0.0069]	0.0042 [0.0069]	0.0041 [0.0069]	
gdp						0.2843*** [0.0694]	0.2244*** [0.0688]	0.2172*** [0.0690]	
inflation						0.2474*** [0.0399]	0.2171*** [0.0446]	0.2151*** [0.0445]	
str						-0.0081 [0.0571]	-0.0189 [0.0618]	-0.0144 [0.0619]	
Country dummies	yes	yes	yes	yes	yes	yes	yes	yes	yes
Time dummies	yes	yes	yes	yes	yes	yes	yes	yes	yes
Observations	289	289	289	289	289	289	289	289	289
Number of banks	74	74	74	74	74	74	74	74	74
R-squared	0.44	0.44	0.45	0.46	0.49	0.64	0.64	0.63	0.63

Note: Standard errors are given in brackets. *, **, and *** indicate significance levels of 10, 5 and 1 percent, respectively.

TABLE A7

Panel Estimations for Bank Margins for the Full Sample of Western and Eastern European Banks - No Country Dums - Bank Heterogeneity (RE)

Variables	SCP versus EFF			bank-specific controls			macro-economic controls		
HERF	5.4089*** [0.4899]	5.1361*** [0.4710]	7.1852*** [0.4008]	7.1746*** [0.3917]	0.3605 [0.3606]	0.4014 [0.3547]			
CR		2.8928*** [0.3295]	2.8490*** [0.3239]	3.4489*** [0.2566]	3.5206*** [0.2544]		0.2234 [0.2221]	0.2396 [0.2212]	
MS	-1.7010* [0.8929]	-0.3806 [0.8748]	-0.0888 [0.7260]	1.4654** [0.7191]	0.3793 [0.6105]		0.4373 [0.6031]		
SIZE		-0.0003*** [0.0001]	-0.0003*** [0.0001]	-0.0001*** [0.0000]	-0.0001*** [0.0000]		-0.0001*** [0.0000]	-0.0001*** [0.0000]	
EFF	-0.6179*** [0.0540]	-0.6179*** [0.0541]	-0.3195*** [0.0354]	-0.3070*** [0.0357]	-0.3201*** [0.0355]	-0.2989*** [0.0300]	-0.2881*** [0.0302]	-0.2989*** [0.0299]	-0.2880*** [0.0301]
CAP			0.1048*** [0.0041]	0.1036*** [0.0041]	0.1059*** [0.0041]	0.0769*** [0.0035]	0.0758*** [0.0035]	0.0770*** [0.0035]	0.0758*** [0.0035]
LTA			0.0122*** [0.0015]	0.0121*** [0.0015]	0.0117*** [0.0015]	0.0173*** [0.0013]	0.0172*** [0.0013]	0.0173*** [0.0013]	0.0172*** [0.0013]
DSDEP			0.0058*** [0.0010]	0.0057*** [0.0010]	0.0059*** [0.0010]	0.0038*** [0.0008]	0.0037*** [0.0008]	0.0038*** [0.0008]	0.0037*** [0.0008]
gdp						0.0111 [0.0102]	0.0091 [0.0102]	0.0111 [0.0102]	0.0092 [0.0102]
inflation						0.1796*** [0.0052]	0.1793*** [0.0052]	0.1797*** [0.0052]	0.1796*** [0.0052]
str						0.1449*** [0.0054]	0.1447*** [0.0054]	0.1450*** [0.0054]	0.1449*** [0.0054]
Country dummies	no	no	no	no	no	no	no	no	no
Time dummies	yes	yes	yes	yes	yes	yes	yes	yes	yes
Observations	11753	11753	10989	10989	10989	10937	10937	10937	10937
Number of banks	2279	2279	2066	2066	2066	2063	2063	2063	2063
R-squared	0.04	0.04	0.13	0.13	0.11	0.17	0.17	0.17	0.17

(Continued)

TABLE A7 (Continued)

Panel Estimations for Bank Margins for the Full Sample of Western and Eastern European Banks - No Country Dums - Bank Heterogeneity (FE)

Variables	SCP versus EFF			bank-specific controls			macro-economic controls			
HERF	4.2198*** [0.5494]	3.7048*** [0.5387]	8.7023*** [0.4833]	8.5648*** [0.4821]	4.0760*** [0.2957] -1.4224 [0.8784]	4.0517*** [0.2959]	0.8324* [0.4265]	0.7885* [0.4247]	0.7951*** [0.2509] -0.4943 [0.7053]	0.7853*** [0.2509]
CR	1.9582*** [0.3654]	1.7906*** [0.3633]	-2.4990*** [0.8750]	-0.0001 [0.0001]	-0.0001 [0.0001]	-0.0001 [0.0001]	-0.5755 [0.7086]	-0.0001 [0.0000]	-0.2541*** [0.0430]	0 [0.0000]
MS	-4.5628*** [1.0262]	-0.0002*** [0.0001]	-0.2224*** [0.0536]	-0.2159*** [0.0539]	-0.2221*** [0.0540]	-0.2147*** [0.0543]	-0.2569*** [0.0430]	-0.2517*** [0.0432]	-0.2541*** [0.0430]	-0.2489*** [0.0432]
SIZE	-0.4809*** [0.0800]	-0.4572*** [0.0806]	0.0996*** [0.0051]	0.1001*** [0.0051]	0.0992*** [0.0051]	0.0994*** [0.0051]	0.0724*** [0.0042]	0.0723*** [0.0042]	0.0726*** [0.0042]	0.0725*** [0.0042]
EFF	-0.4794*** [0.0801]	-0.4549*** [0.0807]	0.0087*** [0.0020]	0.0085*** [0.0020]	0.0084*** [0.0020]	0.0083*** [0.0020]	0.0136*** [0.0016]	0.0135*** [0.0016]	0.0135*** [0.0016]	0.0135*** [0.0016]
CAP	0.0065*** [0.0012]	0.0065*** [0.0012]	0.0065*** [0.0012]	0.0065*** [0.0012]	0.0070*** [0.0012]	0.0069*** [0.0012]	0.0038*** [0.0010]	0.0038*** [0.0010]	0.0037*** [0.0010]	0.0037*** [0.0010]
LTA	no yes	no yes	no yes	no yes	no yes	no yes	-0.0001 [0.0107]	-0.0006 [0.0107]	-0.0027 [0.0107]	-0.0034 [0.0107]
DSDEP	11753	11753	10989	10989	10989	10989	0.1559*** [0.0065]	0.1557*** [0.0065]	0.1540*** [0.0065]	0.1537*** [0.0065]
gdp	2279	2279	2066	2066	2066	2066	0.1270*** [0.0063]	0.1269*** [0.0063]	0.1254*** [0.0063]	0.1253*** [0.0063]
inflation	0.04	0.04	0.13	0.13	0.12	0.12	no yes	no yes	no yes	no yes
str	0.04	0.04	0.13	0.13	0.12	0.12	no yes	no yes	no yes	no yes
Country dummies	no	no	no	no	no	no	no	no	no	no
Time dummies	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Observations	11753	11753	10989	10989	10989	10989	10937	10937	10937	10937
Number of banks	2279	2279	2066	2066	2066	2066	2063	2063	2063	2063
R-squared	0.04	0.04	0.13	0.13	0.12	0.12	0.17	0.17	0.17	0.17

Note: Standard errors are given in brackets. *, **, and *** indicate significance levels of 10, 5 and 1 percent, respectively.

TABLE A8

Panel Estimations for Bank Margins for the Sample of Western European Banks - No Country Dums - Bank Heterogeneity (RE)

Variables	SCP versus EFF			bank-specific controls			macro-economic controls			
HERF	1.5212*** [0.2799]	1.4134*** [0.2785]	1.6461*** [0.2729]	1.5643*** [0.2717]	0.9991*** [0.1633]	0.9619*** [0.1630]	0.7785*** [0.2687]	0.7346*** [0.2675]	0.4639*** [0.1615]	0.4478*** [0.1612]
CR										
MS	-1.7884*** [0.5965]	-1.6952*** [0.5952]	-1.3725** [0.5832]	-0.0001*** [0.0000]	-1.2600** [0.5821]	0.9619*** [0.1630]	-1.0769* [0.5700]	-0.0001*** [0.0000]	-1.0168* [0.5685]	-0.0001*** [0.0000]
SIZE										
EFF	-0.3832*** [0.0229]	-0.3636*** [0.0230]	-0.2883*** [0.0225]	-0.2767*** [0.0225]	-0.2877*** [0.0224]	-0.2760*** [0.0225]	-0.2781*** [0.0216]	-0.2697*** [0.0218]	-0.2776*** [0.0216]	-0.2692*** [0.0218]
CAP										
LTA										
DSDEP										
gdp										
inflation										
str										
Country dummies	no	no	no	no	no	no	no	no	no	no
Time dummies	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Observations	10102	10102	10096	10096	10096	10096	10096	10096	10096	10096
Number of banks	1833	1833	1832	1832	1832	1832	1832	1832	1832	1832
R-squared	0.1	0.11	0.14	0.14	0.14	0.14	0.17	0.17	0.17	0.17

(Continued)

TABLE A8 (Continued)

Panel Estimations for Bank Margins for the Sample of Western European Banks - No Country Dums - Bank Heterogeneity (FE)

Variables	SCP versus EFF			bank-specific controls			macro-economic controls			
HERF	2.1373*** [0.3134]	2.0843*** [0.3135]	2.4226*** [0.3083]	2.3868*** [0.3084]	1.5806*** [0.1770]	1.5632*** [0.1771]	1.4981*** [0.3076]	1.4876*** [0.3076]	1.0143*** [0.1772]	1.0101*** [0.1772]
CR		1.4156*** [0.1800]	1.3891*** [0.1801]		1.5806*** [0.1770]	1.5632*** [0.1771]			1.0143*** [0.1772]	1.0101*** [0.1772]
MS	-1.2433* [0.6431]	-1.1915* [0.6425]	-1.0098 [0.6307]		-0.9509 [0.6300]	-0.9509 [0.6300]	-0.5473 [0.6199]		-0.5199 [0.6195]	
SIZE		-0.0001*** [0.0000]	-0.0001*** [0.0000]		-0.0001** [0.0000]	-0.0001** [0.0000]		0		0
EFF	-0.3325*** [0.0307]	-0.3188*** [0.0309]	-0.2319*** [0.0306]	-0.2237*** [0.0308]	-0.2286*** [0.0306]	-0.2205*** [0.0308]	-0.2117*** [0.0301]	-0.2087*** [0.0303]	-0.2093*** [0.0301]	-0.2065*** [0.0303]
CAP			0.0602*** [0.0033]	0.0597*** [0.0033]	0.0604*** [0.0033]	0.0600*** [0.0033]	0.0606*** [0.0033]	0.0605*** [0.0033]	0.0608*** [0.0033]	0.0607*** [0.0033]
LTA			0.0041*** [0.0012]	0.0040*** [0.0012]	0.0040*** [0.0012]	0.0039*** [0.0012]	0.0088*** [0.0012]	0.0088*** [0.0012]	0.0087*** [0.0012]	0.0087*** [0.0012]
DSDEP			0.0018** [0.0007]	0.0017** [0.0007]	0.0017** [0.0007]	0.0017** [0.0007]	0.0023*** [0.0007]	0.0022*** [0.0007]	0.0022*** [0.0007]	0.0022*** [0.0007]
gdp							0.0749*** [0.0096]	0.0742*** [0.0097]	0.0734*** [0.0096]	0.0727*** [0.0097]
inflation							0.1462*** [0.0139]	0.1464*** [0.0139]	0.1433*** [0.0139]	0.1435*** [0.0139]
str							0.1212*** [0.0097]	0.1210*** [0.0097]	0.1207*** [0.0097]	0.1205*** [0.0097]
Country dummies	no	no	no	no	no	no	no	no	no	no
Time dummies	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Observations	10102	10102	10096	10096	10096	10096	10096	10096	10096	10096
Number of banks	1833	1833	1832	1832	1832	1832	1832	1832	1832	1832
R-squared	0.1	0.11	0.14	0.14	0.14	0.14	0.18	0.18	0.18	0.18

Note: Standard errors are given in brackets. *, **, and *** indicate significance levels of 10, 5 and 1 percent, respectively.

TABLE A9

Panel Estimations for Bank Margins for the Sample of Eastern European Banks - No Country Dums - Bank Heterogeneity (RE)

Variables	SCP versus EFF			bank-specific controls			macro-economic controls			
HERF	-0.9983 [1.9934]	-1.3398 [1.8576]	12.8185*** [2.6159]	12.4442*** [2.3986]	6.5796*** [2.1345]	7.1142*** [2.0485]	-6.4281** [2.7362]	-3.7096 [2.4880]	-4.0287* [2.0709]	-2.957 [2.0104]
CR					1.6836 [2.6017]		5.6961** [2.4909]		4.3829* [2.3239]	
MS	-1.5419 [2.6113]		-1.4993 [2.7209]							
SIZE		-0.0009* [0.0005]		0.0007 [0.0008]		0.0006 [0.0008]		0.0001 [0.0007]		0.0001 [0.0007]
EFF	-3.8096*** [0.6692]	-3.6986*** [0.6713]	-3.8283*** [0.6684]	-1.6146*** [0.5531]	-1.5767*** [0.5566]	-1.5943*** [0.5579]	-1.3572*** [0.4409]	-1.2941*** [0.4434]	-1.3612*** [0.4417]	-1.3092*** [0.4437]
CAP			0.1533*** [0.0204]	0.1594*** [0.0204]	0.1583*** [0.0205]	0.1590*** [0.0205]	0.1304*** [0.0185]	0.1227*** [0.0186]	0.1281*** [0.0185]	0.1228*** [0.0186]
LTA			0.0432*** [0.0124]	0.0436*** [0.0124]	0.0416*** [0.0125]	0.0425*** [0.0125]	0.0442*** [0.0109]	0.0452*** [0.0109]	0.0440*** [0.0109]	0.0448*** [0.0109]
DSDEP			0.0333*** [0.0079]	0.0329*** [0.0079]	0.0358*** [0.0079]	0.0359*** [0.0079]	0.0256*** [0.0070]	0.0258*** [0.0070]	0.0251*** [0.0070]	0.0255*** [0.0070]
gdp							-0.0418 [0.0515]	-0.0485 [0.0515]	-0.0421 [0.0517]	-0.0464 [0.0517]
inflation							0.1480*** [0.0222]	0.1449*** [0.0223]	0.1471*** [0.0222]	0.1456*** [0.0224]
str							0.1045*** [0.0215]	0.1029*** [0.0216]	0.1048*** [0.0215]	0.1038*** [0.0217]
Country dummies	no	no	no	no	no	no	no	no	no	no
Time dummies	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Observations	1651	1651	1651	893	893	893	841	841	841	841
Number of banks	446	446	446	234	234	234	231	231	231	231
R-squared	0.08	0.08	0.09	0.24	0.22	0.22	0.22	0.22	0.22	0.22

