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The financial integration of an enlarged EU: Banking and capital markets

European Investment Bank

Editorial policy

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Cahiers Papers

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Preface

Philippe Maystadt

President

Since the fall of the Berlin Wall, all the Accession countries of Central and Eastern Europe have made major strides in establishing functioning market economies and prospects are good that a fairly large group of countries will join the EU in time for the next election to the European Parliament in June 2004. The European Investment Bank has been supporting this process under successive mandates and pre-accession facilities and, by end-2001, had committed about EUR 16 billion for projects in the region.

An important dimension of both the transition to a market economy and the integration into the EU is the creation of efficient financial systems. Contributing to this endeavour has been one of our objectives from the beginning. To this end, the Bank offers lines of credit to financial intermediaries with a view to supporting the development of banking and the supply of finance to small and medium-sized enterprises. The Bank also aims at helping the development of bond markets in the region, essentially trying to replicate what was done in the 1980s and early 1990s in Spain, Portugal and Greece.

Against this background, we have a keen interest in understanding the achievements and, more importantly, the remaining challenges on the road to further integration of the financial systems of the region with those of current EU members.

A general question we should ask at the outset is whether financial systems matter for economic growth and development. There seems to be a growing consensus that well-developed financial systems cause economic growth and development – rather than the other way round. However, it is without doubt that financial systems can only play their growth-enhancing role when they are properly regulated and supervised. As we have seen in other regions of the world, financial crises can be hugely damaging to economic performance. The question then is whether the financial systems of Accession countries meet this requirement and – if not – what are the most pressing areas for further improvements.

Up to now, I have uniformly referred to "financial systems" without distinguishing between the two main pillars of such systems, namely banking systems and capital markets. Clearly, economies need both banks – at least the services they provide – and capital markets. But it is also true that some advanced market economies rely more

on banks than on capital markets – and vice versa. In light of this, it will be interesting to know more about the relative strengths of banking systems and capital markets in Central and Eastern Europe.

Focusing on banking, a starting point is to ask whether Accession countries have been successful in creating market-driven banking systems. While all countries have made considerable progress in this regard, we must try to understand why progress has been uneven across countries and time. It would be surprising if the experience gained so far does not hold important lessons for those countries that are lagging behind.

Looking ahead, one of the main challenges for all countries will be to further improve the efficiency of banking. There continues to be scope for reducing intermediation costs and for extending the range of borrowers that have access to bank finance. A question here is whether market forces suffice to eventually raise the efficiency of bank intermediation or whether additional policies will be necessary. And then, what type of economic policy could bring about more efficient banking systems? Obviously, to arrive at useful answers we have to understand the existing constraints to more efficient banking: Do these constraints reflect a lack of competition, funds, or expertise in banking? Or are yet other forces at work? From the perspective of the Bank, it is clear that the efficiency of the banking system affects the effectiveness of our activities that involve commercial banks, i.e. a significant share of our activities.

Moving on to capital markets, an important question is the direction that the development of Central and Eastern European capital markets should take. Indeed, we could ask whether Accession countries need to develop their own capital markets, or whether they could instead rely on existing EU markets?

If further developing capital markets in Accession countries is necessary, does each country have to go its own way or should countries try to team-up to create a "pan-Central and Eastern European capital market" that services the specific needs of the region? If such a market is desirable, is it feasible? Is it possible to avoid the fragmentation and inefficiencies that have characterised EU capital markets? Overall, there is a host of intriguing questions all very relevant for the Bank's activities on the capital markets of Central and Eastern Europe.

With EU membership, Accession countries make a commitment to eventually becoming members of EMU. Thus, EU membership also implies working towards joining the euro zone. A number of questions need to be discussed in this context. Another edition of the EIB Papers (Volume 7, Number 2) explores these questions in more detail. Suffice to observe here that it is pertinent to ask how countries should get ready for EMU membership and – equally important – how quickly. In part, answering this question involves choosing a suitable exchange rate regime over the next few years. We have seen throughout the world that an inappropriate mix of policies, including decisions about the exchange rate can trigger financial crisis. The point here is not to be alarmist, but to ask to what extent different countries should adopt different approaches to their chosen combination of fiscal, monetary and exchange rate policy.

As an EU institution, support for the Accession countries is a key strategic objective. As a financial institution, we must achieve this goal in collaboration with the region's financial markets – through lending activities that also involve commercial banks and through raising funds from Central and Eastern European savers via the capital market. It goes without saying that an improved understanding of the region can only strengthen the contribution we make and I am confident that research at the Bank will continue to guide us in our mission to promote the balanced development of an enlarged European Union.

The financial integration of an enlarged EU: Banking and capital markets

A conference aimed at reviewing financial system developments in the Accession countries of Central and Eastern Europe (CEEC), as well as drawing policy conclusions arising from further integrating the CEEC financial systems with those of the EU, was held at the EIB on 17 January, 2002. The conference looked at achievements and challenges in setting up functioning banking sectors, provided an EU banker's strategic view of banking in the region, examined capital market trends, and discussed exchange rate policy options for the Accession countries.

Speakers included:

Willem Buiter,
of the EBRD, London

Paul De Grauwe,
of the Katholieke Universiteit, Leuven

Jan Hanousek,
of CERGE, Prague

Ricardo Lago,
of the EBRD, London

Armin Riess,
of the EIB

Eva Thiel,
of the OECD, Paris

Robert Feldman,
of the IMF, Washington

Erich Hampel,
of Creditanstalt, Vienna

Jens Köke,
of ZEW, Mannheim

Philippe Maystadt,
President of the EIB

Michael Schröder,
of ZEW, Mannheim

Éva Várhegyi,
of Financial Research Ltd, Budapest

EUROPEAN INVESTMENT BANK

Editors' introduction

The financial integration of an enlarged European Union would be of little interest if finance did not matter for economic growth and development. But does it? And if finance matters, what type of financial system, dominated by capital markets or banks, would be more efficient in allocating resources in Central and Eastern European Accession Countries (CEECs)? Recent economic literature suggests that finance does matter for economic growth but that economies can prosper in both a capital market-based or a bank-based financial system. The development of CEEC financial sectors and their smooth integration with those of existing EU members is thus an important economic policy issue. This edition and its companion edition (Volume 7, Number 2) of the *EIB Papers* present contributions, made at the EIB conference on 17 January 2002, to policy debates related to this topic.

We start this introduction by reviewing the arguments regarding the causal relationship between the type and development of the financial system and economic development. After setting the stage, this article broadly follows the ordering of the papers in the two latest editions of the *EIB Papers*. Section 2 contains a review of banking in the CEECs. The purpose of this section is to bring out common features of the CEEC banking sectors but also to pinpoint country specifics. In Section 3 we turn to capital markets and essentially pursue the question of whether accession countries need to establish their own markets or whether they could use existing securities exchanges - in the EU for instance. The last section reviews the papers collected in the companion edition, which looks at interlinkages between financial sector development and the macroeconomy.

Does finance matter?

Is there a causal relationship between financial sector development and economic growth? Given that there is ample cross-country evidence for a positive correlation between the financial and real sector developments this may seem like a redundant question. However, observing an association between finance and growth does not inform on the direction of cause and effect. Indeed, as Arestis and Demetriades (1997) - for instance - reveal, economists hold startling views about the causality between financial development and sustained growth of per capita income.

One school of thought argues that financial institutions and markets foster the mobilisation and efficient allocation of savings and, thereby, raise economic growth. According to this view, financial development is a pre-condition for a thriving economy. The opposing view claims that economic growth stimulates the demand for, as well as the supply of financial assets and, thereby, the development of financial systems. According to this view, growth causes financial development.

With *a priori* reasoning providing conflicting predictions about the causality between finance and growth, the debate essentially needs to be addressed from an empirical angle. Although the literature has not reached consensus, the balance of evidence seems to support the hypothesis that finance leads economic growth (World Bank, 2001). What is more, that functioning financial systems enhance the efficiency of resource allocation seems to be more important than their role in

mobilising savings for investment. In fact, this is not entirely surprising given that planned economies did certainly not accumulate too little but rather the wrong type of physical capital, which - to make things worse - was not efficiently used.

What can we say about the link between growth and finance in CEECs? Berglof and Bolton (2002) point out that there has so far been little correlation between economic growth and financial sector development and that one cannot attribute the relatively better economic performance of some CEECs to a more developed financial system. But the lack of correlation, let alone causality, between growth and finance in the first decade of transition does not really come unexpected and can be explained by a variety of reasons.

To begin with, ten years of transition is likely to be too short a period for financial sector progress to show its impact on economic growth. Second, a bundle of economic policy measures and not only progress in establishing functioning financial systems determined the success, or lack thereof, of the transition to a market economy (Fischer and Sahay, 2000). What comes to mind includes macroeconomic stabilisation, price and trade liberalisation, enterprise restructuring and privatisation, and the creation of the legal underpinnings for a market economy. In this respect, success has varied from country to country in the early stages of transition and, therefore, economic performance has not been uniform across the region. Finally, it is not unreasonable to assume that in the early phase of transition, the most obvious investment and growth opportunities could be met without funds intermediated by domestic financial systems. Foreign direct investment, for instance, has played a crucial role in virtually all CEECs. Overall, the experience of the last decade does not weaken the argument in favour of mobilising and allocating domestic resources in an efficient way and, thus, further developing the financial system is a logical and essential step to sustain growth and development.

But which direction should financial sector development take? More specifically, does it matter whether finance comes predominantly from banks or capital markets? Historically, banks preceded capital markets and the eventual emergence of bank-based systems in some countries and market-based systems in others was due to historical reasons (1) and different policy responses to financial crises but did not reflect a choice based on a thorough assessment of the pros and cons of the two alternatives (Allen and Gale, 2000). Market-based financial systems emerged in the United States and the United Kingdom, for instance, and bank-based systems in continental Europe. But it is also clear that both systems co-exist in most countries albeit in different proportions.

That said, the question remains whether a capital market-based financial system is preferable over a bank-based system and, if yes, whether the CEECs, which had (the choice) to create financial systems from scratch, could skip the historical and, as it seems, accidental detour of relying too much on banks and too little on capital markets.

To answer this question, we note first that cross-country data show a positive correlation between per capita income, on the one hand, and the importance of capital markets relative to banks (World Bank, 2001). Against this background, one could argue that preferring markets to banks could help

1) David Landes (1998) argues that the outcome of financial system development depends on the stage of industrial development at the time financial sectors are created.

the CEECs to catch up with the West. In fact, as pointed out by Lavigne (1999) for instance, policymakers in the CEECs had a preference for market-based over bank-based financial systems at the beginning of the transition. But here again, one must not confuse correlation with causality. The research reviewed by the World Bank does not suggest a causal effect of a country's financial structure (i.e. the relative weights of markets and banks) on economic growth and development. There is evidence, however, that both banks and markets can foster growth and that success depends on whether or not the financial system - bank-based or market-based - is supported by an adequate legal, regulatory, and supervisory framework. If that is the case, economies can thrive under either system.

Recognising the importance of finance for economic growth, the creation of market-driven financial systems featured high on the economic policy agenda of all CEEC governments. Despite initial preference for capital market-based over bank-based financial systems, banks have turned out to dominate CEEC financial systems. Wagner and Iakova (2001) for instance, report that bank assets account for 85 to 95 percent of overall financial assets in the larger CEECs. Events therefore confirm those observers, such as Gros and Steinherr (1995) who have stressed that while prospering economies eventually need banks and capital markets, banking has to precede markets at an early stage of economic development.

A bumpy road towards creating market-driven banking sectors

The achievements and challenges of creating banking sectors are the subject of three country studies in this volume. **Dana Hájková, Jan Hanousek** and **Libor Němeček** take a look at the erratic development of the Czech banking sector in its transition period. They emphasise that the period has been marked with problems and large economic losses, mainly caused by an undefined strategy, lack of proper risk management systems, related-party lending, and by inadequate prudential regulation and supervision. The authors' key conclusion is that after an excessively lengthy period of restructuring - and many false starts and haphazard measures - the Czech banking sector has now been put on a firm footing for future growth.

Éva Várhegyi examines the more successful path taken by Hungary. She points out that the country had a head start because it already had a two-tier banking system when the Berlin Wall came down. Moreover, Hungary decided earlier than many other countries - including the Czech and the Slovak Republics - to privatise state-owned banks to foreign strategic investors who not only injected capital but also a wealth of expertise into the banking sector. Cognisant of Hungary's success in creating a functioning banking system, the author also notes that bank intermediation has not grown as fast as most observers might have expected at the beginning of the 1990s.

Peter Zajc discusses the case of Slovenia, which has been characterised by an absence of bank privatisation and limited foreign bank entry. As a result, state-owned banks continue to dominate the sector and the share of foreign-banks in total banking sector assets currently amounts to about 22 percent, which is low by CEEC standards. Nevertheless, the development of the country's banking sector has been encouraging: Bank intermediation increased and, subsequent to a comprehensive restructuring programme, bank failures have been avoided. However, as the author stresses, Slovenia's banks have benefited from a peculiar institutional setting, such as an inflation

indexation of financial contracts that worked in the banks' favour. This setting is now being revamped and it will be a challenge for banks to maintain their performance in the period ahead.

The country papers in this volume deal with a number of banking sector reform issues that are worth presenting in a more general fashion. To begin with, in creating market-driven banking sectors, most CEECs faced similar tasks. A rather basic one was to switch from a mono-bank model to a two-tier banking system where central banking functions are separated from commercial banking activities and where the latter are performed by a number of competing commercial banks. A far more complex task was to establish an incentive framework that induces banks to behave as they should in a well-functioning market economy. At the beginning of the 1990s, major obstacles to proper bank behaviour included the large amount of non-performing loans to enterprises with limited prospects of surviving in a market economy and the lack of bank capital. In these circumstances, banks had little to lose and faced the temptation to improve their fate by providing new loans to those enterprises in the hope that this would increase the chance of eventually recovering doubtful loans. Against this background, there was an urgent need for recapitalising banks and for restructuring their assets.

CEEC governments addressed the twin challenges of recapitalisation and restructuring by substituting government securities for non-performing loans (see, for instance, Bonin and Wachtel, 1999). There were, however, differences across countries in terms of how much of the bad debt was written off and, more importantly, who was put in charge of trying to restructure non-financial enterprises and, thereby, to recover the remaining non-performing loans. In Poland, for instance, non-performing loans stayed on banks' balance sheets even after recapitalisation; banks were responsible for loan workouts and could keep the proceeds in case of successful loan recovery. In other countries, including Hungary, Slovenia and the Czech and Slovak Republics, non-performing loans were largely transferred to government rehabilitation agencies, which assumed the task of trying to restructure non-financial enterprises and, thereby, to recover as much as possible of the non-performing debt. Van Wijnbergen (1998) pointed out that loan recovery was far better in countries like Poland where banks were assigned an active role in enterprise restructuring. Being involved in this process, banks also had an opportunity to gain expertise in assessing would-be borrowers. By contrast, loan recovery was poor in Slovenia and Hungary, for instance, where government rehabilitation agencies had this task.

Van Wijnbergen emphasised another important difference in the experience of various CEECs, namely whether banks perceived the initial recapitalisation and restructuring as a one-off measure and, thus, expected to operate under a hard budget constraint in the future. Restructured and recapitalised Polish banks seem to have understood this well, as they did not experience new bad loan problems. By contrast, banks in Hungary and the Czech and Slovak Republics continued to run into difficulties and the government bailed them out repeatedly, in Hungary until the mid-1990s and in the Czech and Slovak Republics well into the late 1990s (see Wagner and Iakova, 2001; Várhegyi and Hájková *et al.*, both this volume). Does this suggest that transferring bad debt to a rehabilitation agency inevitably gave the wrong signal to banks? The Slovenian experience illustrates that this would be the wrong conclusion. Although non-performing loans of the Slovenian banking sector ended up with a rehabilitation agency, banks did not encounter new problems in subsequent years but, on the contrary, built up a comfortable capital cushion (Zajc, this volume).

Overall, the behaviour of banks following rehabilitation was determined by whether or not they faced a hard budget constraint and this, in turn, did not depend on whether or not they were involved in enterprise restructuring and bad loan workouts.

It could be tempting to argue that setting a hard budget constraint was more credible if bank restructuring and rehabilitation went together with privatisation. In Hungary, for instance, bank restructuring-cum-privatisation took place in 1994-97 and no major government rescue operations have become necessary since then (Várhegyi, this volume). And then, there is the example of the Czech and Slovak Republics where state ownership of banks, which continued well into the late 1990s, has been singled out as probably the most important reason for the appalling performance of the sector and the accumulation of an enormous amount of non-performing loans (Hájková *et al.*, this volume). However, the failure of the privatised IPB in the Czech Republic is a reminder that privatisation is certainly not a panacea. Furthermore, in Slovenia, the creation of a sound banking sector went hand in hand with the state assuming, rather than relinquishing ownership in banks (Zajc, this volume).

In principle, if restructured and recapitalised banks - or any other enterprise - are exposed to the right incentives, the efficiency of these institutions should not depend on whether they are private or state-owned. Experience strongly suggests, however, that ownership matters a lot because it is difficult, if not impossible, to get the incentives right for state-owned enterprises. The transition environment - with entrenched links between the state, the management of state-owned banks, managers of state-owned non-financial enterprises, and owners or managers of privatised non-financial enterprises - have made it even more important to privatise banks and avoid the creation of very distorted incentive structures. Against this background, all CEECs - so far with the exception of Slovenia - have eventually embarked on bank privatisation programmes. In fact, restructuring and recapitalisation were often undertaken with a view to getting banks in shape for privatisation.

Three broad types of privatisation models were applied (Bonin and Wachtel, 1999): Direct sales to foreign strategic investors, initial public offerings and voucher privatisation. A prime example for the first approach is Hungary, which carried out its privatisation programme in 1994-97. Foreign investors, mainly banks - often from the EU - participated in bank recapitalisation and introduced modern banking sector technology, financial capital, independent governance and expertise. Moreover, the presence of foreign banks reduced the risk of capital flight and depositor runs and stimulated competition in the banking sector. The second model played an important role in Poland, for instance, where public offerings where combined with management buyouts and sales to foreign strategic investor. Czechoslovakia opted for voucher privatisation, which resulted in dispersed ownership and clearly failed in establishing a banking system that was independent from the state and entrenched insiders. Mirroring this failure and mounting banking sector problems, the Czech and Slovak Republics relaunched their privatisation programmes towards the end of the 1990s, this time with the involvement of foreign strategic investors.

In addition to the issue of how the CEEC banking sectors came into being, there is the question of how much they have contributed to the economic advancement of the region. **Armin Riess**, **Rien Wagenvoort** and **Peter Zajc** show that bank intermediation has remained shallow and they illustrate

that CEEC banks mobilise more funds than they can lend domestically, which effectively makes them net external creditors in a capital-importing environment. Furthermore, the authors argue that contrary to what a cursory look at nominal returns on equity may suggest, the profitability of the CEEC banking sectors is largely unsatisfactory. The so far limited - and not very profitable - role of banks in the CEEC economies is mainly due to of stiff competition from cross-border finance (i.e. intercompany loans and non-resident bank lending), banks' inadequate risk assessment and management capacity, and because of shortcomings in the legal environment, which dampen banks' willingness to lend. Improvements in the legal framework and further progress of banks in strengthening their risk assessment and management capacity are seen as crucial pre-conditions for making the sector live up to its potential.

That there is an enormous potential comes out clearly in the contribution of **Erich Hampel**, who provides an EU banker's perspective on banking in the region. He notes that the underdeveloped CEEC banking markets has become the number one target for the international, especially EU, banking community. In particular, the retail market segment holds considerable potential for expansion and, on the back of improvements in corporate governance of non-financial enterprises, the author also sees substantial scope for further developing corporate lending.

Functioning banking sectors obviously not only need banks but also an effective regulatory and supervisory framework. Given that banking, as known in market economies, did not exist under central planning, setting up a proper regulatory and supervisory framework has been as much a challenge as the creation of banks itself. In designing such a framework, the CEECs borrowed from rules and regulations applied in the EU. While this has surely accelerated things, putting in place an appropriate framework and implementing it effectively has nevertheless been a daunting task. And, as Hájková *et al.*, (this volume) point out with respect to the Czech and Slovak banking sectors, regulation and supervision have often developed through a learning-by-doing process where legislative changes were typically a response to problems that had arisen, rather than an attempt to prevent their occurrence in the first place.

In part, this has been due to a lack in personnel trained in bank regulation and supervision. Van Wijnbergen (1998) for instance, notes that to hide failures in their own operations, supervisors misreported problems at credit institutions for a while, hoping that future favourable developments at the problem banks could avoid damage of their own reputation. Another important element is likely to have been regulatory and supervisory forbearance, in particular at the beginning of the transition process when commercial bankers and their regulators and supervisors emerged from the same mono-bank system. In essence, newly appointed supervisors had to monitor previous colleagues who had become bank managers. In these circumstances, but also reflecting political interference, the implementation of new banking laws was seldom as rigorous as it should have been.

All CEECs have now put in place a regulatory and supervisory framework for the banking sector along the Basle guidelines and EU banking directives. What is more, shortcomings in the effective implementation of prudential regulation and supervision are certainly less severe today than they were in the early days of establishing banking in the region. Nevertheless, disparities between the design and the implementation of the regulatory and supervisory framework remain in some countries and will have to be further reduced.

To summarise achievements in the first decade of transition, all CEECs have advanced considerably in creating market-driven banking sectors that are well-capitalised and have significantly stronger loan portfolios than some five years ago. While the timing and specifics of the approach taken differed from country to country, the outcome that we can observe today is quite similar across the region. Probably the most striking structural feature is the large presence of foreign strategic investors, mainly from the EU, who dominate banking in all the countries except Slovenia. And then, the sector has essentially developed along the universal banking model known from continental Europe, which is not a surprise given the heavy involvement of EU investors. But it is also true that the role of banks is lagging behind that of banks in other middle-income countries and, of course, the EU.

In light of this, a very basic question that comes to mind is whether CEEC banks are ready to join the Single Market for financial services? In this context, it is worth noting that the capacity to cope with competitive pressures of the Single Market is one of the economic criteria that accession countries have to fulfil before joining the EU. That question clearly needs to be answered country by country. However, the low level of bank intermediation is not an obstacle to joining and even thriving in an enlarged EU. After all, most CEEC banking sectors have emerged in a process where foreign bank entry exposed domestically-owned banks to considerable competition. In addition, the CEEC banking sectors face substantial competition from the supply of funds from the EU, either in the form of intercompany loans or direct lending by non-resident banks. Against this background, the CEEC banking sectors can be considered better integrated within the EU than most of the banking sectors in the EU.

Nevertheless EU membership will bring new challenges, notably the need to fully adopt the regulatory and supervisory requirements called for under the *acquis communautaire*. In this context, two points are worth mentioning. First, the rules and regulations shaping the Single Market in financial services are constantly changing and, thus, constitute a moving target that needs to be tracked in the preparation for EU membership. For instance, the European Commission has presented a Financial Services Action Plan to further stimulate competition and efficiency of financial markets across the EU. This programme contains a series of measures designed to create a fully integrated European financial market by 2005. These measures include new rules concerning takeovers, cross-border banking charges, and publication of prospectuses. Complying with these rules requires additional efforts on the part of both current and new EU members.

Second, the existing EU regulatory and supervisory framework reflects the development stage of the economic and financial systems of current EU members. This framework is not necessarily consistent with the level of development in the CEECs. A case in point, discussed in this volume by Riess *et al.*, is the deposit insurance schemes stipulated under the *acquis*, which may be too generous given the level of income in the CEECs.

