Foreign banks in transition countries. To whom do they lend and how are they financed?

De Haas, Ralph and Naaborg, Ilko

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To Whom do They Lend and How Are They Financed?

Ralph de Haas[*] and Ilko Naaborg[†]

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Abstract

We use focused interviews with managers of foreign parent banks and their affiliates in Central Europe and the Baltic States to analyse the small-business lending and internal capital markets of multinational financial institutions. Our approach allows us to complement the standard empirical literature, which has difficulty in analysing important issues such as lending technologies and capital allocation. We find that the acquisition of local banks by foreign banks has not led to a persistent bias in these banks' credit supply towards large multinational corporations. Instead, increased competition and the improvement of subsidiaries' lending technologies have led foreign banks to gradually expand into the SME and retail markets. Second, it is demonstrated that local bank affiliates are strongly influenced by the capital allocation and credit steering mechanisms of the parent bank.

Keywords: foreign banks, transition economies, small-business lending, internal capital markets

JEL classification: F23, F36, G21, G32

[*] European Bank for Reconstruction and Development (EBRD), Office of the Chief Economist, One Exchange Square, London EC2A 2JN, United Kingdom. Tel: +44 20 7338 7213, Fax: +44 20 7338 6110. Email: dehaasr@ebrd.com (corresponding author). [†] University of Groningen, Faculty of Economics, P.O. Box 800, 9700 AV Groningen, The Netherlands. Tel: (31) 50 363 3439. Email: i.j.naaborg@eco.rug.nl.

Notes on contributors/acknowledgements

Ralph de Haas is a principal economist at the Office of the Chief Economist, European Bank for Reconstruction and Development, London. Previously he worked as a senior economist at the Economic Policy and Research Division of De Nederlandsche Bank. His research interests include transition and development economics, financial globalisation and the economics of EU enlargement. He holds a Ph.D. degree in economics from Utrecht University.

Ilko Naaborg is a Ph.D. student at the Faculty of Economics, University of Groningen. His research focuses on foreign bank entry and financial intermediation in Central and Eastern Europe, in particular the performance of foreign banks. Other research interests include corporate finance theory, micro finance and remittances.

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1 Introduction

The large-scale entry of foreign banks in Central Europe and the Baltic States (CEB), starting in the late 1980s and intensifying in the middle of the 1990s, has resulted in a banking sector of which about 77% is currently owned by foreign banks.[1] Notwithstanding a rapidly expanding empirical literature on foreign banking, little is known about the underlying differences between foreign and domestic banks. Do foreign bank subsidiaries, for instance, mainly operate as stand-alone banks – like their domestic counterparts – or do they form an integral part of a multinational bank holding? This study presents empirical evidence based on 34 focused interviews with high-level managers of multinational banks and their affiliates, as well as with representatives of supervisory authorities and central banks. The results shed additional light on how multinational banks influence both the type and the amount of credit granted by their subsidiaries.

Our paper focuses on two topics that have received little research attention so far. First, we wished to know whether – and if so, why – foreign banks changed the amount of credit to small and medium-sized enterprises (SMEs) in their CEB affiliates. Due to a lack of microdata, it has thus far been difficult to answer this question. There are reasons to believe that large foreign banks tend to focus on large (inter)national corporate customers, while more or less ignoring SMEs and leaving the latter market segment credit constrained (see Section 2.1). The policy relevance of this topic is high, as many academics and international financial institutions regard SMEs as pivotal for creating jobs and generating economic growth.

Second, our approach allows us to obtain direct and detailed evidence on the financial relationships within multinational banks and the steering of the local credit supply. Econometric research into the operation of internal capital markets has only produced indirect evidence of the operation of such markets by banks (cf. Section 2.1). A better insight into the role of parent banks is especially relevant now that in some transition countries – such as the Baltic States and Bulgaria and Romania – recent credit booms have partly been fuelled by foreign banks' ability to raise substantial amounts of funding from their parent banks abroad.

The paper is structured as follows. Section 2 reviews the existing literature and contemplates some methodological issues. Section 3 then analyses how parent banks have influenced the customer orientation of their CEB subsidiaries.[2] After that, Section 4 looks at intra-bank financial relationships and how local credit growth is steered. Section 5 concludes.

2 Motivation and methodology

2.1 Motivation and existing literature

Especially in a transition context, SME financing is of great importance, as small firms play an important role in the restructuring process by absorbing employees that lose their jobs in privatised, restructured or bankrupt state-owned enterprises (Kowalski and Janc, 1999).[3] Moreover, Calvo and Corricelli (1993) and Pawlowska and Mullineux (1999) show that the sharp decline in bank credit to Polish SMEs at the beginning of the transition process has significantly contributed to the strong output decline in this country. Vice versa, Carlin and Richthofen (1995) find that the rapid growth of the SME sector, and the availability of sufficient external funding for these firms, has contributed to the integration of Eastern and Western Germany.

There are reasons to believe that the entry of foreign banks may lead to a change in the supply of credit to SMEs. Large foreign banks with a limited knowledge of local markets may, for instance, prefer to grant credit on a 'transaction-by-transaction basis', using standardised decision rules when assessing creditworthiness. This may especially be the case if the foreign head office is chartered in a country with a significantly different culture and language (Berger *et al.*, 2001). Foreign banks may also focus more on serving multinational corporations from their home country (Sabi, 1988). In contrast, smaller domestic banks, with more knowledge of the local business sector, will base their credit decisions on idiosyncratic and 'soft' information and will build up client relationships (Berger and Udell, 1995;2002). They may also have a greater commitment to local prosperity (Collender and Shaffer, 2003).

Empirical evidence on foreign banks' SME lending is available for some individual countries – mainly the US – and for cross-sections of countries. Some of these studies confirm the hypothesis that foreign banks lend less to informationally opaque SMEs. In the US, foreign banks and large banks tend to supply less credit to small firms (Berger *et al.*, 1995; Berger and Udell, 2002, DeYoung *et al.*, 1999). Keeton (1996) finds for the US that banks that form part of an out-of-state holding bank are less likely to grant credit to local businesses. Berger *et al*. (2001) study SME financing in Argentina. They find that large, foreign-owned banks have more difficulties in lending to small firms, although this result only holds for foreign banks that are headquartered in a geographically distant nation.

More recently, empirical studies have used more differentiated approaches than the aforementioned studies, which were mostly based on static analyses of different types of banks or of banks' lending before and directly after a merger or acquisition. These newer studies show that large and foreign banks may actually lead to more SME credit in the medium term. Berger *et al.* (1998) show for the US that, while consolidation initially reduces SME financing, the refocusing and restructuring efforts of the acquiring banks fully or partly offset this negative effect later on.[4] Acquiring banks may, for instance, promulgate new lending procedures and technologies to collect and process information. Increasingly, this may enable relatively opaque SMEs – hitherto deprived of foreign bank credit – to receive funding from foreign-owned banks (Petersen and Rajan, 2002). Moreover, other incumbent banks react to the reduced supply of SME credit by increasing their own supply.

Using data from a large cross-country survey of enterprises – including transition countries – Clarke *et al*. (2001) find that foreign bank entry improves financing conditions for enterprises of all sizes, although larger firms benefit more. Unfortunately, given their empirical set-up, the authors cannot distinguish between two interpretations of this result: either foreign banks provide credit to both large firms and SMEs, or foreign bank competition for large customers leads domestic banks to move down the market and to increase SME credit. Peek and Rosengren (1998) find for the US that acquiring banks whose share of SME lending is relatively large – compared with their take-over target – will increase the small-business lending of the acquired bank. The acquiring bank's commitment to SME lending thus increases the proportion of SME lending by the acquired bank over the course of time. Strahan and Weston (1996) demonstrate that US banks involved in mergers, on average, hold more small business loans two years after the merger. Clarke *et al.* (2005) analyse bank-level data for Argentina, Chile, Colombia, and Peru. They find that small foreign banks generally lend less to small businesses (as a share of total lending) than private domestic banks. However, in Chile and Colombia, large foreign banks actually lend slightly more to SMEs than large domestic banks. In addition, in both Argentina and Chile, SME credit has been growing faster at foreign banks with a large local presence than at large domestic banks. According to the authors this last result is consistent with the notion that large foreign banks – using credit-scoring methodologies, enhanced computer power and improved data availability – will increase small-business lending. Peek and Rosengren (1997) mention the example of Japanese banks in the US, which started with lending to Japanese customers, but increasingly started to lend to US customers as well, including many SMEs. Finally, some recent studies that focus on foreign banking in developing countries conclude that an increasing presence of foreign banks leads to a greater availability of credit to SMEs (Beck *et al.*, 2004; Berger *et al.*, 2004).

Based on the empirical literature described above, we expect that foreign bank entry may actually have increased SME lending in transition economies – at least in the medium term – rather than reduced the access of SMEs to financing. Unfortunately, there exist virtually no empirical studies on foreign bank entry and SME credit in transition economies.[5] There is, for instance, a serious lack of systematic data on the composition of banks' credit portfolios in this region. No information is available either on the type of lending technology foreign banks use to finance SMEs (Berger and Udell, 2005). Finally, data on firms' sources of finance is lacking, or unreliable, when it comes to foreign bank credit in CEB. An example of this latter problem is provided by Volz (2004), who analyses firms' financing in transition economies on the basis of the EBRD/World Bank Business Environment and Enterprise Performance Survey. Although this database provides survey data on many factors that influence SME financing in CEB, the author finds the "somewhat puzzling result" that foreign bank credit is almost negligible. In the case of Estonia, for instance, the data shows that SMEs receive virtually no financing from foreign banks, although foreign banks hold nearly 100% of all banking assets. As the author argues, a likely cause for this implausible result is that customers of Hansabank and Eesti Ühisbank still regard these banks as domestic banks, although they are actually Swedish-owned.

Our second topic concerns the internal capital markets that multinational banks may use to steer the credit supply in their CEB affiliates. Multinational bank holdings display varying degrees of centralisation of operations between parents and subsidiaries (Hull, 2002). Unfortunately, most empirical research has, until now, regarded multinational banks as black boxes and has thus ignored differences in intra-bank financial relationships.[6] Such research is typically based on balance-sheet and income-statement data which is accumulated in databases such as BankScope. It turns out to be difficult to unravel ex post, on the basis of this data alone, how and to what extent foreign bank subsidiaries are influenced by their parent banks.

Nevertheless, following the seminal contributions by Williamson (1975), Gertner *et al.* (1994) and Stein (1997) on internal capital markets, a limited number of empirical studies has produced indirect evidence on the existence of such markets in bank holdings.[7] Houston *et al*. (1997) show that (US-based) subsidiaries' credit growth is more sensitive to the cash flow and capital position of the (US-based) holding company than to the capital and cash flow of the subsidiary itself. Credit growth at a particular subsidiary also turns out to be negatively correlated with loan growth in other subsidiaries of the same bank holding, which is consistent with 'winner-picking' behaviour. Houston and James (1998) find that the credit growth of US banks that form part of a US bank holding company is less sensitive to cash flow, capital position and liquidity than that of stand-alone banks.[8] Jeon and Miller (2002) show that foreign bank performance in Korea is not affected by bank solvency, whereas domestic bank performance is. De Haas and Van Lelyveld (2006[I]) show that the credit growth of greenfield foreign bank subsidiaries in European transition countries depends on the financial position of the Western European parent banks. In a follow-up paper, De Haas and Van Lelyveld (2006[II]) provide evidence for a broader, world-wide sample of multinational banks that indicates that such banking groups actively manage the credit growth of subsidiaries, especially in the case of greenfields.