(Continued)

TABLE A9 (Continued)

Panel Estimations for Bank Margins for the Sample of Eastern European Banks - No Country Dums - Bank Heterogeneity (FE)

Variables	SCP versus EFF			bank-specific controls			macro-economic controls			
HERF	-1.9224 [2.2326]	-2.6687 [2.1246]	23.9175*** [3.5374]	21.7789*** [3.5019]	12.5314*** [2.9216]	11.8975*** [2.9491]	-9.3868** [3.8680]	-9.1550** [3.6587]	-3.9875 [2.7331]	-4.3883 [2.7458]
CR										
MS	-4.6485 [3.3710]		-4.5079** [1.7748]		-4.7403*** [1.7402]					
SIZE		-0.0013* [0.0007]								
EFF	-2.5574*** [0.7650]	-2.4654*** [0.7671]	-2.5691*** [0.7632]	-2.4823*** [0.7652]						
CAP			0.1589*** [0.0284]	0.1652*** [0.0283]	0.1572*** [0.0290]	0.1589*** [0.0288]	0.1194*** [0.0249]	0.1160*** [0.0247]	0.1166*** [0.0249]	0.1156*** [0.0248]
LTA			0.0536*** [0.0168]	0.0512*** [0.0169]	0.0566*** [0.0172]	0.0547*** [0.0172]	0.0565*** [0.0140]	0.0560*** [0.0140]	0.0551*** [0.0140]	0.0541*** [0.0140]
DSDEP			0.0376*** [0.0113]	0.0381*** [0.0113]	0.0399*** [0.0115]	0.0399*** [0.0115]	0.0206*** [0.0095]	0.0203*** [0.0095]	0.0208*** [0.0096]	0.0206*** [0.0096]
gdp							-0.0679 [0.0586]	-0.0725 [0.0584]	-0.0799 [0.0588]	-0.0809 [0.0587]
inflation							0.1369*** [0.0350]	0.1338*** [0.0349]	0.1270*** [0.0349]	0.1256*** [0.0349]
str							0.1003*** [0.0317]	0.0984*** [0.0316]	0.0933*** [0.0317]	0.0926*** [0.0317]
Country dummies	no	no	no	no	no	no	no	no	no	no
Time dummies	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Observations	1651	1651	1651	1651	1651	1651	841	841	841	841
Number of banks	446	446	446	446	446	446	231	231	231	231
R-squared	0.09	0.09	0.09	0.09	0.22	0.22	0.23	0.23	0.22	0.22

Note: Standard errors are given in brackets. *, **, and *** indicate significance levels of 10, 5 and 1 percent, respectively.

TABLE A10

Panel Estimations for Bank Margins for the Sample of Banks in Accession Countries - No Country Dums - Bank Heterogeneity (RE)

Variables	SCP versus EFF			bank-specific controls			macro-economic controls			
HERF	-9.8762*** [2.9948]	-8.1890*** [2.8580]	-6.8038* [3.6379]	-5.6299 [3.5334]	-3.9041 [2.5091]	-3.3959 [2.4918]	-3.3459 [3.8077]	-2.4425 [3.6577]	-0.9878 [2.6339]	-0.6327 [2.5987]
CR			-6.7523*** [2.0057]	-6.2566*** [1.9922]	-3.9041 [2.5091]	-3.3959 [2.4918]			1.6015 [3.0460]	
MS	4.4084* [2.5280]		2.8906 [3.0949]		2.0763 [2.9816]		2.1779 [3.1525]			
SIZE		0.0001 [0.0006]		0.0003 [0.0006]		0.0003 [0.0006]		0.0005 [0.0006]		0.0005 [0.0006]
EFF	-1.6332*** [0.3645]	-1.6234*** [0.3688]	-1.6415*** [0.3652]	-1.6383*** [0.3692]	-1.4819*** [0.3782]	-1.5033*** [0.3812]	-1.5704*** [0.3731]	-1.6009*** [0.3760]	-1.5678*** [0.3737]	-1.5996*** [0.3764]
CAP			0.1101*** [0.0260]	0.1088*** [0.0261]	0.1098*** [0.0259]	0.1096*** [0.0260]	0.1103*** [0.0262]	0.1110*** [0.0263]	0.1090*** [0.0261]	0.1107*** [0.0262]
LTA			0.0491*** [0.0111]	0.0500*** [0.0111]	0.0474*** [0.0111]	0.0482*** [0.0111]	0.0513*** [0.0111]	0.0518*** [0.0111]	0.0506*** [0.0111]	0.0512*** [0.0111]
DSDEP			0.0299*** [0.0086]	0.0307*** [0.0086]	0.0279*** [0.0085]	0.0288*** [0.0084]	0.0423*** [0.0090]	0.0428*** [0.0089]	0.0416*** [0.0089]	0.0421*** [0.0088]
gdp							0.0279 [0.0566]	0.0227 [0.0562]	0.0327 [0.0565]	0.0273 [0.0558]
inflation							0.1809*** [0.0351]	0.1825*** [0.0352]	0.1837*** [0.0350]	0.1848*** [0.0350]
str							0.1132*** [0.0365]	0.1132*** [0.0364]	0.1199*** [0.0361]	0.1186*** [0.0361]
Country dummies	no	no	no	no	no	no	no	no	no	no
Time dummies	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Observations	619	619	503	503	503	503	487	487	487	487
Number of banks	142	142	123	123	123	123	122	122	122	122
R-squared	0.18	0.18	0.17	0.17	0.26	0.26	0.29	0.3	0.29	0.29

(Continued)

TABLE A10 (Continued)

Panel Estimations for Bank Margins for the Sample of Banks in Accession Countries - No Country Dums - Bank Heterogeneity (FE)

Variables	SCP versus EFF		bank-specific controls		macro-economic controls	
HERF	-12.2768*** [4.3763]	-12.2194*** [4.3420]	3.1844 [7.5290]	3.4084 [7.6052]	-10.9057 [8.0736]	-10.654 [8.1237]
CR		-4.4168* [2.4591]		3.3216 [3.4991]		1.4118 [3.6056]
MS	0.5236 [4.0971]	-1.0372 [4.0852]	-3.2765 [5.3087]	-2.8365 [5.3228]	-6.6808 [5.7356]	-6.7528 [5.7589]
SIZE		-0.0002 [0.0009]		0.0002 [0.0009]		0.0006 [0.0009]
EFF	-1.2560*** [0.3945]	-1.2785*** [0.3964]	-1.2442*** [0.4073]	-1.2645*** [0.4107]	-1.2312*** [0.3987]	-1.2273*** [0.3997]
CAP		0.1260*** [0.0339]	0.1260*** [0.0339]	0.1259*** [0.0337]	0.1394*** [0.0348]	0.1415*** [0.0348]
LTA		0.0644*** [0.0143]	0.0638*** [0.0142]	0.0661*** [0.0144]	0.0669*** [0.0143]	0.0679*** [0.0145]
DSDEP		0.0238** [0.0120]	0.0237** [0.0120]	0.0240** [0.0119]	0.0259** [0.0123]	0.0259** [0.0123]
gdp					0.0706 [0.0666]	0.0847 [0.0654]
inflation					0.2318*** [0.0473]	0.2065*** [0.0455]
str					0.1151*** [0.0416]	0.1153*** [0.0418]
Country dummies	no	no	no	no	no	no
Time dummies	yes	yes	yes	yes	yes	yes
Observations	619	619	503	503	487	487
Number of banks	142	142	123	123	122	122
R-squared	0.18	0.18	0.27	0.27	0.31	0.31

Note: Standard errors are given in brackets. *, **, and *** indicate significance levels of 10, 5 and 1 percent, respectively.

TABLE A11

Panel Estimations for Bank Margins for the Sample of Banks in Non-Accession Countries - No Country Dums - Bank Heterogeneity (RE)

Variables	SCP versus EFF			bank-specific controls			macro-economic controls		
HERF	-3.5833 [2.6358]	-3.0965 [2.4379]	13.3790*** [4.6863]	13.9461*** [4.2694]	-10.7521** [4.7679]	-6.7687 [4.3738]			
CR		-5.3954** [2.1524]	-4.9559** [2.0752]		7.3983** [3.7563]	8.4491** [3.6160]	-6.5167* [3.7699]		-5.4245 [3.7155]
MS	1.2561 [3.5144]	1.7176 [3.3717]		0.7562 [4.4507]	3.8219 [4.2283]		8.9164** [3.8820]	6.5676* [3.5971]	
SIZE		-0.0007 [0.0007]	-0.0006 [0.0007]	0.0015 [0.0016]		0.0013 [0.0016]	-0.0014 [0.0015]		-0.0013 [0.0014]
EFF	-9.8730*** [1.6296]	-9.8013*** [1.6274]	-9.4819*** [1.6254]	-5.5359** [2.1590]	-5.7726** [2.2587]	-5.1646** [2.1598]	-1.0559 [2.1240]	-1.1017 [2.1321]	-0.0101 [2.0977]
CAP				0.1778*** [0.0327]	0.1836*** [0.0327]	0.1865*** [0.0336]	0.1384*** [0.0290]	0.1340*** [0.0290]	0.1207*** [0.0296]
LTA				0.0449* [0.0239]	0.0416* [0.0240]	0.0457* [0.0244]	0.0473** [0.0216]	0.0471** [0.0217]	0.0440** [0.0221]
DSDEP				0.0362** [0.0147]	0.0397*** [0.0147]	0.0398*** [0.0147]	0.0199 [0.0124]	0.0181 [0.0125]	0.0188 [0.0126]
gdp							-0.1429 [0.1069]	-0.1327 [0.1082]	-0.1412 [0.1089]
inflation							0.1545*** [0.0425]	0.1530*** [0.0431]	0.1586*** [0.0435]
str							0.1042*** [0.0398]	0.1058*** [0.0402]	0.1120*** [0.0407]
Country dummies	no	no	no	no	no	no	no	no	no
Time dummies	yes	yes	yes	yes	yes	yes	yes	yes	yes
Observations	1032	1032	1032	390	390	390	354	354	354
Number of banks	304	304	304	111	111	111	109	109	109
R-squared	0.11	0.11	0.11	0.28	0.27	0.27	0.22	0.23	0.22

(Continued)

TABLE A11 (Continued)

Panel Estimations for Bank Margins for the Sample of Banks in Non-Accession Countries - No Country Dums - Bank Heterogeneity (FE)

Variables	SCP versus EFF			bank-specific controls			macro-economic controls			
HERF	-4.1893 [2.9523]	-4.9828* [2.8122]	20.2883*** [7.0907]	15.8956** [7.0196]	6.766 [5.8736]	5.2368 [5.9231]	-22.0041*** [6.7316]	-22.4632*** [6.3336]	-11.5614** [5.2292]	-14.1362*** [5.2712]
CR									3.698 [4.4955]	
MS	-4.9965 [4.4378]		-9.287 [6.3627]		-4.6575 [6.1984]		9.2822* [4.8778]			
SIZE		-0.0009 [0.0009]	-0.0007 [0.0009]			-0.0033 [0.0026]		-0.0060*** [0.0020]		-0.0050** [0.0020]
EFF	-11.6435*** [2.5491]	-11.4928*** [2.5628]	-11.6043*** [2.5392]	-8.2994 [5.2834]	-10.1721* [5.3655]	-9.7276* [5.3358]	-0.8832 [4.0846]	-1.7606 [4.0117]	-1.0289 [4.1415]	-1.3672 [4.0541]
CAP			0.1879*** [0.0475]	0.1949*** [0.0473]	0.1788*** [0.0480]	0.1834*** [0.0474]	0.0899** [0.0386]	0.0738* [0.0381]	0.0887** [0.0393]	0.0785** [0.0385]
LTA			0.0532 [0.0380]	0.0485 [0.0384]	0.0703* [0.0386]	0.061 [0.0388]	0.0800** [0.0313]	0.0696** [0.0311]	0.0708** [0.0318]	0.0631** [0.0316]
DSDEP			0.0361* [0.0196]	0.0370* [0.0196]	0.0400** [0.0199]	0.0399** [0.0199]	0.0189 [0.0152]	0.0176 [0.0150]	0.0161 [0.0154]	0.0147 [0.0153]
gdp							-0.3509*** [0.1257]	-0.3801*** [0.1250]	-0.2944** [0.1281]	-0.3158** [0.1269]
inflation							0.075 [0.0712]	0.073 [0.0704]	0.0904 [0.0744]	0.0964 [0.0735]
str							0.0342 [0.0655]	0.0385 [0.0648]	0.054 [0.0678]	0.0638 [0.0671]
Country dummies	no	no	no	no	no	no	no	no	no	no
Time dummies	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Observations	1032	1032	1032	390	390	390	354	354	354	354
Number of banks	304	304	304	111	111	111	109	109	109	109
R-squared	0.11	0.11	0.12	0.3	0.28	0.28	0.25	0.27	0.23	0.25

Note: Standard errors are given in brackets. *, **, and *** indicate significance levels of 10, 5 and 1 percent, respectively.