But apart from regulatory and supervisory challenges, what else does the future hold in store for the CEEC banking sectors and, more specifically, are there any messages arising from the experience of banking in the EU, or international banking in general? We briefly look at two issues, namely consolidation and disintermediation.

Like other mature banking sectors, those of the EU have experienced increasing consolidation and concentration in recent years. As a Group of Ten (G-10) report (2001) shows, the objective to save cost, enhance revenue and reduce risk has been a prime force behind this process. New scope for cost saving, revenue enhancement and risk reduction has materialised with advances in information technology and the globalisation of financial and goods and services markets, the latter receiving an additional boost with the introduction of the euro. Increased competition and shareholder pressure have forced banks, more specifically their management, to seize new scope for boosting profitability and consolidation has been one of the means to achieve this. Interestingly enough, in the EU, mergers have so far been largely a national or even regional matter.

What can we say about similar trends in the CEECs? Since the mid-1990s, the CEECs' banking sector has seen market exit and mergers. As a result, following a spurt in the early years of transition, the number of banks in the CEECs has fallen - in some countries substantially. Will this trend continue? On the one hand, the CEECs appear under-banked with room for more rather than fewer banks: The number of banks (and branches) per inhabitant is low in comparison to the EU and bank assets relative to economic activity is well below the level observed in other middle-income countries and the EU. On the other hand, as Riess *et al.*, (this volume) argue, the size of most CEEC banks is considerably below the level at which EU banks fully exhaust economies of scale. While the optimal bank size in the CEECs may be lower than in the EU, this nevertheless suggests that there is scope for further consolidation in the CEECs' banking sector even without considering possible gains from revenue enhancement and risk reduction. In addition to scale economies, mergers could result in cost savings that stem from reducing X-inefficiencies. Indeed, O'Brien and Wagenvoort (2000) show that large banks are usually better managed than small ones. In theory, reducing X-inefficiencies is possible without mergers. In practice, however, the bank merger event makes this more likely, with the new management of the consolidated bank being in a stronger position to carry out overdue cost saving measures. In sum, further consolidation in the CEECs' banking sector is rather likely and, interestingly enough, it is bound to have a more international flavour than so far in the EU given the presence of foreign banks from a wide range of countries in the sector.

Turning finally to bank disintermediation, we recall that it essentially means a substitution of capital market finance for bank loans. Simply put, instead of seeking loans from banks, would-be borrowers - firms but also local and regional authorities - issue debt securities such as bonds. Debtors take this route if they can attract capital market finance at lower cost than bank finance. This is the more likely, the more information about potential debtors is publicly available and the higher the quality of that information.

Disintermediation swept the US financial system in the 1960s through the 1980s (Beim and Calomiris, 2001) but it is still a relatively new phenomenon in continental Europe. However, even here bond issues seem to have been gaining ground relative to bank finance, in particular following the introduction of the euro in 1999. One indication for this is that in the euro zone, outstanding debt securities relative to GDP increased by 21 percent in 1998-2000. During the same period, bank claims on the domestic economy (again relative to GDP) increased only by 4 percent. Recent data collected by the European Commission indicate that the bond issuing activity in euro zone continued on a fast track in 2001.

These figures seem to indicate that bank disintermediation is making inroads into the euro zone financial system. Some qualifications are warranted, however. First, in many cases, banks bring large clients to the capital market. Thus, fee income partly offsets the loss in traditional interest income. In addition, part of the bonds issued may end up on bank balance sheets. While not constituting traditional bank lending, it is nevertheless finance intermediated by banks. Second, bank claims on the government have fallen, partly because local authorities have made increasing use of bond market finance, but there seems to be no moderation in the supply of credit to the private sector. In fact, while bank claims to GDP increased only by 4 percent in 1998-2000 (as mentioned above) bank claims on the private sector increased by 10 percent. Therefore, despite an apparent shift from bank to capital market finance, euro zone banks keep playing a central role in financial intermediation.

Is bank disintermediation also an issue for the CEEC banking sector? There are at least two reasons to believe that it is not. First, given the still emerging CEEC enterprise sector, the possibility to tap debt markets is likely to remain limited to a few large, well-established, creditworthy firms. The more general message here is that bank finance will remain in demand where information on those who seek finance is not widely available and/or of poor quality and where banks are better placed to monitor users of funds. Danthine *et al.*, (1999) have pointed out for developed economies that banks will keep the role as providers of funds for projects that are particularly difficult because of asymmetric information problems. Inevitably, such problems are more severe in the CEECs and banks should thus have a promising future.

Second, to the extent that firms circumvent banks, one cannot presume that this will necessarily come at the expense of the domestic banking sector. This is because creditworthy would-be borrowers currently constitute as much, if not more, the clientele of non-resident banks as of CEEC banks. It follows that possible disintermediation in the CEECs may affect EU rather than CEEC banks. Another reason one could possibly think of is that since CEEC capital markets are not yet sufficiently developed, they cannot effectively compete with bank finance. However, this presumes that capital market finance for CEEC firms has to come from CEEC capital markets. As we will see in the next section, this is everything but a forgone conclusion.

Capital markets in Central and Eastern Europe: To be or not to be?

Jens Köke and **Michael Schröder** in their contribution analyse how capital markets in the CEECs have evolved during the last decade. Since the beginning of transition, most CEECs have taken steps to develop capital markets. There has been a fair deal of heterogeneity in the way the process developed across countries. However, a good ten years after the start of transition, all CEEC capital markets are still in their infancy. Beyond the initial privatisation wave, the amount of funds raised through IPOs or secondary share offering has been relatively modest and the bulk of the bond market is made of securities issued by the central governments or other public sector issuers. Capital markets account for only a small portion of financial assets in these countries and thus are even less developed than the banking sector. The structure of corporate finance reflects this situation, with bank credit dominating external corporate finance. Debt securities play a non-negligible role for financing investment only in the Czech Republic. In addition, the amount of assets controlled by

institutional investors in those CEECs that belong to the OECD is considerably smaller than in the less developed countries of the current EU. These features obviously raise the question whether the local capital markets have the potential to become sufficiently large and deep to channel finance efficiently between investors and issuers.

The stand-alone strategy followed so far by many CEECs may turn out to be too narrow to create liquid markets and to attract foreign investors. Köke and Schröder suggest in their paper that CEECs should strive to develop a pan-Central and Eastern European exchange. They argue that by adopting the same trading, clearing and settlement systems, it will be easier and less costly for investors to operate. This should attract both foreign and domestic investors and indirectly lead to higher liquidity.

One could make a different proposal. It does not necessarily follow that CEECs have to develop fully-fledged and independent capital markets, either on a country-by-country basis or on a regional level. The ultimate goal for the authorities should be to support an efficient allocation of funds in the economy. In the end, one needs to make a clear distinction between the availability of capital market services and the local production of these services. The real issue is whether the development of a local capital market infrastructure is an efficient way to satisfy the needs of investors and issuers. To meaningfully address this question one has to look beyond current domestic considerations and to consider the broad evolution of the worldwide capital market and how the CEECs are likely to develop in the future.

The capital market landscape in developed countries has been changing rapidly in the last decade and there is no sign that the pace of change will abate in the coming years. Two essential factors are driving these changes. Firstly, advances in computer and telecommunication technologies have reduced geographical barriers to the integration of capital markets and to the diffusion of information. Secondly, the lifting of most restrictions on cross-border capital transactions, and globalisation in general, have led to a more intense competition between the main financial centres. In addition, standards in disclosure and accounting have emerged and institutional investors play an increasingly more important role. In Europe these changes were accompanied by the introduction of the euro. While each country of the euro zone had developed its own capital market infrastructure when it had its own national currency, the capital market landscape is being recomposed in the wake of the introduction of the euro. Stock exchanges are abandoning their mutual structure and are merging to provide more efficient services that issuers and investors require. Likewise, the clearing and settlement infrastructure inherited from the pre-euro era is inefficient and too cumbersome to survive unchanged. For example, the report of the Giovannini group (2001) for the European Commission, shows that the costs of cross-border clearing and settlement in the euro zone significantly exceeds that of the more integrated American market. While the process of adjustment is still in its early days, there can be little doubt that a substantial re-organisation of these services will be necessary in the medium-term.

CEECs, like most of the other emerging markets, have not been completely immune to these changes. Indeed, one of the most noticeable features of the effect of globalisation of capital markets on these countries has been the substantial migration of stock market activities to the largest

European and American exchanges, either in the form of cross-listing or depositary receipts. According to Claessens *et al.*, (2002), 49 percent of market capitalisation of the Eastern European region is listed abroad. Of course, a relatively small number of corporations account for this high and increasing share of market capitalisation listed on non-CEEC stock exchanges as typically it is the larger company that lists abroad. Irrespective of whether this process is driven by the reluctance of foreign investors to invest in securities listed only on the relatively illiquid CEEC stock exchanges or by the desire of firms to widen their investors' base, this clearly shows the importance of distinguishing between the local provision and availability of capital market services to investors and issuers.

The migration of stock listing of the largest companies to the world's most important financial centres questions the feasibility of developing/maintaining domestic capital market in Central and Eastern Europe as well as in many EU countries. It is unclear whether the significant costs of developing a domestic capital market infrastructure can be justified if the market size remains limited. Schmiedel (2001) analyses the technical efficiency of financial exchanges in Europe and finds statistically significant inefficiencies (about 20-25 percent), which are partially explained by size. As stock market consolidation in the EU develops further, it is likely that the larger markets will improve their efficiency, making it even more difficult for CEEC exchanges to compete.

With respect to the need for a national capital market, one cannot ignore the importance of having a separate national currency. Indeed, for domestic investors the domestic financial market would be the "place to be" as it would relieve them from having to bear exchange rate risk. This could possibly offer the critical mass and liquidity to justify the existence of a national capital market. However, if the national currency were to be replaced by the currency of a larger economic zone, the inherent advantage of having a national capital market would disappear. Since all CEECs will eventually adopt the euro after having joined the European Union, one cannot disregard that the short-term benefits of a domestically based capital market when the national currency still exists, might not justify the cost of developing and maintaining these markets once the national currency has disappeared.

The above discussion indicates that the future of independent CEEC stock exchanges is not obvious. It should be noted that the same applies to many domestic exchanges in the European Union. This does not mean that domestic firms and investors will not have access to capital market services. Quite the contrary, they could be better off relying on an international structure that can operate much more efficiently.

As a consequence, it may be better for countries not focusing on the development of full fledged local stock exchanges, but rather concentrate on creating the conditions, such as improving shareholders rights and legal system quality, that allow firms to issue and trade shares abroad efficiently. This facilitation will also need to involve harmonisation of corporate governance, accounting, listing and other rules with those in international financial centres, and in many CEECs improvements are required in the enforcement of securities markets' legislation. Like for banking, the institutional framework of capital markets remains of paramount importance.

Naturally, this does not mean that the current capital market infrastructure should be abandoned altogether. Instead, CEECs could continue to develop the infrastructure, not with the aim of developing it on a fully independent basis, but to encourage their local trading systems to be closely linked to and eventually merged with EU platforms. This is already happening in several cases as documented by Köke and Schröder (this volume). Likewise, as efficient clearing and settlement is also a key feature of a well functioning capital market, foreign clearing and settlement operators need to be given access to CEEC exchanges.

It might be politically unpalatable for the public authorities to endorse the view that capital market services should be outsourced internationally. If the authorities were to push for the development of a local independent market (or a regional one) they could try to achieve this by restricting the investment choices of domestic investors in order to tilt their resource allocation toward the local market. These investors would thus risk becoming captive to an inefficient market. This might, on a transitory basis, assure a cheaper funding for local fund-raisers (including the local governments), but this would not necessarily bring about a least cost capital market infrastructure and adequate liquidity. Doing so would eventually isolate local markets and drive down the returns accruing to local savers and investors and expose them to higher risks.

Naturally, the internationalisation process has been driven by larger corporations (except for Nasdaq listed technology companies). It is likely that in the future larger firms will continue to enjoy a better access to international capital markets than smaller businesses. This obviously raises the issue of what the authorities could do to help medium-sized and innovative firms to tap the capital market. These firms typically suffer from larger information problems as the provision of information is relatively more costly and available only at local level. Therefore one role for public authorities is to stimulate an active market for the financing of new or rapidly expanding firms by promoting venture capital and the like. However, this does not necessarily justify the existence of a domestic stock exchange.

Most of the discussion so far has mainly focused on the capital market for shares. One should not conclude from this that the challenge facing the bond market is different. If anything, the experience of the euro zone since the introduction of the single currency has shown that the integration of the bond market is progressing even faster than for the share market. Perée and Steinherr (2001) show that the introduction of the euro has opened the way for a truly integrated bond market characterised by intense competition among issuers and much more sophisticated pricing of risks. As the CEECs are expected to abandon their national currencies in favour of the euro, their bond markets will have to integrate this market too. Hence, the recommendation that CEEC authorities take the necessary steps to integrate their markets with the euro zone market as smoothly as possible is even stronger for the bond market.

In conclusion, there seems to be considerable potential for an efficient integration of capital markets in an enlarged EU. In deciding which road to take, CEECs as well as current EU members would be well-advised not to confuse the local production of capital market services with the availability of capital market finance. One thing should be clear, domestic users of capital market finance and investors would be better off with access to efficient foreign markets instead of having to rely on inefficient domestic capital markets.

Macroeconomic interlinkages

A sound financial system and macroeconomic stability are crucial factors that determine how fast relatively poor countries can catch up with richer ones. An essential observation is that financial sector development and macroeconomic stability support each other. Equally important, financial sector weaknesses pose a threat to macroeconomic stability and macroeconomic imbalances, in turn, could undermine the stability of a country's financial system.

A key macroeconomic decision concerns a country's monetary and exchange rate regime. In taking that decision, a variety of questions need to be addressed. A critical one is which regime is best for getting the country on a sustainable path of economic growth. Another question - obviously related to the first one - is which regime is most suitable for ensuring financial sector stability. In pondering this issue, crucial interlinkages between macroeconomics and the financial sector turn up again: Not only does the exchange rate regime choice bear on financial sector stability, but financial sector instability may adversely affect the viability of the chosen exchange rate regime. For the CEECs, the exchange rate regime choice poses an additional challenge, namely that the chosen regime should pave the way for a smooth entry into EMU.

In sum, the financial integration in an enlarged Union has an important macroeconomic dimension. The remainder of this introduction summarises the gist of the papers on this topic, which are published in a companion edition of the *EIB Papers* (Volume 7, Number 2).

Robert A. Feldman and **Nancy Wagner** (IMF) highlight in their paper "*The financial sector, macroeconomic policy and performance*" that the relationship between the financial sector and macroeconomic policy is a two-way street. Looking down the street in one direction, they argue that a healthy financial sector can enhance the flexibility and effectiveness of fiscal and monetary policy. As to fiscal policy, the authors stress that significant contingent liabilities - related, for instance, to the banking system - prevent credible fiscal planning, divert resources from productive investments, and may lead to debt sustainability issues. As to monetary policy, they point out that central banks may be unwilling to tighten policy if that would threaten the health of financial intermediaries. They furthermore reason that an underdeveloped financial system weakens the predictability of monetary transmission, thereby complicating the conduct of policy. An interesting observation is that large enterprises have access to funds other than domestic bank finance and, as a result, a tightening in monetary policy is likely to disproportionately affect small and medium-size enterprises and households, which usually do not have alternative sources of financing.

Looking in the other direction, Feldman and Wagner emphasise that the growth and development of the financial sector also depends critically on sound monetary and fiscal policies. They stress that an excessively expansionary or restrictive macroeconomic policy stance can exacerbate financial sector vulnerability. For instance, a loose policy mix, underpinning inflationary pressures, reduces the information provided by prices and interest rates, can lead to an overly rapid expansion of domestic credit, and can distort asset prices or even create an asset price bubble. Eventual stabilisation or, similarly, a restrictive policy mix - particularly one heavily reliant on monetary restraint - can place strains on the banking system and could even induce a liquidity crisis in the

banking sector. And then, large structural fiscal imbalances can severely complicate the achievement of macroeconomic stabilisation - placing the burden of adjustment on monetary policy and the banking sector, putting pressure on the exchange rate, increasing overall debt levels and associated vulnerability, crowding out credit to the private sector, and generally constraining the fiscal response to exogenous shocks. Moreover, the authors highlight that an inappropriate policy mix can lead to a loss of foreign and domestic investor confidence, triggering sudden capital outflows or a significant deterioration in external financing conditions, either of which increases the vulnerability of the domestic financial sector.

Paul De Grauwe and **Marianna Grimaldi** (Katholieke Universiteit Leuven) address in their paper "*Exchange rate regimes and financial vulnerability*" the interlinkages between foreign exchange and banking sector crises. They argue that under a fixed exchange rate regime, trouble in the foreign exchange market can easily spill over to the banking sector via skyrocketing interest rates. Mirroring the two-way-street notion of Feldman and Wagner, the authors also point out that cause and effect may be reversed, with a banking crisis inducing a massive injection of liquidity by the central bank and this, in turn, triggering a flight from the country's currency.

This suggests that a fixed exchange rate regime is conducive to banking sector crises. But is a flexible exchange rate regime preferable? De Grauwe and Grimaldi are not convinced, noting that there is very little empirical evidence indicating that banking crises have been more frequent under fixed than under flexible exchange rate regimes. On the contrary, for developing countries, they point to evidence that the probability of a banking sector crisis is higher under flexible exchange rate regimes. In this context, the authors also argue that contrary to what mainstream economic models predict, flexible exchange rates generally do not perform their stabilising role well and, worse, can be an independent source of instability, unrelated to the volatility of underlying macroeconomic fundamentals. In such an environment, flexible exchange rates increase the fragility of the balance sheets of local businesses and banks, in particular in countries with weak banking sector supervision.

De Grauwe and Grimaldi conclude that a flexible exchange rate does not necessarily provide for an environment conducive to financial stability but is more often than not a significant source of monetary and macroeconomic instability endangering the stability of the banking sector. At the same time, the authors leave no doubt - and this is the focus of the analytical model they develop in their paper - that while a strong commitment to a fixed exchange rate regime and high costs of abandoning it make such a system more credible, exogenous shocks are likely to undermine an even apparently credible fixed exchange rate regime before too long. This is particularly the case when countries move to full capital account liberalization, as the CEECs will have to upon EU membership. Overall, it seems pertinent to infer from this that credible fixed exchange rates would serve the CEECs well, but that the road to EMU should be a short one.

Willem Buiter and **Clemens Grafe** (EBRD) develop this theme further in their paper "*Anchor, float or abandon ship: Exchange rate regimes for the Accession countries*", arguing that from an economic point of view, euroisation or a currency board with the euro can make sense for all ten accession countries. They emphasise that important preconditions for the success of such an exchange rate

arrangement are fulfilled: All countries have (i) small, highly open economies that would peg to a currency that accounts for the lion's share of their external trade; (ii) sufficiently sound banking sectors; (iii) fiscal imbalances that do not appear worse than in the majority of existing EU and EMU members; and (iv) a 'strong-exit option' from such an arrangement in the form of EMU membership.

In their critical analysis of free floating - widely regarded as the only other credible exchange rate regime - Buiter and Grafe point out that national monetary autonomy is of limited value for small economies, highly open to trade and financial flows. Furthermore, they highlight the downside of monetary independence and exchange rate flexibility, including vulnerability to exchange rate shocks that can adversely affect domestic banking systems, especially when large parts of banks' balance sheets are denominated in dollars and other hard currencies. Finally, they observe that CEEC monetary and financial systems are undergoing rapid transformations and, as a result, monetary transmission mechanisms are both poorly understood and quite unstable, which increases the likelihood that central banks in the region may miss their announced policy targets.

Buiter and Grafe conclude with a practical suggestion for an efficient EMU entry procedure for successful EU accession countries. In essence, countries should be allowed to euroise at the earliest possible date, not unilaterally, but at an exchange rate that is negotiated and agreed upon between the responsible parties in the existing EMU member states and the accession country. Furthermore, accession countries should become EMU members at the earliest possible date, possibly (and preferably) on the same date on which they become EU members. The authors note that certain technical waivers or derogations from the Maastricht exchange rate and inflation criteria may be judged to be necessary for early EMU entry. In this context, Buiter and Grafe point out that the exchange rate criterion had been flexibly interpreted before, while still observing the Maastricht Treaty. As to the inflation criterion, they stress that there are sound economic reasons to redefine this criterion, for instance, in terms of the inflation rate for tradable goods rather consumer price inflation.

With two papers coming out rather strongly in favour of credible fixed exchange rate regimes on the road to EMU and an early adoption of the euro, one may feel that there is too much praise for one extreme in a "bipolar view" of the world (Fischer, 2001) and too much enthusiasm for an early EMU entry of accession countries. To balance this impression, we think it is appropriate to briefly sketch the case for greater exchange rate flexibility and a more gradual approach to EMU membership as presented, for instance, in Feldman and Watson (2001).

A starting point is the observation that since the beginning of transition a number of countries have moved towards more rather than less flexibility and, at present, the group of countries with floating exchange rate regimes comprise the Czech Republic, Hungary, Poland, Romania, Slovakia and Slovenia (with the Baltic countries and Bulgaria having, *de jure* or *de facto*, currency board arrangements). The main reason for a move towards greater flexibility seems to have been concerns about actual or expected massive capital inflows and associated worries about both inflationary pressures and a possibly abrupt reversal of capital flows.

While large and possibly volatile capital flows pose challenges for any exchange rate regime, it can be argued that regimes with significant exchange rate flexibility are likely to remain for some time to come a less risky option for those accession countries that currently have such systems in place. Two things should be clear though. First, CEECs with flexible exchange rates should not be indifferent to exchange rate movements, and macroeconomic policies have to contribute to avoiding too much exchange rate variability and an excessive currency appreciation that could lead to unsustainable current account balances. Second, as EU members, the CEECs will eventually have to join EMU. Therefore, countries with flexible exchange rates will ultimately have to move back towards greater fixity. As Feldman and Watson (2001) point out this process can be hazardous, calling for an appropriate mix of fiscal and monetary policies, progress in achieving a reasonable degree of price and exchange rate stability, and an exchange rate level upon entry into EMU that does not undermine a country's external competitiveness.

The general conclusion to be drawn from these two editions of the *EIB Papers* on the financial integration of an enlarged EU is that there are no major hurdles to EU membership. All CEECs have made enormous progress in creating market-driven banking sectors. Capital markets in the CEECs are still in their infancy but we argued that one needs to make a clear distinction between the availability of capital market services to issuers and investors of accession countries and the local production of these services. The paper in this volume concludes that CEECs would benefit from establishing a pan-CEEC capital market. We are sceptical, in particular when taking into account that the CEECs will eventually adopt the euro after having joined the EU. CEECs may consider to leap-frog by integrating their capital markets with major EU financial centres more rapidly. There are already strong links between CEEC and EU banks as foreign strategic investors dominate the CEEC banking markets. While the exchange rate regime choice has important implications for the soundness of the financial sector, it remains an open question which exchange regime the CEECs should choose on the road to EMU. The broad picture on CEEC accession is comforting. However, the transition is not over yet and new challenges will arise with enlargement. To withstand and prevent financial stress in CEEC financial sectors, further improvements are required in the legal framework and in the practice of bank supervision. As always the devil is in the detail.

Armin Riess and Rien Wagenvoort

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Practice makes perfect: A review of banking in Central and Eastern Europe

You always pass failure on the way to success
Mickey Rooney

Armin Riess

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1. Introduction

Planned economies produced many goods and services - such as cars, electricity, and machinery - that did not differ fundamentally from those available in market economies. Certainly, the quality and variety of these goods and services did not reach Western standards and there was an almost perennial mismatch between demand and supply, with an excess demand for many goods and an over-supply of others. Yet, there was a supply of cars, electricity, machinery, and the like. This cannot be said about banking services, or finance in general, as known in market economies. For sure, there were financial flows and payments. But to the extent that they accompanied investment, they largely followed real resources that had been allocated before under the central plan, which - in turn - saw no need for key banking functions such as transforming assets, managing risks, and processing information on and monitoring of borrowers.