Although this empirical literature thus provides indirect evidence of parent banks influencing the credit supply of their subsidiaries, the exact mechanisms at work remain unclear. Goldberg (2004) argues that in particular more evidence is needed on the question of whether foreign banks have access to – and receive – additional capital from their head offices in times of stress.

2.2 Some methodological remarks

Although the empirical literature on foreign banking is burgeoning, many research questions remain difficult to answer on the basis of microeconometric evidence alone. Our purpose is, as a complement to this literature, to gain more direct evidence on financial intra-bank relationships and their effects on local credit in general and small-business lending in particular. We use a qualitative, idiographic (case study) approach based on focused interviews with high-level bank managers. In general, economists appear slightly reluctant to use focused interviews.[9] These tools may nevertheless lead to useful evidence. As Blinder (1991, p. 7) expresses: "The imperfect knowledge we can pick up from interviews and questionnaires should (…) not be compared to some epistemological ideal, but to the imperfect knowledge that non-experimental scientists can deduce theoretically or glean from econometric results. By this more reasonable standard of evidence, data culled from interviews certainly looks admissible (…)".

We began by identifying the main lacunae in the literature on multinational banking in CEB and converting these into clear, univocal, but open-ended, questions.[10] As explained above, these lacunae relate to the role of foreign banks in lending to SMEs and the way foreign banks use internal capital markets to steer the credit supply of their CEB subsidiaries. We then chose our population of countries and banks. We limited ourselves to those transition countries that joined the European Union in 2004 and which recorded a substantial amount of foreign direct investment in their banking sectors: the Baltic States, the Czech Republic, Hungary and Poland (Table 1).[11]

Table 1 Bank ownership structure in CEB

	Number of banks		**Number of foreign owned banks**		**Asset share of foreign-owned banks (%)**
	1997	***2003***	***1997***	***2003***	***2003***
Czech Republic	50	35	24	27	96.0
Estonia	12	6	4	3	97.3
Hungary*	45	36	30	29	83.3
Latvia	32	22	15	9	47.2
Lithuania	12	13	5	10†	95.6
Poland*	83	60	29	46	67.8
Slovak Republic	29	21	13	19	96.3
Slovenia	34	22	4	6	36.0

Source: ECB (2005)

* Excludes cooperative banks and international banking units. † Includes foreign bank branches.

We chose foreign banks with CEB subsidiaries that together represent a substantial market share in each of the transition economies as well as in the region as a whole. These are the German/Austrian HVB Bank/Bank Austria Creditanstalt; the Austrian Erste Bank and Raiffeisen Bank; the Belgian KBC Bank; the Dutch ABN AMRO Bank and ING Bank; the Finnish Sampo Bank; and the Swedish FöreningsSparbanken (FSB or Swedbank) and Skandinaviska Enskilda Banken (SEB).[12] Most of these banks are included in the top-ten largest international banking groups in the region.[13] ABN AMRO Bank and the Nordic banks are smaller players, but the latter are dominant in the Baltic States. In addition, managers of the following subsidiaries were interviewed: Hansabank and Eesti Ühisbank in Estonia; ABN AMRO Bank, Česká Spořitelna, ČeskoSlovenská Obchodní Banka (ČSOB) and HVB Bank in the Czech Republic; HVB Bank, ING Bank, Kereskedelmi és Hitel Bank (K&H Bank) and Raiffeisen Bank in Hungary; and ABN AMRO Bank, Bank BPH PBK, ING Bank Śląski and Kredytbank in Poland (Table 2). Together, these subsidiaries own 31% of total banking assets and 47% of all foreign bank assets in Estonia, the Czech Republic, Hungary and Poland. Many of these foreign bank subsidiaries are also among the largest individual banks – taking into account both domestic and foreign-owned banks – in the region.[14]

Table 2 Summary of information on the activities of multinational banks in CEB

1. ABN AMRO Bank	ABN AMRO (the Netherlands) is a global service provider with corporate and private clients. It operates 120 branches in eight Central and Eastern European (CEE) countries, including the Czech Republic, Hungary, Poland, Romania and Russia. It also holds 40.34% of the Hungarian K&H Bank (majority owned by KBC). The ABN AMRO Head Office (Netherlands), ABN AMRO Bank Prague Office, ABN AMRO Bank Poland and K&H Bank were interviewed.
2. Erste Bank	Erste Bank (Austria) is a leading financial services provider in CEE with a focus on consumers and SMEs. It is present in Croatia (Erste & Steiermärkische Bank), the Czech Republic (94.4% of Česká Spořitelna), the Slovak Republic (77.19% of Slovenska Spořitelna) and Hungary (Erste Bank Hungary Rt.). The Austrian head office and Česká Spořitelna were interviewed.

3. HVB / BA-CA	HypoVereinsbank Group (HVB, Germany) and Bank Austria Creditanstalt (BA-CA, Austria) merged in 2000, which also led to the integration of their respective CEB subsidiaries. Within HVB, BA-CA is responsible for business development in CEE, including the local HVB banks. BA-CA owns 71.24% of Polish Bank BPH. The BA-CA head office in Austria, HVB Bank Czech Republic a.s., HVB Bank Hungary Rt. and Bank BPH PBK (now Bank BPH) were interviewed. In 2005, HVB was taken over by UniCredito, Italy's largest bank.
4. ING Bank	ING Group (the Netherlands) is a global financial institution offering banking, insurance and asset management in a large number of CEE countries. ING Bank owns 87.77% of Polish ING Bank Śląski. The Dutch head office, ING Bank Hungary Co. Ltd and ING Bank Śląski were interviewed.
5. KBC Bank	KBC (Belgium) exports its 'bancassurance' concept to its second home market in Central Europe, mainly targeting retail and SME clients. KBC owns 81.51% of market leader ČeskoSlovenská Obchodní Banka (ČSOB) in the Czech and Slovak Republics, as well as 85.53% of Polish Kredytbank, 34% of NLB (Nova Ljubljanska Banka, the largest Slovenian bank) and 59.09% of Hungarian Kereskedelmi és Hitel (K&H) Bank. The Belgian head office, ČSOB Czech Republic, K&H Bank and Kredytbank were interviewed.
6. Raiffeisen Bank	RZB-Austria (Raiffeisen Zentralbank Österreich AG) is the central institution of the Raiffeisen Banking Group. Raiffeisen Group owns a substantial bank network in CEE: Raiffeisen International (RI). RI is a holding company of 15 banking and 11 leasing subsidiaries with a presence in 16 countries in CEE and the CIS. Raiffeisen Group (Austria) and Raiffeisen Bank Hungary were interviewed.
7. Sampo Bank	Sampo Bank plc (Finland), a subsidiary of financial conglomerate Sampo plc, is a regional player that owns 99.99% of AS Sampo Bank in Estonia and UAB Sampo Bankas in Lithuania. The Finnish Sampo Bank plc head office was interviewed.
8. SEB	Skandinaviska Enskilda Banken, Sweden (SEB) is a leading corporate bank in Sweden and a regional player in the Baltic region and Germany. It fully owns Eesti Ühisbank in Estonia, Latvijas Unibanka in Latvia and Vilniaus Bankas in Lithuania, as well as a minority stake (47%) in the Polish Bank Ochrony Srodowiska. Eesti Ühisbank and the

	SEB Baltic & Poland division, which is based in Latvia, was interviewed.
9. Swedbank	Swedbank (also known as FöreningsSparbanken or FSB, Sweden) is the largest retail bank in Sweden and a player in the Baltic Sea region. It owns 59.7% of the Estonian Hansabank Group, which is active in Estonia (Hansabank), Latvia (Hansabanka) and Lithuania (Hansa-LTB). The Swedish head office and Hansabank Group were interviewed.

Source: Banks' websites and annual reports.

At each parent bank, the member of the management board that is responsible for the CEB activities was contacted, while at each subsidiary the management-board member responsible for credit risk management and/or treasury operations was contacted.[15] Representatives of the host- and home-country supervisors and central banks were contacted as well. The banks were all willing to co-operate, but in a few cases the interview could only be conducted by teleconference. In our correspondence with the banks, we clarified the topics that were of interest to us, but did not provide them with the questionnaire in advance. The interviews, which were of between 45 and 90 minutes' duration, were all taped and transcribed literally. The questionnaire was used to steer the interviews, ensuring that all topics were discussed. The interviewees were generally co-operative and rarely unable or unwilling to answer particular (sensitive) questions. As a validation procedure, the respondents were asked to review the draft article.

3 Changes in foreign banks' small-business lending

Foreign banks that acquired large regional banks in CEB 'inherited' a portfolio focused on large corporate customers or, in the case of former savings banks, retail banking. Other banks, such as ABN AMRO, HVB Group and Raiffeisen Bank entered CEB mainly through greenfields with the goal of serving multinational customers. For both types of banks, small-business finance remained unimportant during the first half of the 1990s. However, we find that when the transition process advanced, banks started to lend increasingly to SMEs and, in some cases, also to retail clients (see Table 3). KBC, for instance, actively seeks to increase the proportion of SME financing in its CEB subsidiaries. The main challenge is that local staff are still relatively inexperienced in lending to small clients with an above-average credit risk. Kredytbank in Poland and ČSOB in the Czech Republic shifted their customer focus towards retail clients only after being taken over by KBC. The objective of KBC was to benefit more from the inherent diversification possibilities of the retail market, given Kredytbank's strong initial bias towards the corporate market. Similarly, Czech KBC subsidiary ČSOB started with retail business only after being taken over by KBC.[16] Both banks have started to introduce KBC's bancassurance strategy. Even a global service provider such as ING Bank eventually started to broaden its activities from serving multinationals to providing credit to (smaller) local companies and even retail clients. Although multinationals are still important clients, in recent years the share of Hungarian firms has increased as ING Bank Hungary started to focus more on SMEs and retail clients. Similar to KBC, ING aims to export its bancassurance concept.

Our interview results show that the increase in SME lending during the second half of the 1990s was brought about by two main developments: the fierce competition in the credit market for large corporations and foreign bank subsidiaries' improved ability to finance relatively opaque SMEs.