TABLE A12

Panel Estimations for Bank Margins for the Full Sample of Western and Eastern European Banks - No Country Dums - Country Heterogeneity (RE)

Variables	SCP versus EFF			bank-specific controls			macro-economic controls		
HERF	3.5263*** [0.7117]	3.3838*** [0.6943]	6.9488*** [0.6228]	7.2980*** [0.6101]	-0.3226 [0.6123]	0.0877 [0.6037]	-0.1504 [0.3810]	-0.0005 [0.3800]	
CR		1.6555*** [0.4853]	1.6656*** [0.4800]	3.3305*** [0.3953]	3.5313*** [0.3925]		1.9113*** [0.5830]		
MS	-1.3640* [0.7956]	-0.885 [0.7850]		1.7731*** [0.6303]	2.5087*** [0.6248]	1.9434*** [0.5891]			
SIZE		-0.0002*** [0.0000]	-0.0002*** [0.0000]	-0.0001*** [0.0000]	-0.0001*** [0.0000]	-0.0001*** [0.0000]		-0.0001*** [0.0000]	
EFF	-0.5495*** [0.0390]	-0.4932*** [0.0397]	-0.5510*** [0.0390]	-0.3249*** [0.0260]	-0.3267*** [0.0261]	-0.3429*** [0.0236]	-0.3428*** [0.0236]	-0.3189*** [0.0239]	
CAP			0.0891*** [0.0031]	0.0856*** [0.0031]	0.0895*** [0.0031]	0.0832*** [0.0028]	0.0831*** [0.0028]	0.0792*** [0.0029]	
LTA			0.0272*** [0.0009]	0.0269*** [0.0009]	0.0272*** [0.0009]	0.0275*** [0.0009]	0.0275*** [0.0009]	0.0273*** [0.0009]	
DSDEP			0.0085*** [0.0009]	0.0081*** [0.0009]	0.0086*** [0.0009]	0.0070*** [0.0008]	0.0070*** [0.0008]	0.0066*** [0.0008]	
gdp						0.0056 [0.0164]	0.0045 [0.0164]	0.005 [0.0165]	
inflation						0.1642*** [0.0088]	0.1656*** [0.0088]	0.1658*** [0.0088]	
str						0.1375*** [0.0088]	0.1380*** [0.0088]	0.1381*** [0.0088]	
Country dummies	no	no	no	no	no	no	no	no	
Time dummies	yes	yes	yes	yes	yes	yes	yes	yes	
Observations	11753	11753	10989	10989	10989	10937	10937	10937	
Numb. of countries	36	36	30	30	30	30	30	30	
R-squared	0.04	0.04	0.17	0.17	0.17	0.2	0.2	0.2	

(Continued)

TABLE A12 (Continued)

Panel Estimations for Bank Margins for the Full Sample of Western and Eastern European Banks - No Country Dums - Country Heterogeneity (FE)

Variables	SCP versus EFF			bank-specific controls			macro-economic controls		
HERF	3.4167*** [0.7235]	3.2796*** [0.7080]	7.2637*** [0.6426]	7.6253*** [0.6348]	-0.3103 [0.6557]	0.0318 [0.6506]	-0.1035 [0.3951]	0.0086 [0.3944]	
CR	1.5567*** [0.4904]	1.5664*** [0.4859]	3.3662*** [0.4020]	3.5401*** [0.4008]	1.9116*** [0.5958]	-0.0001*** [0.0000]	1.8852*** [0.5922]	-0.0001*** [0.0000]	
MS	-1.4631* [0.7997]	-1.0238 [0.7903]	1.8203*** [0.6333]	2.5042*** [0.6294]	-0.3431*** [0.0239]	-0.3180*** [0.0242]	-0.3429*** [0.0239]	-0.3180*** [0.0242]	
SIZE	-0.0002*** [0.0000]	-0.0002*** [0.0000]	-0.0001*** [0.0000]	-0.0001*** [0.0000]	0.0825*** [0.0266]	0.0785*** [0.0242]	0.0825*** [0.0239]	0.0785*** [0.0242]	
EFF	-0.5431*** [0.0392]	-0.4865*** [0.0399]	-0.3232*** [0.0262]	-0.2997*** [0.0265]	-0.3005*** [0.0266]	-0.3180*** [0.0242]	-0.3429*** [0.0239]	-0.3180*** [0.0242]	
CAP			0.0882*** [0.0031]	0.0844*** [0.0031]	0.0844*** [0.0031]	0.0785*** [0.0029]	0.0825*** [0.0029]	0.0785*** [0.0029]	
LTA			0.0273*** [0.0009]	0.0270*** [0.0009]	0.0270*** [0.0009]	0.0273*** [0.0009]	0.0276*** [0.0009]	0.0273*** [0.0009]	
DSDEP			0.0084*** [0.0009]	0.0080*** [0.0009]	0.0081*** [0.0009]	0.0065*** [0.0008]	0.0070*** [0.0008]	0.0065*** [0.0008]	
gdp						0.0049 [0.0166]	0.0051 [0.0166]	0.005 [0.0166]	
inflation						0.1562*** [0.0097]	0.1542*** [0.0096]	0.1563*** [0.0096]	
str						0.1319*** [0.0093]	0.1312*** [0.0094]	0.1320*** [0.0093]	
Country dummies	no	no	no	no	no	no	no	no	
Time dummies	yes	yes	yes	yes	yes	yes	yes	yes	
Observations	11753	11753	10989	10989	10989	10937	10937	10937	
Numb. of countries	36	36	30	30	30	30	30	30	
R-squared	0.04	0.04	0.17	0.17	0.17	0.2	0.2	0.2	

Note: Standard errors are given in brackets. *, **, and *** indicate significance levels of 10, 5 and 1 percent, respectively.

TABLE A13

Panel Estimations for Bank Margins for the Sample of Western European banks - No Country Dums - Country Heterogeneity (RE)

Variables	SCP versus EFF			bank-specific controls			macro-economic controls		
HERF	1.0686*	1.0236*	1.5267***	1.5142***	1.0475***	0.4121	0.3658		
	[0.5862]	[0.5775]	[0.5455]	[0.5408]	[0.3209]	[0.4864]	[0.2269]		
CR	0.7865**	0.8030**	1.0256***	1.0475***	1.0475***		0.3758		-0.2187
	[0.3476]	[0.3442]	[0.3218]	[0.3209]	[0.3209]		[0.3126]		[0.1616]
MS	-4.2784***	-4.2623***	-2.2005***	-2.1736***	-2.1736***	-2.0510***	-1.9783***		
	[0.7451]	[0.7443]	[0.6975]	[0.6970]	[0.6970]	[0.6681]	[0.6729]		
SIZE	-0.0002***	-0.0002***	-0.0001***	-0.0001***	-0.0001***	-0.0001***	-0.0001***		-0.0001***
	[0.0000]	[0.0000]	[0.0000]	[0.0000]	[0.0000]	[0.0000]	[0.0000]		[0.0000]
EFF	-0.4806***	-0.4338***	-0.3353***	-0.3141***	-0.3139***	-0.3313***	-0.4470***		-0.4465***
	[0.0201]	[0.0203]	[0.0192]	[0.0193]	[0.0193]	[0.0186]	[0.0189]		[0.0189]
CAP			0.0697***	0.0664***	0.0697***	0.0708***	0.0642***		0.0648***
			[0.0025]	[0.0025]	[0.0025]	[0.0025]	[0.0026]		[0.0026]
LTA			0.0253***	0.0250***	0.0253***	0.0259***	0.0239***		0.0240***
			[0.0007]	[0.0007]	[0.0007]	[0.0007]	[0.0007]		[0.0007]
DSDEP			0.0063***	0.0058***	0.0063***	0.0063***	0.0017***		0.0018***
			[0.0007]	[0.0007]	[0.0007]	[0.0007]	[0.0005]		[0.0005]
gdp						0.0570***	0.0510***		0.0569***
						[0.0177]	[0.0140]		[0.0140]
inflation						0.1531***	0.4119***		0.4093***
						[0.0248]	[0.0178]		[0.0179]
str						0.1773***	0.2748***		0.2698***
						[0.0172]	[0.0159]		[0.0159]
Country dummies	no	no	no	no	no	no	no		no
Time dummies	yes	yes	yes	yes	yes	yes	yes		yes
Observations	10102	10102	10096	10096	10096	10096	10096		10096
Numb. of countries	18	18	18	18	18	18	18		18
R-squared	0.08	0.09	0.22	0.22	0.22	0.23	0.22		0.23

(Continued)

TABLE A13 (Continued)

Panel Estimations for Bank Margins for the Sample of Western European banks - No Country Dums - Country Heterogeneity (FE)

Variables	SCP versus EFF			bank-specific controls			macro-economic controls		
HERF	1.055* [0.6167]	1.1858* [0.6123]	1.6315*** [0.5692]	1.7067*** [0.5676]	1.1118*** [0.3272]	0.6737 [0.5748]	0.7547 [0.5730]	0.478 [0.3326]	0.5249 [0.3316]
CR					1.0667*** [0.3281]				
MS	-4.3744*** [0.7571]	-4.3716*** [0.7569]	-2.1829*** [0.7073]	-2.1767*** [0.7072]	-2.1767*** [0.7072]	-1.7803** [0.7032]		-1.7811** [0.7032]	
SIZE		-0.0002*** [0.0000]		-0.0001*** [0.0000]	-0.0001*** [0.0000]		-0.0001*** [0.0000]		-0.0001*** [0.0000]
EFF	-0.4820*** [0.0203]	-0.4348*** [0.0206]	-0.3363*** [0.0193]	-0.3148*** [0.0195]	-0.3362*** [0.0193]	-0.3344*** [0.0192]	-0.3124*** [0.0193]	-0.3343*** [0.0192]	-0.3122*** [0.0193]
CAP			0.0696*** [0.0025]	0.0664*** [0.0025]	0.0696*** [0.0025]	0.0707*** [0.0025]	0.0673*** [0.0025]	0.0707*** [0.0025]	0.0673*** [0.0025]
LTA			0.0253*** [0.0007]	0.0251*** [0.0007]	0.0253*** [0.0007]	0.0260*** [0.0007]	0.0258*** [0.0007]	0.0260*** [0.0007]	0.0258*** [0.0007]
DSDEP			0.0064*** [0.0007]	0.0058*** [0.0007]	0.0063*** [0.0007]	0.0065*** [0.0007]	0.0059*** [0.0007]	0.0065*** [0.0007]	0.0059*** [0.0007]
gdp						0.0536*** [0.0181]	0.0503*** [0.0180]	0.0527*** [0.0181]	0.0493*** [0.0181]
inflation						0.1540*** [0.0258]	0.1595*** [0.0256]	0.1525*** [0.0258]	0.1579*** [0.0257]
str						0.1790*** [0.0174]	0.1789*** [0.0174]	0.1789*** [0.0174]	0.1788*** [0.0174]
Country dummies	no	no	no	no	no	no	no	no	no
Time dummies	yes	yes	yes	yes	yes	yes	yes	yes	yes
Observations	10102	10102	10096	10096	10096	10096	10096	10096	10096
Numb. of countries	18	18	18	18	18	18	18	18	18
R-squared	0.08	0.09	0.08	0.08	0.22	0.23	0.23	0.23	0.23

Note: Standard errors are given in brackets. *, **, and *** indicate significance levels of 10, 5 and 1 percent, respectively.

TABLE A14

Panel Estimations for Bank Margins for the Sample of Eastern European banks - No Country Dums - Country Heterogeneity (RE)

Variables	SCP versus EFF			bank-specific controls			macro-economic controls			
HERF	-2.6909 [2.3581]	-2.2244 [2.2491]	7.3560*** [2.3372]	9.3399*** [2.0345]	3.9518** [1.9342]	5.9031*** [1.7798]	-4.9905** [2.3062]	-0.2574 [2.0143]	-4.8927*** [1.8639]	-1.8323 [1.7330]
CR										0.0010** [0.0005]
MS		-0.0010** [0.0004]		0.0017*** [0.0006]		0.0017*** [0.0006]				
SIZE	1.1189 [2.2086]		4.3355* [2.2597]		6.0897*** [2.1499]		8.3935*** [2.0083]		8.1446*** [1.8853]	
EFF	-4.8509*** [0.7205]	-4.5825*** [0.7226]	-2.1055*** [0.5681]	-2.2105*** [0.5683]	-2.1292*** [0.5701]	-2.1876*** [0.5716]	-2.0678*** [0.4791]	-2.0095*** [0.4849]	-2.0767*** [0.4785]	-2.0039*** [0.4844]
CAP			0.1702*** [0.0174]	0.1736*** [0.0172]	0.1753*** [0.0174]	0.1751*** [0.0173]	0.1382*** [0.0153]	0.1286*** [0.0154]	0.1392*** [0.0152]	0.1307*** [0.0154]
LTA			0.0280*** [0.0108]	0.0291*** [0.0108]	0.0259** [0.0108]	0.0273** [0.0108]	0.0283*** [0.0094]	0.0312*** [0.0094]	0.0286*** [0.0093]	0.0307*** [0.0094]
DSDEP			0.0290*** [0.0067]	0.0290*** [0.0067]	0.0306*** [0.0067]	0.0316*** [0.0067]	0.0245*** [0.0058]	0.0260*** [0.0059]	0.0247*** [0.0058]	0.0269*** [0.0058]
gdp							0.0019 [0.0570]	0.009 [0.0574]	0.0051 [0.0569]	0.0082 [0.0574]
inflation							0.1520*** [0.0161]	0.1484*** [0.0164]	0.1537*** [0.0161]	0.1499*** [0.0164]
str							0.0987*** [0.0187]	0.0974*** [0.0189]	0.0998*** [0.0186]	0.0958*** [0.0188]
Country dummies	no	no	no	no	no	no	no	no	no	no
Time dummies	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Observations	1651	1651	893	893	893	893	841	841	841	841
Numb. of countries	18	18	12	12	12	12	12	12	12	12
R-squared	0.07	0.08	0.19	0.19	0.19	0.18	0.2	0.19	0.2	0.19

(Continued)

TABLE A14 (Continued)

Panel Estimations for Bank Margins for the Sample of Eastern European banks - No Country Dums - Country Heterogeneity (FE)

Variables	SCP versus EFF			bank-specific controls			macro-economic controls		
HERF	-4.6540*	-4.1284*	12.9690***	15.4977***	-10.5608***	-4.8766	-7.2281**	-5.1320*	
	[2.5086]	[2.4313]	[3.4983]	[3.3271]	[3.8644]	[3.6689]	[3.0916]	[3.0676]	
CR				6.9619**	8.6943***			0.0010**	
				[3.0388]	[3.0029]			[0.0005]	
MS				0.0012**	0.0012**				
				[0.0006]	[0.0006]				
SIZE	0.9318		4.6667**	6.3559***	8.5795***		7.4820***		
	[2.2398]		[2.1963]	[2.1296]	[2.0116]		[1.9234]		
EFF	-4.5028***	-4.2519***	-2.0277***	-2.0155***	-1.9993***	-1.8726***	-2.0147***	-1.8944***	
	[0.7314]	[0.7331]	[0.5796]	[0.5789]	[0.4993]	[0.5029]	[0.5000]	[0.5023]	
CAP			0.1568***	0.1577***	0.1507***	0.1413***	0.1468***	0.1406***	
			[0.0188]	[0.0189]	[0.0170]	[0.0172]	[0.0169]	[0.0172]	
LTA			0.0445***	0.0467***	0.0482***	0.0515***	0.0473***	0.0511***	
			[0.0112]	[0.0111]	[0.0112]	[0.0101]	[0.0100]	[0.0100]	
DSDEP			0.0216**	0.0213**	0.0170**	0.0183**	0.0167**	0.0177**	
			[0.0085]	[0.0085]	[0.0086]	[0.0077]	[0.0076]	[0.0077]	
gdp						-0.0206	-0.0236	-0.0174	
						[0.0698]	[0.0692]	[0.0697]	
inflation						0.1456***	0.1432***	0.1485***	
						[0.0431]	[0.0428]	[0.0430]	
str						0.1105***	0.1119***	0.1135***	
						[0.0387]	[0.0385]	[0.0387]	
Country dummies	no	no	no	no	no	no	no	no	
Time dummies	yes	yes	yes	yes	yes	yes	yes	yes	
Observations	1651	1651	893	893	841	841	841	841	
Numb. of countries	18	18	12	12	12	12	12	12	
R-squared	0.07	0.08	0.08	0.19	0.21	0.2	0.21	0.2	

Note: Standard errors are given in brackets. *, **, and *** indicate significance levels of 10, 5 and 1 percent, respectively.