In creating market-driven banking sectors, all Central and Eastern European accession countries (CEECs) (1) encountered similar problems, notably a substantial amount of bad loans inherited from the communist past and the accumulation of new non-performing loans in the early years of transition. The latter was due to a combination of factors, in particular an inevitable lack of expertise in commercial banking, continued lending of incumbent banks to enterprises from the communist past with a doubtful future in an open economy, imprudent or fraudulent lending by a rapidly growing number of new banks, and - last but not least - weak banking sector regulation and supervision.

To address these problems, all CEECs embarked on far-reaching banking sector restructuring and recapitalisation programmes. While the timing and specifics of these programmes differed from country to country, their outcome has been quite similar across the region. Key structural features of the banking sectors that emerged after restructuring and recapitalisation can be summarised as follows (2):

- In most countries, the number of banks declined due to consolidation or exit, mainly of domestically owned banks; banks overwhelmingly follow the universal banking model.
- The number of banks and bank branches relative to the size of the population does not suggest that the CEECs are "over-banked" (3).
- In all countries except Slovenia, foreign strategic investors now dominate the market.

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1) Bulgaria, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, the Slovak Republic and Slovenia.
2) See Table A.1, A.2 and A.3 in the Annex for details.
3) In fact, Table A.2 in the Annex shows that branch density in the CEECs is much lower than in the EU, suggesting that CEECs are "under-banked" compared to the EU. However, the EU benchmark could be misleading for two reasons. For one thing, there is scope for technological leapfrogging (Berglof and Bolton, 2002) and, thus, modern distribution channels for banking services, such as Automatic Teller Machines and internet banking, are likely to develop more rapidly in the CEECs than in countries where these technologies were introduced first. For another, CEECs do not have a long history of using traditional brick-and-mortar distribution channels and, thus, modern modes of delivering banking services have a better chance of becoming substitutes for rather than complements to traditional distribution channels (Meigas, 2001).

The banking sectors that emerged in accession countries of Central and Eastern Europe have similar structural features.

Overall, more than ten years into the transition, all CEECs have made major strides in setting up banking sectors that are guided by market forces. This is a major achievement given where these countries started. However, cognisant of what has been achieved, we will argue in this paper that CEEC banks continue to operate considerably below their potential: they provide less finance to the domestic economy than they could and their current profitability is too low to ensure the soundness of banking. There are, however, no grounds for bashing the banks. Their so far limited contribution to the development of CEEC economies indicates that while properly functioning banking sectors had to be created from scratch they could not be created over night, and with hindsight one has to acknowledge that even a decade has not been enough. Taking a forward looking perspective, our aim is also to identify key obstacles to a more thriving CEEC banking sector and to indicate what it takes to make the sector live up to its potential.

The remainder of this paper is structured as follows. Section 2 provides evidence for the hypothesis that CEEC banks underperform in terms of how much, to whom, and how profitably they lend. Since we consider the lack of profitability a threat to the soundness of banking, this section also reviews the current situation in this respect. The next two sections set out why things are as we find them and, more importantly, how they could be improved. Section 3 explains why (and why not) banks lend too little to the domestic economy and what needs to happen to make them do more. Section 4 examines why the profitability of banks has been disappointing and how it could be raised. Section 5 focuses on how to ensure the soundness of banks as and when they strive for more business and higher profits. Section 6 concludes.

Two final introductory remarks are appropriate. First, data on the CEEC banking sector inevitably have their limitations, but we find them reliable enough - in particular after eliminating outliers - to reveal the essence of banking in the region. Second, we are interested in insights that are relevant for the majority of CEECs and, thus, have used a broad brush, sketching how things have developed on average in the CEECs. Obviously, not all CEEC banking sectors, let alone individual banks, fit this picture and we thus point out striking country specifics as we go along (4). With these caveats duly emphasised, we proceed.

2. Bank lending - below its potential, not profitable enough, but currently sound

In this section, we sketch three interrelated weaknesses of CEEC banking, namely the low degree of bank intermediation, excess funds in the system, and the meagre profitability of banks. But we also illustrate how the soundness of the banking sector has increased in recent years.

Low degree of bank intermediation

To measure the depth of bank intermediation, a variety of indicators are available (5). One that is frequently used is the ratio of bank claims on the domestic economy to GDP (6). Figure 1 shows how

4) For specifics on the Czech, Hungarian and Slovenian banking sector, see Hájková et al.*, Várhegyi and Zajc, respectively (all in this volume).*

5) The World Bank has recently compiled an extensive database on the structure and development of financial sectors in different countries. See Beck, Demirgüç-Kunt and Levine (2000).

6) Domestic bank claims include claims on the government, public authorities, non-financial enterprises (private and public), and non-bank financial institutions; claims on other banks are excluded; it is worth noting that in addition to loans, claims may include bank holdings of debt securities and equity.

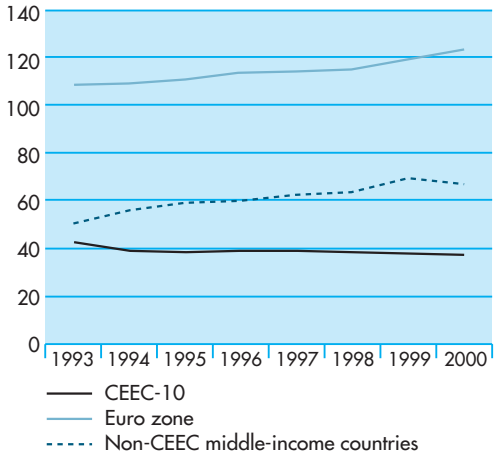
this indicator has evolved over time in three groups of countries, namely the euro zone, the CEECs, and a group of non-CEEC countries with a per capita income similar to that of the CEECs (7).

The contribution of bank finance to economic activity has remained surprisingly limited.

In the CEECs, domestic bank claims have virtually remained constant relative to GDP, with the ratio hovering around 40 percent since 1993. This suggests that CEEC banks have not taken on a more important role in the economy. By contrast, in other middle-income countries and in the euro zone, banks have become more important relative to economic activity. As a result, domestic bank claims (in percent of GDP) in other middle-income countries and the euro zone exceed claims in the CEECs by a factor of around 1.8 and 3, respectively. It is not surprising that the depth of bank intermediation is higher in more advanced countries of the euro zone. What is remarkable, however, is that the importance of banking in the CEECs has fallen further behind - both compared to the euro zone and other middle-income countries.

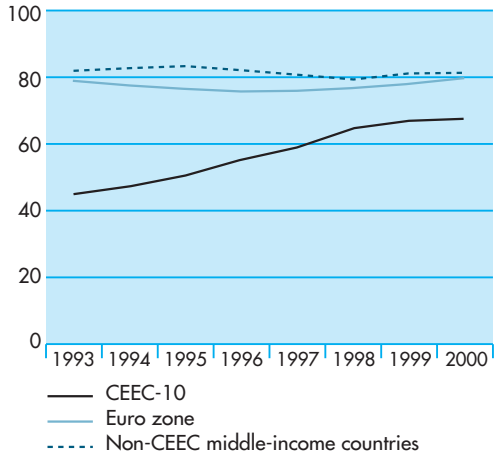
However, the situation in the CEECs is not as static as it appears at first glance. Figure 2 shows that CEEC banks have increased the share of funds channelled to the private sector (firms and households). In 1993, less than 50 percent of domestic bank claims consisted of private sector claims. By 2000, this share had gone up to almost 70 percent. It follows that during the period considered here, the ratio of bank claims on the private sector relative to GDP increased from about 20 to 28 percent. While this is encouraging, it does not necessarily mean that bank-intermediated finance has become more important for the private sector because, to a large extent, it reflects the increasing share of the private sector in economic activity resulting from a withdrawal of the state from commercial undertakings.

Figure 1. Domestic bank claims, in % of GDP



Source: IMF International Financial Statistics (IFS).

Figure 2. Claims on the private sector, in % of total



Source: IMF International Financial Statistics (IFS).

There are, of course, differences across countries. For instance, with a claims-to-GDP ratio of 60 percent in 2000, the Czech banking industry appears to be well ahead of the CEEC average even after a substantial decline in the ratio since 1997 on the back of several banking sector crises. This

7) The last country group comprises Argentina, Brazil, Greece, Korea, Mexico, Peru, Portugal, South Africa, Thailand and Turkey.

Box 1. Measuring financial depth

Alternative indicators

Bank claims on domestic borrowers include claims on the government, public authorities, non-financial enterprises (private and public), and non-bank financial institutions; excluded are claims on other banks.

Other indicators of financial depth essentially confirm that the CEEC banking markets remain underdeveloped. Frequently used indicators include the ratio of broad money to GDP. In 2000, broad money relative to GDP in the CEECs stood at about two-thirds of the euro zone average of 65 percent. However, compared to other middle-income countries, the CEECs were not lagging behind.

Limitations of the claims-to-GDP ratio

Although the indicator shown in Figure 1 gives an idea about the development of banking, some of its limitations should be mentioned. First, the indicator relates a stock variable (bank claims) to a flow variable (GDP). An alternative way to gauge the role of banks in an economy would be to compare the flow of bank finance to a measure of economic activity such as GDP or corporate investment. However, the data needed for this approach are difficult to compile on a coherent basis for the group of countries considered here. But there are indications that CEEC banks have lost ground in the area of corporate finance. For instance, Schardax and Reininger (2001) have pointed out that *new* net lending (i.e. the change in the stock of credit to the corporate sector) relative to gross fixed capital investment has fallen in the 1990s in Poland, the Czech Republic, Hungary and in Slovenia.

Second, even for countries at a similar stage of economic development, the indicator varies considerably and changes markedly over time. In France, for example, bank claims relative to GDP amount to only two-thirds of those in Germany, where the ratio stood at 150 percent in 2000. What is more, the ratio for Germany increased by 50 percentage points during the 1990s. Obviously, it would not be convincing to argue that in recent years banking in Germany developed that rapidly and that Germany's banking sector is considerably more advanced than the French banking industry.

Finally, the indicator does not account for the quality of bank claims. At the beginning of transition, CEEC banks inherited a large portfolio of loans to ailing state-owned companies, the government, and other public authorities. Inherited non-performing public sector loans have now been largely written-off or transferred to consolidation agencies and, as a result, the quality of banks' loan portfolios has improved. It follows that although the bank claims-to-GDP ratio has not changed - on average - in the CEECs, bank claims are likely to have a stronger link to the real sphere of the economy than ten years ago.

contrasts sharply with the experience in Poland and Slovenia, for example, where the level of bank intermediation has increased steadily albeit from a low level. Noteworthy are also trends in Hungary, a country that is widely perceived as being at the forefront of creating a private, market-driven banking sector. Interestingly enough, the mobilisation and allocation of funds of the Hungarian banking sector has lost in importance and is below the CEEC average.

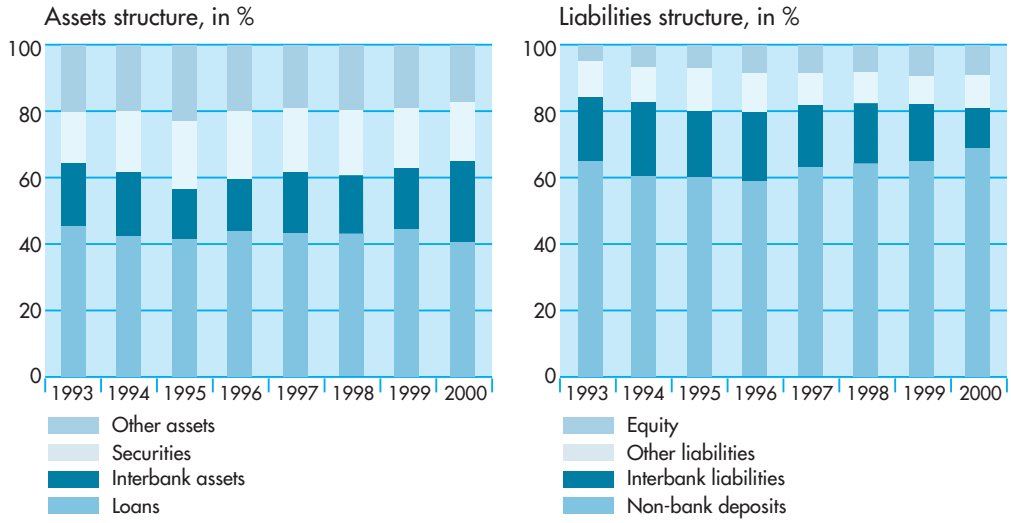
Overall, developments in the ratio of bank claims to GDP suggest that bank intermediation has remained shallow in the CEECs. It is true that the indicator used here has its limitations. But as we briefly discuss in Box 1, these do not necessarily imply that this indicator understates the actual importance of banks.

Banks mobilise more funds than they can lend domestically

We have seen that the provision of bank finance to domestic borrowers has remained low. We will illustrate next that bank lending to domestic borrowers was not constrained by a lack of financial resources.

Figure 3 shows how the balance sheet structure of an average CEEC bank evolved during 1993-2000. On the liability side, non-bank deposits - increasing from 65 percent of total liabilities to 69 percent - became an even larger source of funding. By contrast, interbank liabilities, reflecting borrowing from other banks, became significantly less important, with their contribution to total funding dropping from 20 to 12 percent. Finally, the other remarkable change was the doubling of equity from 4 to 8 percent of liabilities.

Figure 3. Balance sheet structure of CEEC banks



Notes: Other assets comprise fixed assets, cash and other earning and non-earning assets.
Source: Own calculation based on Bankscope (8).

With a doubling of equity and an increase in non-bank deposits, the structure of bank liabilities has improved.

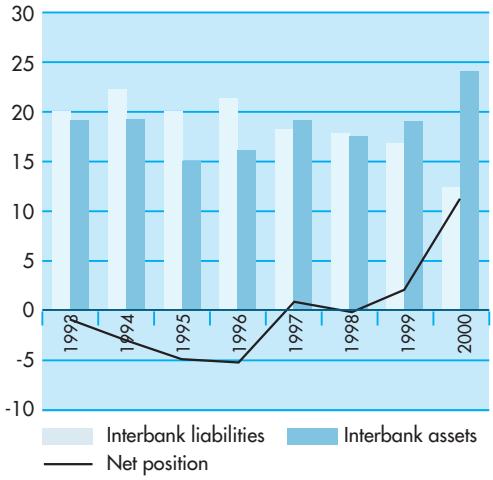
The decline in interbank liabilities in favour of non-bank deposits implied a shift towards a source of funding that normally carries a lower interest rate, thus improving the liability structure of banks' balance sheets. An improvement in the liability structure also resulted from a higher equity contribution, enabling banks to invest in riskier though potentially more profitable assets while still meeting the Basle capital adequacy principles. Did CEEC banks seize this opportunity?

Developments in the structure of bank assets do not suggest that this was the case. As Figure 3 indicates, the share of loans in total assets remained virtually constant at 40 percent and there was thus no increase in the portion of funds allocated to potentially more profitable assets. To put things in perspective, it is worth noting that credit institutions in the EU allocate on average 50 percent of their assets to loans. Figure 3 also indicates that interbank assets, reflecting lending to other banks, increased from about one fifth to one quarter of bank assets. Next to interbank assets, the holding of securities was the third largest component, accounting for one fifth of assets. The share of other assets fell slightly, mainly because of a drop in the portion of banks' cash balances.

8) Bankscope is a firm-level database of Bureau Van Dijk (Brussels).

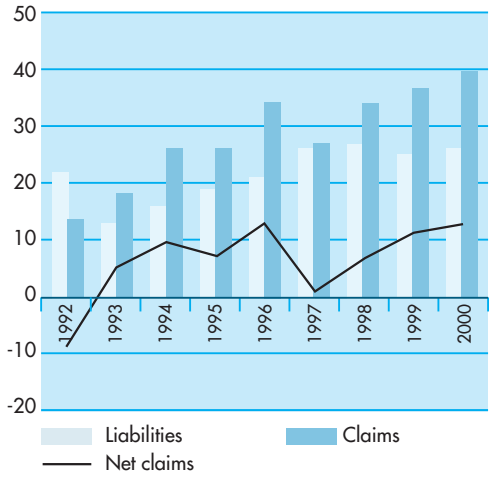
Overall, the most striking change in the balance sheet structure of banks was the relative decline in interbank liabilities and, at the same time, the rise of interbank assets. Figure 4 illustrates that towards the end of the decade interbank assets exceeded interbank liabilities by a considerable margin. In interpreting this net position, it is important to recall that Figure 4 shows aggregate data for the CEEC banking sector. Hence, the net position reflected net claims against non-CEEC banks, largely, but not exclusively, EU banks. The CEEC banking sector has thus become a net creditor of non-CEEC banks.

Figure 4. Interbank assets & liabilities of CEEC banks, in % of balance sheet



Source: Own calculation based on Bankscope.

Figure 5. Claims & liabilities of CEEC banks vis-à-vis BIS reporting banks, in USD bn



Source: BIS Quarterly Review (2002).

CEEC banks are net external creditors in capital-importing countries.

Other data sources, such as statistics of the IMF and the Bank for International Settlements (BIS) confirm this result. International Financial Statistics of the IMF show that all CEEC banking sectors, with the exception of Estonia and Latvia, had a positive net foreign asset position in 2000. Net foreign assets were particularly high in the case of Bulgaria, Romania, and the Czech and Slovak Republics. BIS data (BIS, 2002), which are pictured in Figure 5, tell that CEEC banks have been net lenders to BIS reporting banks since the mid-1990s. The exception here are the Hungarian and Estonian banking sectors, which have borrowed net from BIS reporting banks.

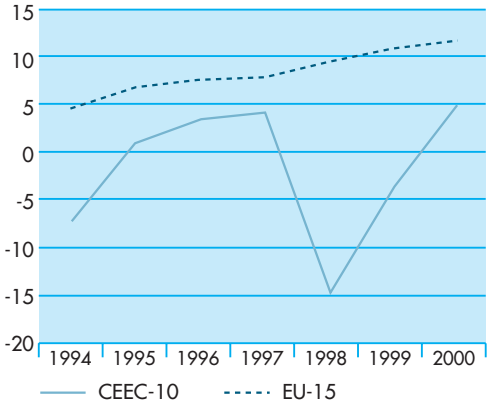
In sum, the rising share of non-bank deposits in liabilities together with the constant, if not falling, loan-to-asset ratio indicate that CEEC banks are mobilising savings in excess of what they are willing to lend to domestic borrowers. The surplus is invested abroad. We thus arrive at the startling conclusion that the CEEC banking sector is a net exporter of capital in a group of capital-importing countries.

Meagre profitability but improved soundness of banking

Another feature of banking in the CEECs is that it has not been particularly profitable. To assess banks' profitability we calculate real returns on equity (after tax) on the basis of banks' income

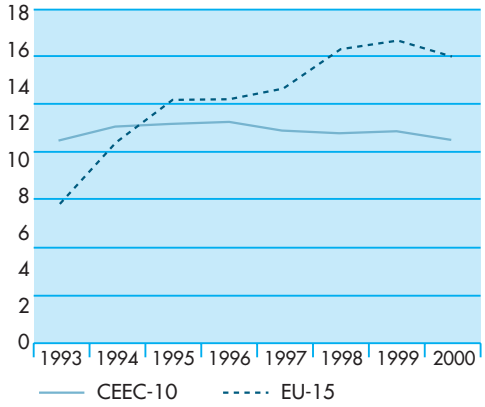
statements (9). Figure 6 shows that the average real return on equity of CEEC banks was considerably below the real return on equity of EU banks - many of them not being top performers either by international standards.

Figure 6. Real return on equity of banks in the CEEC and the EU, in %



Source: Own calculation based on Bankscope.

Figure 7. Cooke ratio of banks in the CEEC and the EU, in %



Source: Own calculation based on Bankscope.

Obviously, the CEEC average can be influenced by developments in particular countries and, at the same time, masks differences across countries. For instance, the heavy losses that the CEEC banking sector experienced in 1998-99 reflected - among other things - major problems in the Czech banking sector. And then, the positive outcome in 2000 was largely due to sizeable profits in Slovakia, Estonia and Latvia while the profitability of banking in other countries was modest and Romania's banking industry continued to incur losses.

Real returns to bank equity have been low but the banking sectors' capital cushion has grown nevertheless.

Low profitability does not bode well for the soundness of banking. However, at present, CEEC banks are well capitalised and, thus, the lack of profitability is not an immediate threat. Figure 7 illustrates that the Cooke ratio (bank capital in percent of risk-weighted assets) for the average CEEC bank has increased sharply, reaching almost 16 percent in 2000. This value is twice as high as the Basle regulatory requirement and exceeds the average capital adequacy ratio of EU banks by more than 4 percentage points (10).

But it is clear that the comfortable capital cushion has been thanks to one-off measures and not retained profits. For one thing, bank recapitalisation - financed by foreign strategic investors and the public purse - has doubled the share of equity on the liability side of banks' balance sheets (as

9) Adjusting nominal returns for inflation allows a comparison of the profitability of CEEC banks with that of banks in the EU where inflation has been lower. Using RoE for the nominal return on equity and π for the rate of inflation, the real return on equity is $RRoE=(1+RoE)/(1+\pi)-1$. An additional comment is useful. Foreign owners of CEEC banks made their equity contribution in a non-CEEC currency, mainly the euro. To the extent that CEEC currencies appreciate against the euro, owners make foreign exchange profits that $RRoE$ does not account for. While this is correct, we would find it misleading, for a variety of reasons, to include such profits in a measure of bank performance. The most fundamental reason is that if investors want to take a foreign exchange bet, there are simpler options than buying banks.

10) It has been observed that CEEC banks may aim for a higher-than-required capital adequacy ratio to signal their solvency and, thereby, attract deposits needed for expanding business in a lending environment that is inherently more risky than that of the EU. See, for instance, Fries and Taci (2001).

was illustrated in Figure 3), thus raising the numerator of the Cooke ratio. For another, an increasing portion of funds has been allocated to less risky assets, such as deposits with banks in the EU (Figure 3), that carry lower capital requirements and, therefore, reduce the denominator of the Cooke ratio.

Having sketched the main deficiencies of banking in the CEECs, we now turn to the question of how the situation can be improved.

3. Enhancing bank lending to domestic borrowers

We have argued that the degree of bank intermediation in the CEECs is low and that banks do not provide as much finance to the domestic economy as they could. This raises the question of why that is so and what remedies could be taken.

Why CEEC banks do not lend as much as they could

A possible reason could be that CEEC banks are charging too high interest rates on their lending, de facto cutting off a large share of demand. To investigate this, we calculated the real intermediation spread that banks charge when channelling funds from depositors to borrowers. Box 2 sets out the specifics of this calculation; suffice to note here that it rests on the difference between banks' lending and deposit rates, adjusted for both inflation and the effect of central banks' minimum reserve requirement policies (11). Obviously, a positive spread is necessary to compensate banks for intermediating funds but excessive spreads would curb the flow of funds through the banking system.

Bank intermediation spreads are not excessive and thus do not explain why bank lending has been meagre.

Figure 8 does not suggest that the real spread for bank intermediation in the CEECs is excessive. Real spreads are lower now than they were in 1995, with the CEEC average amounting to less than 4 percent. More important, spreads in the CEEC banking sector are below those in the EU. This is rather surprising, as one would expect that CEEC banks need higher spreads than their EU counterparts given that the economic environment in which they have to operate is more volatile than in the EU. But we have seen that CEEC banks seem to be paying for this in terms of low profits and, in fact, one could argue that they have reduced real spreads to a level they can ill afford.