Table 3 Summary of the development of multinational banks' SME finance in CEB

1. ABN AMRO Bank	Followed global clients, but gradually and organically expanded into SME business as well. Most SME lending was terminated during a reorganisation in 2001 and AAB currently only finances SMEs in Romania. AAB's strategy is to have a broad presence throughout the region, with a limited number of offices that focus on wholesale clients, rather than a deep penetration of a few national banking markets.
2. Erste Bank	The strategic focus has been to expand the retail-banking concept to CEE. Accordingly, the growth in recent years was mainly concentrated in the retail and SME portfolios.
3. HVB / BA-CA	Initial focus was partly on serving large Austrian (BA-CA) and German (HVB) corporates. The customer focus was later broadened to also include retail and SME business. Due to strong competition in the segment of (foreign) blue-chips, the focus on the medium market segment increased. Austrian customers remained important.
4. ING Bank	At the beginning of the transition process, ING's focus was on assisting large foreign

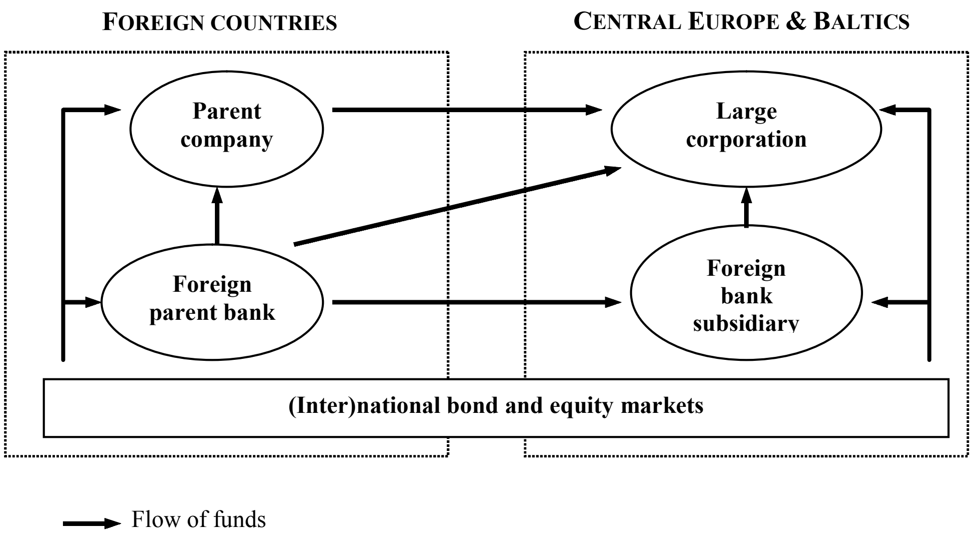
	corporations with their direct investments in CEE. Gradually ING also expanded into the SME and retail business (bancasurrance).
5. KBC Bank	Main strategy is to develop CEE as a second home market, e.g. by implementing bancassurance. Focus on medium-sized firms; fastest growth was realised in the retail and SME segments. KBC also serves Belgian customers, but to a limited extent. Lack of historical information makes SME finance expensive. In addition, SME finance is, to a certain extent, impeded by the inexperience of local staff. However, SME finance was stimulated by strong competition in the blue-chip segment. KBC also implemented new credit-scoring techniques for microentrepreneurs.
6. Raiffeisen Bank	Initial focus on large (foreign) corporations. Gradual increase in credit to large local corporations, SMEs and retail clients. In 1998, Raiffeisen explicitly chose to become a universal bank. Lack of historical data on SMEs and lack of transparent financial information are the main problems in SME segment. However, SME business developed in reaction to strong competition in the corporate segment and the local development of credit-scoring techniques for SMEs. No bias towards Austrian clients.
7. Sampo Bank	From the outset, the main focus has been on local SMEs since the large corporate business would require too much capital at the local level.
8. SEB	Aims to increase its SME market share in the Baltic region (within its universal banking approach). Targets both local customers and Nordic (mainly Swedish) customers.
9. Swedbank	No initial focus on home-country customers, but, rather, on the local market. Main business comprises medium-sized Baltic corporations. Margins on large corporate business are perceived as too small. No bias towards Swedish clients.

3.1 Increased competition in the credit market for large corporations

Our interview results show that during the transition process the competition in the market for large corporate customers gradually increased, eroding interest-rate margins and fees, and eventually stimulating banks like Erste Bank, SEB and Swedbank to start serving SMEs and retail clients as well. Swedbank's Hansabank Group, for instance, increased its focus on SME lending and consumer finance and, consequently, saw the relative importance of lending to large companies decline. An interesting finding is also that the increased competition in the upper corporate segment also led greenfield banks such as HVB and Raiffeisen Bank to gradually begin serving SMEs and retail clients.[17]

In Hungary, Raiffeisen Bank started out in 1987 with a selective set of large multinational companies. Gradually, the portfolio was expanded to also include, successively, large Hungarian corporate customers, medium-sized corporates, private banking individuals and municipalities. In 1998, the strategic decision was made to become a universal bank and, in 1999, the retail activities were launched by a significant additional (greenfield) expansion of the branch network. In 2001, Raiffeisen Bank also began to serve SMEs through this network. The main driver for this strategic development was the rapid increase in competition in the Hungarian credit market for large corporations at the end of the 1990s.[18] Also, in the other CEE markets in which Raiffeisen Bank operates, there has been a clear shift from corporate banking towards becoming a retail and SME-oriented bank. The Hungarian KBC subsidiary K&H Bank also mentions that, due to the minimal margins on large corporate customers, it is planning to refocus on SMEs. According to our interviewees, the rapid increase in competition in the market for large corporations can be traced back to three underlying trends (see also Figure 1).[19]

Figure 1 Increase in funding sources of large CEB corporations



First, the supply of banking services to large firms increased very rapidly during the 1990s. To a large extent this was due to the rising number of foreign banks. Moreover, in many countries, large blue-chip corporations gained better access to cross-border financial services, i.e. directly from the head offices of foreign banks. According to the Hungarian central bank, many large Hungarian companies have left the Hungarian banks for foreign competitors, because the large exposure limits of domestic banks (which are related to their relatively low capital levels) are too low for the credit needs of these companies. As a result, they receive cross-border credit, mainly from German banks. German, Finnish and Austrian banks also provide cross-border credit to companies in the Baltic States. Foreign banks with local operations in the Baltic States, such as Swedbank and Sampo Bank, see this cross-border business at least partly as a form of 'cherry-picking', which lowers the margins for the best risks, i.e. the largest corporations.[20] As a result, margin differentiation according to risk degree has increased and many banks argue that numerous cross-border deals are currently underpriced. Most bankers throughout CEB nevertheless stress that cherry-picking is limited and not expected to become important for smaller companies. Local companies need banks not only to finance large investments, but also for shorter-term borrowing, such as working capital finance, and for taking care of daily business such as execution of payments. Bankers stress that there is a clear advantage in having a bricks-and-mortar presence as it reduces information asymmetries, and thus provides local banks with a competitive advantage. Still, cross-border credit is seen as a competitive force in the credit market for local subsidiaries of multinationals and some of the biggest local companies.[21]

A second driving force underlying competition is the increasing importance of funding that excises local or cross-border banking services altogether. Many (non-bank) parent companies have started to finance CEB subsidiaries themselves through internal capital markets. This process of intra-group financing was boosted by the CEB privatisation process, in which many local firms were taken over by foreign companies, thus gaining access to intra-group funding. Large foreign companies use their head office and/or regional hubs to obtain cheap funding and to pool cash overnight (as better-rated foreign head offices can obtain less expensive funding).

Third, the largest and most transparent local companies – such as utilities, energy companies and telecoms – have been increasingly able to access the international financial markets themselves.

3.2 Improved screening and monitoring systems and the use of leasing

Foreign banks not only increased their SME lending because of competitive pressures but were also able to do so because of their improved ability to efficiently screen and monitor smaller firms. Our interviews show that, after foreign banks took over local banks, a process of transformation, centralisation and integration with the foreign parent banks started. Generally, banks tried to strike a balance between allowing their CEB subsidiaries to be truly local and, at the same time, having sufficient control over their operations. In particular, risk-management systems and IT platforms are most frequently cited as being in need of substantial revisions. Banks started to standardise their risk-assessment methodologies and rating systems for credit risk, market risk, liquidity risk and, sometimes, operational risk and began to use risk-management functions for the group as a whole. This way, exposures in the acquired banks can be measured in a standardised manner and thus included in group-level exposure indicators. The restructuring process gradually made local affiliates of foreign banks more able and willing to take risks in smaller, and informationally more opaque, firms and retail customers. Swedbank, for instance, transferred knowledge about mortgage financing to Hansabank. In Česká Spořitelna, SME lending was only introduced during the transformation programme implemented by Erste Bank, which included credit-risk projects.

With regard to screening systems, KBC and SEB started to develop or improve cash-flow based credit-evaluation systems in their subsidiaries (financial statement lending). More importantly, Erste Bank, KBC, Raiffeisen Bank, Sampobank and SEB all started to develop credit-scoring systems for SME and retail clients applying for a loan from their CEB subsidiaries (credit-scored lending).[22] Some of these banks also provided training – sometimes in the home country, sometimes by way of flying-in experts – to introduce these new systems. KBC, for instance, implemented scoring systems for retail banking in ČSOB and updated the retail-scoring systems of Kredytbank after acquiring this Polish bank. At a later stage, KBC developed similar credit ‘scorecards’ for microentrepreneurs. Important in this regard is that many banks, including KBC, HVB and Raiffeisen Bank Hungary, first needed to accumulate more information on the historical performance of the retail and microcorporate portfolios to be able to judge the likely profile, behaviour and future cash flows of potential customers.

To this end, Česká Spořitelna, HVB Bank, GE Capital Bank, ČSOB and Komercni Banka founded a credit bureau in the Czech Republic in June 2002.

Another interesting case is that of Raiffeisen Bank Hungary, which, due to the increasing competition in the market for large corporate customers, gradually increased its SME business. At first, this gradual development was more unintentional than the result of a deliberate strategy, and for quite some time SME customers were screened in a similar fashion as large corporates, i.e. by (expensive) financial statement analysis. Only when Raiffeisen took the strategic decision to become a universal bank, credit-scoring techniques for SMEs and retail customers were developed. The influence of parent bank RZB was limited in this specific case, as RZB Austria itself had only limited experience with credit scoring.[23] The scoring techniques were therefore developed in Hungary, though approved by the Austrian parent. Raiffeisen mentions that the lack of historic data makes it impossible, even now and in such a relatively developed market as the Hungarian one, to fully rely on credit-scoring models. Therefore, a work-around solution is used in which, if a loan to an SME customer cannot be granted on the basis of credit-scoring results alone, the proposal is handled as if it were a corporate customer, i.e. it is individually analysed through financial-statement analysis. Without this procedure, not enough SME customers would be granted a loan.

The methods employed by local subsidiaries to monitor their existing client portfolio also came under the influence of the parent banks. Banks like SEB implemented signalling systems that follow customers during the tenure of the loan and ensure that certain financial ratios remain fulfilled (e.g. minimum capital and liquidity requirements). Parent banks also monitor the portfolio through the credit committee of the subsidiaries' supervisory councils. Moreover, since the local portfolios are fully consolidated in the group's total portfolio, the head office also monitors local credit on a continuing and aggregated basis.

Our interview results also clearly point out that screening and monitoring have also become easier because SMEs themselves have become more transparent and willing to provide information to banks. Legal and accounting systems have become more sophisticated as well, improving the ability of banks to base lending decisions on cash-flow analysis, possibly backed up with collateral (financial-statement lending). Banks mention that, over the past few years, the legal environment in most countries has improved, making small-business lending in particular less risky. On the basis of court decisions it is, for instance, becoming increasingly clear which types of collateral are safe and which are not. According to the banks, the main problem with the current legal system is the slow pace at which laws are enforced and the corruption that prevails in some countries. The limited amount of jurisprudence slows down the legal system.

In some countries, such as the Baltic States, the Czech Republic and Hungary, the deficient and slow legal system has been a driving force for the rapid growth in leasing, especially of company cars and real estate. When leasing, the bank retains the ownership of the object leased and can simply repossess if the debtor goes bankrupt, thus avoiding any lengthy bankruptcy procedures to take possession of collateral. Especially in the Baltic States, the rapid spread of leasing at the beginning of the transition process was related to the limited protection of collateral. Banks also used leasing to get around the problem of insufficient track records of firms, which made credit screening difficult. KBC mentions, for instance, that leasing has partly replaced SME lending because, in some countries, local-subsidiary personnel continue to be highly reluctant to lend to smaller firms. Although the track records of firms have improved, credit-rating systems have been upgraded and the (enforcement of) legal systems have improved in recent years, leasing continues to be an important way of financing in CEB. To a large extent this is due to 'path dependency': banks and customers have grown used to the flexible payment schedules of leasing. The leasing market has thus gradually shifted from being supply-driven to being demand-driven.