TABLE A15

Panel Estimations for Bank Margins for the Sample of Banks in Accession Countries - No Country Dums - Country Heterogeneity (RE)

Variables	SCP versus EFF			bank-specific controls			macro-economic controls			
HERF	-9.7021*** [2.1719]	-5.7814*** [1.8959]	-11.2919*** [2.6667]	-8.5434*** [2.4825]	-9.2733*** [2.1032] 5.2148** [2.1767]	-7.6680*** [2.0111]	-2.9325 [3.2338]	-0.8201 [3.0140]	-2.7406 [2.5370] 4.1793* [2.2541]	-1.493 [2.4413]
CR										
MS	5.9623*** [1.7338]	-10.0356*** [1.7265] 5.1668*** [1.5759]	-7.9655*** [1.6402]				4.2705* [2.3275]			
SIZE				0.0006 [0.0004]		0.0006 [0.0004]		0.0004 [0.0004]		0.0004 [0.0004]
EFF	-2.3410*** [0.3837]	-2.3376*** [0.3779]	-2.4855*** [0.3849]	-2.0386*** [0.4032]	-1.9552*** [0.3955]	-2.0462*** [0.4019]	-2.0776*** [0.3938]	-2.1339*** [0.3987]	-2.0758*** [0.3937]	-2.1356*** [0.3986]
CAP				0.1179*** [0.0225]	0.1184*** [0.0225]	0.1137*** [0.0225]	0.1023*** [0.0226]	0.0981*** [0.0226]	0.1027*** [0.0226]	0.0988*** [0.0226]
LTA				0.0316*** [0.0099]	0.0313*** [0.0099]	0.0330*** [0.0099]	0.0344*** [0.0099]	0.0359*** [0.0099]	0.0344*** [0.0099]	0.0361*** [0.0098]
DSDEP				0.0291*** [0.0071]	0.0255*** [0.0069]	0.0291*** [0.0067]	0.0462*** [0.0077]	0.0486*** [0.0076]	0.0450*** [0.0078]	0.0481*** [0.0076]
gdp							0.0471 [0.0603]	0.0421 [0.0605]	0.0525 [0.0591]	0.0412 [0.0591]
inflation							0.1787*** [0.0331]	0.1851*** [0.0329]	0.1766*** [0.0331]	0.1809*** [0.0330]
str							0.1439*** [0.0377]	0.1464*** [0.0378]	0.1405*** [0.0378]	0.1399*** [0.0381]
Country dummies	no	no	no	no	no	no	no	no	no	no
Time dummies	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Observations	619	619	619	503	503	503	487	487	487	487
Numb. of countries	8	8	8	7	7	7	7	7	7	7
R-squared	0.15	0.15	0.15	0.2	0.2	0.2	0.22	0.21	0.22	0.21

(Continued)

TABLE A15 (Continued)

Panel Estimations for Bank Margins for the Sample of Banks in Accession Countries - No Country Dums - Country Heterogeneity (FE)

Variables	SCP versus EFF			bank-specific controls			macro-economic controls		
HERF	-11.7168** [4.7961]	-11.5458** [4.8021]	-2.2571 [8.1162]	-1.9252 [8.1620]	-13.7353 [8.7872]	-13.608 [8.8097]	-1.9839 [3.8174]	-2.2394 [3.8206]	
CR									
MS	2.9225* [1.6804]	-5.4015** [2.6516] 2.6548 [1.6857]	-5.5697** [2.6504]	-0.928 [3.6628] 4.8906** [2.2087]	-1.2372 [3.6718]				
SIZE									
EFF	-1.8442*** [0.3715]	-1.8631*** [0.3720]	-1.8326*** [0.3927]	-1.8565*** [0.0004]	-1.8583*** [0.0004]	-1.8501*** [0.0004]	-1.8350*** [0.3893]	-1.8661*** [0.0004]	
CAP									
LTA									
DSDEP									
gdp									
inflation									
str									
Country dummies	no	no	no	no	no	no	no	no	
Time dummies	yes	yes	yes	yes	yes	yes	yes	yes	
Observations	619	619	503	503	487	487	487	487	
Numb. of countries	8	8	7	7	7	7	7	7	
R-squared	0.16	0.15	0.22	0.21	0.25	0.24	0.24	0.24	

Note: Standard errors are given in brackets. *, **, and *** indicate significance levels of 10, 5 and 1 percent, respectively.

TABLE A16

Panel Estimations for Bank Margins for the Sample of Banks in Non-Accession Countries - No Country Dums - Country Heterogeneity (RE)

Variables	SCP versus EFF			bank-specific controls			macro-economic controls		
HERF	-1.4083 [2.7309]	0.6165 [2.4258]	12.8569*** [4.2416]	16.2123*** [3.7158]	-4.4992 [4.3895]	1.9591 [3.9481]			
CR			-1.4447 [2.1297]		9.1493*** [3.4586]	12.1238*** [3.2199]			-2.0272 [3.6260]
MS	5.2533 [3.2187]		7.1714* [3.9155]		9.2661** [3.7058]	11.4302*** [3.4968]			10.4007*** [3.2975]
SIZE		-0.0008 [0.0006]	-0.0007 [0.0006]		0.0035*** [0.0013]	0.0037*** [0.0013]			0.0023** [0.0012]
EFF	-11.7401*** [1.5312]	-10.9698*** [1.5248]	-11.7142*** [1.5291]	-6.4331*** [1.8437]	-7.6861*** [1.9492]	-6.1204*** [1.8495]			-3.5958** [1.7827]
CAP			0.1743*** [0.0279]	0.1918*** [0.0292]	0.1821*** [0.0276]	0.1990*** [0.0292]			0.1645*** [0.0239]
LTA			0.0409* [0.0211]	0.0542** [0.0211]	0.0388* [0.0212]	0.0527** [0.0213]			0.0471** [0.0189]
DSDEP			0.0364*** [0.0136]	0.0353*** [0.0136]	0.0393*** [0.0136]	0.0399*** [0.0135]			0.0220* [0.0121]
gdp									0.0121 [0.0122]
inflation									-0.0381 [0.1265]
str									0.1622*** [0.0352]
Country dummies	no	no	no	no	no	no	no	no	no
Time dummies	yes	yes	yes	yes	yes	yes	yes	yes	yes
Observations	1032	1032	1032	390	390	390	354	354	354
Numb. of countries	10	10	10	5	5	5	5	5	5
R-squared	0.09	0.1	0.1	0.24	0.23	0.23	0.22	0.21	0.22

(Continued)

TABLE A16 (Continued)

Panel Estimations for Bank Margins for the Sample of Banks in Non-Accession Countries - No Country Dums - Country Heterogeneity (FE)

Variables	SCP versus EFF			bank-specific controls			macro-economic controls			
HERF	-8.0863** [3.3330]	-7.0725** [3.2016]	6.4898 [7.0927]	11.2489* [6.6495]	2.4199 [6.1396]	5.0973 [6.0626]	-18.5289*** [7.0614]	-7.1373 [6.5932]	-11.9686* [6.0934]	-6.9977 [6.0312]
CR										
MS	2.1916 [3.2830]	-8.5560*** [2.6907]	6.3814 [3.9290]	0.0030** [3.7414]	7.3806** [3.7414]	0.0029** [6.0626]	13.6330*** [3.5564]		11.3214*** [3.3545]	
SIZE										
EFF	-10.8308*** [1.5796]	-10.2043*** [1.5811]	-4.3893** [2.2043]	-3.5853* [2.0928]	-4.4664** [2.2078]	-3.3872 [2.0981]	-4.1129** [1.8698]	-2.1756 [1.8141]	-4.1004** [1.8790]	-2.317 [1.8058]
CAP										
LTA										
DSDEP										
gdp										
inflation										
str										
Country dummies	no	no	no	no	no	no	no	no	no	no
Time dummies	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Observations	1032	1032	390	390	390	390	354	354	354	354
Numb. of countries	10	10	5	5	5	5	5	5	5	5
R-squared	0.1	0.1	0.24	0.25	0.24	0.24	0.24	0.22	0.24	0.22

Note: Standard errors are given in brackets. *, **, and *** indicate significance levels of 10, 5 and 1 percent, respectively.

TABLE A17

Yearly Cross-Country Regressions for the Sample of Western European Banks

Variables	1994		1995		1996		1997	
	HERF	-1.9391** [0.7944]	-2.3262*** [0.7502]	2.1546*** [0.6984]	1.3486** [0.6548]	3.7124*** [0.7773]	2.4131*** [0.6947]	3.7883*** [0.8111]
MS	-2.8407** [1.3988]		-4.5231*** [1.3225]		-6.6140*** [1.6946]		-8.1997*** [1.8918]	
SIZE		-0.0002*** [0.0001]		-0.0001** [0.0001]		-0.0001*** [0.0001]		-0.0001*** [0.0000]
EFF	-0.9328*** [0.0772]	-0.8961*** [0.0781]	-0.7516*** [0.0673]	-0.7419*** [0.0679]	-0.5531*** [0.0579]	-0.5156*** [0.0593]	-0.6019*** [0.0534]	-0.5698*** [0.0550]
CAP	0.0637*** [0.0077]	0.0612*** [0.0078]	0.0716*** [0.0070]	0.0702*** [0.0071]	0.0551*** [0.0070]	0.0550*** [0.0071]	0.0594*** [0.0069]	0.0605*** [0.0070]
LTA	0.0129*** [0.0016]	0.0129*** [0.0016]	0.002 [0.0016]	0.002 [0.0016]	0.0006 [0.0017]	0.0003 [0.0017]	-0.0004 [0.0014]	-0.0004 [0.0014]
DSDEP	0.0358*** [0.0021]	0.0359*** [0.0021]	0.0311*** [0.0020]	0.0310*** [0.0020]	0.0272*** [0.0020]	0.0270*** [0.0020]	0.0248*** [0.0018]	0.0245*** [0.0018]
gdp	0.6578*** [0.0430]	0.6513*** [0.0429]	0.3843*** [0.0623]	0.3845*** [0.0626]	0.0436 [0.0537]	0.0211 [0.0544]	-0.0377 [0.0293]	-0.0617** [0.0299]
inflation	0.3493*** [0.0446]	0.3568*** [0.0446]	0.0977** [0.0392]	0.0975** [0.0395]	0.4448*** [0.0774]	0.5358*** [0.0734]	0.4754*** [0.0830]	0.5287*** [0.0829]
str	0.0017 [0.0686]	-0.0179 [0.0686]	0.4083*** [0.0386]	0.3973*** [0.0388]	0.2069*** [0.0691]	0.1134* [0.0641]	0.3789*** [0.0418]	0.3301*** [0.0408]
Constant	-1.5687*** [0.2765]	-1.4206*** [0.2789]	-1.4059*** [0.2353]	-1.2633*** [0.2405]	-0.3232 [0.2226]	-0.1256 [0.2258]	-0.4155* [0.2141]	-0.2182 [0.2165]
Country dummies	no	no	no	no	no	no	no	no
Observations	1059	1059	1092	1092	1261	1261	1409	1409
R-squared	0.51	0.52	0.51	0.51	0.38	0.38	0.4	0.39

Variables	1998		1999		2000		2001	
	HERF	-1.8527** [0.7302]	-2.5154*** [0.6763]	-2.3880*** [0.6815]	-2.7657*** [0.6452]	-1.2406* [0.7000]	-1.9527*** [0.6698]	1.2322** [0.4934]
MS	-6.3928*** [2.3979]		-3.9869** [1.9523]		-10.2391*** [2.7412]		-7.2841*** [1.7183]	
SIZE		-0.0001*** [0.0000]		-0.0001*** [0.0000]		-0.0001*** [0.0000]		-0.0001*** [0.0000]
EFF	-0.4632*** [0.0576]	-0.4327*** [0.0582]	-0.2059*** [0.0377]	-0.1914*** [0.0379]	-0.3021*** [0.0478]	-0.2880*** [0.0482]	-0.4324*** [0.0433]	-0.4337*** [0.0438]
CAP	0.0627*** [0.0072]	0.0604*** [0.0073]	0.0437*** [0.0071]	0.0398*** [0.0072]	0.0762*** [0.0072]	0.0737*** [0.0073]	0.0770*** [0.0056]	0.0773*** [0.0056]
LTA	0.0017 [0.0015]	0.001 [0.0015]	0.0025* [0.0015]	0.0018 [0.0015]	0.0012 [0.0016]	0.0006 [0.0016]	0.0001 [0.0014]	-0.0006 [0.0014]
DSDEP	0.0228*** [0.0019]	0.0224*** [0.0019]	0.0189*** [0.0020]	0.0184*** [0.0020]	0.0163*** [0.0020]	0.0155*** [0.0020]	0.0198*** [0.0015]	0.0198*** [0.0015]
gdp	-0.0218 [0.0354]	-0.0638* [0.0357]	-0.0617 [0.0395]	-0.1025** [0.0403]	-0.1974*** [0.0394]	-0.2320*** [0.0397]	0.2390*** [0.0625]	0.2320*** [0.0630]
inflation	0.4450*** [0.0646]	0.4242*** [0.0644]	0.7863*** [0.0703]	0.7574*** [0.0690]	0.7845*** [0.0826]	0.6609*** [0.0786]	0.4317*** [0.0568]	0.3418*** [0.0534]
str	0.3215*** [0.0768]	0.2571*** [0.0736]	0.2689*** [0.0516]	0.2389*** [0.0504]	0.3646*** [0.0768]	0.2548*** [0.0727]	0.2391*** [0.0520]	0.1988*** [0.0515]
Constant	0.1018 [0.3311]	0.5681* [0.3245]	0.1971 [0.2687]	0.5642** [0.2730]	-0.4241 [0.4242]	0.3798 [0.4124]	-0.8101*** [0.2416]	-0.4198* [0.2346]
Country dummies	no	no	no	no	no	no	no	no
Observations	1414	1414	1427	1427	1394	1394	1040	1040
R-squared	0.28	0.28	0.23	0.23	0.27	0.26	0.41	0.4

Note: Standard errors are given in brackets. *, ** and *** indicate significance levels of 10, 5 and 1 percent, respectively.