Low and falling real spreads have been a feature of all CEEC banking sectors, with the exception of Poland where spreads have been on the rise in recent years though they are still not exceeding the EU average (12). Figure 8 also shows that the real bank intermediation spread has fallen quite substantially in Hungary. Overall, falling spreads indicate that the CEEC banking sector has been exposed to increasing competition. In part, this has been due to the entrance of foreign banks into the market. But competition from non-resident banks that are lending directly to CEEC borrowers has also played a role. Foreign bank entry and non-resident bank lending has particularly benefited blue-chip companies, while the impact of competition on other market segments has probably been more limited. The degree of competition in other market segments will depend on bank concentration. As Figure 9 suggests, the concentration in the banking industry of the Czech

11) These adjustments are necessary to make comparisons across countries with different rates of inflation and reserve requirement policies. While the wedge created by inadequately remunerated reserves makes bank intermediation more expensive, it cannot be taken as indication that banks overcharge their borrowers and/or offer too little to depositors.
12) A possible explanation for the rising spread in Poland is the considerable tightening of monetary conditions in recent years. In these circumstances, upward adjustments in deposit rates often lag increases in lending rates and, thus, spreads widen.

Box 2. Interest spread corrected for inflation and reserve requirements

Methodology: We assume that a bank sets its lending rate in a world without uncertainty as a function of the (i) profit it wants to achieve, (ii) deposit rate offered to its depositors, (iii) reserve requirement on deposits, and (iv) the remuneration of reserves. The monetary authorities set the latter two rates. Consider a one-period model. At the beginning of the period, the bank receives deposits and supplies loans. At the end of the period, the depositors get back their savings (including interest) and borrowers pay back their loans (including interest). The following equation shows the link between these variables, with those pertaining to bank assets and liabilities on the left-hand side and the right-hand side, respectively:

$$(1) \qquad (1-k)(1+i_l)+k(1+i_r)=(1+i_d)+M$$

In (1), k is the reserve requirement, i_l, i_d and i_r are the nominal lending, deposit, and reserve remuneration rate, respectively. On each unit of deposits the bank receives a nominal spread M. This spread can be set simultaneously with nominal lending and deposit rates such that any real spread can be obtained given the inflation rate. The bank's spread must cover its operating costs, such as personnel expenses, and normally includes an additional margin to achieve a proper return on equity.

Using (1), the spread between the nominal lending and deposit rates can be written as

$$(2) \qquad (i_l - i_d) = k(i_l - i_r) + M$$

Furthermore, the spread between the nominal lending rate and the nominal rate on reserves is equal to

$$(3) \qquad (i_l - i_r) = (1+\pi)(r_l - r_r)$$

In (3), r_l and r_r are the real lending rate and the real reserve remuneration rate, respectively; π is the rate of inflation. Using (3) in (2) gives

$$(4) \qquad (i_l - i_d) = k(1+\pi)(r_l - r_r) + M$$

Equation (4) shows that the nominal interest rate spread (the left-hand side of (4)) depends non-linearly on both inflation and the reserve requirement. Dividing (4) by $1+\pi$ and rearranging terms leads to the real intermediation spread of banking (M_{real}):

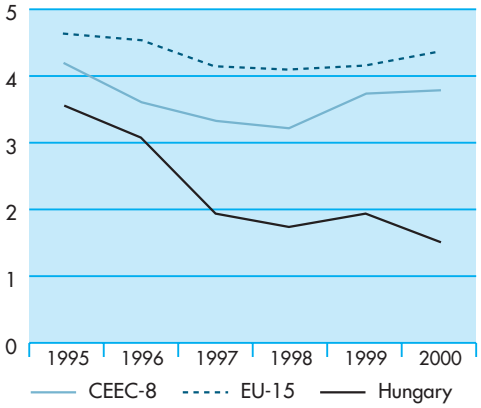
$$(5) \qquad M_{real} = r_l - r_d - k(r_l - r_r)$$

For $k=0$, M_{real} is equal to the difference between the real lending rate (r_l) and the real deposit rate (r_d).

Data: To compute M_{real}, we took IMF-IFS data on lending and deposit rates as well as inflation. For most countries, the lending rate refers to a weighted average of short-term rates offered to all types of borrowers. In the case of Poland, however, the lending rate is the rate charged by commercial banks on loans to prime borrowers. Data on reserve requirements and their remuneration are based on central bank publications.

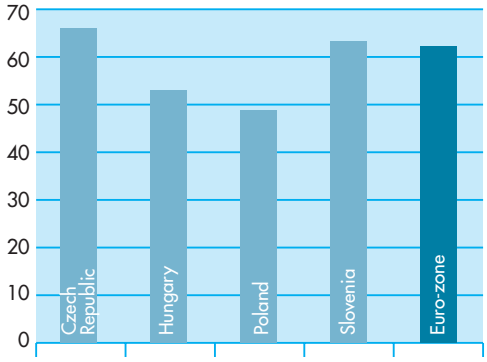
Republic, Hungary, Poland and Slovenia is similar to the euro zone average, with concentration measured by the share of the five largest banks in total banking sector assets. In any event, trends in real spreads do not suggest that a possibly too concentrated banking sector has prevented the mobilisation and allocation of funds at reasonable terms.

Figure 8. Real bank intermediation spreads in the EU and the CEECs, in %



Notes: CEEC-8 excludes Bulgaria and Romania.
Sources: Own calculation based on IMF-IFS and central bank publications.

Figure 9. Market concentration in selected CEECs and the euro zone, in % (2000)



Notes: Share of five largest banks in total banking sector assets. The euro zone figure is for 1998 and reflects a simple average.
Sources: National central bank publications and Belaisch *et al.*, (2001).

We thus do not find evidence for the notion that CEEC banks charge too much for their loans and we therefore need to consider other reasons why CEEC banks prefer, at the margin, lending to non-CEEC banks over loans to domestic borrowers.

One observation to start with is that although maturity transformation is a salient feature of bank intermediation, there are limits to the maturity risks that banks can prudently take. The high ratio of deposits to liabilities of around 68 percent (as shown in Figure 3) indicates that CEEC banks rely to a large extent on short-term funds, which limits their possibilities to extend long-term loans. For comparison, in the EU, deposits account for 42 percent of liabilities and long-term sources of funds, such as securities, are far more important. In principle, CEEC banks could offer short-term loans to private, domestic borrowers, but demand for such loans may be low and, more important, banks may consider investing in short-term government debt and placements with non-CEEC banks better alternatives.

Shortcomings in risk appraisal and management capacity and in the judicial environment curb the role of banks in channelling funds to domestic borrowers

And then, CEEC banks also receive foreign currency deposits and, in light of this, it is tempting to argue that banks place funds with non-CEEC banks to avoid currency risks. This could be achieved, however, through foreign currency lending to domestic borrowers, which is substantial in many CEECs. In any case, currency risk hedging could not explain why the CEEC banking sector is in a net external creditor position: If hedging were the issue, a balanced position would suffice.

Another explanation could be a dearth of viable investment. This needs a bit of explanation. At first glance, one is inclined to think that the process of catching-up with higher living standards elsewhere in the world comes with ample investment opportunities and all it takes to realise them is sufficient finance. While opportunities are indeed high, closer inspection of the transition process

reveals a number of reasons why realised investment may fall short of both opportunities and available finance. Lack of entrepreneurial expertise in identifying, seizing, and carrying out investment opportunities is one of them.

A more important string of reasons, however, reflects the very nature of the product that financial systems offer. In market economies, banks - and other suppliers of funds - provide finance to users of funds in exchange for a promise to return these funds in the future together with an appropriate remuneration. A salient feature is that these promises are sometimes broken. It is clear that this possibility dampens banks' willingness to lend, in particular when bank staff, as in the CEECs, is still developing experience in appraising, pricing, and managing risks.

Shortcomings in the legal framework further undermine banks' willingness to take risk and lend. This is because banks not only need the risk management know-how, the legal framework must also enable them to actually manage risks. Insufficient protection of creditor rights deters banks from extending loans that, in principle, promise adequate returns. Creditor rights comprise two important aspects: the possibility, first, to hold and seize collateral and, second, to recover loans - at least partially - through bankruptcy procedures. If these possibilities are limited, banks will be reluctant to lend in the first place and, as a result, economically viable investments do not materialise.

Wagner and Iakova (2001), for instance, provide evidence for an insufficient protection of creditor rights in a number of CEECs. Typical problems are reported to include low collateral recovery, legal restrictions on the disposal of assets backed by real estate, tax laws discouraging write-off of bad loans, and slow and inefficient bankruptcy procedures.

Banks are exposed to considerable competition from cross-border finance.

In an environment of insufficiently protected creditor rights and not yet fully developed risk appraisal and management capacity, lending tends to be limited to most creditworthy borrowers. The problem - from the perspective of CEEC banks - is that these borrowers often have access to non-bank finance and loans from non-resident banks and there is, thus, stiff competition in this market segment. To illustrate this, claims of BIS reporting banks on non-bank borrowers in the CEECs have risen from less than USD 10 billion in 1994 to USD 30 billion in 2001 (BIS, 2002). This is equivalent to one-fifth of CEEC bank lending to the domestic economy. To complete the picture, it also needs to be kept in mind that because of the large presence of foreign direct investors in the non-financial sector of CEEC economies, there is a substantial flow of intercompany loans, effectively limiting the potential for domestic bank intermediation.

Removing obstacles to bank intermediation

We have identified three main reasons - in part mutually reinforcing - for the relative lack of bank intermediation in the CEECs, namely considerable competition from cross-border finance, underdeveloped risk appraisal and management capacity, and shortcomings in the legal framework.

Obviously, competition from cross-border finance should not be an economic policy concern. What is important for the development of the CEECs is that finance is made available to profitable

investment at the lowest cost and whether the funds are foreign or domestic is of second-order importance. An observation to make is, of course, that cross-border finance serves a certain clientele, essentially foreign and domestic blue-chip companies, but does not reach less creditworthy domestic borrowers. While this is true, it certainly does not mean that cross-border finance itself impedes the flow of funds to potential borrowers with a lesser credit standing.

As to risk appraisal and management skills, it is rightly emphasised that they are important for ensuring the soundness of banking systems, with the worry being that inadequate risk assessment and management results in too much risk taking. But the opposite could be true as well: inadequate risk assessment and management could imply that banks exaggerate risk and, as a result, shy away from viable investment projects; this seems to be especially tempting when banks, as in the CEECs, are still recovering from a bad loan hang-over. It would be erroneous to presume that foreign owners that now dominate the CEEC banking sector can rectify this problem quickly, essentially by transferring banking know-how, experience, and culture over night. On the contrary, passing on these virtues, which is part of creating the institutional set-up of a functioning market economy, will take time. But the important point to take away is that improving the ways of doing business is a task for the banks themselves and does not require public policy measures.

Improvements to the legal framework in combination with better risk assessment and management capacity are key for enhancing the role of bank finance in the economy.

By contrast, improving the legal framework, creditor rights in particular, is a public policy issue *par excellence*. La Porta *et al.,* (1997) and Levine *et al.,* (2000), among others, provide compelling evidence that appropriate legal foundations are of critical importance for the effective operation of financial systems and thus economic growth. Although all CEECs have made considerable progress in designing legal frameworks that are necessary for a functioning market economy, there continues to be scope for further improvements, including the need to close the gap between the extensiveness and the effectiveness of these legal foundations (EBRD, 2001).

Improvements to the legal framework in combination with better risk assessment and management capacity of banks hold considerable potential for raising banks' willingness to lend and to increase the share of bank funds that are ploughed back into the domestic economy. While this can be expected to help the economy at large, it should be especially beneficial in circumstances where the processing of information on potential borrowers is particularly costly. One example that comes to mind is lending to borrowers in peripheral regions. Another example - related to the first one - is lending to small and medium-sized enterprises (13). One thing should be clear though: in the absence of such improvements, CEEC banks are doing the right thing by investing surplus funds abroad; it would be worse if they ignored such shortcomings and lent to risky projects in the domestic economy; not only would this undermine the soundness of the CEEC banking sector, but it would also be bad for profitability, an issue that we address next.

13) A separate question is whether and, if yes, what additional measures are needed to enhance the supply of finance to SMEs. Credit guarantee schemes are in operation in many CEECs. The purpose of such schemes is to enable smaller firms with a viable business plan but insufficient collateral to obtain bank loans. Evidence from the CEECs suggests that the utilisation of such schemes has been disappointing (European Commission, 2000) mainly due to a lack of clarity concerning the risk sharing between banks and the agency in charge of the guarantee scheme; genuine or perceived problems arising from loan appraisal and processing procedures; and efforts to recover too much of the cost of guaranteeing loans from final beneficiaries, essentially curtailing the demand for loans under such schemes.

4. Raising the profitability of bank lending

Next to the lack of domestic bank intermediation, the other salient feature of the CEEC banking sector that we identified in Section 2 is its unsatisfactory profitability: from the point of view of an international investor, CEEC banks have, on average, generated very meagre real returns on equity.

Why CEEC bank profitability has been low

To find out what can be done to raise profits, we first have to understand why they have been rather low. In general, the profitability of a bank depends on a variety of factors, including its cost efficiency, the structure and quality of its investment portfolio, its capital structure, and the degree of competition in the industry. The income and balance sheet statement of a bank features variables that provide information on these factors. Box 3 explains how the after-tax return on equity for a bank can be explained in terms of income and balance sheet variables. As equation (4) in Box 3 summarises, the real return on equity $(RRoE)$ depends positively on the net interest margin (NIM), the share of earning assets in total assets (EA/A), and on the contribution of non-interest income $(RNIIR)$. And then, the real return on equity is the higher the lower are operating cost (OC) and taxes (T). Finally, for a profitable bank, the real return on equity is the higher, the larger the ratio of assets to equity (A/E).

While an upward trend in non-interest income has had a positive impact on bank profitability, considerable operating costs have ultimately prevented the generation of adequate profits.

Table 1 shows for an average CEEC bank developments in the real return on equity and its components (14). The gist of what happened to the return on equity in 1994-2000 can be summarised as follows:

- Trends in non-interest income $(RNIIR)$ had a very positive impact on the performance of banks. In percent of total equity, real non-interest income increased from less than 4 percent to almost 28 percent. In the absence of that increase, the real return on equity in the CEEC banking sector would have been lower still.
- Changes in the real net interest margin $(NIM/(1+\pi))$ had, on average, a negative impact on profitability. The downward pressure on margins from 4.2 to 3.7 percent has been due to increased competition in the face of a continuously high, though falling, share of non-performing loans.
- Banks were modestly successful in managing overall assets more effectively. The importance of fixed capital, cash, and other non-earning assets declined and, as a result, the portion of earning assets in total assets (EA/A) increased to almost 90 percent.
- Operating cost moved in favour of the real return on equity at the beginning of the sample period. However, changes in operating costs clearly exerted a negative impact on profitability in 1998-99. In 2000, there was again a change to the better.

14) Note that in general $E[xy] \neq E[x]E[y]$. Therefore, equation (4) of Box 3 does not necessarily hold for the average values presented in Table 1 although it holds at firm level.

Table 1. Average real return on equity and its components in the CEEC banking sector

	$RRoE$ (in %)	A/E	EA/A (in %)	$NIM/(1+\pi)$ (in %)	$RNIIR$ (in %)	$OC/A(1+\pi)$ (in %)	$T/A(1+\pi)$ (in %)
1994	-7.3	17.1	87.8	4.2	3.4	3.5	0.7
1995	0.8	16.5	87.0	4.1	6.4	3.2	0.6
1996	3.6	15.4	87.7	3.7	13.9	3.1	0.6
1997	4.0	15.6	87.3	4.1	13.6	3.2	0.8
1998	-14.6	15.1	86.7	4.1	14.6	4.3	1.0
1999	-3.6	15.2	88.5	4.1	25.4	4.3	1.1
2000	5.0	15.0	89.5	3.7	27.8	3.8	1.1

$RRoE$ Real return on equity
A/E Asset-to-equity ratio
EA/A Share of earning assets in total assets
NIM Net interest margin
$RNIIR$ "Real return on equity arising from non-interest income (before costs and taxes)"
OC Operating cost
T Taxes and other items (net)
A Total assets
π Rate of inflation

Source: Own calculation based on Bankscope.

Overall, the disappointing performance of CEEC banks has been largely due to adverse trends in operating cost that were only partially compensated for by rapidly rising non-interest income and a slightly better management of assets. In light of this, it is worth shedding more light on the level and composition of operating costs in the CEEC banking sector.

In 2000, operating costs stood at 4 percent of total assets. For comparison, in the EU banking sector, operating cost amounted to the equivalent of around 2 percent of assets. As there have been a number of banking sector crises - affecting individual CEECs to a different degree and at different times - it is not surprising that relatively high loan loss provisions help explain high operating costs of the CEEC banking sector. Provisions fluctuated substantially over the 1990s, mirroring the timing of banking sector crises, but they were particularly high in 1998-99 when banks in a number of countries, in particular the Czech Republic, faced serious losses. By 2000, they had fallen again, amounting to 0.8 percent of assets. For comparison, in the same year, loan loss provisions in the EU banking sector reached the equivalent of 0.2 percent of assets.

Box 3. Real return on equity

To analyse the factors that have influenced banks' real return on equity we start with the accounting definition that profit after tax (P) is equal to the sum of net interest revenue (NIR) - which, in turn, is interest income minus interest expenses - and non-interest income (NII) minus operating costs (OC) and taxes (T):

(1) $$P = NIR + NII - OC - T$$

It is important to note that operating costs as understood in (1) comprise - in addition to personnel and administrative expenses - depreciation of fixed assets and loan loss provisions (the latter including the write-off of loans not provisioned for). This is the definition of operating costs in the firm-level data base *Bankscope* of Bureau Van Dijk (Brussels) that we have used for our empirical analysis.

The accounting return on average equity (RoE), in nominal terms, in anyone year is defined as after-tax profit (P) in percent of average equity (E), with the latter being the average of the equity at the beginning and the end of the year. Using (1), we can thus write

(2) $$RoE = \frac{NIR}{E} + \frac{NII}{E} - \frac{OC}{E} - \frac{T}{E}$$

We rearrange (2) further by introducing the so-called net interest margin (NIM), which is computed as net interest revenue (NIR) divided by the average stock of earning assets (EA). With this, and the average stock of total assets (A), equation (2) becomes

(3) $$RoE = \frac{A}{E}\left(NIM\frac{EA}{A} + \frac{NII}{A} - \frac{OC}{A} - \frac{T}{A}\right)$$

Equation (3) shows the nominal return on equity as a function of variables that are, with the exception of T, reported in *Bankscope*. For our analysis, we treat T as a residual that includes, in addition to taxes, items such as extra-ordinary profits or losses and provisions for pensions.

To finally arrive at an expression for the real return on average equity $(RRoE)$, we recall from footnote 9 that the link between real and nominal returns is given by $RRoE = (1 + RoE)/(1 + \pi) - 1$, where π is the rate of inflation. With this, we get

(4) $$RRoE = \frac{A}{E}\left(\left(\frac{NIM}{1+\pi}\right)\frac{EA}{A} - \frac{OC}{A(1+\pi)} - \frac{T}{A(1+\pi)}\right) + RNIIR$$

In (4), $RNIIR = (1 + NII/E)/(1 + \pi) - 1$, which can be considered the real return on average equity arising from non-interest income (before costs and taxes).

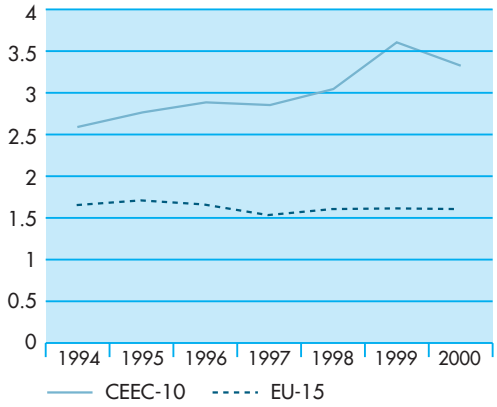
Substantial loan loss provisions and a rapid increase in personnel expenses explain high operating costs.

But bad credits have certainly not been the only reason for the high operating costs and the low profitability of CEEC banks. Figure 10 shows for the CEEC and the EU banking sectors operating costs excluding loan loss provisions: even without provisions, operating costs of CEEC banks have been markedly above the EU level. In fact, the cost difference between the two banking sectors has increased over time and, as a result, CEEC banks' operating costs (excluding loan loss provisions) are more than twice as high as in the EU banking sector.

What was driving these developments? Figure 11 shows that a steep rise in personnel expenses in the CEEC banking sector and a substantial decline in this cost item in the EU banking sector explain

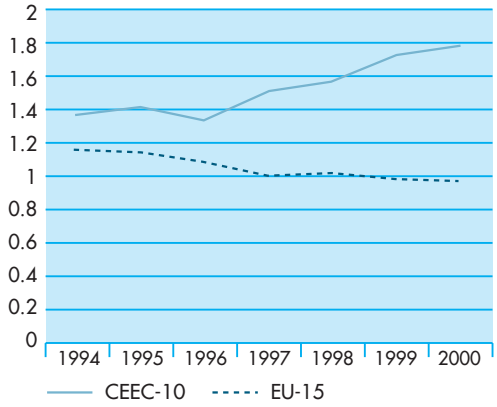
a good part of the increasing difference in operating costs. Indeed, CEEC banks employ more than seven times as many people as EU banks to manage assets of EUR 1 billion! CEEC banks are thus far less efficient and, given the current level of assets, overstaffed (15).

Figure 10. Operating cost excluding loan loss provisions, in % of total assets



Source: Own calculation based on Bankscope.

Figure 11. Personnel expenses, in % of tota assets



Source: Own calculation based on Bankscope.

Increased lending is the key to higher profitability

As far as costs relative to assets are concerned, our analysis indicates that CEEC banks have fallen further behind Western banks instead of catching up with them. To some extent, this is not surprising because, to develop their businesses, CEEC banks inevitably had to incur upfront costs, including expenses on personnel and modern banking technology. The challenge in the period ahead will be to align the size of earning and - one should stress - performing assets with operating costs.

An obvious possibility to achieve this is to cut costs. Cost reductions would address X-inefficiencies, which means that a given level of output, measured here by the size of assets, could be produced at lower cost. A recent study of O'Brien and Wagenvoort (2000) on the EU banking sector shows that such inefficiencies and, thus, the scope for cost savings are substantial. In light of its very high level of operating cost (relative to assets), it seems fair to conjecture that X-inefficiencies also characterise the CEEC banking sector. Cutting costs, including personnel expenditures, therefore seems to be a means for increasing profitability.

Asset growth and a greater focus on high-yielding investment seem to be necessary to boost profits.

Another - equally obvious - possibility is to increase assets. The same study by O'Brien and Wagenvoort reports that cost economies of scale are found up to a bank size, measured by assets, of about EUR 5 to 10 billion. The vast majority of CEEC banks are operating at a much lower scale, with an average bank size of EUR 1 to 1.5 billion. This suggests that further consolidation can contribute to increasing the profitability of banks. What is more, it suggests a considerable potential for CEEC banks to benefit from economies of scale by lending more (16).

15) Strictly speaking, a formal comparative analysis of the cost efficiency of credit institutions should follow the cost frontier approach, which allows to take into account differences in output quantities and input prices when comparing cost across banks (see, among others, Altunbas et al., *(2001) and Wagenvoort and Schure (1999) on the efficiency of EU banks).*
16) Strictly speaking, this statement only applies to cost-efficient banks, i.e. those that have eliminated X-inefficiencies.