While foreign banks have generally started to lend more to SMEs and retail clients, banks vary in the priority they assign to serving home-country customers. Some banks see large corporations from their home country, which conduct cross-border business in CEB or have opened up local subsidiaries, as a clear target group, arguing that "knowing your customer is easier if you already know the customer". Sampo Bank and SEB try to actively support clients from their Nordic home countries, resulting in a bias in their corporate credit portfolio towards Nordic customers. HVB/Bank Austria Credit Anstalt's portfolio in Poland still comprises a relatively large number of Austrian corporate clients that are given support with their expansion into CEB. However, the proportion of Polish corporate clients in the total portfolio has gradually increased. Czech bank ČSOB also gained many

Belgian and multinational corporate customers after being taken over by KBC and is serving the local subsidiaries of such multinationals with loans, payment services and financial market products. The proportion of Belgian clients in the portfolios of KBC's foreign subsidiaries is nevertheless limited. According to KBC, the small Belgian home market is even a competitive disadvantage when compared to German, British or American banks, which all profit from geographically large home markets and, hence, greater numbers of potential home-country customers. Overall, even in those banks that actively seek to support home-country customers, these comprise only a limited component of the total credit portfolio. This is in line with Seth *et al.* (1998), who analyse the lending patterns of multinational banks and find that the majority of foreign bank credit in a host country does not go to home-country clients.

In sum, our findings paint a multifaceted, but integrated, picture of how foreign bank entry has influenced SME lending in CEB. This picture broadly confirms the fragmented results of the empirical literature that stresses the potential for positive medium-term effects of foreign bank entry on SME lending. Little evidence is found of foreign banks persistently confining their credit supply to large – multinational or home-country – companies.[24] Although many banks initially did have a clear focus on multinationals and the largest local corporations, almost all of them started to gradually lend more to SMEs.

Our finding that many foreign banks have improved their subsidiaries' lending techniques and have reshaped subsidiaries' customer focus in line with their own customer orientation, confirms the results of Peek and Rosengren (1998) and Berger *et al*. (1998). Our results are also consistent with Berger *et al*. (2001), who find that foreign banks only lend less to SMEs if the parent bank is headquartered on another continent. Clearly, that is not the case for the banks that we interviewed, or for most of the foreign banks in CEB for that matter. Their competitive disadvantage in lending to local SMEs has been relatively limited as they entered from neighbouring countries with strong historical ties.

We are also able to go one step further than Clarke *et al.* (2001) by demonstrating that when foreign banks compete fiercely for the largest corporate customers, they will eventually start to move down the market themselves by granting credit to smaller, more opaque firms as well. The 'difficult'

SME segment is thus not necessarily left to domestic banks. Finally, the results here underscore the recent conceptual framework of Berger and Udell (2005). These authors stress that changes in a country's financial institution structure – in this case, the entry of foreign banks and the subsequent increase in competition – and changes in the lending infrastructure – in this case, the increase in the availability of at least a minimum quantity of information on opaque SMEs – affect the lending techniques that can successfully be used. In turn, this influences the ability of banks to finance SMEs. This is precisely what we document in detail for CEB. While, at the beginning of the transition process, leasing was an important way to 'circumvent' inefficient legal systems, foreign banks later on also introduced credit-scoring techniques in order to lend to informationally opaque SMEs. In conventional econometric research, lending technologies generally remain unobserved (Berger and Udell, 2005).

4 Intra-bank financial relationships and the steering of local credit

Since the majority of CEB banks currently form part of a multinational banking group, their lending activities will, to some extent at least, reflect decisions by the foreign head office. The organisational and especially the financial relationships between a parent bank and its local affiliates differ between banks. Intra-bank governance mechanisms will therefore influence the credit process of local affiliates to different degrees.[25] On the basis of the information we culled from our interviews, we add to the literature on internal capital markets by providing more direct evidence on how multinational banks in CEB use such mechanisms to steer credit. Section 4.1 discusses how CEB subsidiaries are financially linked to their foreign headquarters. Section 4.2 then analyses how headquarters use these links to steer the credit expansion of their subsidiaries. Section 4.3 discusses how this steering works under exceptional economic circumstances.

4.1 Financial intra-bank relationships in multinational banks

Particularly in rapidly expanding markets like those in CEB, banks may face constraints when expanding credit because of limitations on the liability side of their balance sheet. In general, banks are potentially constrained in their credit growth by the growth of their liabilities: equity ('capital') and deposits. For equity, the constraint is posed by supervisory capital adequacy requirements, which force banks to hold a certain amount of (expensive) equity capital against risky assets, combined with the fact that banks cannot tap the equity market to unlimited amounts (Froot and Stein, 1998, Van den Heuvel, 2002).[26] Banks may also be constrained by the amount of deposits they receive.

Foreign bank subsidiaries may face fewer financing constraints if they receive additional funding – equity and/or debt – from their parents. A subsidiary that has trouble raising new capital may, for instance, receive funds from the parent in exchange for (new) shares. When the subsidiary requires additional liquidity rather than equity, the parent bank may provide it with funds in exchange for debt titles. In this sense, foreign bank subsidiaries form part of an internal capital market operated by the parent bank. Here, we should take a closer look at the term 'internal capital market'. This concept usually refers to the internal allocation of funds between different divisions of a single legal entity. Characteristically, these funds are reshuffled on the basis of hierarchical orders, rather than by contract. In this study, we are mainly interested in the relationships between parent banks and their legally separate subsidiaries – sometimes even less than fully owned subsidiaries. This implies that any reallocation of funds between parent and subsidiary will usually not be done through orders, but in the form of lending to, or taking additional equity in, these subsidiaries (i.e. through legal contracts).

The distinction will be made between the 'internal equity market' – in which a parent bank allocates funds to the subsidiary in exchange for ownership rights with the specific goal of boosting the subsidiary's equity – and the 'internal debt market' for the allocation of funds to the subsidiary in exchange for debt instruments.[27] Although in both cases the effect on the asset side of the balance sheet is initially the same, the accompanying change in the liability structure is different. In the medium term, there are also different effects on the asset side, as equity is part of tier 1 capital and can thus be used as a basis for credit expansion.[28]

Internal equity markets

It is not self-evident that parent banks influence local capital since, at the holding level, capital is viewed from a consolidated perspective, e.g. by the home-country supervisors. In this light, ING Bank mentions, for instance, that local capital of foreign subsidiaries could, in principle, be zero. Still, all parent banks interviewed operate some form of internal equity market in which they influence the capital levels of their CEB subsidiaries. Our interviewees mention three external reasons for doing so: local capital adequacy requirements; local large exposure limits; and local tax regimes.[29]

An example of the first reason is Swedbank's capital allocation, which is based on the various national capital adequacy rules and the projected capital requirements derived from those rules. Actual paid-in capital largely reflects local supervisory requirements in combination with the history of retained earnings. ABN AMRO Poland mentioned that the parent bank wants to keep capital "as much as possible centrally".[30] More generally, the parent banks that we interviewed consistently mentioned that they tend to replenish local capital levels when subsidiaries' capital ratios are getting too close to supervisory minimum levels, either because of rapid credit expansion or because of large losses.

KBC and SEB state, for instance, their commitment to providing tier 1 and tier 2 capital in order to guarantee the fulfilment of local capital requirements. A case in point is KBC's support of Kredytbank's capital increase in 2003–2004 after the subsidiary's significant losses in 2002–2003. KBC explicitly mentions that it does not want subsidiaries to raise expensive subordinated debt themselves in order to boost tier 2 capital. It has therefore provided Kredytbank with normal and perpetual subordinated debt as part of tier 2 capital support (*idem* for the Slovak part of the ČSOB subsidiary). In Hungary, Raiffeisen Bank is supporting its subsidiary in order to let it increase its market share. Raiffeisen Bank Hungary has an agreement with Raiffeisen Zentral Bank in Vienna under which the subsidiary is able to draw subordinated loans when tier 2 capital is in need of an increase. In addition, the local subsidiary has issued preferential shares, which were bought by the Viennese head office, so as to boost tier 1 capital as well. Other examples of capital support by parent banks include HVB Bank Czech Republic, Erste Bank (which increased the capital of its Hungarian subsidiary twice in order to back up rapid credit growth), Sampo Bank (which supported its Lithuanian subsidiary) and Swedbank (which subscribed for the full amount of subordinated debt that Hansabank issued in 2001).

A second reason for foreign parent banks to have capital at the local level concerns local large exposure limits. Such limits specify the maximum amounts, expressed as percentages of local capital, that locally chartered banks are allowed to lend to an individual counterparty. If a foreign bank subsidiary is not permitted to lend more than 25% of its own capital to a single debtor, this will provide an incentive to parent banks to increase local capital in order to soften the effect of the large exposure rule. According to ING, large exposure limits are the single most important reason why subsidiaries ask the parent for additional capital. However, banks have also found ways to circumvent such limits. ABN AMRO and ING, for instance, often enter loans 'offshore' – i.e. directly into the books of the head office – with the subsidiary de facto operating as a representative office. ABN AMRO established a separate offshore booking centre for this. Another option is to allow the head office to issue guarantees for large individual loans, such as large working capital facilities. A final option is to change subsidiaries into branches (which can then draw on total group capital), although in many countries this is not allowed. For similar reasons, ABN AMRO usually serves large corporate customers and public-sector business by means of branches, as the accompanying capital allocation flexibility suits this large customer business (i.e. large transactions would lead to significant swings in local capital requirements). For retail and SME business, ABN AMRO tends to use local subsidiaries, as, for these types of customers, capital requirements are generally more stable.

A third important rationale for banks to influence local capital lies in the CEB tax regimes, which have stimulated banks to leave retained profits local rather than transfer them to the head office. In recent years, many parent banks have passively supported their CEB subsidiaries by setting relatively low dividend payout ratios. In many cases – including KBC's ČSOB in the Czech Republic, HVB/Bank Austria Credit Anstalt's Bank BPH in Poland, Erste Bank's Česká Spořitelna in the Czech Republic and HVB Bank in Hungary – this has left subsidiaries with more than sufficient capital to support their credit expansion. The Baltic foreign bank subsidiaries currently operate with excess capital as well because profits have been persistently retained. This strategy has been stimulated by the fact that in Estonia, for instance, profits are not taxed until they are paid out as dividends. In Poland, a 25% tax has to be paid when a parent withdraws equity from its subsidiary. As yet, subsidiaries have thus not been channelling excess retained profits upwards, e.g. by paying 'super-dividends' out of local excess capital to the parent company.[31] With accession to the EU, the payment of dividends to parent companies has become more attractive, possibly increasing the number of super dividends going forward.[32] Yet, many banks consider channelling excess capital to the parent bank as relatively unimportant anyway, as the local subsidiaries are consolidated with the parent and an internal upward flow of dividends does not change capital at the consolidated group level.

Internal debt markets and central treasuries

Foreign parent banks can also support subsidiaries with cheap funding. Indeed, Bonin *et al.* (2005) find that privatised CEB banks experienced an increase in net interest margins after their privatisation, which they take as evidence of the ability of the foreign owner to access funds less expensively. Indeed, we find that parent banks provide their CEB subsidiaries with debt funding, either long-term debt financing or short-term cash support, although, as will be explained below, the currency of denomination and regulatory factors can hamper such debt flows. According to the bankers that were interviewed, debt financing of subsidiaries is mainly an operational consequence on the liability side of the balance sheet of previously set, strategic credit-growth objectives.

The level of centralisation of such treasury activities differs among banks. HVB Bank, KBC, Raiffeisen Bank and Swedbank follow a relatively decentralised approach in which subsidiaries are required to fund themselves with senior debt through their own treasury desks (Swedbank provides subordinated debt as part of tier 2 *capital* support).[33] These banks stress the fact that their local funding bases are generally sufficient and that providing cheap funding from the home country would mean that minority shareholders would free-ride. Raiffeisen Bank and ABN AMRO even mention the access to deposits as a clear advantage of (also) doing retail business. Within Raiffeisen Bank, there is close co-operation between the central treasury and the local CEB treasuries. Subsidiaries can rely on the Vienna-based parent bank in the case of a liquidity squeeze, but normally are required to fund themselves independently through deposits, the interbank market and syndicated loans.