TABLE A18

Yearly Cross-Country Regressions for the Sample of Eastern European Banks

Variables	1994		1995		1996		1997	
	HERF	-8.4667 [12.8528]	-3.5889 [12.2097]	-21.9271* [11.0728]	-9.4599 [10.0674]	-15.1235** [7.4643]	-4.4866 [6.9821]	8.1335 [9.6246]
MS	8.1586 [9.9099]		19.4309** [8.9465]		16.6376*** [5.2149]		3.7068 [6.3989]	
SIZE		0.0047 [0.0035]		0.0032 [0.0023]		0.0011 [0.0012]		0.0003 [0.0014]
EFF	-5.3068 [7.2794]	-8.0303 [7.5409]	-5.0644 [3.8793]	-6.6913 [4.1642]	-4.8882* [2.5277]	-5.3752* [2.7534]	-1.0981* [0.5934]	-1.1059* [0.6087]
CAP	0.1454 [0.1472]	0.1938 [0.1520]	0.2393*** [0.0732]	0.2138*** [0.0729]	0.1781*** [0.0448]	0.1420*** [0.0456]	0.0171 [0.0415]	0.0106 [0.0425]
LTA	0.0588 [0.0427]	0.0584 [0.0418]	0.0770** [0.0353]	0.0758** [0.0361]	0.0122 [0.0189]	0.0123 [0.0199]	0.0174 [0.0151]	0.0181 [0.0152]
DSDEP	0.0467 [0.0684]	0.045 [0.0661]	0.0930* [0.0509]	0.1159** [0.0512]	0.0252 [0.0274]	0.0405 [0.0283]	0.0579** [0.0256]	0.0603** [0.0255]
gdp	-0.2534 [0.3767]	-0.3737 [0.3635]	0.123 [0.2521]	0.0188 [0.2537]	0.2438 [0.1826]	0.1891 [0.1913]	0.4193** [0.1986]	0.4290** [0.1996]
inflation	0.2394* [0.1360]	0.2510* [0.1277]	0.2988*** [0.0954]	0.3269*** [0.0956]	0.0772 [0.0626]	0.0543 [0.0655]	0.1809*** [0.0539]	0.1799*** [0.0555]
str	0.3010** [0.1188]	0.3327*** [0.1122]	0.1830* [0.1047]	0.1915* [0.1080]	-0.0629 [0.0843]	-0.0893 [0.0884]	0.1152** [0.0578]	0.1140* [0.0605]
Constant	-2.6024 [0.2765]	-3.899 [0.2789]	-5.9337	-8.3234** [0.2353]	3.1304 [0.2405]	2.6063	-4.1043 [0.2226]	-4.3971 [0.2258]
Country dummies	no	no	no	no	no	no	no	no
Observations	45	45	85	85	98	98	124	124
R-squared	0.39	0.4	0.47	0.45	0.34	0.27	0.33	0.33

Variables	1998		1999		2000		2001	
	HERF	-19.8110*** [6.9662]	-12.2223** [5.8299]	0.4347 [6.1546]	1.6464 [5.9102]	1.1801 [4.4445]	2.6466 [4.0326]	-1.5666 [2.4699]
MS	12.0523** [5.8078]		5.1423 [6.1303]		3.3464 [4.1836]		0.2683 [1.9731]	
SIZE		0.0014 [0.0011]		0.0007 [0.0011]		0.0003 [0.0010]		0.0003 [0.0006]
EFF	-5.4746*** [2.0372]	-3.3518* [1.7699]	-1.6282 [1.2901]	-1.7427 [1.2861]	-4.2188** [1.7952]	-3.9309** [1.7546]	-4.1861*** [1.1110]	-4.0546*** [1.1308]
CAP	0.1760*** [0.0368]	0.1663*** [0.0370]	0.1609*** [0.0376]	0.1589*** [0.0376]	0.1223*** [0.0273]	0.1213*** [0.0280]	0.0991*** [0.0266]	0.1039*** [0.0278]
LTA	0.0281* [0.0147]	0.0365** [0.0142]	0.0194 [0.0141]	0.0201 [0.0141]	-0.0052 [0.0121]	-0.0055 [0.0122]	-0.0103 [0.0080]	-0.0107 [0.0079]
DSDEP	0.0024 [0.0237]	0.0002 [0.0240]	0.0252 [0.0220]	0.0255 [0.0220]	0.0292* [0.0170]	0.0300* [0.0170]	0.0204 [0.0126]	0.0217* [0.0128]
gdp	-0.1105 [0.1952]	-0.0127 [0.1890]	-0.0799 [0.1373]	-0.0793 [0.1382]	0.2122 [0.1996]	0.2455 [0.1968]	0.3626 [0.2912]	0.3908 [0.2934]
inflation	0.1646*** [0.0572]	0.1659*** [0.0585]	0.1297*** [0.0289]	0.1257*** [0.0290]	0.1458*** [0.0338]	0.1438*** [0.0341]	-0.1983 [0.1536]	-0.2042 [0.1534]
str	0.072 [0.0567]	0.0863 [0.0567]	0.0213 [0.0411]	0.0208 [0.0412]	0.0829 [0.0859]	0.0766 [0.0858]	0.0279 [0.0650]	0.028 [0.0633]
Constant	4.6042* [2.3944]	2.3967 [2.1804]	-0.0812 [1.9605]	-0.19 [1.9783]	0.7111 [2.0096]	0.3359 [1.9965]	3.4758* [1.7845]	3.1819* [1.8409]
Country dummies	no	no	no	no	no	no	no	no
Observations	133	133	145	145	149	149	62	62
R-squared	0.51	0.5	0.45	0.45	0.36	0.35	0.62	0.63

Note: Standard errors are given in brackets. *, ** and *** indicate significance levels of 10, 5 and 1 percent, respectively.

TABLE A19

Yearly Cross-Country Regressions for the Sample of Banks in Accession Countries

Variables	1994		1995		1996		1997	
	HERF	-51.8433 [34.4473]	-44.6291 [33.4612]	19.5162 [58.5915]	19.5382 [59.6927]	-49.0389*** [15.4771]	-39.3015** [15.6395]	-4.8355 [12.8160]
MS	4.1633 [16.5709]		24.8836 [15.4835]		13.3402** [5.6188]		-2.6095 [8.3943]	
SIZE		0.0029 [0.0035]		0.0031 [0.0021]		0.0005 [0.0008]		-0.0008 [0.0013]
EFF	-7.2114 [8.2003]	-8.6592 [8.3151]	-7.0132* [3.7851]	-8.9578** [4.2062]	-4.5294** [2.0847]	-4.8365** [2.2122]	-1.0635** [0.4889]	-1.0032* [0.5033]
CAP	0.06 [0.1863]	0.1028 [0.1882]	0.1984* [0.1127]	0.1916* [0.1129]	0.0128 [0.0477]	0.0033 [0.0505]	0.0258 [0.0725]	0.0204 [0.0705]
LTA	0.066 [0.0553]	0.0671 [0.0518]	0.0810** [0.0361]	0.0821** [0.0363]	0.0013 [0.0241]	-0.0014 [0.0261]	0.0321 [0.0306]	0.0336 [0.0307]
DSDEP	0.1284 [0.0764]	0.1193 [0.0740]	0.0801 [0.0504]	0.0804 [0.0507]	0.0326 [0.0251]	0.042 [0.0260]	0.0834** [0.0328]	0.0861** [0.0332]
gdp	-0.4383 [0.6217]	-0.4702 [0.6127]	0.2177 [0.3249]	0.1485 [0.3392]	0.5118* [0.3012]	0.4256 [0.3260]	0.3311* [0.1909]	0.3386* [0.1878]
inflation	0.2645 [0.1930]	0.2727 [0.1715]	0.3233** [0.1323]	0.2715** [0.1261]	-0.082 [0.1182]	-0.0784 [0.1244]	-0.0609 [0.1614]	-0.0642 [0.1603]
str	0.1411 [0.2239]	0.1677 [0.2211]	0.4924 [0.4808]	0.4278 [0.4742]	-0.6497** [0.3102]	-0.6839** [0.3304]	0.0897 [0.1367]	0.1069 [0.1370]
Constant	4.9685 [12.1971]	3.1115 [11.3700]	-12.7615 [12.1824]	-10.5444 [11.8709]	12.9439** [5.1854]	12.3076** [5.4983]	-0.0437 [3.9714]	-0.1052 [3.9121]
Country dummies	no	no	no	no	no	no	no	no
Observations	40	40	55	55	61	61	67	67
R-squared	0.34	0.36	0.41	0.41	0.52	0.47	0.27	0.27

Variables	1998		1999		2000		2001	
	HERF	-22.0227*** [7.3747]	-19.9077*** [6.3331]	-16.0722 [13.4566]	-15.7941 [13.4849]	1.1309 [4.2309]	1.6908 [3.7154]	-2.6918 [3.4595]
MS	2.5585 [4.1653]		2.7789 [4.8153]		0.9327 [2.9881]		-0.3698 [2.2399]	
SIZE		0.0002 [0.0007]		0.0004 [0.0009]		0.0003 [0.0006]		-0.0001 [0.0008]
EFF	-3.5157** [1.7081]	-3.4576* [1.7461]	-2.0181 [1.2763]	-1.9977 [1.2769]	-3.9419*** [0.9478]	-3.9111*** [0.9479]	-4.0866*** [1.3632]	-4.1054** [1.5062]
CAP	0.1045*** [0.0353]	0.0980*** [0.0336]	0.0719* [0.0369]	0.0691* [0.0362]	0.0841** [0.0353]	0.0848** [0.0351]	0.1269 [0.1025]	0.1253 [0.1040]
LTA	0.0143 [0.0137]	0.0159 [0.0135]	0.0126 [0.0217]	0.0131 [0.0218]	0.0012 [0.0127]	0.0005 [0.0129]	-0.0073 [0.0134]	-0.0075 [0.0137]
DSDEP	0.0001 [0.0157]	0.0009 [0.0158]	0.0309 [0.0192]	0.0305 [0.0194]	0.0269** [0.0124]	0.0269** [0.0124]	0.0274 [0.0167]	0.0274 [0.0174]
gdp	0.0181 [0.1565]	0.0484 [0.1479]	-0.4281 [0.4715]	-0.4848 [0.4641]	0.2345 [0.1931]	0.2602 [0.1951]	0.4037 [0.3305]	0.3942 [0.3280]
inflation	-0.4114** [0.1553]	-0.3973** [0.1542]	0.0249 [0.1980]	0.0516 [0.1900]	-0.0387 [0.0963]	-0.0373 [0.0942]	-0.2954 [0.2334]	-0.2948 [0.2370]
str	0.1468* [0.0866]	0.1443 [0.0879]	-0.0975 [0.2782]	-0.1323 [0.2789]	0.1811*** [0.0500]	0.1804*** [0.0498]	-0.0029 [0.0853]	-0.005 [0.0873]
Constant	9.2803*** [2.5559]	8.7880*** [2.4016]	5.7113 [3.8889]	5.7995 [3.9268]	1.4857 [1.5319]	1.254 [1.4644]	3.6094 [2.3479]	3.6914 [2.5911]
Country dummies	no	no	no	no	no	no	no	no
Observations	70	70	79	79	76	76	39	39
R-squared	0.54	0.54	0.22	0.21	0.43	0.43	0.55	0.55

Note: Standard errors are given in brackets. *, ** and *** indicate significance levels of 10, 5 and 1 percent, respectively.

TABLE A20

Yearly Cross-Country Regressions for the Sample of Banks in Non-Accession Countries

Variables	1994		1995		1996		1997	
	HERF	.	.	<i>dropped</i>	<i>dropped</i>	<i>dropped</i>	<i>dropped</i>	<i>dropped</i>
MS	.	.	15.2168		18.9060*		7.7533	
SIZE	.	.	[15.9633]	0.002	[9.3831]	0.0053	[9.9414]	0.0028
EFF	.	.	-33.593	-34.9773	11.0822	8.5871	-13.0134	-13.6763
CAP	.	.	[22.5022]	[23.0820]	[13.3880]	[15.3597]	[9.3848]	[9.4043]
LTA	.	.	0.1675	0.143	0.2939***	0.2496**	0.014	0.0262
DSDEP	.	.	[0.1375]	[0.1642]	[0.1019]	[0.1084]	[0.0727]	[0.0760]
gdp	.	.	0.0593	0.0609	0.0394	0.0348	0.0242	0.0214
inflation	.	.	[0.0878]	[0.0896]	[0.0488]	[0.0517]	[0.0301]	[0.0302]
str	.	.	0.1628	0.1839	0.0451	0.0882	0.0939*	0.1014*
Constant	.	.	[0.1360]	[0.1400]	[0.0732]	[0.0747]	[0.0535]	[0.0517]
Country dummies	.	.	<i>dropped</i>	<i>dropped</i>	6.9581	1.0729	-0.016	-0.2476
Observations	.	.	0.2521	0.433	[8.8814]	[8.9826]	[1.2498]	[1.1702]
R-squared	.	.	[0.3742]	[0.3300]	[4.3913]	[4.4331]	[0.3750]	[0.3565]
	.	.	0.4099	0.4059	4.8198	0.6984	0.0248	-0.0577
	.	.	[0.4523]	[0.5089]	[6.1268]	[6.1619]	[0.3480]	[0.3286]
	.	.	-9.5595	-10.0097	-127.159	-25.5538	0.3193	2.0471
	.	.	[11.5495]	[11.7871]	[154.5876]	[156.3130]	[12.6010]	[12.0248]
	.	.	no	no	no	no	no	no
	.	.	30	30	37	37	57	57
	.	.	0.53	0.51	0.41	0.34	0.42	0.43

Variables	1998		1999		2000		2001	
	HERF	-25.5523*	-19.6217	260.7449	216.9017	-33.1186	-27.0089	<i>dropped</i>
MS	[13.6847]	[13.1321]	[235.8156]	[222.9845]	[32.4279]	[32.1390]	46.1584**	
SIZE	32.2383*		13.5061		11.254		[18.5173]	
EFF	[16.4940]	0.0038	[17.1621]	0.0018	[9.3243]	0.0016		0.0044**
CAP		[0.0025]		[0.0023]		[0.0024]		[0.0018]
LTA	-10.6581	1.3303	-1.4536	-1.5453	-7.7722	-4.6397	-13.9504***	-13.9504***
DSDEP	[7.0145]	[3.9593]	[2.5098]	[2.5087]	[6.0401]	[5.2334]	[4.6487]	[4.6487]
gdp	0.2317***	0.2416***	0.2607***	0.2614***	0.1557***	0.1564***	0.1227***	0.1227***
inflation	[0.0623]	[0.0663]	[0.0724]	[0.0726]	[0.0516]	[0.0547]	[0.0336]	[0.0336]
str	0.025	0.0373	0.0281	0.0292	-0.0254	-0.0257	-0.0082	-0.0082
Constant	[0.0284]	[0.0282]	[0.0334]	[0.0335]	[0.0229]	[0.0232]	[0.0097]	[0.0097]
Country dummies	0.0598	0.0513	0.0307	0.0326	0.0707*	0.0695*	0.008	0.008
Observations	[0.0534]	[0.0537]	[0.0467]	[0.0467]	[0.0371]	[0.0383]	[0.0218]	[0.0218]
R-squared	-0.361	-0.061	-7.0939	-5.8213	1.3966	1.3325	<i>dropped</i>	<i>dropped</i>
	[0.8975]	[0.9132]	[6.3986]	[6.0223]	[1.1849]	[1.2056]		
	0.1749	0.2371	-0.0161	0.0095	0.5774	0.5317	<i>dropped</i>	<i>dropped</i>
	[0.2278]	[0.2312]	[0.1595]	[0.1518]	[0.3903]	[0.3923]		
	0.0574	0.1475	0.7406	0.6167	1.6096	1.4327	<i>dropped</i>	<i>dropped</i>
	[0.1169]	[0.1123]	[0.6458]	[0.6098]	[1.3976]	[1.4062]		
	1.9846	-3.3996	-45.7155	-38.8151	-2.2173	-3.1868	5.5994***	5.5994***
	[5.3859]	[5.3658]	[38.9937]	[36.7908]	[5.1173]	[5.3299]	[1.7777]	[1.7777]
	no	no	no	no	no	no	no	no
	63	63	66	66	73	73	23	23
	0.46	0.45	0.42	0.42	0.3	0.29	0.68	0.68

Note: Standard errors are given in brackets. *, ** and *** indicate significance levels of 10, 5 and 1 percent, respectively.