Asset growth alone is unlikely to be good enough, however. What needs reversing is the shift towards safe but low-yielding assets documented in Section 2. To earn sufficient returns, assets must include potentially highly profitable though riskier loans to borrowers that CEEC banks currently shy away from. From a policy perspective, we are thus back to what has been discussed in the previous section since the obstacles that have prevented a higher degree of bank intermediation are obviously the same that stand in the way of a greater focus on better remunerated investment.

Raising the profitability of banking is certainly in the interest of bank owners. But it is also crucial for maintaining the soundness of the CEEC banking sector. We look at this issue and related economic policy questions in the next section.

5. Ensuring the soundness of banking

While the sector is currently well capitalised, this comforting position has been due to capital injections in the context of bank restructuring and privatisation but not because retained profits augmented banks' own funds. In the period ahead, capital ratios of a growing banking sector could erode quickly if banks do not become more profitable. Renewed capital injections are unlikely unless, that is, CEEC banks generate adequate returns to shareholders. But in that case, there is no - or less - need for capital injections in the first place, since profits contribute to banks' own funds.

The trouble is that a strategy aimed at higher profits needs to include increased lending to potentially very profitable but also riskier borrowers. In principle, this should not pose problems provided that banks properly assess, price and monitor the risks they are taking. In practice, and not only in the CEECs, this cannot be taken for granted and, thus, to prevent banks from building up a loan portfolio that could threaten the stability of the banking system, any shift towards riskier borrowers needs to be accompanied by vigilant prudential regulation and supervision.

While adequate profits are crucial for the viability of banking, banks' strive for higher profits needs careful monitoring by supervisory authorities.

In this respect, there continues to be scope for further progress. While an appropriate regulatory and supervisory framework for the banking sector has been established in all CEECs, there remains a difference between writing rules and regulations, on the one hand, and putting them into practice on the other (EBRD, 2001 and Lannoo and Salem, 2001). Obviously, with banks possibly moving into riskier territory, enhancing the effectiveness of prudential regulation and supervision becomes ever more urgent.

Additional regulatory and supervisory challenges are likely to arise as and when the CEECs fully implement the *acquis communautaire*, i.e. the full body of EU laws and regulations. To avoid a misunderstanding from the outset: In light of what the CEECs have achieved in setting up market-driven banking sectors, adopting the *acquis* does not constitute the kind of liberalisation shock that hit other emerging countries when they liberalised and opened up their financial systems. Still, two elements of the *acquis* that pose a particular challenge for bank regulation and supervision are worth highlighting.

First, with fully liberalised capital account transactions, the CEEC banking sector may experience an increase in gross capital inflows. In striving for higher profitability in an increasingly competitive

market, banks will be tempted to take more risk than they can bear. The financial and banking sector crises of the 1990s, notably in Asia, are a stark reminder that a fully open capital account can create havoc in the absence of effective banking sector regulation and supervision.

Second, the deposit insurance schemes that the *acquis* calls for may not - contrary to their intention - strengthen the soundness of the CEEC banking sector (see, for instance, Lannoo, 2000). The main purpose of insuring deposits against bank failures is to prevent a run on deposits of solvent banks, which - if it occurs - could result in the collapse of a principally solvent banking sector. The drawback of such schemes is that they could give rise to moral hazard behaviour, essentially for two related reasons. For one thing, deposit insurance reduces the incentives for depositors to monitor banks' performance and to withdraw deposits when banks encounter difficulties. For another, this relieves banks from the disciplinary effect of possible bank runs and, as a result, tends to raise the attractiveness of *ex ante* more profitable though riskier loans. Overall, this may lead to excessive risk-taking.

Full capital account liberalisation and generous deposit insurance schemes further strengthen the need for more effective prudential regulation and supervision.

Excessive risk-taking is the more likely, the larger the deposits covered under the scheme. The relevant EU directive (17) stipulates that deposit insurance schemes should normally cover aggregate deposits of each depositor of up to EUR 20 000. While this is close to the average GDP per capita of current EU members, it is a multiple of the average income in the CEECs and, thus, implies a more serious weakening of the market discipline that uninsured depositors could, in principle, exert on the behaviour of banks. Deposit insurance schemes that adequately reflect the circumstances of individual CEECs seem warranted and, in fact, derogations from the *acquis* are being negotiated for the Baltic countries, for instance. Even in these cases, however, it is envisaged that the EU minimum of EUR 20 000 will have to apply from 2008 onwards. By that time, this minimum will still be high relative to the level of income in these countries.

The possibly adverse effect of excessive capital inflows and generous deposit insurance schemes on the soundness of the CEEC banking sector raises the question of whether countervailing measures could and should be taken. One measure that has been proposed by commentators is the requirement for banks to regularly issue subordinated debt, i.e. debt that is junior to all other liabilities except equity. The interest rate on this debt would, in principle, reflect the market's assessment of how risky the issuing bank is. Since it would be in the interest of banks to launch such debt at reasonable cost, they have an incentive to strike the right balance between the return to and risk of their loan portfolio. The terms at which such debt is issued and traded in the market provides a signal to bank creditors (including depositors) and supervisory authorities as to the soundness, or lack thereof, of the issuing bank.

Subordinated-debt proposal have been made for developed countries, but also for emerging markets where supervisory capacity is weak (see, for instance, Calomiris, 1997). While the proposal has, in principle, some appeal, doubts have been raised as to whether the conditions for making this a successful instrument exist in emerging markets (Karacadag and Shrivastava, 2000). Important conditions include the possibility to monitor bank assets and the presence of reasonably

17) Deposit Guarantee Schemes Directive (94/19/EC).

Proposals for using capital markets to monitor the soundness of banks appear to be premature.

well-developed capital markets with arm's-length investors who have sufficient interest in both monitoring banks and acquiring their debt. Given the rather shallow development of capital markets in most CEECs (see, for instance, Köke and Schröder, this volume), a subordinated-debt requirement seems premature for the CEEC banking sector.

Another measure to ensure the soundness of banking in a challenging and sub-optimally regulated and supervised environment would call on CEEC banks to maintain Cooke ratios in excess of the Basle minimum of 8 percent. The rationale is that excessive risk-taking, possibly fostered by generous deposit insurance, is less likely if banks have more equity at stake. We see two problems of this proposal. For one thing, it is currently redundant given that CEEC banks, on average, already maintain Cooke ratios not only above 8 percent but also above the level observed in EU countries. For another, it would distort competition between foreign-owned and domestically owned banks. This is because in an enlarged EU, the "single passport" becomes valid in countries that join the EU. As a result, CEEC branches of banks from current EU countries will be subject to the prudential regulation and supervision of these countries, which do not require higher Cooke ratios (18). All other things being equal, CEEC branches of EU banks have scope for reducing lending rates and raising deposit rates, thereby increasing their market share and their profits. Overall, the competitive position of domestically owned banks is liable to suffer if they are required to maintain a higher-than-normal Cooke ratio.

In sum, there do not seem to be feasible alternatives to more effective banking sector supervision. Progress on this front will be crucial for maintaining the soundness of banking as and when banks are striving for higher profits in a world of fully open capital accounts.

6. Conclusions

More than a decade after embracing capitalism, all CEECs have advanced considerably in creating market-driven banking systems. While this is no minor feat given that such systems did not exist at the end of the 1980s, it is also true that bank intermediation has remained shallow, banking sectors mobilise more funds than they can lend domestically, and that banks lack profitability.

A variety of factors explain this situation. From a policy perspective, weaknesses in the judicial environment are a main hurdle to an increased role of banks in channelling funds to the domestic economy. Improvements in this area together with further progress on the part of banks in strengthening their risk assessment and management capacity are crucial pre-conditions for a more thriving and profitable banking sector.

For banks to become more profitable, their assets need to reach a level that is consistent with operating cost. More lending alone is unlikely to do the trick and, as a result, cost reductions will have to contribute. Furthermore, an increase in profits is hard to achieve without a greater focus on assets that promise higher risk-adjusted returns to banks than their current loan portfolio.

18) While these branches still have to operate in a challenging environment, the risks associated with the CEEC loan book can be pooled and diversified within the overall portfolio of the bank. This enhances the credibility of branches without carrying higher-than-normal capital on their balance sheets.

All accession countries of Central and Eastern Europe have made strides in creating market-driven banking sectors - but the transition is not yet over.

Our interest in the need to raise profitability does not reflect concerns about banks' shareholders. It is rather because profits are essential to ensure the long-term viability of banking and, thus, the steady development of the CEEC economies. At present, the CEEC banking sector is well-capitalised and sound, but in the absence of adequate profits its comfortable capital cushion could erode quickly. Having said this, it is also true that in search for higher profits, banks may take excessive risks. To limit this possibility and its adverse impact on the soundness of the banking sector, supervisory authorities need to carefully watch banks' struggle for higher profits.

Overall, the trials and tribulations of Central and Eastern European accession countries in creating banking systems are a reminder that building the institutional framework for a market economy takes time. Still, all accession countries have progressed greatly and - though challenges remain - there is no reason why the CEEC banking sector should not prosper in the years to come.

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Annex

Table A.1 Number of banks in the CEECs

	1994	1995	1996	1997	1998	1999	2000
Bulgaria	40	41	42	28	34	34	35
Czech Republic	52	55	55	53	50	45	40
Estonia	22	18	13	11	6	7	7
Hungary	43	42	42	47	44	42	42
Latvia	55	41	34	31	27	23	21
Lithuania	22	15	12	14	12	13	10
Poland	82	81	81	83	83	77	84
Romania	20	24	31	33	36	34	33
Slovak Republic	27	31	29	29	26	25	23
Slovenia	33	31	29	28	24	25	25
Total	396	379	368	357	342	325	320

Sources: National central bank publications and EBRD (Transition Report, 2001).

Table A.2 Indicators of access to banking services in selected CEEC and EU countries

	Year	Inhabitants per bank	Inhabitants per branch	Inhabitants per employee	ATMs per 1 million inhabitants	Assets (in mil. Euro) per employee
Czech Republic	2000	255 608	5 556	222	160	1.7
Hungary	2000	238 876	9 091	379	250	1.2
Poland	2000	522 220	16 667	278		0.7
Slovenia	2000	79 640	3 448	181	430	1.4
Euro-area (excl. Luxembourg)	1998	78 663	1 923	128	540	6.6

Source: OECD (2001), Belaisch *et al.,* (2001), National central bank publications, and Eurostat.

Table A.3 Assets of foreign-owned banks as a percentage of total banking sector assets

	1995	1996	1997	1998	1999	2000
Bulgaria				47	73	76
Czech R.	10	12	15	16	28	54
Estonia	2	2	2	90	90	97
Hungary	37	43	61	59	61	67
Latvia	41	69	71	76	74	74
Poland	4	14	16	17	49	70
Romania				20	48	51
Slovak R.					25	76
Slovenia		5	5	5	5	5

Source: National central bank publications.

The Czech Republic's banking sector: Emerging from turbulent times

Dana Hájková

Jan Hanousek

Libor Němeček

1. Introduction

In contrast to many other accession countries of Central and Eastern Europe (CEECs), the Czech Republic experienced a shorter and less severe transition recession in the first half of the 1990s. The decline in output lasted two years and by 1995, real GDP had returned to its 1989 level. Unemployment was surprisingly low, averaging less than 3 percent in 1990-95. In addition, stabilisation policies (the fixing and devaluation of the exchange rate, tight fiscal and monetary policies, and initial wage discipline) led to a fast reduction in inflation to single-digit levels and, thus, to internal as well as external stability. The liberalisation of prices, wages and trade, along with the fast launching of mass privatisation of state property were seen as major achievements in getting the country on a path to prosperity.

A number of observers have noted that what appeared like a smooth transition from socialism to capitalism was in fact a sign that a fundamental reorientation of the Czech economy was yet to come. We agree with this assessment. What is more, one of our main hypothesis is that the country's apparent success at output and macroeconomic stabilisation in the early phase of transition distracted from addressing fundamental problems of the banking sector and corporate governance. That these problems were real became evident with the massive accumulation of non-performing loans on banks' balance sheets, bank failures, and the economic recession in the second half of the 1990s.

Against this background, we analyse in Section 2 the transition of the Czech banking sector. Section 3 builds on this and examines the main forces that have shaped sector developments. The long-postponed privatisation of banks to foreign strategic investors is one of these factors. With this in mind, Section 4 turns to the impact of foreign-owned banks and off-shore financing on the Czech banking sector. Finally, Section 5 concludes.

2. The transition of the banking sector in the Czech Republic

2.1 Privatisation and foreign ownership

The transformation from a one-tier banking system to a two-tier banking system in former Czechoslovakia had already begun in 1989, when a new law separated central banking activities from commercial banking ones. In January 1990, the SBCS (the former monobank) transferred its commercial banking activities to three newly established banks: Komerční banka (KB), Všeobecná úvěrová banka (VUB) and Investiční banka (IP, which merged with post-office banks in 1993, forming IPB, i.e. Investiční a poštovní banka). Together with Česká spořitelna (CS) and Slovenská sporitelňa (in operation since 1969), these banks dominated the newly developing banking markets. The two other incumbents on the market were Československá obchodní banka (ČSOB) and Živnostenská banka, which, however, specialised in international trade financing and large private clients.

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The rapid growth in the number of private, Czech-owned banks in the first half of the 1990s was followed by an equally rapid market exit in the second half.

The number of banks operating in the market grew most rapidly from 1990 to 1995, when many small banks and branches and subsidiaries of foreign banks were established. In early 1990, the Czech Republic had a central bank plus seven banks licensed for universal banking. By the end of 1995, the number of banks had reached 55 (see Table 1). These newly established banks were typically small, with Agrobanka being the one significant exception.

Table 1. Number of active banks in the Czech Republic, by ownership

		Czech controlled					Foreign controlled			
	Total	Total	State financial institutions	State-owned banks	Czech-controlled, private banks	Banks under administration	Total	Foreign-controlled banks	Foreign bank branches	Unlicensed banks
1990	5	5	4	1	0	0	0	0	0	x
1991	9	9	4	1	4	0	0	0	0	x
1992	24	20	4	1	15	0	4	4	0	x
1993	37	26	1	4	21	0	11	9	2	x
1994	52	34	1	4	28	1	18	12	6	x
1995	55	34	1	4	28	1	21	13	8	2
1996	55	32	1	6	25	0	23	13	10	5
1997	53	30	1	6	18	5	23	14	9	7
1998	50	26	1	6	15	4	24	15	9	11
1999	45	20	1	5	14	0	25	15	10	18
2000	40	14	1	4	8	1	26	16	10	20
2001	40	14	1	4	8	1	26	16	10	23

Source: CNB, www.cnb.cz, current information about banking sector.

After some time in operation, many of the smaller newly established banks, especially those with private Czech capital, were unable to cope with the risky transition environment and were forced to terminate their activities. Table 2 summarises the restructuring efforts with regard small and medium-sized banks. Large state banks were also affected by the same problems and had to be bailed out (this took place between 1998 and 2000). Out of 63 banking licenses granted since 1989, 23 licenses were ended. Of these, 17 licences were terminated because of bad management and a lack of prudence, five ended as a result of sales or mergers, and one bank never started operations. At the end of 2000, the banking sector consisted of 40 banks (both domestic banks and subsidiaries, and branches of foreign banks).

The first Czech bank to be privatised (1) was Živnostenská banka. Already in 1992, 52 percent of its shares were sold to foreign investors, with the rest being sold under voucher privatisation. However, after this transaction, the transfer of state ownership of banks to private hands came to a halt for a number of years (under various governments) and in 1996 the state still held major stakes in the four big commercial banks (KB, CS, IPB, and ČSOB), representing over 30 percent of equity in the sector.

1) And also the first bank in Central and Eastern Europe privatised to foreign investors.

Table 2. Restructuring small and medium-sized banks in the Czech Republic

Pre-1993	Consolidation programme I: bad loans from the pre-1990 period shifted to Konsolidačni banka, capital injections to state owned banks
1993	Forced administration in Kreditni a prumyslova banka
1994	Forced administration in Banka Bohemia (fraudulent activities; the bank ceased operation; due to insufficient deposit insurance, funds were taken over by ČSOB) License revocation to AB banka stopped (taken over by Česká spořitelna) The state and the CNB committed themselves to cover losses that had emerged in two problematic banks: Bohemia Banka, and AB Banka
1995	Licenses revoked to AB banka and Ceska banka.
1996	Consolidation programme II: on the basis of external audits, potential losses from active operations of banks were provisioned; capital adequacy in the sector significantly decreased; 15 banks participated and nine banks were put under forced administration or had their banking license taken away. Stabilisation programme: designed for 13 small banks; six banks participated. Bad assets up to 110 percent of equity should be carved out temporarily (seven years) from balance sheets. The programme was conditioned on the banks following a set of very strict rules. The banking supervision body took legal actions on 16 occasions due to criminal activities in some banks. Six forced administrations (Ekoagrobanka, COOP banka, Podnikatelska banka, Realitbanka, Velkomoravska banka, and Agrobanka) and two licenses taken away (Prvni slezska banka and Kreditni banka)
1997	Licenses of Bankovni dum Skala, Ekoagrobanka, Evrobanka and Realitbanka revoked.
1998	Licenses of COOP banka, Velkomoravska banka, Agrobanka, and Pragobanka revoked.
1999	Licenses of Universal banka and Moravia banka revoked. Privatisation of ČSOB
2000	Forced administration of IPB (business sold to ČSOB) Bail-out and privatisation of Česká spořitelna
2001	Privatisation process of former state banks finished Bail-out and privatisation of Komerční banka

Source: CNB, www.cnb.cz, banking sector development.

Bank privatisation got off to a very slow start and gained momentum only towards the end of the 1990s.

Privatisation was re-launched in 1997 and the state's divestiture from large banks commenced in February 1998 with the sale of the state's 36 percent minority stake in IPB to Nomura International. This was the first time that foreign investors got the opportunity to acquire a substantial or majority interest in a large Czech bank. Privatisation continued in June 1998, when General Electric Capital Services (GE Capital) acquired a substantial part of Agrobanka assets, which had been under forced administration since 1996. And then, in mid-1999, KBC of Belgium bought a 66 percent

stake in ČSOB, the fourth largest Czech bank (2). In March 2000, Erste Bank of Austria acquired 52 percent of CS. This came after the Czech government had carved-out a good part of the bad debt and protected the new owner against the remaining credit risk on CS's loan portfolio through a ring-fencing agreement. Finally, in mid-2001, the process of bank privatisation was essentially completed - again after carving-out bad assets - by the sale of KB to Société Générale.

The last state financial institution, Konsolidační banka (3), terminated its activities in August 2001, when its assets were transferred to the Konsolidační agentura. The state will retain its stakes only in a number of specialised banks specifically oriented towards financing government programmes in the areas of export, support for small businesses, and administration of poor quality assets.

As elsewhere in the region, foreign-owned banks now dominate the banking sector.

As a result of the privatisation, the share of foreign capital in the equity of the banking sector increased markedly between 1995 and 2000. At the end of 2000, foreigners held about 55 percent of total equity of the Czech banking sector (see Table 3). At the same time, the share of banking sector assets under direct control of foreigners (i.e. subsidiaries of foreign banks and majority foreign shareholdings in Czech banks) was almost 72 percent. This share increases to about 75 percent when banks under indirect foreign ownership (i.e. banks that are controlled by a domestic legal entity which, in turn, is majority-owned by foreigners) are included. EU investors account for the largest proportion, with about 80 percent total foreign equity capital.

The development of medium-sized banks, which are mainly foreign banks and foreign bank branches, has gradually eroded the dominance of the large banks. Between 1998 and 2000, the share of large banks in total banking sector credit declined from 74 percent to 64 percent. In the more competitive derivatives market, the share of large banks fell from 42 percent to 33 percent. Even on the deposit side, large banks have lost ground, with their market share falling from 75 percent to 70 percent (4).

Table 3. Ownership structure of Czech banks by share of equity, in %

	1995	1996	1997	1998	1999	2000
State, municipalities	31.5	31	20.3	25.1	27	23.6
Czech capital	45.7	44.9	50.2	36.2	24.7	21.9
Foreign	22.8	24.1	29.5	38.7	48.3	54.5
- EU	*13.3*	*15.1*	*22.1*	*28.6*	*37.3*	*43.5*
- USA	.	.	.	*4.6*	*7.5*	*7.7*
other foreign	.	.	.	*5.5*	*3.5*	*3.3*

Source: Own calculation (Banking supervision 1997, p. 21, and 2000, p.19).
Notes: Including foreign bank branches. The sale of the state share in KB to Société Générale in 2001 implies a decline (increase) in state ownership (foreign ownership) by about 15 percentage points.

2) In June 2000, ČSOB bought the assets and liabilities of IPB, which had been put into forced administration after its majority owner, Nomura, failed to address liquidity problems and the undercapitalisation of IPB.
3) Konsolidační banka concentrated on the administration of poor quality assets transferred to it from other banks as part of the consolidation of the banking sector.
4) The level of competition in the banking sector measured by the Czech National Bank using Herfindahl indices (taking value in the range of 0 to 1, where 1 represents a non-competitive, monopoly-controlled environment and a value near 0 denotes a competitive market) shows that at present, the strongest competition is in the area of assets (0.10) and on the credit market (0.09). In spite of growth in competition in the area of deposits, the competitive environment continues to be weakest in this area (0.12).

To summarise, after an initial burst, the number of banks operating in the Czech Republic has declined, but remains relatively high for the size of the Czech economy. Bank privatisation got off to a slow start and only gained momentum towards the end of the 1990s. As in all other CEECs, except Slovenia, foreign-owned banks now dominate the market both in terms of bank capital and banking sector assets.

2.2 Profitability, assets and liabilities

The aggregate net income from banking activities grew between 1995 and 1998 to CZK 97 billion, but declined to CZK 80 billion in 2000. Net profits of the banking sector in the late 1990s were affected by massive reserve creation, and the sector recorded aggregate losses (Table 4). Only in 2000 did the sector announce an aggregate profit.

Due to a sizeable bad loan problem, banks have been making losses for a long time, but lately there are signs of improvements.

Client transactions, those activities connected with accepting deposits and granting credits, have remained the primary source of profit from banking activities. The most important source of revenues has been interest profit, followed by the profit from fees and charges. Despite the significant decline in interest rate spreads, the share of interest profit in total profit from banking activities rose from 46 percent in 1997 to 67 percent in 2000.

The share of profit from fees and charges also increased during the same period from 13 percent to 22 percent. At the end of the 1990s, the Czech banks sharply increased fees and charges on over-the-counter services to induce clients to use the lower-cost services. Thanks to a strong increase in the volume of transactions (retail payments, card transactions), large retail banks are best positioned to increase fee income by repricing charges on retail services.

Table 4. Profitability and efficiency of the Czech banking sector

	1997	1998	1999	2000
Key indicators, in %				
Profit from banking activities/assets	4.5	4.6	3.9	3.3
Net profit/assets	-0.2	-0.3	-0.2	0.6
Net profit/tier 1 capital	-3.5	-5.2	-4.3	12.0
Interest income/interest earning assets	11.9	11.7	7.8	6.7
Interest expenses/interest bearing liabilities	8.1	8.2	5.2	4.2
Interest rate spread	3.8	3.5	2.6	2.6
Net interest margin	2.9	3.4	2.6	2.4
Interest profit/profit from banking activities	45.8	67.8	62.8	66.6
Profit from fees and charges/profit from banking activities	13.3	13.3	16.2	21.5
General operating expenses/assets	n.a.	2.2	2.2	2.2
Key indicators, in thousands of CZK				
Assets per employee	40 692	43 231	47 369	55 822
Profit from banking activities per employee	1 708	1 889	1 845	1 783
Net profit per employee	-66	-142	-114	332
Operating expenses per employee	831	930	1 044	1 171
Personnel expenses per employee	238	255	297	333
Number of banking sector employees	51 170	51 079	48 924	44 932

Sources: CNB, Banking Supervision 1999, 2000.
Notes: Data for 1998-2000 are for banks with licences as of 31 December 2000, excluding Konsolidační banka. Data for 1997 are for banks with licences as of 31 December 1999, again excluding Konsolidační banka.