Many other banks operate more centralised treasury functions, at least for foreign-currency liquidity. SEB, for instance, is the only provider of non-deposit funding to its subsidiaries. At the end of the year, subsidiaries like Eesti Ühisbank calculate the funding requirements for the next year, including subordinated, long-term and short-term debt, and submit this application to the group Treasury. The local subsidiaries are fully integrated into the treasury activities of the group and are guaranteed liquidity through a mandate. According to SEB, this integrated liquidity management is less expensive than independent funding by the subsidiaries themselves. ING Bank, Erste Bank and ABN AMRO also operate a relatively centralised treasury. Subsidiaries and branches are allowed to fund themselves in the local currency, but have to use the central treasury for foreign currencies.

According to our interviewees, a potential limitation to cross-border intra-bank debt funding is posed by the currency of denomination in combination with the level of development of the market for currency swaps. In general, parent banks cannot fund their subsidiaries in the host-country currency, so that cross-border funding is usually denominated in euro or dollars. Such support can only be used to fund local credit if the subsidiary is able to sufficiently expand its foreign-currency-denominated lending business or if it can easily swap the foreign funding into the local currency. For instance, although ING Hungary receives some euro liquidity from Amsterdam, it does most of its funding locally because its business is mainly in Hungarian forint. On the other hand, KBC provides Kredytbank with significant amounts of euro and dollar liquidity as many Polish companies finance themselves in euro.[34] KBC and ABN AMRO also send euro liquidity to K&H Bank, which has been experiencing constraints on its credit supply because of low liquidity, after which K&H swaps this liquidity into Hungarian forints.

In some cases, regulatory factors limit the funding of CEB subsidiaries, since parent banks have to comply with home-country large exposure limits concerning intra-group loans.[35] These stipulate that a parent bank can only provide a maximum percentage of its capital to a subsidiary in the form of equity and lending.[36] This introduces a regulatory limitation on the direct support parent banks can give. As a result, some parent banks have started to perform the role of syndication leader for their CEB subsidiaries in order to arrange long-term funding. An example is the Polish Bank BPH, owned by Bank Austria Credit Anstalt, which depends on Vienna for loans with a relatively long tenure. In most cases, Bank Austria Credit Anstalt does not lend itself, which would result in very large intra-bank funding, but arranges a long-term syndicated loan instead. Similarly, Swedbank has participated as a co-arranger when Hansabank issued senior debt (and has kept minor parts of the loan in its own portfolio).

4.2 Foreign parent banks' steering of their CEB subsidiaries

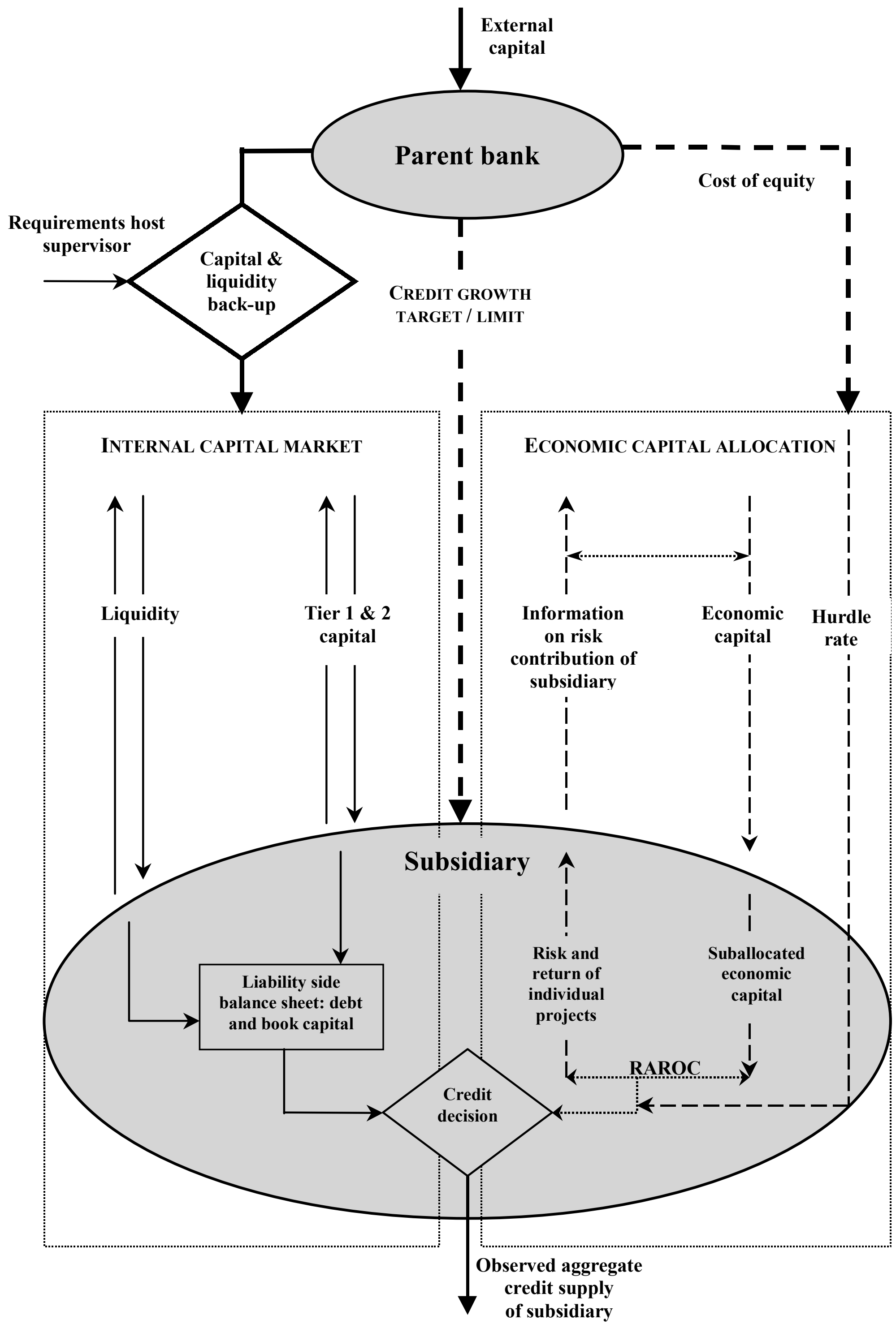
Internal capital allocation: book capital versus economic capital

Section 4.1 discussed how parent banks have supported their CEB subsidiaries with tier 1 and 2 capital as well as liquidity in order to maintain credit growth or replenish book capital after losses. In other cases, parent banks simply supported local subsidiaries by keeping retained earnings locally. Such an allocation system for book capital to subsidiaries is a passive approach to capital allocation as it is mainly based on external, regulatory reasons (see the left-hand side of Figure 2).

In general, banks' capital allocation systems lie somewhere on a continuum between passive and active approaches (Matten, 2000, p. 316). In the aforementioned passive approach, the parent bank allocates *book* capital to subsidiaries, but does not use this capital allocation to measure performance, to compensate managers or to steer business directly. Instead, banks such as ING Bank and Raiffeisen steer subsidiaries by setting direct targets/limits on the (risk-weighted) asset side, which are often based on targets for future market shares. The various subsidiaries all submit plans to the head office – which more or less explicitly regards the group as a (country) portfolio of investment opportunities – and thus compete for higher risk-weighted asset limits. In a next step, the parent bank then calculates whether – given the allocated risk-weighted asset limits – book capital support is necessary from a regulatory perspective. In this passive approach to capital allocation, local book capital thus follows from the interaction between the credit growth targets as set by the parent bank and the local capital adequacy requirements.

In addition to such passive internal capital markets many of the banks interviewed have begun to operate more active and potentially more influential capital allocation systems. Contrary to passive systems, active systems do not entail actual capital flows, but rather consist of 'virtually' allocating *economic* capital for management information purposes.[37] Economic capital is basically an internal risk measure that determines how much capital a bank needs in order to reach a certain level of protection against default. Economic capital may deviate from actual capital as it reflects the amount of capital that the parent bank itself deems necessary as a buffer against unexpected losses.[38]

Figure 2 Parent banks' steering of subsidiaries' credit supply



After a bank has determined the total amount of economic capital it should hold, the capital allocation system assigns this economic capital to the various business units or subsidiaries on the basis of how much each subsidiary contributes to total banking risk (see the right-hand side of Figure 2).[39] The development of economic capital allocation systems has been accompanied by the emergence of risk-adjusted rates of return (RAROC) calculations to measure the attractiveness of current and future projects.[40] When taking both risk and return characteristics into account, comparison of business units and of individual loans becomes easier.[41]

An economic capital allocation system can be used to set targets for managers and to measure performance (semi-active approach) or to directly steer the activities of these subsidiaries (active approach). In the latter case, subsidiaries receive an amount of economic capital on the basis of which they can decide – with the aid of their internal-risk models – which and how many assets they want to finance.[42] Although some banks have started doing this in their subsidiaries in developed economies, the internal operations of the CEB subsidiaries are still considered insufficiently sophisticated to be integrated into such an active economic capital model. Almost all banks interviewed by now use a semi-active approach to economic capital allocation as a complement to the passive, regulatory-driven allocation of book capital.

The advantage of a semi-active type of capital allocation can be illustrated by the counter-example of Erste Bank, which is the only bank in our sample that only uses a simple passive approach to allocate book capital. The performance of subsidiaries is measured through basic return on equity (ROE) calculations, based on local book capital rather than some economic capital measure. In the case of overcapitalised CEB subsidiaries, such an approach may make it difficult for managers to meet ROE targets since there is no procedure for neutralising the effect of excess local capital.[43] Most other banks – such as KBC, SEB and Swedbank – therefore also use a semi-active system of economic capital allocation. In these elementary systems of economic capital allocation, management is rewarded on the basis of achieving profitability measures based on economic capital rather than book capital.[44] Subsidiaries are typically charged for the economic capital that they use, in order to take into account the aforementioned cost of capital.[45] By using economic rather than book capital to measure profitability ratios, and by charging subsidiaries for the costs of the economic capital they have been assigned, any negative effects of overcapitalisation (in an accounting sense) on performance measurement are prevented.

The interaction between RAROC, economic capital and risk-weighted asset limits

Although foreign banks in CEB use economic capital allocation mainly as an evaluation and performance-measurement methodology, and not to steer credit directly, this semi-active approach may still influence credit growth *in*directly. Importantly, economic capital that is allocated also forms the basis for the calculation of the RAROC of individual new loans. This bottom-up approach means that a subsidiary must sub-allocate the economic capital that it has been assigned to individual projects.[46] If the subsidiary is charged for the use of economic capital, it will only use this capital for projects that make up for its cost, i.e. that have a risk-adjusted return that exceeds the hurdle rate. The allocation of economic capital thus introduces a potential (indirect) constraint on subsidiaries' activities.[47] Given a certain risk-weighted asset limit, some subsidiaries will find it easier to reach these nominal targets than others, depending on the number of above-hurdle rate projects that can be found. Under positive economic circumstances, many projects with a high RAROC are available, and the nominal credit limits may become a constraint (if they cannot be lifted). The 'nominal room for credit expansion' is then quickly filled. On the other hand, some subsidiaries may not be able to reach the credit target with projects that exceed the hurdle rate, so that RAROC poses a binding constraint on the subsidiary's expansion. In this way, the allocation of economic capital will indirectly influence the growth rate of a subsidiary through the RAROC calculations for individual new projects. Many banks thus operate a dual system: they assign nominal credit limits to their subsidiaries in a top-down fashion *and* operate a bottom-up system of economic capital allocation and RAROC-calculations.