TABLE A21

Panel Estimations for Bank Margins for the Full Sample of Western and Eastern European Banks (Alternating Macro-Variables)

Variables	<i>gdp and inflation</i>			<i>gdp and str</i>			<i>inflation and str</i>				
HERF	6.4817*** [0.4786]	6.4155*** [0.4762]	2.9547*** [0.2912] -0.3228 [0.7054]	3.2527*** [0.4193]	3.2632*** [0.4170]	2.1314*** [0.2477] 0.6095 [0.6363]	2.1348*** [0.2474]	0.6068 [0.4132]	0.6053 [0.4113]	0.6056** [0.2437] 0.2421 [0.6207]	0.6006** [0.2435]
CR	-1.035 [0.7063]	-0.0001** [0.0000]	2.9516*** [0.2908]	0.2899 [0.6395]	-0.0001** [0.0000]	-0.0001** [0.0000]	-0.0001** [0.0000]	0.1905 [0.6233]	-0.0001** [0.0000]	-0.0001** [0.0000]	-0.0001** [0.0000]
MS	-0.2188*** [0.0346]	-0.2107*** [0.0350]	-0.2217*** [0.0347]	-0.2413*** [0.0319]	-0.2305*** [0.0321]	-0.2394*** [0.0318]	-0.2283*** [0.0321]	-0.2491*** [0.0313]	-0.2392*** [0.0315]	-0.2478*** [0.0312]	-0.2380*** [0.0315]
SIZE	0.0928*** [0.0039]	0.0924*** [0.0039]	0.0928*** [0.0039]	0.0812*** [0.0036]	0.0801*** [0.0036]	0.0814*** [0.0036]	0.0802*** [0.0036]	0.0743*** [0.0035]	0.0734*** [0.0035]	0.0745*** [0.0035]	0.0735*** [0.0035]
EFF	0.0199*** [0.0014]	0.0197*** [0.0014]	0.0199*** [0.0014]	0.0161*** [0.0013]	0.0160*** [0.0013]	0.0162*** [0.0013]	0.0161*** [0.0013]	0.0193*** [0.0013]	0.0192*** [0.0013]	0.0193*** [0.0013]	0.0192*** [0.0013]
CAP	0.0055*** [0.0010]	0.0054*** [0.0010]	0.0057*** [0.0010]	0.0053*** [0.0009]	0.0052*** [0.0009]	0.0052*** [0.0009]	0.0051*** [0.0009]	0.0042*** [0.0009]	0.0041*** [0.0009]	0.0042*** [0.0009]	0.0041*** [0.0009]
LTA	-0.0614*** [0.0120]	-0.0620*** [0.0120]	-0.0553*** [0.0120]	-0.0452*** [0.0106]	-0.0463*** [0.0106]	-0.0472*** [0.0106]	-0.0482*** [0.0106]	0.0009 [0.0106]	0.0009 [0.0106]	0.0009 [0.0106]	0.0009 [0.0106]
DSDEP	0.0847*** [0.0041]	0.0845*** [0.0041]	0.0899*** [0.0041]	0.0002 [0.0036]	0.0002 [0.0035]	0.0017 [0.0035]	0.0017 [0.0035]	0.1556*** [0.0063]	0.1557*** [0.0062]	0.1543*** [0.0062]	0.1543*** [0.0062]
gdp											
inflation											
str											
Country dummies	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Time dummies	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Observations	10989	10989	10989	10937	10937	10937	10937	10937	10937	10937	10937
Number of banks	2066	2066	2066	2063	2063	2063	2063	2063	2063	2063	2063
R-squared	0.18	0.18	0.17	0.11	0.11	0.12	0.12	0.17	0.17	0.17	0.17

Note: Standard errors are given in brackets. *, ** and *** indicate significance levels of 10, 5 and 1 percent, respectively.

TABLE A22

Panel Estimations for Bank Margins for the Sample of Western European Banks (Alternating Macro-Variables)

Variables	<i>gdp and inflation</i>			<i>gdp and str</i>			<i>inflation and str</i>		
HERF	1.6051*** [0.3099]	1.5904*** [0.3098]	1.7452*** [0.3076]	1.7275*** [0.3076]	1.7055*** [0.3052]	1.6814*** [0.3051]	1.1168*** [0.1757]	1.1044*** [0.1757]	
CR		1.0505*** [0.1787]	1.0438*** [0.1787]	1.1686*** [0.1769]	1.1613*** [0.1768]				
MS	-0.6771 [0.5875]	-0.6561 [0.5872]	-1.1523** [0.5839]	-1.1208* [0.5835]	-0.7123 [0.5833]		-0.6898 [0.5830]		
SIZE		-0.0001*** [0.0000]	-0.0001*** [0.0000]	-0.0001*** [0.0000]	-0.0001*** [0.0000]	-0.0001*** [0.0000]		-0.0001*** [0.0000]	
EFF	-0.2439*** [0.0225]	-0.2336*** [0.0226]	-0.2427*** [0.0225]	-0.2154*** [0.0225]	-0.2225*** [0.0223]	-0.2118*** [0.0225]	-0.2213*** [0.0223]	-0.2107*** [0.0224]	
CAP	0.0603*** [0.0028]	0.0592*** [0.0028]	0.0604*** [0.0028]	0.0588*** [0.0028]	0.0599*** [0.0028]	0.0590*** [0.0028]	0.0602*** [0.0028]	0.0591*** [0.0028]	
LTA	0.0133*** [0.0009]	0.0132*** [0.0009]	0.0132*** [0.0009]	0.0145*** [0.0009]	0.0146*** [0.0009]	0.0145*** [0.0009]	0.0155*** [0.0009]	0.0154*** [0.0009]	
DSDEP	0.0021*** [0.0007]	0.0019*** [0.0007]	0.0020*** [0.0007]	0.0035*** [0.0007]	0.0036*** [0.0007]	0.0035*** [0.0007]	0.0031*** [0.0007]	0.0029*** [0.0007]	
gdp	0.0812*** [0.0097]	0.0791*** [0.0097]	0.0798*** [0.0097]	0.0687*** [0.0097]	0.0692*** [0.0097]	0.0671*** [0.0097]			
inflation	0.1584*** [0.0140]	0.1579*** [0.0140]	0.1557*** [0.0140]	0.1397*** [0.0096]	0.1392*** [0.0096]	0.1388*** [0.0096]	0.1492*** [0.0139]	0.1487*** [0.0139]	
str							0.1412*** [0.0096]	0.1406*** [0.0096]	
Country dummies	yes	yes	yes	yes	yes	yes	yes	yes	
Time dummies	yes	yes	yes	yes	yes	yes	yes	yes	
Observations	10096	10096	10096	10096	10096	10096	10096	10096	
Number of banks	1832	1832	1832	1832	1832	1832	1832	1832	
R-squared	0.16	0.16	0.16	0.16	0.16	0.16	0.17	0.17	

Note: Standard errors are given in brackets. *, ** and *** indicate significance levels of 10, 5 and 1 percent, respectively.

TABLE A23

Panel Estimations for Bank Margins for the Sample of Eastern European Banks (Alternating Macro-Variables)

Variables	<i>gdp</i> and <i>inflation</i>		<i>gdp</i> and <i>str</i>		<i>inflation</i> and <i>str</i>				
HERF	15.9661*** [3.3353]	16.1049*** [3.2171]	-7.3244** [3.4548]	-4.9897 [3.2878]	-11.5023*** [3.4633]	-8.8839*** [3.3042]	-6.2962** [2.5439] 3.6878 [2.3705]	-5.7380** [2.5379]	
CR	8.0410*** [2.7581] 1.9956 [2.5728]	8.5247*** [2.7363]	5.0769** [2.5138]	0	-3.4917 [2.5429] 3.76 [2.3896]	-2.918 [2.5340]	0.0001 [0.0007]	0.0002 [0.0007]	
MS	-1.2829** [0.5489] 0.1614*** [0.0212]	-1.3375** [0.5490] 0.1669*** [0.0213]	-1.2964** [0.5541] 0.1642*** [0.0214]	-1.1923*** [0.4547] 0.1333*** [0.0199]	-1.2556*** [0.4543] 0.1377*** [0.0198]	-1.2120*** [0.4553] 0.1329*** [0.0199]	-1.2948*** [0.4471] 0.1354*** [0.0197]	-1.3069*** [0.4491] 0.1312*** [0.0197]	-1.2717*** [0.4502] 0.1269*** [0.0197]
EFF	0.0540*** [0.0126]	0.0543*** [0.0126]	0.0558*** [0.0127]	0.0502*** [0.0114]	0.0484*** [0.0114]	0.0494*** [0.0114]	0.0559*** [0.0113]	0.0544*** [0.0113]	0.0556*** [0.0113]
CAP	0.0241*** [0.0090]	0.0236*** [0.0090]	0.0248*** [0.0091]	0.0162** [0.0081]	0.0158* [0.0081]	0.0161** [0.0081]	0.0177** [0.0080]	0.0176** [0.0080]	0.0178** [0.0080]
LTA	-0.1811*** [0.0557]	-0.1786*** [0.0555]	-0.1736*** [0.0566]	-0.1741*** [0.0470]	-0.1688*** [0.0470]	-0.1737*** [0.0471]	0.1555*** [0.0280]	0.1501*** [0.0280]	0.1516*** [0.0280]
DSDEP	0.0469*** [0.0141]	0.0478*** [0.0141]	0.0566*** [0.0141]	0.0575*** [0.0140]	-0.0185* [0.0104]	-0.0173* [0.0104]	0.1128*** [0.0265]	0.1098*** [0.0266]	0.1107*** [0.0266]
gdp									
inflation									
str									
Country dummies	yes	yes	yes	yes	yes	yes	yes	yes	yes
Time dummies	yes	yes	yes	yes	yes	yes	yes	yes	yes
Observations	893	893	893	841	841	841	841	841	841
Number of banks	234	234	234	231	231	231	231	231	231
R-squared	0.29	0.29	0.27	0.21	0.21	0.2	0.22	0.22	0.22

Note: Standard errors are given in brackets. *, ** and *** indicate significance levels of 10, 5 and 1 percent, respectively.

TABLE A24

Panel Estimations for Bank Margins for the Sample of Banks in Accession Countries (Alternating Macro-Variables)

Variables	<i>gdp</i> and <i>inflation</i>			<i>gdp</i> and <i>str</i>			<i>inflation</i> and <i>str</i>		
HERF	-11.029 [7.5946]	-10.4267 [7.6014]	0.0395 [7.5441]	0.6479 [7.5624]	-11.5478 [7.6478]	-11.0207 [7.6504]	0.0037 [3.3891]	0.0043 [3.3767]	
CR		-0.737 [3.3918]		2.4679 [3.4723]		2.5015 [3.4678]		0.0007 [0.0006]	
MS	2.3347 [2.9979]	2.4921 [2.9678]	2.5007 [3.0993]	2.6868 [3.0746]	1.7301 [3.0126]	1.9821 [2.9981]			
SIZE		0.0007 [0.0006]		0.0006 [0.0006]		0.0006 [0.0006]		0.0007 [0.0006]	
EFF	-1.4323*** [0.3721]	-1.4709*** [0.3737]	-1.4443*** [0.3737]	-1.4871*** [0.3753]	-1.4514*** [0.3840]	-1.4796*** [0.3857]	-1.4957*** [0.3745]	-1.5154*** [0.3758]	
CAP	0.1003*** [0.0258]	0.1023*** [0.0257]	0.1006*** [0.0257]	0.1027*** [0.0256]	0.0917*** [0.0265]	0.0923*** [0.0265]	0.0973*** [0.0259]	0.0981*** [0.0259]	
LTA	0.0568*** [0.0109]	0.0569*** [0.0109]	0.0563*** [0.0110]	0.0563*** [0.0110]	0.0539*** [0.0113]	0.0541*** [0.0113]	0.0573*** [0.0110]	0.0571*** [0.0111]	
DSDEP	0.0192** [0.0097]	0.0189* [0.0097]	0.0187* [0.0097]	0.0183* [0.0097]	0.0162 [0.0102]	0.0161 [0.0102]	0.0212** [0.0100]	0.0211** [0.0100]	
gdp	-0.0457 [0.0548]	-0.0514 [0.0542]	-0.0538 [0.0560]	-0.0597 [0.0555]	-0.1012* [0.0562]	-0.1098** [0.0557]			
inflation	0.1414*** [0.0375]	0.1436*** [0.0375]	0.1222*** [0.0360]	0.1256*** [0.0361]					
str			0.0323 [0.0349]	0.0316 [0.0349]	0.037 [0.0346]	0.0357 [0.0346]	0.2133*** [0.0384]	0.1926*** [0.0374]	0.1979*** [0.0372]
Country dummies	yes	yes	yes	yes	yes	yes	yes	yes	yes
Time dummies	yes	yes	yes	yes	yes	yes	yes	yes	yes
Observations	503	503	503	503	487	487	487	487	487
Number of banks	123	123	123	123	122	122	122	122	122
R-squared	0.3	0.3	0.3	0.3	0.25	0.26	0.3	0.29	0.3

Note: Standard errors are given in brackets. *, ** and *** indicate significance levels of 10, 5 and 1 percent, respectively.