Specialised banks, building societies in particular, have so far achieved the highest interest rate spreads. Large banks have also realised wide interest rate spreads. By contrast, foreign banks and branches have maintained very narrow spreads. Furthermore, interest rate spreads of small banks decreased radically in the second half of the 1990s. This was mainly because they faced funding problems and, thus, had to offer higher deposit rates to attract more deposits.

The share of total assets in GDP was 131 percent in 1995 and 138 percent in 2000 (5). By this measure, the Czech Republic exhibits the highest degree of bank intermediation among all CEECs and, in fact, has attained a level that is comparable to those of many Western European countries. Here it has to be kept in mind that large bad debts inflate and thus distort Czech data. Still, the ratio of deposits to GDP suggests that the size of the banking sector in the Czech Republic is larger than in countries such as Poland and Hungary; in fact, the Czech deposit to GDP ratio compares favourably with EU countries like Spain and Italy.

The importance of lending to the enterprise sector has fallen significantly in the second half of the 1990s.

Between 1995 and 2000, the composition of banks' assets developed more towards "safer" assets such as deposits with the Czech National Bank (CNB), i.e. the central bank, and other banks, T-bills and CNB-bills. This can be seen as a cautious response of domestic banks to the severe bad loan problem that emerged during this period. The share of such "safer" assets increased between 1996 and 1999 from 32 percent to 45 percent of total assets, with T-bills and CNB-bills accounting for much of the increase (see Table 5). At the same time, the share of credits to clients decreased from 46 percent to 36 percent of assets.

Classified credits accounted for up to 30 percent of total credits in 2000. However, there has been an improvement in the quality of the balance sheet of the surviving banks as low-quality credits have been taken off banks' balance sheets and passed on to Konsolidační banka or sold at a discount to other banks. It should also be emphasised that according to CNB methodology, "watch" credits are included in the category of classified credits. This is not common in many countries (6). The sum of the three high-risk categories (i.e. "sub-standard", "doubtful" and "loss" credits) accounted for 19 percent of the total amount of credit in 2000, which compares to about 15 percent and 7 percent in Poland and Hungary, respectively. In sum, notwithstanding improvements in recent years, the poor quality of assets still represents a substantial financial burden for the Czech banking sector, which is evident from high provisioning costs of large Czech banks, amounting to over 3 percent of customer loans in 2000. This is significantly higher than the CEECs average of around 2 percent and the Western European average of 0.4 percent.

5) At end-2000, total assets of the banking sector stood at CZK 2 719 billion (including the bad assets managed by Konsolidační banka). CNB's annual publication provides aggregate data for banks with valid licenses at the end of the year and re-computes the previous two years on this basis. This results in an underestimation of the aggregate data of earlier years.
6) Loan classification and the required creation of reserves depend on the quality of the client (financial and income performance of borrower), his/her credit history, and the overdue period of interest and principal. Banks are permitted to deduct the value of collateral before calculating specific provisions. Each credit exposure must be classified under one of the following categories: "watch" (overdue 30-90 days); "sub-standard" (91-180 days); "doubtful" (181-361 days); and "loss" (overdue more than 361 days). Required reserves in percent of the outstanding loan not covered by collateral are as follows: "watch" 5 percent; "sub-standard" 20 percent; "doubtful" 50 percent; and "loss" 100 percent.

Table 5. Structure of assets of the Czech banking sector, in %

	1995	1996	1997	1998	1999
Cash	1.3	1.4	1.2	1.1	1.5
Deposits and credits with CNB	8.9	7.0	8.6	11.1	10.8
of which: required reserves	(4.1)	(5.6)	(3.9)	(3.6)	(1.1)
Deposits and credits with banks	17.1	19.2	21.7	20.5	22.6
CNB bills and T-bills	8.4	5.6	5.8	8.9	11.2
Credits granted (net)	45.9	46.2	44.9	41.4	37.3
of which: to clients	(45.6)	(45.9)	(44.0)	(40.3)	(35.9)
to state and local authorities	(0.3)	(0.2)	(0.9)	(1.1)	(1.3)
Securities	8.0	8.7	4.4	4.0	3.0
of which: bonds	(6.6)	(6.5)	(4.0)	(3.8)	(2.9)
equity	(1.3)	(1.9)	(0.4)	(0.2)	(0.1)
Long-term financial investments	1.2	1.1	4.1	3.8	4.8
Tangible and intangible assets	3.1	3.2	2.8	2.6	2.5
Other assets	6.0	7.7	6.5	6.6	6.4
Memo item: share of "safe" assets	34.4	31.8	36.1	40.5	44.6

Sources: CNB, Banking Supervision 1996 and 1999.
Notes: Data for 1995 and 1996 for banks with valid license as of the end of 1996, data for 1997-1999 for banks with valid license as of the end of 1999. "Safe" assets comprise deposits with CNB, deposits with other banks, T-bills and CNB bills.

As can be seen from Table 6, the structure of liabilities of Czech banks remained very much unchanged during the late 1990s, with slightly more than half of the balance sheet formed by client deposits.

Table 6. Structure of liabilities of the Czech banking sector, in %

	1995	1996	1997	1998	1999
Funds from CNB	4.0	3.9	3.3	2.2	1.3
Deposits and credits from banks	20.8	23.1	22.9	20.8	19.4
Non-banks deposits	50.8	49.7	50.2	50.3	51.9
of which: state and local authorities	(2.4)	(2.0)	(2.3)	(2.3)	(2.2)
Bond issues	2.6	3.1	4.2	3.8	3.9
Equity, capital, and reserves	10.5	10.5	9.4	9.7	9.0
Other liabilities	11.3	9.7	10.0	13.2	14.5

Sources: CNB, Banking Supervision 1996 and 1999.
Notes: Data for 1995 and 1996 for banks with valid license as of end 1996, data for 1997-99 for banks with valid license as of end 1999.

The term structure of assets and liabilities developed as follows. In the second half of the 1990s, the maturity of assets lengthened, with long-term credit gaining in importance. In 1995, 29 percent of total CZK and foreign currency credits were long-term. By 2000, this share had increased to 43

percent. On the liability side, a shift towards less liquid instruments was also visible. The share of demand deposits decreased between 1995 and 1999 from 41 percent to 33 percent, which is a sign of improving money management of the population.

Business of Czech banks with non-resident banks have increased, in particular on the asset side.

Operations of Czech banks with non-residents have been increasing, especially on the asset side of the balance sheet. As a result, in 1999, Czech banks developed a net external creditor position. In that year, the assets vis-à-vis non-residents increased by 40 percent, reaching around CZK 500 billion (equivalent to 19 percent of assets). Within the category of non-resident assets, deposits of Czech banks with non-resident banks dominate, accounting for 60 percent of total non-resident assets. It is also worth noting that deposits with non-resident banks accounted for more than half of total assets held with other banks. The growth in deposits with non-resident banks has been due to reduced lending activity in the Czech Republic. Liabilities to non-residents made up about 14 percent of total liabilities in 1999. Deposits of non-resident banks with Czech banks accounted for the majority of non-resident liabilities (62 percent), but they have been falling steadily.

Large banks, foreign-owned banks, and branches of foreign banks have the largest share of operations with non-residents whereas small banks and specialised banks are virtually absent. Interestingly enough, large banks hold most of non-resident assets while foreign-owned banks and foreign bank branches account for the majority of non-resident liabilities.

In sum, the performance of the Czech banking sector has been poor. Banks accumulated large amounts of bad debt and incurred substantial losses, which continue to be a burden on the government budget. Although the situation is getting brighter - banks became profitable in 2000 - the challenge in the period ahead will be to accelerate lending again while maintaining profitability.

3. Explaining the Czech experience

Following a period of optimism and large credit expansion, the Czech banking sector experienced a period of insufficient capital adequacy, non-transparent ownership structure, related lending, asset stripping and a huge bad loan problem. As a result, domestic banks suffered losses and large state banks had to be bailed out, while small and medium-sized domestic banks had to be paid special attention in restructuring programmes. At the same time, banks under foreign control behaved prudently and were profitable. The Czech case may serve as a handbook of banking sector problems caused, paradoxically, by a lack of binding constraints (7). A number of factors caused these adverse developments. We will concentrate on the most important.

Inherited debt and voucher privatisation

Large state banks were burdened by low-profit or loss assets from the time before 1990. Voucher privatisation harmed the banking sector by dividing the assets and liabilities of companies to be privatised. Apart from a direct damage through the shift of the productive assets from some companies with substantial bank debt to new companies earmarked for privatisation, voucher privatisation created very dispersed ownership of the privatised companies and this led to poor performance. Widespread ownership structures with no strong shareholder(s) effectively left control

7) Slovakia suffered similar problems, but later, and the problems were less pronounced.

The voucher privatisation has hindered the development of a sound and efficient banking sector.

over the company in the hands of the existing management. As this management had no motivation or ability to formulate promising business strategies, the financial situation of such companies gradually deteriorated. Incumbent banks were thus often left financing companies with no prospects. Because of the immense size of such loans on banks' balance sheets, these banks were locked-in and maintained credit links to these companies despite their obvious inefficiency.

Lack of expertise in banking

Banks with domestic capital showed a characteristically low level of expertise in bank management and entrepreneurship, and lacked a sound methodology for assessing credit risk. Moreover, banks were viewed publicly as an automatic source of financing for the take-off of the domestic economy. When granting credits, the prospects of the economy were often overvalued, while staff was incapable of using appropriate tools to assess risks, be it industry risk or overexposure to financially connected groups. However, following an increased stringency and rigorousness of banking auditors, the quality standards for submitted projects rose in the late 1990s.

The problem of poor risk assessment concerned both large and small domestic banks, while foreign banks - in addition to possessing the know-how - attracted the top-tier clientele. The ranking of bank groups obviously reflected an adverse selection problem; foreign banks served the best customers - their home-country clients and the top local clients - because they were able to supply the demanded product. Large state banks captured projects with poorer, but still of a more-or-less standard quality while small banks often financed very doubtful projects. The deposit interest rates offered by particular banks could serve as a reliable indicator of the bank's loan portfolio. The deposit interest rates offered by some small banks, for instance, exceeded any rates of return on the market. Loan interest rates that had to be charged to recoup excessive deposit rates were so high that the debt service on these loans could hardly be expected. Indeed some debtors that accepted such conditions probably did not even plan to pay such interest rates.

Shortcomings in the legal, regulatory and supervisory environment

The banking sector and banking regulation in Czechoslovakia emerged at the same time in the beginning of the 1990s, and thus regulation and supervision developed through a learning-by-doing process. In practice, the regulatory body was unable to prevent adverse developments and avoid emerging problems. Part of the problems of the Czech (and Slovak) banking sector, then, dates back to their co-existence in one state.

Conditions for obtaining banking licenses in the beginning of the 1990s, prior to the split of Czechoslovakia were quite soft, requiring a minimum subscribed equity capital of only CZK 50 million (8). This low requirement was gradually increased later on, reaching CZK 500 million in 1994. Moreover, the Law on Foreign Exchange protected the local market against foreign competition by preventing firms from directly acquiring capital abroad. Such a protectionist policy was schizophrenic: The state desired to create a competitive environment for the incumbent banks to force them to behave efficiently, yet it was clear that direct competition from foreign banks would soon ruin the domestic banks. The entry of foreign banks was effectively limited and the emerging banking market remained dominated by state banks.

8) At that time, it was - strictly speaking - the Czechoslovak rather than the Czech koruna.

Due to soft licensing procedures and the insufficient screening of license candidates, many newly formed banks (9) lacked a sufficient capital base, and hired employees without proper managerial skills and business ethics. With too little capital, all small and medium-sized banks were subject to moral hazard behaviour: They had little to loose but a lot to gain when extending loans to risky borrowers. And then, by charging the highest lending rates in the market, they fell victim to the adverse selection problem: The preponderance of their clients became those carrying out the riskiest projects that other banks refused to finance.

In addition, several new banks began using deposits to extend credit to other activities of the bank's owners, or simply tunnelling the deposited money out of the bank. Whether the main reason was incompetence or theft, the overall effect on the cash flow and balance sheets of these banks was damaging (10). Several bank failures, which began in December 1993, jeopardised public trust in the banking sector and had a strong influence on the stability of small and medium-sized banks.

Soft licensing policies, shortcomings in bank regulation and supervision, and weak creditor rights have all contributed to problems in the banking sector.

For a long time a characteristic feature of the Czech banking legislation was that appropriate changes in banking laws typically followed problems that had emerged. It was not that changes were implemented in a proactive way to avoid the emergence of such problems. And then, the social and political encouragement of credit activities and the strong influence of politicians on lending decisions also contributed to the adverse developments. Moreover, there was little political will to prevent or punish risky and illegal behaviour of some bankers. Although the first bank collapse occurred in 1993, it was not until 1998 that effective changes were incorporated into the Act on Banks.

Reactive rather than proactive measures also applied to CNB regulations, which have been amended almost annually from 1992. The regulations only responded to the developments in the banking sector, although more flexibly than the legislation. However, some types of undesirable behaviour flourished for quite some time. For example, banks circumvented capital adequacy regulation by transferring their risky assets to other entities of their financial group or by misreporting them. More generally, bank regulators and supervisors failed in several cases to identify and take timely steps against banks or bankers that did not follow the regulation.

Finally, the poor protection of creditors' rights significantly harmed the effectiveness and profitability of banking. Banks were not able to get rid of bad loans accumulated before and during the transition period. Bankruptcy procedures were inordinately long and debtors were given enough time to strip the assets of the indebted companies. Creditors could not effectively take over ownership. Thus, banks often realised only a fraction of such assets and at a huge cost. Imperfect definitions and weak enforcement of particular laws caused banks to knowingly continue financing de facto ruined enterprises because they were not able to satisfy their overdue claims guaranteed by collateral. This led to a significant reduction in bank lending activities.

9) A majority (in the Czech Republic, all) of banks with private domestic capital were granted licenses in the initial period (1991-1993).

10) To quote The Economist magazine *(September 1996): "Each of these bank failures stemmed from a deadly cocktail of mismanagement, orgiastic lending (often to bank's own stockholders), and more often than not, fraud".*

Lack of competition from financial markets

In the 1990s, banking products dominated financial markets. Banks faced no competition in selling their products (i.e. providing credit) from capital markets. What is more, banks had a dominant position in particular with regard to competing for savings. Capital markets were in their infancy, and pension and investment funds played only a marginal role in the intermediation of savings to productive investment. The pay-as-you-go pension system relieved the population from the need to save for retirement, and investments into pension funds have become popular only lately. The redirection of funds from saving accounts - practically the only means for the population to accumulate financial wealth during the past forty years - towards other places in the financial market such as investment and mutual funds has been gradual. Overall, banks did not have to fear competition for resources with other types of financial institutions. As a result, bank owners and managers were often not forced to achieve efficiency and to innovate with a view to attracting customers

State influence

Considerable state influence is probably the most important factor that explains the difficulties in creating a functioning banking sector.

Considerable state influence is probably the most important factor that explains adverse developments in the Czech (and Slovak) banking sector. Indeed, there is little doubt that without the state's dominant ownership position in the banking sector, some of the developments we have described would have been completely avoided and the effects of institutional imperfections would have been less severe.

Unlike in Poland and Hungary, the state in the Czech (and Slovak) Republic was a majority owner of the incumbent banks for too long - well into the late 1990s. The state played three roles that were pitted against each other - the role of regulator, owner (seller) and policy maker. As an owner, the Czech Republic failed. The government was neither able to behave efficiently in allocating assets and in running the banks, nor to maintain their ownership stake and decision power.

In contrast to other CEECs, the Czech government had many degrees of freedom in creating strategies for restructuring the banking sector. The state was not in financial trouble at the beginning of the 1990s and did not have to sell the banks for fiscal reasons. And then, a comfortable fiscal position did not necessitate bank privatisation when banks had to be bailed-out in the mid-1990s. Paradoxically, the lack of binding constraints left the governments with so much freedom that they could postpone an optimal strategy, involving timely privatisation to foreign investors. Due to poor corporate governance the value of the banks over time deteriorated and the opportunities to sell them for a decent price shrank. At the end of the 1990s, however, the cost of the banking sector restructuring and recapitalisation surmounted an acceptable level, the state sold one bank after another, and the circle closed. Although banks were finally sold for a positive price, the total cost of this sale greatly exceeded its revenues. Table 7 shows the interim account of this detour.

Table 7. Costs and revenues of bank privatisation in the Czech Republic, CZK billion

		Revenues	Costs
Bank	Komerční banka	40	98
	ČSOB	40	57
	Česká spořitelna	19	47
	IPB	3	16
Total		102	218

Notes: The IPB cost estimate excludes the expected loss of CZK 40-100 billion that the state guaranteed to pay to ČSOB after taking over the IPB business in mid-2000.
Source: CNB, www.cnb.cz

The three state-owned banks, KB, CS and IPB, along with the group of small banks, were most violently hit by the problem of bad loans as a consequence of the inadequate investment appraisal. At the same time, cost management was very poor and labour productivity low. The weak competition in banking that sustained in the second half of the 1990s allowed these banks to maintain large spreads and did not force them to cut costs. Provision and reserve requirements that followed the worsening of the banks' balance sheets led to huge losses that undermined their capital.

Tackling the problems of the Czech banking sector had been delayed for too long.

What can we conclude from our short review of the Czech experience? On the one hand, in creating a functioning banking sector the country faced challenges that were very similar to those of other CEECs, including inherited bad debts, a lack of banking sector expertise, and the task to swiftly establish and implement an appropriate regulatory and supervisory framework. On the other hand, there are features that clearly distinguish the Czech Republic from most other CEECs. Two of them are worth repeating. First, voucher privatisation resulted in corporate governance structures that fostered an inefficient - if not fraudulent - use of bank loans. The resulting accumulation of new bad debt was not addressed for many years. On the contrary, there was a tendency to roll over doubtful outstanding loans, in particular to well-connected companies and those firms that banks owned - directly or indirectly. Second, the largest banks remained under government control for much longer than in other countries. What is more, privatisation to strategic foreign investors began in earnest only towards the end of the 1990s. With this in mind, we now take a look at the impact of financial sector integration on the Czech banking sector.

4. The impact of financial integration

Foreign investment and off-shore financing are the key factors that are driving the integration of the Czech banking sector with that of the EU.

The activities of foreign banks in the Czech banking market got off to a slow start. While more than two thirds of the 26 foreign banks currently operating in the country entered in 1993-94, the scope of their activities was restricted in the early years of their development. When expanding to the Czech Republic, the vast majority of foreign banks followed the standard way of entry by focusing first on serving their home country customers. As these banks gained more experience with the local market, they started to market the top-tier local corporates. And as the foreign banks offered better services and newer products, they successfully entered this market segment.

While prior to 1998 all foreign banks had to build their franchises through greenfield investments, the acquisitions of stakes in large Czech banks diversified the playing field and strategies of main market players. Banks acquiring control over the largest Czech banks (Erste Bank over CS and Société Générale over KB) have naturally focused more on developing retail strategies for their acquisitions and risk management procedures for their lending businesses. On the other hand, banks traditionally strong in corporate banking (ČSOB/KBC, franchises of foreign banks) continued in their traditional activities and have only gradually entered the retail market. Also, some of these banks identified the SMEs market as being relatively unexplored and developed specific product and service offers for this market segment (e.g. Citibank and GE Capital).

The retail market entry has often focused on a specific product (e.g. credit and debit cards of Bank Austria-Creditanstalt/HypoVereinsbank (BA-CA/HVB), consumer finance focus of GE Capital) or a specific target market (middle to high-income individuals, which is the focus of Citibank). In this way, new entrants have been able to limit the need for building extensive physical networks and distribute their products through alternative channels such as sales representatives and electronic banking.

Until very recently, foreign-owned banks served a narrow market segment and their activities broadened only after strategic foreign investors became majority owners of formerly state-owned banks.

Foreign banks operating in the Czech Republic can be grouped according to their business mix as (i) universal banks with regional networks (e.g., Erste Bank and BA-CA/HVB), (ii) large international banks (ABN Amro, Commerzbank, Crédit Lyonnais, Société Générale), (iii) investment banks (Deutsche Bank, Dresdner Bank), and (iv) "bancassurers" (ING Group, KBC Holding). Banks may also be classified according to how they have entered new markets. Some banks achieved growth by extending their business model to new customer bases or new markets, i.e. functioning as universal banks. Other banks achieved growth and returns through specialisation and developing strengths in selected product lines.

As a result of the relatively recent privatisation of large Czech banks and the slower entry of foreign banks compared to countries such as Hungary and Poland the impact of financial integration and structural changes on banks' activities is still emerging in the Czech Republic. Czech banks are less active in the most dynamically developing market segments. This is clearly illustrated by the share of retail loans in total loans, which accounted for about 9 percent of total loans. This compares to some 13 percent and 25 percent for Hungary and Poland, respectively. Although the Czech figure is influenced by the role of corporate loans in the economy, the retail loans segment certainly represents a significant growth potential in the Czech banking market. To illustrate this it is worth noting that in Western European the share of retail loans in total lending amounts to about 40-50 percent.

Given the international experience of foreign banks, their entry into the Czech banking sector also has indirect positive effects on the availability and costs of financing entrepreneurial projects. Foreign banks can introduce strong companies with viable development projects to international investors who do not necessarily have on-ground presence or knowledge of the local environment, but would consider investing in these projects. In this respect, product expertise, structuring capabilities and a broader investor base help foreign banks match the available cross-border funds with the financing needs of Czech based companies. This financing can and does take a number of forms, from loans in foreign currencies syndicated on international markets, to bonds and other fixed income instruments, to GDR issues for blue chip companies. Increasing competition among financial institutions in serving the top market segments then translates into lower financing costs for Czech companies.

Box 1. Size and structure of off-shore financing in the Czech Republic

Off-shore sources certainly played an important role in financing the activities of local businesses during the 1990s. Once the Czech koruna became fully convertible in 1995, Czech nationals were able to tap international financial markets. Table 1.1 shows external debt trends for the Czech Republic. In 1993-2000, convertible currency debt increased from USD 8.5 billion to USD 21.2 billion. A major part of this increase can be attributed to increased lending by foreign banks (USD 9.4 billion) but also to growing credit from suppliers and direct investors (some USD 3.4 billion) (11).

Concerning the structure of convertible currency debt it is worth noting that funds directly channelled to non-financial sectors (labelled "other sectors" in Table 1.1) increased from USD 3.1 billion (equivalent to 37 percent of the total) in 1993 to USD 11.8 billion (56 percent) at the end of 2000. In addition, the term structure of external debt owed by Czech entities has shortened, with the share of short-term debt rising from 24 percent in 1993 to 42 percent by end 2000.