Which of the two constraints is, in practice, most binding?[48] Given nominal credit targets and local capital adequacy requirements, banks calculate the actual minimum capital that needs to be in place in the year to come. If this capital need exceeds the capital that is present at the local level, some form of capital support is necessary. In practice, such support was provided on numerous occasions. The steering of the local business is thus in first instance done on the asset side of the balance sheet, after which the matching of the liability side – through liquidity assistance and book capital support – is more or less an operational issue.

Raiffeisen Bank, for instance, mentions that local credit expansion is controlled on the asset side – local banks have to produce yearly credit policy papers that set out their targets – but is, in practice, made possible by tier 1 and tier 2 book capital back-up from Vienna. ING Bank maintains a matrix of nominal risk-weighted asset limits for its subsidiaries. Only when the capital ratio at the group level comes too close to the required minimum level, does the allocation of risk-weighted asset limits become stricter. This may ultimately confront subsidiaries with risk-weighted asset limits that become binding in practice. However, under normal circumstances, the parent bank simply ensures that each subsidiary fulfils the local capital adequacy requirements that belong to the risk-weighted asset targets for the coming year. In that case, the passive allocation of book capital will not create a bottleneck. Indeed, according to ING Bank, RAROC decisions are more important for local activities than the local capital that is available: “RAROC steers the business”. Also, in the case of Raiffeisen Bank Hungary, the return on economic capital calculation, which is driven by the parent bank RZB, is more important than the nominal credit limits, since it forces the subsidiary to only proceed with business that is efficient from a capital perspective. ABN AMRO Prague – which is a branch and can rely on the total holding capital – also mentions that, if the expected ROE of a project is lower than the minimum hurdle rate: “The holding is not willing to provide the economic capital for funding such clients. The holding thus uses these ratios to steer credit growth.”

To sum up, our interview results show that parent banks use both a passive and a semi-active approach to steer subsidiaries. The passive approach is mainly driven by local regulatory considerations and establishes a minimum amount of book capital, given the risk-weighted asset targets as set by the parent bank. The bankers interviewed acknowledge that their head office more or less explicitly operates a portfolio view in which risk-weighted asset limits are (re)allocated to the subsidiaries with the highest expected (risk-adjusted) returns. In addition, some banks are beginning to operate economic capital allocation systems. In the CEB region, these economic capital models are still of the semi-active type, meaning that they are used as performance-measurement and evaluation tools, but not to steer subsidiaries’ credit growth directly. Nevertheless, by allocating economic capital and charging subsidiaries for the use of this capital, parent banks introduce a bottom-up constraint at the loan level. This determines the pace at which subsidiaries are able to meet the nominal targets or boundaries as set by the passive approach. In CEB countries, the bottom-up RAROC constraint at the individual loan level turns out to be more binding than the aggregate nominal asset limits. Actual local capital levels and nominal credit limits almost never pose constraints in practice.

Although studies such as Houston *et al.* (1997) already detected lending patterns that were consistent with the existence of internal capital markets, we show more directly how banks operate such markets. A weakness of the aforementioned literature is that the econometrician can only observe data on the passive approach, i.e. changes in book capital and credit (the left-hand side of Figure 2). The assumption is that changes in book capital cause changes in credit. However, we argue that banks mainly steer their subsidiaries directly at the asset side, while regarding the adequate capitalisation as an operational issue. The credit supply of subsidiaries is also influenced by the (unobservable) economic capital that the bank holding allocates. Indeed, it is found that a number of the subsidiaries that were interviewed were consistently overcapitalised (with regard to book capital). Such banks may nevertheless still face a constraint in their credit expansion if individual new loans have to pass a hurdle rate.

Our results thus also shed a different light on the conclusion by Houston *et al.* (1997, p. 159) that their results are "surprisingly strong in light of regulatory restrictions on bank holding companies that impair the management of capital on a consolidated basis". While regulatory and tax systems are found to be important barriers for banks when moving book capital and liquidity, our results also indicate that parent banks do not always need to move *book* capital in order to steer subsidiaries' credit. The allocation of *economic* capital increasingly drives local credit growth in CEB.

4.3 Credit steering by multinational banks under exceptional circumstances

<u>The allocation of credit targets and book capital when parents are capital-constrained</u>

The fact that many parent banks steer subsidiaries' activities by setting targets for credit growth and backing these up with tier 1 and 2 capital, implies that subsidiaries' credit growth may depend on the total amount of consolidated group capital. Large losses in the home country or in third markets that wipe out a significant portion of group capital may force parent banks to decrease (foreign) affiliates' credit growth targets (Peek and Rosengren, 1997). A number of subsidiaries think it is indeed likely that group-level problems may have a negative influence on their credit limits, although this has not happened in CEB as yet.[49] As well as lowering credit-growth targets across various subsidiaries, parent banks may also decide to restructure the portfolio and focus more on high-quality customers. Especially banks that have significant operations in third markets ('global service providers') may be prone to such intra-bank contagion, in the sense that problems at other subsidiaries may make the parent bank more cautious when extending credit limits to CEB subsidiaries. However, global service provider ABN AMRO argues that, in the case of prolonged low returns in Latin America, an *increase* in capital to Poland would be more likely. Apparently, a local capital crunch would occur only when group capital decreases so much that a decrease in credit across al subsidiaries is necessary.

Notwithstanding the assurances of ABN AMRO, KBC and SEB that the credit growth of CEB subsidiaries will not be influenced by home- or third-country problems, the National Bank of Poland points out that, due to the subdued economic situation in Germany, some German banks have been transferring subsidiaries' profits to the German head office through extraordinarily high dividends. In a similar vein, the Hungarian central bank mentions the scenario of a foreign bank that, due to problems in its home market, may no longer be willing to provide capital support to its subsidiaries. Another, more profound effect of parent banks experiencing a capital 'crunch' is the postponement of acquisitions or the closing down of existing operations in other markets. An example is Bankgesellschaft Berlin, which – due to problems with its East German property portfolio – was forced to downsize its foreign operations, such as the stake in Polish internet bank Inteligo and in the Czech Zivnostenska Banka. Similarly, ING Bank mentions that it reconsidered some of its Latin American activities, precisely because ING Group was approaching the limits of its capital base. In 2002, when market capitalisation was relatively low, ING Bank's acquisition policy changed and the planned acquisition of the Romanian bank BCR was cancelled. In this context, ABN AMRO mentions that following the takeover of the Brazilian Banco Real in 1998, market rumours spread that ABN AMRO was investing too heavily in emerging markets. This prompted the bank to put potential new investments in other emerging markets on hold until the financial markets were convinced that the Latin American activities would not destabilise the group. In this case, it was not so much actual constraints that influenced the group's (non-)expansion, but rather the pressure from the market and analysts. Adverse developments in the home-country portfolio may also give rise to negative reactions from the financial markets. The problems at the German HVB Group, which began around December 2002, generated much negative publicity and a price increase of HVB bonds. Such increased risk premiums for the parent bank may also translate into higher funding costs for the local subsidiaries. In the case of the Polish subsidiary BPH Bank this turned out not to be the case, perhaps because of this subsidiary's sound performance and transparency due to its listing.

Multinational banks as lenders of last resort

Since subsidiaries are separate legal entities, parent banks have no legal obligation to rescue them from severe liquidity problems or bankruptcy (Aliber, 1984). Such a lender of last resort (LOLR) role may then be left to the local monetary and fiscal authorities and, ultimately, to the taxpayers. However, most of the parent banks interviewed explicitly assume the role of LOLR. Many banks even mention this in their annual reports (the so-called 'Patronatserklärung'), although other banks are less explicit about their role. The main reason for banks to commit to the role of LOLR is that withholding support from a foreign subsidiary would be very costly due to high reputation costs. Such costs would be directly reflected in higher credit spreads for the remaining subsidiaries.[50] As a result, there is, in practice, often no difference between branches and subsidiaries with regard to support from the head office. The only reason for not providing assistance would be that this would jeopardise the parent bank itself. Still, a small number of parent banks mention that there should also be a role for the host-country government, given the potential systemic implications of a bankruptcy. Other bankers even explicitly stress that there is no obligation for the parent bank to bail out a foreign subsidiary and that the parent bank's willingness to do so depends on what exactly caused the problems. In the end, the decision as to whether the parent bank will support its subsidiary or not will thus be made "taking into account the balance of future profits and expenses including legal and reputation costs" (Cárdenas *et al.*, 2003).

Interestingly, home-country supervisors argue that problems at a subsidiary should primarily and in the first instance be dealt with by the host-country authorities, especially when it would endanger the stability of the parent bank (although they acknowledge an as yet unspecified responsibility of their own as well). It is also mentioned that the existence of large exposure limits could restrict the amount of liquidity assistance a parent bank can provide. Nevertheless, the Polish and Czech central banks declared that, in the event of an emergency, the foreign parent banks are expected to support their Polish and Czech subsidiaries. The case of Rijecka Banka is mentioned in this regard, which has sent a negative signal throughout the region about the ability and especially the willingness of parent banks to support their subsidiaries in times of need. When 60% strategic investor Bayerische Landesbank found out in 2002 about a fraud in its Croatian subsidiary Rijecka Banka, it decided to withdraw and leave the further resolution to the Croatian government. Importantly, Bayerische Landesbank was having problems in its home country because of its large exposure to the troubled Kirch media group. An important issue is also that, as in the case of Rijecka Banka, a local subsidiary may often be relatively unimportant for the parent bank, but of systemic importance for the host country.[51] In the host supervisor's eyes, parent banks should take responsibility for such subsidiaries.

5 Summary and conclusions

To our knowledge, this is the first study to look into the effect of foreign bank entry on small-business lending in CEB. By means of focused interviews, we were able to at least partially circumvent the current lack of data on the customers of foreign banks in CEB. Our results show that foreign banks initially focused almost exclusively on large foreign and local corporate clients. However, nearly all foreign banks have gradually increased their small-business and retail lending. Subsidiaries started to use leasing in order to circumvent the deficient legal systems and parent banks later on also introduced new lending techniques in their subsidiaries. Gradually, SMEs themselves also became more transparent. In addition, the rapid increase in competition in the blue-chip corporate segment stimulated foreign banks to seize the opportunities in SME lending.

The qualitative approach adopted here also provides additional insight into the mechanisms through which multinational banks influence the credit supply of subsidiaries. On the basis of our interview results we illustrated how foreign banks operate internal markets for debt and equity and how the use of semi-active economic capital allocation can loosen the bond between local book capital in a subsidiary and its credit growth. It is found that the restructuring of CEB subsidiaries has created local banks that are strongly integrated in the capital allocation and credit steering mechanisms of the parent banks. Our findings show that parent banks generally steer subsidiaries by setting risk-weighted asset limits, which may be supported by book capital and debt funding. This passive approach is mainly driven by regulatory considerations and establishes a minimum amount of local capital (given the credit growth target).

In addition to the passive approach, some banks have started to use semi-active economic capital models. By allocating economic capital and charging subsidiaries for the use of it, parent banks introduce a constraint at the individual loan level. This bottom-up approach determines the pace at which subsidiaries are able to meet nominal credit targets. Depending on local circumstances, the bottleneck in a subsidiary's credit growth may be either nominal credit limits or the operation of a RAROC-like system in this bottom-up fashion. In the years ahead, we expect banks to increasingly use their RAROC systems to pursue a more direct top-down steering policy towards their CEB affiliates.