TABLE A25

Panel Estimations for Bank Margins for the Sample of Banks in Non-Accession Countries (Alternating Macro-Variables)

Variables	<i>gdp and inflation</i>			<i>gdp and str</i>			<i>inflation and str</i>			
HERF	7.4257 [6.6088]	8.0407 [6.3035]	-20.2535*** [6.0630]	-15.3929*** [5.6713]	-10.8786** [4.7156]	-10.5368** [4.7202]	-20.0159*** [6.1431]	-14.7597** [5.7502]	-12.9401*** [4.8746]	-12.4501** [4.8943]
CR		2.0135 [5.3330]	2.4422 [5.2998]							
MS	0.6918 [4.3649]	2.0576 [4.1785]	10.2715*** [3.8907]		6.2467* [3.6143]		10.0178** [3.9125]		6.2852* [3.6261]	
SIZE		0.0004 [0.0016]	0.0003 [0.0016]	-0.0021 [0.0015]		-0.0018 [0.0015]		-0.0015 [0.0015]		-0.0014 [0.0014]
EFF	-2.4435 [2.4846]	-2.6499 [2.4837]	-2.3389 [2.4021]	-0.9835 [2.2345]	-2.1589 [2.2568]	-1.2058 [2.2326]	-2.4051 [2.2545]	-1.02 [2.2355]	-2.112 [2.2573]	-1.1777 [2.2311]
CAP	0.1982*** [0.0330]	0.1989*** [0.0331]	0.1974*** [0.0338]	0.1222*** [0.0305]	0.1396*** [0.0301]	0.1231*** [0.0306]	0.1419*** [0.0301]	0.1229*** [0.0308]	0.1350*** [0.0304]	0.1201*** [0.0310]
LTA	0.0744*** [0.0258]	0.0753*** [0.0261]	0.0800*** [0.0260]	0.0685*** [0.0232]	0.0612*** [0.0233]	0.0588** [0.0235]	0.0700*** [0.0235]	0.0649*** [0.0239]	0.0661*** [0.0236]	0.0647*** [0.0239]
DSDEP	0.0229 [0.0147]	0.0229 [0.0148]	0.0238 [0.0148]	0.0156 [0.0126]	0.0126 [0.0127]	0.0128 [0.0127]	0.0183 [0.0126]	0.0188 [0.0127]	0.0149 [0.0127]	0.0154 [0.0128]
gdp	-0.3477*** [0.1091]	-0.3452*** [0.1101]	-0.3552*** [0.1100]	-0.3438*** [0.0939]	-0.3040*** [0.0926]	-0.3231*** [0.0937]				
inflation	0.03 [0.0210]	0.0345* [0.0207]	0.0355* [0.0207]				0.1513*** [0.0539]	0.1534*** [0.0544]	0.1579*** [0.0552]	0.1644*** [0.0555]
str				-0.0369** [0.0144]	-0.0305** [0.0143]	-0.0296** [0.0144]	0.0939* [0.0516]	0.0988* [0.0522]	0.1059** [0.0526]	0.1119** [0.0530]
Country dummies	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Time dummies	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Observations	390	390	390	354	354	354	354	354	354	354
Number of banks	111	111	111	109	109	109	109	109	109	109
R-squared	0.34	0.34	0.34	0.25	0.22	0.23	0.22	0.22	0.21	0.22

Note: Standard errors are given in brackets. *, ** and *** indicate significance levels of 10, 5 and 1 percent, respectively.

TABLE A26

Coefficient Impact (based on the last four regressions of tables 3 to 7)

	st dev			average coeff			average impact				
	West	East	NonAcc	West	East	Acc	NonAcc	West	East	Acc	NonAcc
HERF	0.07	0.11	0.07	1.37405	-9.7186	-12.684	-18.3181	0.096184	-1.06905	-0.88788	-2.19817
CR	0.1	0.12	0.08	0.92135	-5.60735	-0.57985	-12.03	0.092135	-0.67288	-0.04639	-1.6842
MS	0.03	0.09	0.09	-0.69045	4.5769	2.18155	8.2624	-0.02071	0.411921	0.19634	0.743616
SIZE	1147	411	311	-0.0001	0.0001	0.0007	-0.00195	-0.1147	0.0411	0.2177	-0.89895
EFF	0.88	0.26	0.34	-0.22155	-1.25913	-1.4955	-1.53648	-0.19496	-0.32737	-0.50847	-0.27657
CAP	6.42	10.8	6.5	0.06005	0.130225	0.0973	0.128975	0.385521	1.40643	0.63245	1.493531
LTA	23.78	16.64	16.02	0.015475	0.05485	0.05795	0.066125	0.367996	0.912704	0.928359	1.122141
DSDEP	31.33	29.13	24.83	0.002975	0.0175	0.020875	0.014725	0.093207	0.509775	0.518326	0.373132
gdp	1.43	6.93	2.59	0.071175	-0.0462	0.06815	-0.25415	0.10178	-0.32017	0.176509	-2.15265
inflation	1.09	74.9	7.41	0.15245	0.13775	0.2282	0.0675	0.166171	10.31748	1.690962	6.155325
str	1.27	58.6	5.61	0.1368	0.099375	0.145325	0.02755	0.173736	5.823375	0.815273	2.045312



FACULTEIT ECONOMIE EN BEDRIJFSKUNDE
HOVENIERSBERG 24
9000 GENT

Tel. : 32 - (0)9 - 264.34.61
Fax. : 32 - (0)9 - 264.35.92

WORKING PAPER SERIES

5

- 00/80 **K. DE WULF, G. ODEKERKEN-SCHRÖDER**, The influence of seller relationship orientation and buyer relationship proneness on trust, commitment, and behavioral loyalty in a consumer environment, January 2000, 27p. (published as 'Investments in consumer relationships: a cross-country and cross-industry exploration', *Journal of Marketing*, 2001)
- 00/81 **R. VANDER VENNET**, Cost and profit efficiency of financial conglomerates and universal banks in Europe., February 2000, 33 p. (published in *Journal of Money, Credit, and Banking*, 2002)
- 00/82 **J. BOUCKAERT**, Bargaining in markets with simultaneous and sequential suppliers, April 2000, 23 p. (published in *Journal of Economic Behavior and Organization*, 2002)
- 00/83 **N. HOUTHOOFD, A. HEENE**, A systems view on what matters to excel, May 2000, 22 p.
- 00/84 **D. VAN DE GAER, E. SCHOKKAERT, M. MARTINEZ**, Three meanings of intergenerational mobility, May 2000, 20 p. (published in *Economica*, 2001)
- 00/85 **G. DHAENE, E. SCHOKKAERT, C. VAN DE VOORDE**, Best affine unbiased response decomposition, May 2000, 9 p. (forthcoming in *Journal of Multivariate Analysis*, 2003)
- 00/86 **D. BUYENS, A. DE VOS**, The added value of the HR-department : empirical study and development of an integrated framework, June 2000, 37 p. (published as 'Personnel and human resource managers: Power, prestige and potential - Perceptions of the value of the HR function', in *Human Resource Management Journal*, 2001).
- 00/87 **K. CAMPO, E. GIJSBRECHTS, P. NISOL**, The impact of stock-outs on whether, how much and what to buy, June 2000, 50 p.
- 00/88 **K. CAMPO, E. GIJSBRECHTS, P. NISOL**, Towards understanding consumer response to stock-outs, June 2000, 40 p. (published in *Journal of Retailing*, 2000)
- 00/89 **K. DE WULF, G. ODEKERKEN-SCHRÖDER, P. SCHUMACHER**, Why it takes two to build succesful buyer-seller relationships July 2000, 31 p. (published as 'Strengthening Retailer-Consumer Relationships: The Dual Impact of Relationship Marketing Tactics and Consumer Personality', in *Journal of Business Research*, 2002)
- 00/90 **J. CROMBEZ, R. VANDER VENNET**, Exact factor pricing in a European framework, September 2000, 38 p.
- 00/91 **J. CAMERLYNCK, H. OOGHE**, Pre-acquisition profile of privately held companies involved in takeovers : an empirical study, October 2000, 34 p.
- 00/92 **K. DENECKER, S. VAN ASSCHE, J. CROMBEZ, R. VANDER VENNET, I. LEMAHIEU**, Value-at-risk prediction using context modeling, November 2000, 24 p. (published in *European Physical Journal B*, 2001)
- 00/93 **P. VAN KENHOVE, I. VERMEIR, S. VERNIERS**, An empirical investigation of the relationships between ethical beliefs, ethical ideology, political preference and need for closure of Dutch-speaking consumers in Belgium, November 2000, 37 p. (published in *Journal of Business Ethics*, 2001)
- 00/94 **P. VAN KENHOVE, K. WIJNEN, K. DE WULF**, The influence of topic involvement on mail survey response behavior, November 2000, 40 p. (published in *Psychology & Marketing*, 2002).
- 00/95 **A. BOSMANS, P. VAN KENHOVE, P. VLERICK, H. HENDRICKX**, The effect of mood on self-referencing in a persuasion context, November 2000, 26p. (published in *Advances in Consumer Research*, vol.28, 2001, p.115-121)
- 00/96 **P. EVERAERT, G. BOËR, W. BRUGGEMAN**, The Impact of Target Costing on Cost, Quality and Development Time of New Products: Conflicting Evidence from Lab Experiments, December 2000, 47 p.
- 00/97 **G. EVERAERT**, Balanced growth and public capital: An empirical analysis with I(2)-trends in capital stock data, December 2000, 29 p. (forthcoming in *Economic Modelling*, 2003).
- 00/98 **G. EVERAERT, F. HEYLEN**, Public capital and labour market performance in Belgium, December 2000, 45 p. (forthcoming in *Journal of Policy Modeling*, 2004)
- 00/99 **G. DHAENE, O. SCALLET**, Reversed Score and Likelihood Ratio Tests, December 2000, 16 p.



WORKING PAPER SERIES

6

- 01/100 **A. DE VOS, D. BUYENS**, Managing the psychological contract of graduate recruits: a challenge for human resource management, January 2001, 35 p.
- 01/101 **J. CHRISTIAENS**, Financial Accounting Reform in Flemish Universities: An Empirical Study of the implementation, February 2001, 22 p.
- 01/102 **S. VIAENE, B. BAESENS, D. VAN DEN POEL, G. DEDENE, J. VANTHIENEN**, Wrapped Input Selection using Multilayer Perceptrons for Repeat-Purchase Modeling in Direct Marketing, June 2001, 23 p. (published in *International Journal of Intelligent Systems in Accounting, Finance & Management*, 2001).
- 01/103 **J. ANNAERT, J. VAN DEN BROECK, R. VANDER VENNET**, Determinants of Mutual Fund Performance: A Bayesian Stochastic Frontier Approach, June 2001, 31 p. (forthcoming in *European Journal of Operational Research*, 2003)
- 01/104 **S. VIAENE, B. BAESENS, T. VAN GESTEL, J.A.K. SUYKENS, D. VAN DEN POEL, J. VANTHIENEN, B. DE MOOR, G. DEDENE**, Knowledge Discovery in a Direct Marketing Case using Least Square Support Vector Machines, June 2001, 27 p. (published in *International Journal of Intelligent Systems*, 2001).
- 01/105 **S. VIAENE, B. BAESENS, D. VAN DEN POEL, J. VANTHIENEN, G. DEDENE**, Bayesian Neural Network Learning for Repeat Purchase Modelling in Direct Marketing, June 2001, 33 p. (published in *European Journal of Operational Research*, 2002).
- 01/106 **H.P. HUIZINGA, J.H.M. NELISSEN, R. VANDER VENNET**, Efficiency Effects of Bank Mergers and Acquisitions in Europe, June 2001, 33 p.
- 01/107 **H. OOGHE, J. CAMERLYNCK, S. BALCAEN**, The Ooghe-Joos-De Vos Failure Prediction Models: a Cross-Industry Validation, July 2001, 42 p.
- 01/108 **D. BUYENS, K. DE WITTE, G. MARTENS**, Building a Conceptual Framework on the Exploratory Job Search, July 2001, 31 p.
- 01/109 **J. BOUCKAERT**, Recente inzichten in de industriële economie op de ontwikkelingen in de telecommunicatie, augustus 2001, 26 p. (published in *Economisch en Sociaal Tijdschrift*, 2001).
- 01/110 **A. VEREECKE, R. VAN DIERDONCK**, The Strategic Role of the Plant: Testing Ferdows' Model, August 2001, 31 p. (published in *International Journal of Operations and Production Management*, 2002)
- 01/111 **S. MANIGART, C. BEUSELINCK**, Supply of Venture Capital by European Governments, August 2001, 20 p.
- 01/112 **S. MANIGART, K. BAEYENS, W. VAN HYFTE**, The survival of venture capital backed companies, September 2001, 32 p. (published in *Venture Capital*, 2002)
- 01/113 **J. CHRISTIAENS, C. VANHEE**, Innovations in Governmental Accounting Systems: the Concept of a "Mega General Ledger" in Belgian Provinces, September 2001, 20 p. (published in V. Montesinos and J.M. Vela, *Innovations in governmental accounting*, Kluwer Academic Publishers, 2002).
- 01/114 **M. GEUENS, P. DE PELSMACKER**, Validity and reliability of scores on the reduced Emotional Intensity Scale, September 2001, 25 p. (published in *Educational and Psychological Measurement*, 2001)
- 01/115 **B. CLARYSSE, N. MORAY**, A process study of entrepreneurial team formation: the case of a research based spin off, October 2001, 29 p.
- 01/116 **F. HEYLEN, L. DOBBELAERE, A. SCHOLLAERT**, Inflation, human capital and long-run growth. An empirical analysis, October 2001, 17 p.
- 01/117 **S. DOBBELAERE**, Insider power and wage determination in Bulgaria. An econometric investigation, October 2001, 30 p. (forthcoming in *International Journal of Manpower*, 2003)
- 01/118 **L. POZZI**, The coefficient of relative risk aversion: a Monte Carlo study investigating small sample estimator problems, October 2001, 21 p. (forthcoming in *Economic Modelling*, 2003).