Table 1.1 Czech Republic - external debt, in USD billion

	1993	1994	1995	1996	1997	1998	1999	2000
Convertible currency	8.5	10.7	16.5	20.8	21.4	24.0	22.6	21.2
Long term	6.5	7.8	11.5	14.8	14.3	15.0	13.8	12.3
Government and CNB	*4.0*	*3.0*	*2.8*	*2.1*	*1.6*	*1.5*	*1.2*	*0.8*
Commercial banks	*0.5*	*1.0*	*3.6*	*5.5*	*4.6*	*4.5*	*3.6*	*2.5*
Other sectors	*2.0*	*3.8*	*5.1*	*7.2*	*8.1*	*9.0*	*9.0*	*9.0*
Short term	2.0	2.9	5.0	6.0	7.1	9.1	8.8	8.8
Government and CNB	*0.2*	*03*	*0.6*	*0.1*	*0.2*	*0.0*	*0.0*	*0.1*
Commercial banks	*0.7*	*1.2*	*2.7*	*3.9*	*4.9*	*6.5*	*6.4*	*6.0*
Other sectors	*1.1*	*1.4*	*1.8*	*2.0*	*1.9*	*2.6*	*2.4*	*2.8*
Non-convertible currency	1.1	1.5	0.6	0.3	0.3	0.3	0.2	0.2
Total	9.6	12.2	17.2	21.2	21.6	24.3	22.9	21.4
Memorandum items:								
Debt owed to foreign banks	3.5	5.4	10.3	14.0	14.4	15.5	14.0	12.9
Long term	2.8	4.4	8.1	10.9	10.3	9.6	8.4	7.5
Short term	0.7	1.0	2.2	3.1	4.1	5.9	5.6	5.4
Debt owed to suppliers & foreign investors	1.9	2.4	1.7	2.7	3.0	4.7	2.4	5.3
Long term	0.9	1.2	0.1	1.0	1.3	2.4	2.1	2.7
Short term	1.0	1.2	1.6	1.7	1.7	2.3	2.3	2.6

Source: CNB; numbers may not add up due to rounding.

The increase in external debt was particularly strong in 1993-96, when external debt in convertible currencies increased by USD 12.3 billion, of which around two thirds reflected long-term debt. Commercial banks and borrowers other than the government and the CNB accounted for an increase of USD 8.2 billion and USD 6.1 billion, respectively. In essence, these inflows financed the credit expansion of foreign-owned banks in the Czech Republic or went directly to the non-financial sector of the Czech economy. Overall, cross-border lending clearly complemented domestic financial resources available to resident borrowers.

11) Note that the change in external debt owed to these creditors exceeds the change in total convertible debt. This is because the external debt of the Czech Republic to other creditors, notably official bilateral and multilateral lenders, declined during the period.

The situation changed significantly during the 1997-98 period. The economy was in recession and growing credit problems with their existing loan portfolios forced the large Czech banks, in particular, to reconsider their lending strategies and to contract domestic credit. While foreign banks reacted to the increased uncertainty by shortening the tenure of their loans (the amount of long-term loans decreased by USD 1.3 billion), their net exposure to the Czech economy increased by USD 1.5 billion thanks to an increase of USD 2.8 billion in short-term debt. The fall in long-term financing available from domestic and foreign credit institutions forced manufacturing and other non-financial Czech businesses to seek alternative financing sources from their suppliers or other direct investors. In the event, debt owed to foreign suppliers and other investors increased by USD 2.0 billion, with some 70 percent of the rise reflecting long-term finance. Overall, the level of external debt in convertible currencies increased by USD 3.2 billion in 1997-98, substituting for the reduced pool of domestic credit available to resident borrowers.

Foreign-owned banks offered better service and more innovative products than locally-owned banks. Additional competition arose from off-shore financing, comprising non-resident bank lending and intercompany loans (Box 1 sheds some light on the size and structure of off-shore financing in the Czech Republic). This led to a significant loss of market share of local banks in the priority segment of top-tier local firms, forcing them - primarily the large ones - to seek alternative business opportunities with smaller or financially weaker companies. Given the deficiencies in risk management systems of local banks, this contributed to the increase in classified credits of local banks.

Czech banks face strong competition from off-shore sources of finance.

And then, competition from foreign-owned banks and cross-border lending has made it more difficult for incumbent banks to cross-subsidise various activities and has increased the role of proper risk assessment and pricing. As most local banks still lack experience, the role of foreign-owned banks is crucial for providing the know-how and technology for further developing the banking sector.

A comparison of performance indicators for banks with different ownership structure suggests that foreign-owned banks operating in the Czech Republic are generally more efficient than both state-owned and local private banks (12). Unlike local banks, foreign-owned banks were able to generate, on average, a positive return on assets in 1994-99 despite the economic recession of the late 1990s. This was mainly due to significantly lower operating costs.

Looking ahead, the diversification from pure traditional banking to modern financial products certainly represents an important opportunity for Czech banks. For example, CS has already successfully marketed its money market funds to its large retail client base and currently enjoys a large market share in this business, with assets under management amounting to USD 866 million at the end of 2000 (compared with USD 458 million for KB, USD 930 million for Hungarian OTP Fund Management, or USD 279 million for the largest Polish fund, Skarbiec).

While these are promising developments, it is clear that in the absence of well-defined corporate governance and risk management mechanisms, this diversification also poses potential conflicts of

12) Hawkins and Mihajlek (2001), Table A4, p.39.

interest and may influence the credit decisions of the banks. The dual role of owner and lender proved especially damaging to the stability of the Czech banking sector during the economic recession between 1997 and 1999. In this respect, the financial strength, risk management know-how, and ability to formulate and pursue clear strategies of foreign-owned banks are expected to continue to have positive effects on the stability of the Czech banking sector.

While coming late, the increasing role of foreign-owned banks is expected to bolster the development of the Czech banking sector.

More generally, the future efficiency and stability of the Czech banking sector will be determined by the ability of individual banks to cope with the changing competitive landscape of increasing competition in the traditional banking products from both bank and non-bank institutions. In this respect, evidence from the European banking industry in the 1990s is illustrative. In continental Europe, the contribution of non-interest income to banks' total income has increased while the importance of (net) interest income, i.e. traditionally the mainstay of banks, has declined. In essence, because of a limited growth potential of traditional bank intermediation, European banks are increasingly providing services with more scope for growth, notably investment banking and asset management services. Given the direct influence that European banks have wielded by acquiring a large market share and the indirect influence of the EU convergence, the trends and market structures observed in Europe provide a useful comparison benchmark.

The possible lack of finance for small and medium-sized enterprises is often a particular concern of policy makers - and not only in accession countries of Central and Eastern Europe. Contrary to concerns that market segments such as lending to SMEs and households will not be served as foreign-owned banks will focus on different business segments, foreign-owned banks in the other CEECs have increased lending to these clients as a result of growing penetration and competition in other marker segments. This trend can also be expected in the Czech Republic.

5. Conclusions

The development of the Czech banking sector in its post-transition period has been erratic. It has been marked with problems and large economic losses. These materialised most visibly in the second half of the 1990s. First, the crisis of small banks in 1996 revealed several problems in the Czech banking sector. Second, the experience in 1997-98 clearly confirmed the need for change. The economy was in recession, and growing credit problems of banks with their existing loan portfolios forced the large Czech banks, in particular, to reconsider their lending strategies and to contract domestic credit. Observers often refer to this period as a "credit crunch" since it has been characterised by a lack of capital. We would instead consider this period a healthy adjustment of previous soft lending behaviour. Perhaps the period should be renamed "lack of projects". Overall, it is fair to conclude that it was more an undefined strategy, lack of proper risk management systems, and related-party lending that caused most of the failures of Czech banks, rather than excessive competition.

Soft lending procedures or even soft budget constraint behaviour of the Czech banks make us wonder whether policy makers did not allow them on purpose. There was a smooth transition from shrinking "old sectors" to growing "new sectors" that went along with social peace, i.e. low unemployment. A comparison of the Czech Republic excessive banking costs (mostly bailouts) to those of other CEECs certainly raises the question of whether the price for such a smooth transition was not too high.

Privatisation of the banking sector is expected to result in greater efficiency, and mostly in higher stability. It is clear that the new market players do not lack either sufficient capital or know-how. There is no reason, therefore, for any of the banks to be exposed to a higher risk than others. In other words, the adverse selection problem disappears.

After a lengthy period of restructuring, the Czech banking sector now appears to be on a promising growth trajectory.

Despite a slowdown of the economy during 1996-99, it seems that the problems and crisis in the Czech banking sector did not interfere with economic growth. We attribute this phenomenon to the significant role of cross-border capital flows - comprising foreign direct investment, intercompany loans, and direct lending of non-resident banks - which dominate the allocation of resources to fast growing enterprises.

The key conclusion is that after an excessively lengthy period of restructuring - and many false starts and haphazard measures - the Czech banking sector has now been put on a firm footing for future growth.

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Hungary's banking sector: Achievements and challenges

Éva Várhegyi

1. Introduction

Hungary is generally considered one of the best performing transition countries, having been successful in achieving macroeconomic stabilisation and in creating a market-driven economic system (see, for instance, Fischer and Sahay, 2000; and Weder, 2001). In terms of financial sector reforms, the country is also considered in the advanced league (Bokros, 2001).

While we agree to this assessment, it is also true that the degree of monetisation and bank intermediation in the Hungarian economy is surprisingly low, and this despite Hungary's head start in setting a market-driven banking sector. More specifically, in contrast to many other Central and Eastern European Countries (CEECs), Hungary already had a two-tier banking system when the Berlin Wall came down. While the nature of activities that banks could pursue was strictly regulated - limiting competition between banks and resulting in a segmentation of the market - things changed in 1989 when commercial banks - originally confined to corporate customers - were admitted to the retail market. At the same time retail financial institutions were given commercial banking licenses.

Against this background, this paper examines achievements and challenges in setting up a functioning banking sector in Hungary. We proceed as follows: Section 2 presents key characteristics of the Hungarian banking sector and Section 3 discusses the main factors that have influenced these developments; Section 4 extends this discussion by looking specifically at the impact of financial integration on the Hungarian banking sector; finally, the last section concludes and sketches main challenges in the period ahead.

2. Characteristics of the Hungarian banking sector

2.1 Role of money and bank finance in the economy

The degree of financial depth and bank intermediation in Hungary is surprisingly low.

The role of money and bank finance in the Hungarian economy has remained surprisingly limited. The ratio of broad money to GDP has not increased since the mid-1990s and remains below 50 percent, which compares to roughly 80 percent in the European Union. What is more, the ratio of bank assets to GDP has been virtually constant since 1995 and currently amounts to about 70 percent, i.e. less than one third of the figure observed in the EU. The importance of banking in Hungary seems low even compared to other CEECs, such as the Czech and Slovak Republics, although one has to bear in mind that data for Hungary already excludes unrecoverable assets whereas they are still included, at least in part, in many other CEECs.

A more detailed look at bank assets confirms the modest importance of banking in Hungary: Loans of resident banks to non-financial enterprises and households are equivalent to merely 27 percent of GDP, which compares to a ratio of 90-100 percent in the EU. In this context, it is worth noting that half of the Hungarian enterprises operate without bank finance, which is partially due to poor creditworthiness of these enterprises.

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And then, loans to households are marginal in relation to their income and the value of their property. More specifically, household indebtedness, relative to disposable income, stands at a paltry 7 percent, far below the EU average of around 50 percent. Mortgage loans account for 5 percent of the total value of homes. Having said this, it is also true that consumer loans have recently begun to grow rapidly.

Although being small relative to the size of the economy, the banking sector dominates Hungary's financial system. In fact, the structure of financial assets in Hungary - with bank assets accounting for 53 percent of the total - is very similar to the EU (51 percent). In terms of funds channelled through financial intermediaries, Hungary is also similar to the EU: 80 percent of the savings are placed with banks and other credit institutions and the remainder is taken up by investment funds, insurance companies and pension funds.

2.2 Structure of assets and liabilities, and bank income

The structure of banks' balance sheets is similar to that found in the EU, and the quality of banks' loan portfolio has improved much in the second half of the 1990s.

The balance sheet structure of Hungarian banks is becoming similar to that of the EU. To start with assets, Table 1 shows that while claims on the state and the central bank have been on a downward trend, reaching 26 percent of the total in 2000, they continue to constitute an important part of banks' assets, not least because of poor credit demand and limited creditworthiness of non-state borrowers. Nevertheless, claims on other banks and financial institutions (10 percent of assets) as well as loans to enterprises and households (41 percent) have increased substantially. Although the share of loans to households is much lower than in the EU (6 percent compared to 16 percent in Germany, for instance), banks have stepped up their lending to households over the past three years, reflecting rising income and property prices as well as enhanced creditor rights. Over one-third of loans to enterprises are denominated in foreign currency (of which 60 percent is dominated in euro), which carry lower interest rates and are thus very attractive for companies that are able to manage exchange rate risks.

Maturities have lengthened and advances with a maturity of over one year have climbed to over 40 percent of total assets. Furthermore, more than 50 percent of enterprise loans and close to 90 percent of household loans have a maturity of over one year.

The quality of the portfolio of the Hungarian bank sector improved much in the second half of the 1990s. By 2000, the share of problematic assets (bad, doubtful, and below-average loans) and those requiring special monitoring had fallen to less than 3 percent and 6 percent, respectively. It is worth noting that the quality of assets has improved despite the soaring volume of client loans. Average capital adequacy has been around 15 percent, pointing to a well-capitalised banking sector.

Table 1. Structure of assets of the Hungarian banking sector, in %

	1995	1996	1997	1998	1999	2000
State	20.2	19.8	16.2	16.2	14.7	14.2
Central bank	22.3	22.8	19.7	17.4	16.9	12.1
Banks and financial institutions	2.7	4.3	6.1	7.8	7.7	10.0
Foreign assets	3.2	5.3	7.4	9.3	10.7	7.9
Loans to customers, total	33.4	32.5	35.0	34.2	36.3	41.3
- of which loans to enterprises	(27.3)	(28.5)	(31.4)	(30.9)	(31.7)	(35.4)
- of which loans to households	(6.1)	(4.0)	(3.6)	(3.3)	(4.6)	(5.9)
Shares and corporate bonds	4.4	4.1	4.5	4.3	3.8	3.5
Other, including cash	13.8	12.2	11.1	10.8	9.9	11.0

Source: National Bank of Hungary.

Turning to the liability side of the balance sheet, Table 2 shows a number of interesting developments. First, the importance of customer deposits has increased and they now account for more than 50 percent of banks' liabilities. Second, the domestic inter-bank money market (8 percent of the total) and foreign funds (17 percent) have gained in importance (1). The main reason why the Hungarian banks resort to foreign funds is the shortage of long-term domestic finance rather than the demand for foreign currency loans. Indeed, foreign funds and equity are the main long-term sources of funds whereas the bulk of domestic funds (some 90 percent) is of a short maturity. Third, mirroring the increase in these sources of bank finance, the importance of central bank lending and debt securities has declined markedly. Finally, the share of own funds has changed little (11 percent) - but is higher than in the euro zone - and provides scope for expanding the activity of the banking sector.

Table 2. Structure of liabilities of Hungarian banking sector, in %

	1995	1996	1997	1998	1999	2000
Own source	10.1	10.5	11.5	11.8	10.4	11.1
State	4.5	4.0	3.8	3.1	3.0	3.1
Central bank	8.5	5.2	3.3	2.7	1.6	1.0
Banks and financial institutions	3.9	5.7	8.1	7.9	7.2	8.2
Foreigners	11.6	12.2	15.8	19.2	17.2	17.1
Deposits from customers	47.4	47.7	49.7	49.3	53.4	53.0
- of which enterprise deposits	(18.0)	(18.1)	(17.9)	(16.7)	(17.2)	(17.6)
- of which household deposits	(29.4)	(29.6)	(31.8)	(32.6)	(36.2)	(35.4)
Debt securities	7.4	8.2	5.8	1.3	1.4	1.5
Other	6.6	6.5	2.0	4.7	5.8	5.0

Source: National Bank of Hungary.

1) The share of funds denominated in foreign currency was about twice as high (36 percent), which indicates that around half of the foreign currency funds came from residents.

We finally take a brief look at the sources of bank income. In the second half of the 1990s, the share of net interest revenue in total income of Hungarian banks fluctuated between 70 to 80 percent (2). Non-interest revenues (net) accounted for 26 percent in 2000, much less than the EU average of over 40 percent. Fees and commissions - i.e. a major component of non-interest revenue - have been on the rise and reached 15 percent in 2000. The bulk of this is related to financial intermediation (lending, account holding, bank cards, etc.). Revenue from trading securities is another important source of non-interest revenues. Until 1999, however, commercial banks could trade securities on behalf of their clients only within separate organisations and, thus, non-interest bank revenues included own-account trading only. It follows that on a consolidated basis, the share of interest and other intermediation revenue in total income would be lower than what the 70 to 80 percent range suggests.

2.3 Market structure, ownership and concentration

In 2000, the Hungarian banking sector comprised 42 credit institutions and around 200 small savings and credit cooperatives. While the number of credit institutions has been fairly stable since the mid-1990s, the number of cooperatives has fallen substantially. Relative to a population of ten million, the number of banks might be considered high, but with only 1 500 branches and 2 500 ATMs, access to bank services remains well below the EU average. Furthermore, the use of bank cards as well as telephone and internet banking, though growing, continues to be below the level observed in more developed markets.

Most commercial banks operate as holding companies that own two or more types of financial institutions. Because banks were not allowed to provide investment services until 1999, most of them had established independent brokerage firms and investment banks. Since the removal of these restrictions, many banks have incorporated these entities with a view to positioning themselves as universal banks. However, in most cases they continue to operate as independent units within bank holding companies. In addition, a number of banks own leasing, investment fund management, and insurance companies, and private pension funds. As a result, commercial banks are key owners in Hungary's non-bank financial system.

Foreign direct investment became a salient feature of the Hungarian banking sector early in the transition process. As a result, at end 2000, foreign shareholders held the majority of shares in 33 of the 42 credit institutions. In addition, there was one institution with a significant foreign minority shareholder. Overall, foreign investors hold two-thirds of total registered bank capital, up from about one-third in 1995, and the share of state-owned bank capital has been cut to 20 percent.

Foreign direct investment became a salient feature of the Hungarian banking sector early in the transition process.

The role of foreign investors is even more striking when looking at the distribution of assets. As Table 3 shows, foreign-owned or controlled banks account for more than 90 percent of banking sector assets. It is probably worth noting that foreign-owned banks that entered the Hungarian market through greenfield investment prior to the privatisation of state-owned banks have grown rapidly, increasing their market share from 12 to 33 percent between 1993 and 2000.

2) Net interest revenue is interest received minus interest paid.

Among foreign-owned banks, EU-based institutions have a strong presence, accounting for 55 percent of banking sector assets (for details see Table A1 in the Annex). Major EU-players are BLB, IntesaBci, ABN Amro and KBC. Non-EU investors include General Electric Capital Services (GE), Citicorp and the subsidiary of Russia's Gazprombank.

Table 3. Share of foreign-owned banks in total assets, in %

	1995	1996	1997	1998	1999	2000
1. Majority foreigner ownership	41.8	46.2	53.0	64.0	66.4	68.1
2. Minority foreign ownership	37.5	36.8	40.3	25.0	24.2	22.9
Total (1+2)	79.3	83.0	93.3	89.0	90.6	91.0

Note: Excludes savings and credit co-operatives, and building societies.
Source: Own calculations on the basis of banks' reports.

Concentration in the Hungarian banking sector is moderate and, as Table 4 shows, has declined over time. The decline in market concentration is also evident from a drop in the Herfindahl index (HI), which fell in 1993-2000 from 1 500 to 900. Mergers and acquisitions would have increased the degree of concentration, but the Hungarian banking market has witnessed only two major mergers (3). These do not seem to have weakened competition because they strengthened the position of the second largest bank vis-à-vis the dominant bank in the market.

Table 4. Concentration in the Hungarian banking sector, in %

	1995	1996	1997	1998	1999	2000
Market share of five largest banks	61	*59*	*56*	*54*	*55*	*53*
of which majority-owned by foreigners	*0*	*14*	*24*	*29*	*30*	*30*
Market share of ten largest banks	80	*77*	*74*	*69*	*74*	*73*
of which majority-owned by foreigners	*13*	*32*	*42*	*42*	*45*	*46*

Note: Measured as a percentage of total banking assets.
Source: Own calculation on the basis of reports of banks.

Asset concentration in the Hungarian banking sector is not excessive, but concentration is higher in other market segments.

It should be kept in mind that concentration calculated on the basis of assets disguises differences across various market segments. On the one hand, OTP - the largest retail bank - dominates household deposits and loans, having a market share of 42 percent and 45 percent, respectively. The Herfindahl index for this market segment is above 2 000, suggesting that the retail banking market can still be considered oligopolistic, rather than competitive (see Bikker and Groeneveld, 1998; Molyneux, 1999). On the other hand, the situation is more balanced in the corporate sector, where the index is below 700.

3) ABN Amro and KBC, operating in a strategic alliance, combined their Hungarian subsidiaries. Likewise, the merger of the HypoVereinsbank (HVB) and Bank Austria-Creditanstalt (BA-CA) led to the merger of their subsidiaries.

2.4 Efficiency, profitability and banking sector stability

As Table 5 indicates, there are signs that the efficiency of the Hungarian banking sector has improved in the second half of the 1990s. By 2000, the net interest margin on all assets and the interest rate spread had fallen to 4.0 percent and 3.7 percent, respectively. Despite these improvements, margins and spreads are high compared to the EU average (although they compare favourably to many other CEECs). This indicates that intermediation costs are relatively high. In fact, in 2000, operating costs still amounted to 3.5 percent of assets, which is twice as high as the EU average. However, it is important to note that high costs - in part - reflect efforts to modernise the banks and to establish branch networks.

Trends in the efficiency, profitability and stability of the banking sector bode well for the future.

Table 5. Efficiency and stability of the Hungarian banking sector

	1995	1996	1997	1998	1999	2000
Efficiency						
Net interest margin (in % of assets)	5.4	4.9	4.5	4.5	4.1	4.0
Interest spread (in %)	4.9	4.7	4.3	4.2	3.7	3.7
Operating cost (in % of assets)	3.7	3.6	3.8	4.0	3.7	3.5
RoA (in %; pre-tax)	1.5	1.7	1.3	-2.1 (0.9)	0.6	1.3
RoE (in %; pre-tax)	18.2	20.6	14.3	-25.4 (10.7)	6.3	15.1
Stability						
Bad and doubtful loans (in % of assets)	7.4	4.0	3.2	1.8	2.6	2.0
Capital adequacy ratio	18.3	18.9	17.3	9.9	15.0	15.2

Notes: Excludes savings and credit co-operatives. Figures in parenthesis for 1998 exclude two loss-making banks, one of which was liquidated while the other was bailed-out by the state.
Sources: National Bank of Hungary and Banking Supervision.

The profitability of the Hungarian banking sector has been satisfactory since the completion of bank restructuring and privatisation. The average pre-tax return on assets (RoA) has been around 1-2 percent. The average pre-tax return on equity (RoE) has fluctuated more and can only be evaluated in relation to the rate of inflation: In 1995-99, the inflation rate exceeded the RoE - in some years by a considerable margin; this changed in 2000, when the inflation-adjusted RoE amounted to around 5 percent; current indications are that this favourable trend has continued since then.

It is also worth noting that greenfield banks that entered the Hungarian market early have been more successful from the outset than privatised banks. The former were more cost-efficient and more profitable. Things have changed recently, with privatised banks catching up. Nevertheless, not all new owners could galvanise their Hungarian subsidiaries, even if they effected major investments and hired foreign managers (see Table A2 in the Annex).

There is also evidence of improvements in the stability of the Hungarian banking sector. In 1995-2000, bad and doubtful loans (in percent of total assets) have declined from 7.4 percent to 2 percent, which is lower than in any other CEECs, except Estonia (see RZB, 2001). Furthermore, the capital adequacy ratio, i.e. banks' capital in percent of their risk-weighted assets, has remained

well above 8 percent, the minimum envisaged under the Basle Accord. Hungary's banking system is thus well-capitalised.