Of course, a drawback of our approach is that it remains difficult to quantify the findings. For instance, it remains unclear how much acquired banks have expanded their SME lending. In many transition countries, financing conditions still constitute an important problem for many SMEs. Further research will therefore be necessary to test whether the qualitative results from this study hold in quantitative terms as well. It should also be noted that the use of economic capital models in banking, which is well documented in the more practically oriented banking literature (e.g. Corrigan, 1998; Matten, 2000; Walter, 2004) has, as yet, only to a limited extent been applied in the academic empirical literature. The latter literature implicitly still assumes that banks only operate an internal market for book capital. Here, too, lies an empirical challenge.

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Annex 1 Example of questionnaire

The questions in this example are the same as those put to the subsidiaries. Similar but rephrased questions were put to the parent banks. In the questionnaire, the name of the bank was filled in where the questions below speak of '*the parent bank'* and '*the subsidiary'*, respectively.

Topic 1 Financial relationships between *the parent bank* and *the subsidiary*

Q1.1: Would you say the power of decision-making with regard to overall strategic decisions lies mostly with the parent bank or with the subsidiary?

Q1.2: Is the power of decision-making with regard to risk management mostly with the parent bank or with the *subsidiary*?

Q1.3: To what extent does *the parent bank* operate an internal capital market in which it manages capital on a consolidated basis? Please elaborate.

Q1.4a: If so, does *the parent bank* allocate capital to those subsidiaries that have the projects with the highest net present value? Please elaborate.

Q1.4b: Do you use a RAROC-like methodology? Please elaborate.

Q1.5: Does *the parent bank* transfer surplus capital from *the subsidiary* to itself in the form of large one-off dividends?

Q1.6: What is/are the main source(s) of funding for *the subsidiary*?

- local deposits
- local financial and interbank markets
- *the parent bank*

Q1.7a: Is *the parent bank* a source of funding at all?

Q1.7b: If so, does *the parent bank* use this funding to actively steer the growth of *the subsidiary*?

Q1.7c: Does *the subsidiary* have independent access to the local financial markets?

Q1.8: To what extent is *the subsidiary* influenced by the monetary policy of the central bank?

Q1.9: Is *the subsidiary* required to comply with the reserve requirements of the central bank?

Q1.10: Do you think that internal capital markets of foreign banks active in [name of country] form a channel through which foreign business cycles or the euro zone monetary policy can influence the credit supply in [name of country]?

Q1.11: Would *the parent bank* be a source of liquidity in times of crisis? Please elaborate.

Q1.12: Do you think that the parent-subsidiary relationships in your banking group are typical of how things are arranged in other banking groups?

Topic 2 Development of the subsidiary's credit policies

Q2.1: Have there been any significant changes in your ability to screen prospective customers since you entered [name of country]?

- improved accounting legislation
- more voluntary disclosure (SMEs)
- better knowledge of market (SMEs)
- improved risk-management and credit-scoring techniques (such as for SMEs)

Q2.2: Has this had an influence on the customer groups you are able to target, such as SMEs?

Q2.3: When the subsidiary was taken over by the parent bank, to what extent were existing customer relationships maintained? Please elaborate.

Q2.4: Is *the subsidiary's* credit portfolio in [name host country] 'biased' towards customers from [name home country]? Please elaborate.

Q2.5: Have there been any significant changes in *the subsidiary's* ability to monitor customers, especially SMEs?

- improved accounting legislation
- more voluntary disclosure
- better knowledge of market
- improved risk management

Q2.6: How have the collateral policies of *the subsidiary* changed in recent years?

- new types of collateral
- better legal enforcement
- more collateral available with customers

Q2.7: How does *the subsidiary's* collateral policy differ among customer groups (e.g. small versus large customers)?

Q2.8: Do you think that, generally speaking, collateral provides adequate protection against a firm's bankruptcy in ["name host country]?

- (not) enough availability
- bad/good legislation
- (un)enforceable (expensive or corrupt judges)

Q2.9: Does *the subsidiary* have any leasing business? Please elaborate.

Q2.10: According to you, what are the reasons behind the rapid growth of leasing business in some Central and Eastern European countries?

- deficient legal framework at present
- deficient legal framework in the past ('path dependency')
- flexibility

Topic 3 Some general issues

Q3.1: To what extent does *the subsidiary* face competition from cross-border credit?

Q3.2: How would you rate the legal environment in [name host country]? What specific legal barriers are you confronted with, if any?

Q3.3: How would you rate the supervisory quality in [name host country]? What specific problems regarding banking supervision are you confronted with, if any?

Annex 2 Overview of interviews

Nr.	Bank/Supervisory – Monetary Authority	Name of respondent(s)	Position of respondent(s)	Location
1	FöreningsSparbanken (FSB/Swedbank)	Mr Lennart Lundberg	Senior Vice President	Sweden
2	Finansinspektionen	Mr Göran Ahlberg, Mr Mats Stenhammer	Senior Financial Inspectors	Sweden
3	Hansabank	Mr Indrek Neivelt	Chairman of the Board/Group CEO	Estonia
4	Hansabank	Mr Anders Sahlén	Chairman Supervisory Council Hansabank/Senior Advisor Swedbank	Estonia
5	Financial Supervision Authority	Mr Juha Savela, Ms Marina Hansson	Head of Credit Institutions Department, Banking Supervisor	Finland
6	Sampo Bank plc	Mr Jukka Ohls, Mr Risto Tornivaara	Head of Baltic Banking, Member of the Board	Finland
7	Skandinaviska Enskilda Banken (SEB)	Mr Mats Kjaer	Deputy Head, Baltic & Poland Division	Latvia
8	Eesti Ühisbank	Mr Veine Svensson	CFO	Estonia
9	Bank of Estonia	Mr Jaak Tõrs	Head of Financial Sector Policy Division	Estonia
10	ING Bank	Mr Peter J van Baar	Vice President / Team Leader Counterparty Risk Management	Netherlands
11	Kredytbank S.A.	Mr Guy Libot	Deputy President/Deputy	Poland

			CEO	
12	National Bank of Poland	Mr Pawel Samecki, Ms Marta Golajewska, Mr Piotr Bednarski, Mr Tadeusz Parys	Director International Department, Head of Financial System Stability Unit, Banking Supervisor, Deputy Director Bank Licensing Division	Poland
13	Bank BPH PBK	Mr Niels Lundorff	Member of the Management Board	Poland
14	ING Bank Śląski	Mr Kees Tuijnman	Executive Vice President	Poland
15	Česká Spořitelna a.s.	Mr Dušan Baran, Ms Brigitte Lintner	Vice Chairman of the Board/CFO, Deputy Department Head Credit Controlling and Policy	Czech Republic
16	ABN AMRO Bank	Mr Hugo Halter	Country Administrative Officer	Czech Republic
17	ČSOB	Mr Patrick Daems	Member of the Board of Directors/Senior Executive Officer	Czech Republic
18	ČSOB	Mr. Petr Knapp	Member of the Board of Directors/Senior Executive Officer	Czech Republic
19	HVB Bank Czech Republic a.s.	Mr Udo Szekulics	Member of the Board	Czech Republic
20	Czech National Bank	Mr Karel Gabrhel, Ms Musilova	Director Off-Site Banking Supervision Division I, Banking Supervision	Czech Republic

21	Oesterreichische Nationalbank	Mr Martin Hammer, Mr Thomas Reininger	Foreign Research Division	Austria
22	Erste Bank	Mr Martin Wohlmuth, Mr Bernard Spalt	Head of Group Strategy, General Manager Group Risk Management	Austria
23	ING Bank Rt.	Mr Pieter de Haes	CEO	Hungary
24	National Bank of Hungary	Mr Gyula Tóth	Analyst Banking Department	Hungary
25	HVB Bank Hungary	Mr M. Kunsch	CEO	Hungary
26	Raiffeisen Bank Rt.	Mr István Vass	Senior Manager Treasury/Head of Correspondent Banking	Hungary
27	KBC	Mr Herman Agneessens	CEO/Chief Risk Officer	Belgium
28	ING Bank	Mr Dick C. Klaasse	Managing Director/Regional Head of Financial Markets, Central and Eastern Europe	Netherlands
29	ABN AMRO Poland S.A.	Mr Frederik-Jan Umbgrove	President of the Management Board	Poland
30	Bank Austria Creditanstalt	Mr Gerhard Smoley	Investor Relations	Austria
31	Kereskedelmi és Hitel (K&H) Bank	Mr Péter Szabo	Director of Risk Management	Hungary
32	Raiffeisen Bank Rt.	Mr Ferenc Szabó	Deputy Managing Director	Hungary
33	ABN AMRO Bank	Mr Olivier P. Lindeman	Senior Relationship Banker CEE region	Netherlands
34	Raiffeisen	Mr Robert Kossmann	Regional SME Risk	Austria

International Bank Holding	Manager

The interviews were conducted in June 2003 (No. 1–9), August 2003 (No. 10), September 2003 (No. 11–26), October 2003 (No. 27–31) and January–February 2005 (No. 32–34).

Endnotes

[1] ECB (2005), unweighted average (cf. Table 1).

[2] The terms ‘parent bank’ and ‘bank holding’ are used alternately.

[3] SME loans generally concern exposures of less than € 1million.

[4] According to Berger *et al.* (1998) this restructuring and refocusing takes about three years. Majnoni *et al*. (2003) also show that it took about three years for foreign bank acquirers in Hungary to rationalise labour costs.

[5] An exception is Kraft (2002), who shows on the basis of interviews with foreign bank managers that foreign bank entry has not led to a decrease in SME financing in Croatia.

[6] The few existing theoretical models of multinational banking also do not contain any theoretical priors about the organisational structure of the banking system, let alone of individual banks. Morgan *et al.* (2004), for instance, do not make the internal structure of the banking sector explicit, but rather view the sector as a homogeneous amount of internationally transferable bank capital.

[7] Here, internal capital markets refer to the allocation by bank holding companies of both capital and liquidity (Houston *et al*., 1997, p. 137). We, too, use this definition.

[8] Some other studies show that banks’ internal capital markets, through which they close subsidiaries’ funding gaps, influence the effectiveness of monetary policy because affiliated banks have fewer problems in attracting non-reservable funds (Ashcraft, 2006; Campello, 2002; Ehrmann and Worms, 2004; Pill, 1997).

[9] An interesting exception is Dittus (1996) who uses interviews with bank managers to examine why Eastern European banks have been reluctant to take ownership stakes in firms. Guillén and Tschoegl (1999) use semi-structured interviews with 33 bankers and bank regulators in Latin America and Spain to examine the internationalisation of retail banking in Latin America.

[10] Annex 1 lists the relevant parts of the questionnaire. Managers were also asked about their motives to expand into CEB and the restructuring of their new subsidiaries. This information is analysed in a separate paper.

[11] FDI in the Slovenian banking sector has lagged behind considerably when compared to other new EU Member States (Table 1). We did not visit banks in the Slovak Republic, but only in the Czech Republic (the state banks that were privatised in these countries stemmed from the same state banks in the former Czechoslovakia).

[12] Note that almost all of these banks are ‘mid-cap’ Western European banks. Large global banking groups – e.g. Deutsche Bank, HSBC, BBVA and UBS – do not have a significant presence in the region as yet.

[13] KBC (1st), Erste Bank (2nd), BA-CA (3rd), Raiffeisen Bank (5th) and ING Bank (10th). The position of the international banking group based on market shares as at the end of 2003 is between parentheses. Source: BA-CA (2004).