WORKING PAPER SERIES

7

- 01/119 **N. GOBBIN, B. VAN AARLE**, Fiscal Adjustments and Their Effects during the Transition to the EMU, October 2001, 28 p. (published in *Public Choice*, 2001).
- 01/120 **A. DE VOS, D. BUYENS, R. SCHALK**, Antecedents of the Psychological Contract: The Impact of Work Values and Exchange Orientation on Organizational Newcomers' Psychological Contracts, November 2001, 41 p.
- 01/121 **A. VAN LANDSCHOOT**, Sovereign Credit Spreads and the Composition of the Government Budget, November 2001, 29 p.
- 01/122 **K. SCHOORS**, The fate of Russia's former state banks: Chronicle of a restructuring postponed and a crisis foretold, November 2001, 54 p. (published in *Europe-Asia Studies*, 2003)
- 01/123 **J. ALBRECHT, D. FRANÇOIS, K. SCHOORS**, A Shapley Decomposition of Carbon Emissions without Residuals, December 2001, 21 p. (published in *Energy Policy*, 2002).
- 01/124 **T. DE LANGHE, H. OOGHE**, Are Acquisitions Worthwhile? An Empirical Study of the Post-Acquisition Performance of Privately Held Belgian Companies Involved in Take-overs, December 2001, 29 p.
- 01/125 **L. POZZI**, Government debt, imperfect information and fiscal policy effects on private consumption. Evidence for 2 high debt countries, December 2001, 34 p.
- 02/126 **G. RAYP, W. MEEUSEN**, Social Protection Competition in the EMU, January 2002, 20 p.
- 02/127 **S. DE MAN, P. GEMMEL, P. VLERICK, P. VAN RIJK, R. DIERCKX**, Patients' and personnel's perceptions of service quality and patient satisfaction in nuclear medicine, January 2002, 21 p.
- 02/128 **T. VERBEKE, M. DE CLERCQ**, Environmental Quality and Economic Growth, January 2002, 48 p.
- 02/129 **T. VERBEKE, M. DE CLERCQ**, Environmental policy, policy uncertainty and relocation decisions, January 2002, 33 p.
- 02/130 **W. BRUGGEMAN, V. DECOENE**, An Empirical Study of the Influence of Balanced Scorecard-Based Variable Remuneration on the Performance Motivation of Operating Managers, January 2002, 19 p.
- 02/131 **B. CLARYSSE, N. MORAY, A. HEIRMAN**, Transferring Technology by Spinning off Ventures: Towards an empirically based understanding of the spin off process, January 2002, 32 p.
- 02/132 **H. OOGHE, S. BALCAEN**, Are Failure Prediction Models Transferable From One Country to Another? An Empirical Study Using Belgian Financial Statements, February 2002, 42 p.
- 02/133 **M. VANHOUCHE, E. DEMEULEMEESTER, W. HERROELEN**, Discrete Time/Cost Trade-offs in Project scheduling with Time-Switch Constraints? February 2002, 23 p. (published in *Journal of the Operational Research Society*, 2002)
- 02/134 **C. MAYER, K. SCHOORS, Y. YAFEH**, Sources of Funds and Investment Activities of Venture Capital Funds: Evidence from Germany, Israel, Japan and the UK?, February 2002, 31 p.
- 02/135 **K. DEWETTINCK, D. BUYENS**, Employment implications of downsizing strategies and reorientation practices: an empirical exploration, February 2002, 22 p.
- 02/136 **M. DELOOF, M. DE MAESENEIRE, K. INGHELBRECHT**, The Valuation of IPOs by Investment Banks and the Stock Market: Empirical Evidence, February 2002, 24 p.
- 02/137 **P. EVERAERT, W. BRUGGEMAN**, Cost Targets and Time Pressure during New Product Development, March 2002, 21 p. (published in *International Journal of Operations and Production Management*, 2002).
- 02/138 **D. O'NEILL, O. SWEETMAN, D. VAN DE GAER**, The impact of cognitive skills on the distribution of the black-white wage gap, March 2002, 14 p.
- 02/139 **W. DE MAESENEIRE, S. MANIGART**, Initial returns: underpricing or overvaluation? Evidence from Easdaq and EuroNM, March 2002, 36 p.



WORKING PAPER SERIES

8

- 02/140 **K. SCHOORS**, Should the Central and Eastern European accession countries adopt the EURO before or after accession? March 2002, 29p. (published in *Economics of Planning*, 2002).
- 02/141 **D. VERHAEST, E. OMEY**, Overeducation in the Flemish Youth Labour Market, March 2002, 39p.
- 02/142 **L. CUYVERS, M. DUMONT, G. RAYP, K. STEVENS**, Wage and Employment Effects in the EU of International Trade with the Emerging Economies, April 2002, 24 p. (forthcoming in *Weltwirtschaftliches Archiv*, 2003).
- 02/143 **M. GEUENS, P. DE PELSMACKER**, The Role of Humor in the Persuasion of Individuals Varying in Need for Cognition, April 2002, 19 p. (published in *Advances in Consumer Research*, 2002).
- 02/144 **M. VANHOUCHE, E. DEMEULEMEESTER, W. HERROELEN**, Net Present Value Maximization of Projects with Progress Payments, April 2002, 23 p. (published in *European Journal of Operational Research*, 2003)
- 02/145 **E. SCHOKKAERT, D. VAN DE GAER, F. VANDENBROUCKE**, Responsibility-sensitive egalitarianism and optimal linear income taxation, April 2002, 37p. (revised version, co-authored by R. Luttens, forthcoming in *Mathematical Social Sciences*, 2004).
- 02/146 **J. ANNAERT, J. CROMBEZ, B. SPINEL, F. VAN HOLLE**, Value and size effect: Now you see it, now you don't, May 2002, 31 p.
- 02/147 **N. HOUTHOFD, A. HEENE**, The quest for strategic groups: Overview, and suggestions for future research, July 2002, 22 p.
- 02/148 **G. PEERSMAN**, The transmission of monetary policy in the Euro area: Are the effects different across countries?, July 2002, 35 p.
- 02/149 **G. PEERSMAN, F. SMETS**, The industry effects of monetary policy in the Euro area, July 2002, 30 p.
- 02/150 **J. BOUCKAERT, G. DHAENE**, Inter-Ethnic Trust and Reciprocity: Results of an Experiment with Small Business Entrepreneurs, July 2002, 27 p. (forthcoming in *European Journal of Political Economy*, 2004)
- 02/151 **S. GARRÉ, I. DE BEELDE, Y. LEVANT**, The impact of accounting differences between France and Belgium, August 2002, 28 p. (published in French in *Comptabilité - Contrôle - Audit*, 2002)
- 02/152 **R. VANDER VENNET**, Cross-border mergers in European banking and bank efficiency, September 2002, 42 p.
- 02/153 **K. SCHOORS**, Financial regulation in Central Europe: the role of reserve requirements and capital rules, September 2002, 22 p.
- 02/154 **B. BAESENS, G. VERSTRAETEN, D. VAN DEN POEL, M. EGMONT-PETERSEN, P. VAN KENHOVE, J. VANTHIENEN**, Bayesian Network Classifiers for Identifying the Slope of the Customer Lifecycle of Long-Life Customers, October 2002, 27 p. (forthcoming in *European Journal of Operational Research*, 2003).
- 02/155 **L. POZZI, F. HEYLEN, M. DOSSCHE**, Government debt and the excess sensitivity of private consumption to current income: an empirical analysis for OECD countries, October 2002, 19 p.
- 02/156 **D. O'NEILL, O. SWEETMAN, D. VAN DE GAER**, Consequences of Specification Error for Distributional Analysis With an Application to Intergenerational Mobility, November 2002, 35 p.
- 02/157 **K. SCHOORS, B. VAN DER TOL**, Foreign direct investment spillovers within and between sectors: Evidence from Hungarian data, November 2002, 29 p.
- 02/158 **L. CUYVERS, M. DUMONT, G. RAYP, K. STEVENS**, Home Employment Effects of EU Firms' Activities in Central and Eastern European Countries, November 2002, 25 p.
- 02/159 **M. VANHOUCHE**, Optimal due date assignment in project scheduling, December 2002, 18 p.



WORKING PAPER SERIES

9

- 02/160 **J. ANNAERT, M.J.K. DE CEUSTER, W. VANHYFTE**, The Value of Asset Allocation Advice. Evidence from the Economist's Quarterly Portfolio Poll, December 2002, 35p. (revised version forthcoming in *Journal of Banking and Finance*, 2004)
- 02/161 **M. GEUENS, P. DE PELSMACKER**, Developing a Short Affect Intensity Scale, December 2002, 20 p. (published in *Psychological Reports*, 2002).
- 02/162 **P. DE PELSMACKER, M. GEUENS, P. ANCKAERT**, Media context and advertising effectiveness: The role of context appreciation and context-ad similarity, December 2002, 23 p. (published in *Journal of Advertising*, 2002).
- 03/163 **M. GEUENS, D. VANTOMME, G. GOESSAERT, B. WEIJTERS**, Assessing the impact of offline URL advertising, January 2003, 20 p.
- 03/164 **D. VAN DEN POEL, B. LARIVIÈRE**, Customer Attrition Analysis For Financial Services Using Proportional Hazard Models, January 2003, 39 p. (forthcoming in *European Journal of Operational Research*, 2003)
- 03/165 **P. DE PELSMACKER, L. DRIESEN, G. RAYP**, Are fair trade labels good business ? Ethics and coffee buying intentions, January 2003, 20 p.
- 03/166 **D. VANDAELE, P. GEMMEL**, Service Level Agreements – Een literatuuroverzicht, Januari 2003, 31 p. (forthcoming in *Tijdschrift voor Economie en Management*, 2003).
- 03/167 **P. VAN KENHOVE, K. DE WULF AND S. STEENHAUT**, The relationship between consumers' unethical behavior and customer loyalty in a retail environment, February 2003, 27 p.
- 03/168 **P. VAN KENHOVE, K. DE WULF, D. VAN DEN POEL**, Does attitudinal commitment to stores always lead to behavioural loyalty? The moderating effect of age, February 2003, 20 p.
- 03/169 **E. VERHOFSTADT, E. OMEY**, The impact of education on job satisfaction in the first job, March 2003, 16 p.
- 03/170 **S. DOBBELAERE**, Ownership, Firm Size and Rent Sharing in a Transition Country, March 2003, 26 p. (forthcoming in *Labour Economics*, 2004)
- 03/171 **S. DOBBELAERE**, Joint Estimation of Price-Cost Margins and Union Bargaining Power for Belgian Manufacturing, March 2003, 29 p.
- 03/172 **M. DUMONT, G. RAYP, P. WILLEMÉ, O. THAS**, Correcting Standard Errors in Two-Stage Estimation Procedures with Generated Regressands, April 2003, 12 p.
- 03/173 **L. POZZI**, Imperfect information and the excess sensitivity of private consumption to government expenditures, April 2003, 25 p.
- 03/174 **F. HEYLEN, A. SCHOLLAERT, G. EVERAERT, L. POZZI**, Inflation and human capital formation: theory and panel data evidence, April 2003, 24 p.
- 03/175 **N.A. DENTCHEV, A. HEENE**, Reputation management: Sending the right signal to the right stakeholder, April 2003, 26 p.
- 03/176 **A. WILLEM, M. BUELENS**, Making competencies cross business unit boundaries: the interplay between inter-unit coordination, trust and knowledge transferability, April 2003, 37 p.
- 03/177 **K. SCHOORS, K. SONIN**, Passive creditors, May 2003, 33 p.
- 03/178 **W. BUCKINX, D. VAN DEN POEL**, Customer Base Analysis: Partial Defection of Behaviorally-Loyal Clients in a Non-Contractual FMCG Retail Setting, May 2003, 26 p.
- 03/179 **H. OOGHE, T. DE LANGHE, J. CAMERLYNCK**, Profile of multiple versus single acquirers and their targets : a research note, June 2003, 15 p.



WORKING PAPER SERIES

10

-
- 03/180 **M. NEYT, J. ALBRECHT, B. CLARYSSE, V. COCQUYT**, The Cost-Effectiveness of Herceptin® in a Standard Cost Model for Breast-Cancer Treatment in a Belgian University Hospital, June 2003, 20 p.
- 03/181 **M. VANHOUCKE**, New computational results for the discrete time/cost trade-off problem with time-switch constraints, June 2003, 24 p.
- 03/182 **C. SCHLUTER, D. VAN DE GAER**, Mobility as distributional difference, June 2003, 22 p.
- 03/183 **B. MERLEVEDE**, Reform Reversals and Output Growth in Transition Economies, June 2003, 35 p.
- 03/184 **G. POELS**, Functional Size Measurement of Multi-Layer Object-Oriented Conceptual Models, June 2003, 13 p. (forthcoming in *Lecture Notes in Computer Science*, 2003)
- 03/185 **A. VEREECKE, M. STEVENS, E. PANDELAERE, D. DESCHOOLMEESTER**, A classification of programmes and its managerial impact, June 2003, 11 p. (forthcoming in *International Journal of Operations and Production Management*, 2003)
- 03/186 **S. STEENHAUT, P. VANKENHOVE**, Consumers' Reactions to "Receiving Too Much Change at the Checkout", July 2003, 28 p.
- 03/187 **H. OOGHE, N. WAEYAERT**, Oorzaken van faling en falingspaden: Literatuuroverzicht en conceptueel verklaringsmodel, July 2003, 35 p.
- 03/188 **S. SCHILLER, I. DE BEELDE**, Disclosure of improvement activities related to tangible assets, August 2003, 21 p.
- 03/189 **L. BAELE**, Volatility Spillover Effects in European Equity Markets, August 2003, 73 p.
- 03/190 **A. SCHOLLAERT, D. VAN DE GAER**, Trust, Primary Commodity Dependence and Segregation, August 2003, 18 p.
- 03/191 **D. VAN DEN POEL**, Predicting Mail-Order Repeat Buying: Which Variables Matter?, August 2003, 25 p.
- 03/192 **T. VERBEKE, M. DE CLERCQ**, The income-environment relationship: Does a logit model offer an alternative empirical strategy?, September 2003, 32 p.
- 03/193 **S. HERMANN, H. OOGHE, E. VAN LAERE, C. VAN WYMEERSCH**, Het type controleverslag: resultaten van een empirisch onderzoek in België, September 2003, 18 p.
- 03/194 **A. DE VOS, D. BUYENS, R. SCHALK**, Psychological Contract Development during Organizational Socialization: Adaptation to Reality and the Role of Reciprocity, September 2003, 42 p.
- 03/195 **W. BUCKINX, D. VAN DEN POEL**, Predicting Online Purchasing Behavior, September 2003, 43 p.
- 03/196 **N.A. DENTCHEV, A. HEENE**, Toward stakeholder responsibility and stakeholder motivation: Systemic and holistic perspectives on corporate sustainability, September 2003, 37 p.
- 03/197 **D. HEYMAN, M. DELOOF, H. OOGHE**, The Debt-Maturity Structure of Small Firms in a Creditor-Oriented Environment, September 2003, 22 p.
- 03/198 **A. HEIRMAN, B. CLARYSSE, V. VAN DEN HAUTE**, How and Why Do Firms Differ at Start-Up? A Resource-Based Configurational Perspective, September 2003, 43 p.
- 03/199 **M. GENERO, G. POELS, M. PIATTINI**, Defining and Validating Metrics for Assessing the Maintainability of Entity-Relationship Diagrams, October 2003, 61 p.
- 03/200 **V. DECOENE, W. BRUGGEMAN**, Strategic alignment of manufacturing processes in a Balanced Scorecard-based compensation plan: a theory illustration case, October 2003, 22 p.