[14] ČSOB(1st), Česká Spořitelna (3rd), Bank BPH (7th), Hansabank (12th), Bank Śląski(13th), K&H Bank (15th) and Kredytbank (17th). Source: BA-CA (2004). The Polish subsidiaries in our set own 20% and 39% of total banking assets and foreign bank assets in Poland, respectively. Corresponding figures are 24% and 32% in Hungary, 46% and 61% in the Czech Republic, and 85% and 96% in Estonia. Sources: BA-CA (2004), BankScope and annual reports. Market shares are expressed as shares in total banking sector assets (end of 2003).

[15] In the case of two parent banks, we were unable to interview members of the management board, but instead talked to one or more senior managers, such as heads of group strategy and heads of group risk management. Annex 2 lists all interviewees.

[16] One year after the acquisition of ČSOB, the Czech bank IPB almost failed and was taken over by ČSOB in a government-led arrangement. Since IBP brought with it about two-million retail clients, ČSOB was able to build up its retail franchise much faster than initially anticipated. ČSOB's Czech competitor Česká Spořitelna mentions an increasing focus on retail business (mortgages and consumer loans) and lending to SMEs since being taken over by the Austrian Erste Bank.

[17] In the words of Erich Hampel (managing board of Bank Austria Credit Anstalt): "Our business focus has (…) evolved during the last ten years. Initially, we focused primarily on commercial customers, participated in privatisations via our subsidiary Creditanstalt Investmentbank, and were active on the capital market. Recently, the HVB Group has established a strong foothold in the retail banking business. This leads to a key plank to our strategy – to be a universal bank throughout the entire region" (Hampel, 2002, p. 112).

[18] Competition first concentrated on margins and fees. When these could not be reduced much further, competition started to focus on collateral. As a result, the prime international corporations no longer had to provide banks with collateral, and, gradually, smaller companies were also allowed to pledge less collateral. From 2000 onwards, Hungarian banks also started to finance SMEs, as the retail market had then become very competitive as well. Cf. Majnoni *et al.* (2003).

[19] No data is available on the quantitative importance of these driving forces. However, a large number of the respondents mentioned these to be the most important sources of competitive pressure for them in practice.

[20] ‘Cherry-picking’ refers to banks that provide cross-border credit but strictly limit themselves to the best local companies, while leaving all other firms to be served by local banks (that fully bear the costs associated with the local payments system infrastructure).

[21] In quantitative terms, cross-border credit remains important in many CEB countries, especially in Hungary and Poland (cf. De Haas and Van Lelyveld, 2004). In some countries, such as the Baltic States, cross-border lending is impeded by the corporate tax system. In general, bank profits from cross-border lending are taxed at the corporate tax rate prevalent in the bank’s home country, whereas profits from local lending are taxed locally. As, for instance, the Estonian corporate tax rate for reinvested earnings is currently 0%, there is a clear incentive for foreign banks to lend locally, rather than cross-border, to Estonian customers.

[22] See Bakker *et al.* (2004) for an overview of lending techniques available to financial institutions for SME financing and the link with a country’s legal and information infrastructure. Small-business scoring, a transactions technology in which basic data is entered into a loan performance-prediction model, can be applied even to relatively opaque SMEs since much of the information relates to the personal history of the owner, rather than the SME itself (Berger and Udell, 2004). See Mester (1997) on how credit-scoring techniques increasingly enable large banks to lend to SMEs.

[23] In contrast, both the credit-rating system for large corporations and the collateral rating methodology are taken from the Austrian parent bank RZB. The local development of a credit-scoring technique by Raiffeisen Bank rather than importing it from the parent bank is an exception to our general result, namely that retail parent banks expand abroad in order to exploit existing capabilities (Tschoegl, 1987). Grubel (1977) already noted that banks use their home-country management technology and know-how at a very low marginal cost abroad.

[24] Basically, the only bank that partly corresponds with the idea of a foreign bank that almost exclusively provides services to multinational corporations is ABN AMRO. For some time, ABN AMRO had retail operations in Poland, but these were closed after the strategic reorientation of the ABN AMRO Group as announced in May 2000. ABN AMRO shut down several Polish branches, leaving in place only one branch with an almost exclusive focus on large corporations. An exception to the wholesale strategy is ABN AMRO Bank Romania S.A., which not only offers services to large corporations, but also to SME and retail customers in 15 Romanian cities.

[25] An important (legal) distinction is that between subsidiaries and branches. Whereas branches form an integral part of a legal banking entity, a subsidiary is a separate legal entity with capital of its own.

[26] Tier 1 capital mainly consists of shareholder's equity and retained earnings. Tier 2 capital includes hybrid financing instruments such as long-term subordinated loans. Tier 3 capital comprises short-term subordinated debt held specifically as a buffer against market risks. Tiers 1 and 2 are the most important capital components.

[27] Both operations increase liquid assets on the asset side of the balance sheet, but on the liability side the former increases equity, whereas the latter increases 'loans from parent bank'.

[28] Together the internal market for equity and the internal market for debt thus make up an internal market for capital (as in 'capital structure'). The term 'capital' is confusing: although it relates to both debt and equity instruments in the finance literature, it is used as a synonym for 'equity' in the context of banking supervision.

[29] The term 'local capital' is used for the actual book capital of a subsidiary, i.e. the amount of equity capital that appears in the local balance sheet. Local capital should at least fulfil local regulatory requirements (i.e. regulatory capital) but may exceed this regulatory minimum because of the influence of tax regimes and local large exposure rules.

[30] The management information system of ABN AMRO aims to price (internally) the capital that subsidiaries ask in such a way that the fee that subsidiaries have to pay for capital usage keeps them from demanding too much capital. Other banks that were interviewed thought it too early to use such internal pricing in CEB.

[31] Exceptions are ABN AMRO Poland, which adds a certain percentage (based on local supervisory requirements) to the local capital base and pays out the rest of the profits to the parent bank, and ING Bank, which enters profits in the books of the Dutch head office, where they are subsequently reallocated.

[32] Indeed, in 2004 ČSOB declared a super-dividend – which reduced its over-capitalisation – in order to use this excess capital in other parts of the KBC group where more profitable investment opportunities were available.

[33] However, KBC does provide Polish subsidiary Kredytbank with foreign-currency funding.

[34] Vice versa, overly liquid subsidiaries provide the parent bank with liquidity during periods of low local credit growth. In the Czech Republic, where excess liquidity is commonplace, Česká Spořitelna provides other members of Erste Group with Czech crown liquidity. These members may then decide to swap this liquidity into other currencies (to the extent possible). Similarly, liquidity is incidentally provided by ČSOB to KBC, by Komercni Banka to Société Générale and, in Poland, by ING Bank Śląski to ING Bank.

[35] Houston *et al*. (1997) have already pointed out that banks may be impaired in operating internal capital markets by regulatory restrictions on inter-subsidiary transactions and transactions between parents and subsidiaries.

[36] Supervisors impose large exposure limits in order to prevent overly concentrated portfolios. Such regulation limits the maximum exposure a bank can take on a single counterparty or group of connected debtors. In many countries, this maximum is 25% of total tier 1 and tier 2 capital (cf. EU Directive 2000/12/CE). For own subsidiaries, a stricter regime applies by default, in which the large exposure limit for a bank's subsidiary is reduced to 20% of the parent's capital. Although some countries (e.g. Austria, Finland and Sweden) use this default regime, others, such as the Netherlands, use an exemption clause that states that the standard 25% may apply if adequate monitoring is in place.

[37] According to Matten (2000, pp. 74–75): "The term 'allocation' of capital refers to the process whereby a notional or pro forma calculation of the amount of capital underpinning a business is made. This is distinct from the investment of capital, in that no actual cash investment takes place." Note that the term 'internal capital markets', as used by empirical researchers such as Houston *et al.* (1997), is somewhat confusingly limited to what we call passive capital allocation, i.e. the investment of book capital within the bank holding company, rather than the allocation of economic capital for management information purposes. In Figure 2, dotted arrows refer to information flows, whereas solid arrows refer to flows of funds or of accounting items.

[38] On the contrary, book capital will, to a great extent, be determined by the minimum capital adequacy rules as set by the supervisory authorities. The new Basel Accord intends to bring these external and internal considerations more in line, thus narrowing the gap between book capital and economic capital.

[39] In a third step, each subsidiary further allocates the economic capital it has been assigned to individual projects and loans.

[40] RAROC is calculated as (revenues minus costs minus expected losses)/economic capital. Only projects with a RAROC that exceeds the cost of equity will add economic value. The cost of equity, i.e. the return shareholders require on their equity, is usually called the hurdle rate. It basically determines the minimum RAROC required by the bank. Ideally, performance measurement should not be based directly on RAROC performance (i.e. a ratio measuring profitability) but on the total amount of economic or shareholder value a certain business adds (Walter, 2004). This entails that, besides the profitability and the cost of capital, the volume of investments should also be taken into consideration. Only Hansabank explicitly mentioned the use of such a methodology, called EVA (Economic Value Added).

[41] In order to stimulate loan growth, especially in low-risk sectors (large corporations, local government agencies) KBC subsidiary ČSOB introduced a basic version of RAROC. Without RAROC calculations, low-risk and (thus) low-return projects would have a high chance of rejection. By using RAROC, ČSOB explicitly

incorporates the fact that many low-return projects are also low-risk and thus absorb less economic capital. This increases the relative attractiveness of such projects and allows them to clear minimum return hurdles more easily.

[42] Contrary to the passive allocation of capital – where local (book) capital follows the credit targets – in this case the subsidiaries are steered by allocating economic capital. Credit growth then thus follows the amount of local (economic) capital.

[43] Subsidiaries that experienced periods of excess capital due to high retained earnings include ČSOB, Bank BPH, Česká Spořitelna and HVB Bank Hungary. Obviously, in these cases, local capital levels did not constrain credit growth and, consequently, such banks were not in need of additional capital support of their parent banks.

[44] Basically, RAROC or similar profitability measures can be seen as a refinement of standard ROE ratios.

[45] SEB also allocates economic capital, but as yet does not require a minimum charge over the allocated capital. For that, the CEB markets are still considered to be insufficiently developed.

[46] ING calculates RAROC for all new projects at the time of application. In addition, business units are measured on the basis of RAROC each quarter. In contrast, Sampobank uses RAROC at the client level in Finland, but does not as yet do so in its Baltic subsidiaries where RAROC is only measured at the aggregate subsidiary level.

[47] Parent banks that attract relatively cheap equity, for example, because they are well diversified, need to charge their (CEB) subsidiaries less for the use of capital. These subsidiaries can then apply a lower hurdle rate, will more easily find projects that exceed this hurdle rate and will thus feel less of a bottom-up constraint (cf. Figure 2).

[48] Matten (2000, p. 263) already briefly mentions these dual constraints.

[49] However, some other respondents mention that, even in the case of increasingly binding capital constraints at the group level, the fast-growing CEB subsidiaries will receive sufficient capital support.

[50] Note that the ratings of agencies such as Standard & Poor's and Moody's explicitly treat bank subsidiaries as part of a multinational bank rather than as stand-alone operations.

[51] Subsidiaries differ with regard to their relative importance for the parent banks. For instance, the 98% stake in Česká Spořitelna is quite important for Erste Bank as Česká Spořitelna's balance sheet amounts to about 13% of total assets of Erste Bank (end of 2003). The 60% stake of Société Générale in Komercni Banka is less substantial: the assets of the subsidiary amount to 3% of Société Générale's balance sheet (end of 2003). Before the crisis at Rijecka Banka, its assets amounted to a mere 0.4% of the assets of Bayerische Landesbank, which then owned a 60% stake (end of 2001).