2.5 A brief summary

In a nutshell, the main characteristics of the Hungarian banking sector can be summarised as follows:

- The size of the banking sector relative to the size of the economy has not increased and remains low by international standards.
- The structure of banks' balance sheets has become similar to that observed in the EU and activities with the private sector have grown at the expense of those involving the state.
- The number of banks is high, but low branch density does not suggest over-banking.
- Foreign investors dominate the banking sector.
- Competition has increased and the degree of concentration does not impede competition.
- There remains considerable scope for increasing the efficiency and profitability of banking.

Having sketched the main features of Hungary's banking sector, we now take a look at the main factors that have influenced its development.

3. Determinants of banking sector development in Hungary

Macroeconomic stabilisation, rapid economic restructuring, and privatisation have created an environment that is conducive to the development of banking.

Let us start with the **macroeconomic environment**. In the early 1990s, Hungary experienced - like many other CEECs - a deep transformation crisis, characterised by a sharp contraction of aggregate output, rising inflation and unemployment, and by large fiscal and external imbalances. By 1996, the Hungarian economy had begun to normalise, following stabilisation policies and structural reforms that - among other things - attracted substantial foreign direct investment. By the late 1990s, the conditions for sustainable development had been put in place (see Kiss and Szapáry, 2000). Overall, the macroeconomic stabilisation and the rapid creation of a market economy provided an environment that has been conducive to banking sector activity.

And then, bank **restructuring** and **privatisation** were probably the most important factors that influenced the development of the Hungarian banking sector. The bad loan problem inherited from the socialist past increased dramatically as a result of the rapid transformation recession that characterised the early 1990s. By 1992, the bad loan problem had become a major obstacle to the operation of the Hungarian banking system, calling for swift and far-reaching measures.

Under the 1993 restructuring programme, bad loans were swapped for long-term government bonds. Although strengthening banks' balance sheets, portfolios deteriorated again because of continuing difficulties in Hungary's enterprise sector. As a result, many state-owned banks became technically insolvent, triggering further government recapitalisation (4). While government rescue operations officially finished by end 1995, some banks benefited from additional public funds (capital injections and guarantees) to facilitate their privatisation.

4) During 1993-1995 the government used bonds equivalent to USD 4 billion (10 percent of the annual GDP then) in bank restructuring programmes. See Várhegyi, É. (2001a) on the process of bank restructuring.

The main objective of Hungary's bank restructuring programme was to make banks attractive to investors, and removing unrecoverable loans from banks' balance sheets and government-financed bank recapitalisation were the means of getting banks in shape. Privatisation itself raised two related policy issues, namely (i) whether banks should be sold to strategic or portfolio investors, and (ii) whether concentrated or diversified ownership structures were preferable (see Várhegyi, 1999).

In the event, Hungary's bank privatisation programme in 1994-97 put emphasis on involving strategic foreign investors and producing concentrated ownership structures (see Várhegyi, 1999 and 2001a) (5). In general, strategic investors were selected on the basis of the price and the capital injection promised and most investors acquired majority stakes or were granted an option to attain majority ownership in the future.

But there have been two exceptions to this model, namely OTP and Postabank, the two largest retail banks. The owners of OTP are foreign institutional investors, Hungarian institutional and private investors, and bank employees and management. In the case of Postabank, a less conscious government policy produced a diversified but not very transparent ownership structure that led to substantial losses and the need for bailing out the institution.

Privatisation has created clear and transparent ownership relations for most banks. Hungary's policy of favouring foreign strategic investors was been beneficial not only because Hungarian banks were taken over by capital-rich and experienced owners but also because it prevented the emergence of cross-ownership holdings, the hotbed of conflicts of interests (6). Overall, it is fair to conclude that Hungary's bank restructuring and privatisation happened faster than in most CEECs and that it has been brought to a successful conclusion at acceptable costs. In fact, since the completion of privatisation in 1997, the government has rescued only Postabank and has not stepped in to prevent the collapse of a smaller private bank.

Next, putting in place a proper **regulatory** and **supervisory framework** is essential for a well functioning banking sector. What has been achieved in this respect?

Like in other transition economies, there remains scope for improving the effectiveness of bank regulation and supervision.

In addressing this question, it is useful to distinguish between designing and implementing such a framework. As to the former, it is fair to state that the framework - which was modelled along EU regulations and Basle core principles - has provided the right environment for developing Hungary's banking system. The liberalisation of licensing enabled banks to perform more diverse activities and serve a wider clientele: Commercial banks were licensed to offer retail-banking services, while retail banks were granted a full commercial bank license. Despite quasi-Chinese walls between commercial banking and investment banking, banks could provide all financial services under one roof. Low entry thresholds led to the entry of several foreign banks, initially in the form of greenfield investment. As we have seen, foreign strategic investors were also free to

5) This was in contrast to the route taken in many EU countries. For instance, when banks were privatised in Portugal, most foreign buyers were turned down and, as a result, foreign-owned banks accounted for only 11 percent of total assets in 1997. In Greece, the share of foreign-owned banks in the total assets was about 16 percent in 1997, with the state retaining major stakes (Honohan, 2000).

6) The Banking Act also restrict the share that non-financial institution can hold in banks to 15 percent, thereby limiting the scope for connected lending.

participate in the privatisation of banks. The only effective barrier to market entry was the lack of legal provisions for branch establishment. This possibility was created in 1997 after Hungary's accession to the OECD.

As to the implementation of the framework, bank supervision was rather ineffective in the first half of the 1990s. This was due to a lack of professionalism and independence of the supervisory authority. What is more, prior to 1997, separate supervisors were in charge of different financial services while more and more banks were operating as holding companies - offering a wide range of financial services under one roof. This enabled banks to allocate risks within the holding, thereby evading capital requirement regulations. In some cases, such a strategy made it possible for the management to hide the group's capital shortage for many years. To deal with these challenges, the supervisors responsible for banks and investment service providers were combined in 1997. And then, in 2000, a single organisation - the Hungarian Financial Supervisory Authority - was established, which also integrated the supervision of insurance and pension funds.

Integrated supervision provides much better conditions for the implementation of supervision of a preventive nature, focusing on various kinds of risks, considering intra-group risks and risk concentration, and making more risk-based and forward-looking examinations during visits. Extending prudential and capital requirement rules to bank groups and financial holdings has further strengthened supervision. Still, there are some factors that inhibit effective supervision. Though the Financial Supervisory Authority has its own separate budget and is legally independent, it has no regulatory power itself, as the adoption of prudential rules remains the perogative of the Minister of Finance.

While the judicial environment has improved, banks remain cautious in extending loans.

Finally, a thriving banking sector needs a proper **legal framework**. At the beginning of the 1990s, the judicial environment was rather weak. The 1992 Act on Bankruptcy did not provide adequate protection to creditors. The law stipulated voluntary bankruptcy when a company had overdue debt and allowed a three-month debt service moratorium without envisaging negotiations with creditors. As a consequence, some companies - though not insolvent at all - suspended payments to their creditors. This resulted in huge bank losses, triggering a change in the rules regarding voluntary bankruptcy a year later.

Despite these changes, banks continued to be disadvantaged when companies were liquidated. In fact, banks often recouped little after accounting for the cost of protracted liquidation procedures. In practice, the problem was partly solved by the decline in the frequency of bankruptcies and liquidations. Nevertheless, banks have become more cautious in accepting collateral, a situation that improved with the amended legislation concerning the enforcement of the right of pledge.

So far, our review suggests a macroeconomic and institutional framework in which banking should have developed quickly. But we have seen in Section 2 that the role of the Hungarian banking sector in the economy is rather limited. Why is that? There are a variety of reasons for this:

A number of factors explain the low degree of bank intermediation, including competition from other sources of funds - cross-border finance in particular.

- Limited financial savings due to low household income (7).
- A sizeable grey and black economy (estimated at 25-30 percent of recorded GDP) motivated by tax evasion, has curbed financial deepening.
- An increasing share of financial savings is not placed with banks (non-bank deposits with the Hungarian banking sector amount to only 39 percent of GDP) but channelled into investment funds, insurance companies and pension funds.
- High operating costs, which - in part - are due to inefficiencies. But they also reflect considerable IT expenditure and the cost of opening new branches, both necessary for developing the banking sector. And then, considerable reserve requirements have added to the cost of intermediation, reducing both the demand for loans and the supply of deposits (8).
- Monopolistic nature of certain market segments, and the retail sector in particular. Here the main incumbents have inherited a competitive advantage in the form of extensive branch networks, well-known bank name, and established bank-client relations.
- Shortage of well-capitalised, domestic firms with an established credit history has limited the scope of viable lending to the enterprise sector. In fact, banks have self-imposed restrictions on the amount of lending by "redlining" small and medium-sized firms, thereby cutting off the demand even of creditworthy borrowers.
- Insufficient protection of creditors' rights (including the ability to hold and seize collateral) has been an obstacle to higher lending, though the amendment of the mortgage law in September 2001 has greatly improved this situation.
- Government securities have attracted a substantial part of banks' funds, thereby crowding out lending to the enterprise sector.
- Competition from foreign funds - such as FDI, intercompany loans, and direct lending by non-resident banks to creditworthy firms - has curbed the role of the Hungarian banking system in financing corporate investment, of large firms in particular. To illustrate this, in mid-2001, the stock of cross-border loans to firms in Hungary amounted to EUR 11.5 billion and was, thus, almost as high as the amount of company debt owed to resident banks (EUR 12 billion). Some EUR 3.5 billion of cross-border loans are estimated to reflect intercompany loans.

In sum, the macroeconomic and institutional environment seems to be conducive for developing the Hungarian banking sector. Yet, the sector has got off to a slow start. In part, this is due to substantial competition from other foreign resources. We have seen that Hungary's financial integration with other countries - comprising the activities of foreign investors and the availability of foreign finance for domestic borrowers - had a significant impact on its emerging banking sector. This next section elaborates on this topic and sketches future developments.

7) Experiences in other emerging countries suggest that the structural processes accompanying economic catch-up played an important role in reducing personal savings. Liberalisation and modernisation of the financial sector, consequent easing of liquidity constraints, prolonged economic growth leading to higher income expectations, and impatience caused by postponed consumption in earlier years have all been decisive factors behind the fall in net savings by households. See Montiel (1997), Árvai and Menczel (2001).

8) In the first half of the 1990s, the reserve requirement raised the spread between lending and deposit interest rates by as much as 300 basis points, which was reduced to 50 basis points by the end of the decade.

4. The impact of financial integration on the Hungarian banking sector

4.1 Products, competition, efficiency and stability

Foreign investors have contributed to the appearance of modern banking products, procedures, and information technology. Greenfield investments were particularly effective in transferring the parent bank's culture, products and procedures. Foreign investors have also enabled the transfer of modern risk appraisal and management techniques. They have spurred the provision of medium to long-term funds and they have alleviated access to foreign currency loans. Some foreign-owned banks have ventured into niches, providing missing or inadequate services. For instance, foreign financial institutions established most of the consumer loan banks and building societies; in addition, they were also involved in setting up mortgage banks.

The entry of foreign banks has been very beneficial, enhancing the scope of banking sector services, competition and the efficiency of bank intermediation.

The entry of foreign banks lessened concentration in and the monopolistic character of most market segments. Corporate clients benefited first from enhanced competition. The distribution of power is fairly balanced in the corporate credit market: The four largest players have 10-12 percent each, while the next three control 6-7 percent each. Today, falling real lending rates are a good sign of strong competition. After initially pursuing only large corporations, banks have recently begun to target SMEs. In this market segment, the Hungarian banking sector does not (yet) have to compete with non-resident banks.

Things are different in the retail market where concentration is much higher. Because of substantial transaction costs, the availability of cross-border private deposits has not forced Hungarian banks to behave competitively in this market segment. However, as the share of the market leader has been falling year by year, and newcomers have gradually strengthened their positions, competition is gearing up both in the market for consumer and home loans. In fact, real lending rates for home loans have plunged in recent years.

The radical shift in the ownership structure and competition from foreign sources of funds has been key in raising the efficiency of Hungary's banking sector. Foreign investors that established new banks prior to the privatisation of state-owned banks have been particularly useful for bringing about this result. In addition to fostering competition, the presence of foreign banks has accelerated the introduction of banking sector skills, including risk appraisal and management techniques. Finally, there seems to be little doubt that the entry of foreign greenfield banks, bank restructuring, and bank privatisation to strategic foreign investors have strengthened the stability of the Hungarian banking sector.

4.2 A sketch of future developments

Looking ahead, it is reasonable to presume that the structure of the Hungarian banking sector will continue to change - without and even more so with Hungary's accession to the EU. The number of universal banks will decline because inefficient banks will exit the market, divest certain businesses, or merge with stronger banks. On the other hand, the number of specialised institutions may rise since there are many segments with scope for expansion (e.g. private banking, mortgage lending). Following accession, the number of banks licensed in Hungary is likely to decrease. This is because current subsidiaries of foreign banks will be turned into foreign bank branches. In addition, foreign

banks currently not operating in Hungary may open branches, or use other distribution channels such as the internet, to target customers in Hungary. This could further diminish the role of resident banks.

Although consolidation within Hungary's banking sector will continue, this is not expected to weaken competition.

All this can be expected to further promote competition, increasing the pressure on banks to become more cost-efficient. As a result, bank margins are likely to decline further, therefore strengthening the role of bank-intermediated funds in the economy. Competitive pressure will not necessarily come at the expense of profits. For one thing, operating costs may decrease once the massive infrastructure developments have been completed. And then, bank consolidation that generates economies of scale could also reduce cost. Finally, the income lost through falling margins may be recouped from non-interest revenue, which is currently much lower than in the EU.

Resident banks have the potential to build on their advantage in markets where they do not face strong foreign competition. Retail banking and private banking, in particular, are areas where the Hungarian banks may exploit their knowledge of local conditions and existing client relations. In this area, they have the best chance to raise their market share.

Things will be tougher for resident banks in the corporate loan market, where competition has already driven down margins and where rivalry will certainly intensify after accession. Again, there is potential for resident banks to benefit from local knowledge and increase lending to borrowers, such as SMEs, that have been rationed in the past. If properly priced and managed, increased lending to riskier customers could bolster banks' profitability without undermining the soundness of the banking sector.

Bank capitalisation may fall subsequent to EU accession. This is because foreign bank branches emerging from current bank subsidiaries have lower capital adequacy ratios. However, in itself this does not weaken the soundness of the Hungarian banking sector since a decline in capital adequacy ratios will be compensated for by the unlimited liability of banks' headquarters (the former parent banks) for the operation of their foreign branches.

EU accession may also influence net capital flows to Hungary, but possible effects are ambiguous. On the one hand, diminishing sovereign risk may raise inflows into the banking and the corporate sector. On the other hand, Hungarian banks will be in a better position to diversify assets geographically. Having said this, it seems unlikely that Hungarian banks will target advanced EU markets where they would face competition from more efficient banks. But it is possible that they put greater emphasis on lending to clients in other accession countries.

In conclusion, the integration of Hungary's banking sector with the EU has been fairly successful, resulting in a more efficient and more stable banking sector. With accession to the EU, the process of integration can be expected to proceed smoothly not least because EU financial institutions have taken large stakes in Hungarian banking system. That said, there are nevertheless policy challenges to which we turn in the final section.

5. Conclusions and challenges ahead

While Hungary has been successful in creating a functioning banking system, bank intermediation has not grown as fast as most observers might have expected at the beginning of the 1990s. With hindsight we can detect a variety of reasons for this, notably significant cross-border lending to creditworthy Hungarian borrowers and cautious lending of resident banks to borrowers that cross-border lending did not target.

Notwithstanding progress in recent years, there is considerable scope for improving the efficiency and profitability of the Hungarian banking sector. The challenge in the period ahead will be to make progress on this front while ensuring the soundness of the banking sector. This requires additional efforts on the part of banks, regulators and supervisors, and policy makers in general.

Increased lending to small and medium-sized enterprises holds considerable potential for the Hungarian banking sector.

To start with banks, increased lending to SMEs could be the most promising means for banks to extend their loan operations, because SMEs will continue to have only limited access to capital market finance. Indeed, most banks have abandoned their "redlining" policy in recent years and have stepped up their efforts to lend to creditworthy SMEs (see Király and Várhegyi, 1998) (9). Obviously, to enhance profitability and to maintain bank solvency, banks must properly price, monitor, and control the risk of lending to untested borrowers.

Although foreign investors with a wealth of experience in banking dominate the Hungarian banks, corporate governance is inadequate in some of them. Experience shows that parent banks do not send the most suitable management to their Hungarian subsidiaries and they change it too frequently. Parent banks could contribute to more efficient bank management through longer-term postings, and training of local professionals who have a good knowledge of local conditions and idiosyncrasies.

While an appropriate regulatory and supervisory framework - modelled along EU regulations and accounting for Basle core principles - has been put in place, its implementation needs to become more effective. This applies in particular to the supervision of bank groups and financial holdings. As argued above, competitive pressure is expected to entice banks to lend more to borrowers that are currently perceived as too risky. This should reinforce the argument in favour of improving the effectiveness of regulation and supervision. To this end, the EU should provide timely and generous assistance (transferring methodologies, providing training, etc.) to Hungarian regulators and supervisors. Finally, after accession to the EU, the subsidiaries of foreign banks may be turned into foreign bank branches. This will increase the need for better coordination of Hungarian supervisors with their counterparts in the EU.

There is also the risk that under competitive pressure the maturity structure of banks' assets, on the one hand, and their liabilities, on the other, become too unbalanced. To help avoid this problem, the Hungarian economic policy must encourage long-term savings and reduce the share of savings absorbed by the state.

In summary, our analysis has demonstrated both the progress made in creating a functioning banking system and the challenges ahead. Overall, we conclude that accession should further enhance the integration of Hungary's banking system with those of the EU.

9) For the credit market position of Hungarian SMEs see Várhegyi (2001b).

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Annex

Table A.1 Market positions of EU-owned Hungarian banks

Bank name	Owners (in 2000)	Year founded (F) or acquired (A)	Market share in 2000	Market share in 1993
Hungarian Foreign Trade Bank	BLB (85%)	1994 (A)	9.4	9.1
CIB Bank	IntesaBci (100%)	1979 (F)	8.0	4.2
Commercial and Creditbank	KBC Bank (73%), Irish Life (18%)	1997 (A)	7.3	8.8
ABN Amro	ABN Amro (100%)	1996 (A)	5.9	13.6
Raiffeisen Bank	Raiffeisen Banking Group (96%)	1986 (F)	4.1	1.4
BA-CA Hungary	Bank Austria (90%),	1990 (F)	3.8	1.0
Erste Bank Hungary	Erste Bank (99%)	1997 (A)	2.4	1.3
Hypo-Bank Hungaria	HypoVereinsbank (100%)	1993 (F)	2.2	-
Inter-Európa Bank	San Paolo - IMI (66%)	1989 (A)	1.8	1.5
ING Bank Hungary	ING (100%)	1991 (F)	1.7	0.8
Commerzbank Budapest	Commerzbank (100%)	1993 (F)	1.7	0.4
Bank of Hungarian Savings Cooperatives	DG Bank (72%)	1997 (A)	1.4	1.4
Major EU-owned banks, total			49.7	43.5
Other EU-owned banks, total			5.6	2.7
EU-owned banks, total			55.3	46.2

Notes: Market shares are based on banking sector assets.

Source: Calculation on the basis of banks' reports.

Table A.2 Efficiency of major foreign-owned banks in Hungary in 2000, in %

Bank	Home country of the owner	Market share	ROE	ROA	Net interest margin	Cost to assets
Hungarian Foreign Trade Bank	Germany	9.5	12.5	1.0	2.7	1.8
CIB	Italy	8.2	19.1	1.5	2.5	1.8
K&H	Belgium	7.5	-5.5	-0.3	3.1	4.6
ABN Amro	Netherlands	5.6	-3.1	-0.3	3.9	6.8
Raiffeisen	Austria	4.2	16.3	1.5	3.8	2.8
General Banking & Trust	Russia	3.9	22.4	2.2	4.1	0.9
BA-CA	Austria	3.8	18.9	1.7	3.1	2.5
Budapest Bank	USA	3.8	0.8	0.1	5.4	7.2
Citibank	USA	3.8	17.0	1.4	4.9	3.2
Erste	Austria	2.4	3.6	0.2	3.7	4.5
HypoVereinsbank	Germany	2.2	10.1	1.0	2.9	3.2
Banking sector total	-		*9.9*	*0.9*	*4.0*	*3.8*

Notes: Return on equity (ROE) and return on assets (ROA) are based on after-tax profits.

Sources: Banks' reports and National Bank of Hungary.

Slovenian banks a decade later

Peter Zajc

1. Introduction

Yugoslavia's (1) economic system differed in many respects from the model pursued by other communist countries, and banking is certainly one of the areas where the country set itself apart from its peers. Yugoslavia had already introduced a two-tier banking system in the mid-1950s and also established a decentralised system of communal banks and savings institutions. In 1960, a new banking law further reduced the range of commercial activities of the National Bank of Yugoslavia (the central bank) and opened the way to the creation of commercial banks. To ensure that banks met the needs of non-financial enterprises, the latter were allowed to set up and own commercial banks (2). In the Yugoslav Republic of Slovenia, a milestone in the development of banking was the establishment of the Credit and Savings Bank Ljubljana in 1967, which accounted for about 70 percent of total banking sector assets in Slovenia (Prinčič, 2001) and later evolved into Ljubljanska banka (LB), Slovenia's largest bank. Towards the end of the 1960s, banking licenses were broadened, allowing banks to pursue international operations, including the establishment of representative offices abroad (3). Overall, banks became increasingly independent and profit-oriented (Štiblar, 1997).

In the 1970s, economic reforms - including those pertaining to banking - slowed down. What is more, connected lending, inevitably arising when non-financial enterprises own banks, intensified and, in addition, there was increasing political interference in lending decisions. As a result, many loans were *de facto* donations, banks developed an excessive exposure to single clients, and bad loans accumulated. In addition, a dramatic currency mismatch on banks' balance sheets emerged. This was because the government encouraged banks to take foreign currency deposits to alleviate Yugoslavia's foreign currency shortages but at the same time restricted their foreign currency lending. When inflation accelerated, the domestic currency started to depreciate rapidly, causing large bank losses. With mounting bad debts and foreign currency losses, banks could only survive with repeated government bail-outs. Nevertheless, in 1990, on the brink of Yugoslavia's disintegration, up to 40 percent of banking sector assets in Slovenia were non-performing (Savin, 2000).

Overall, while sharing the bad debt problem with other Central and Eastern European countries (CEECs), Yugoslavia's banking system was more advanced than other CEEC banking systems and, thus, Slovenia started from a more favourable position when embarking on the transformation of its banking sector after gaining independence in 1991. Against this background, this paper analyses where the Slovenian banking sector stands a decade into the transition to a market economy. The

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1) The term Yugoslavia refers to the former Yugoslavia, established after the Second World War and started to disintegrate in late 1980s.

2) A distinguishing feature of Yugoslavia's economic system was "social" rather than state ownership. Social ownership implied that no legal entity or private person had a claim on equity (Ribnikar, 1992).

3) Ljubljanska banka, in particular, had a strong presence abroad, with 22 representative offices around the world (Štiblar, 1997).

rest of the paper is organised in three main sections. The next section reviews the rehabilitation of the Slovenian banking sector and examines its structure, size, and its assets and liabilities. Section 3 looks at the profitability and soundness of banks. Finally, Section 4 turns to two issues that continue to be debated in Slovenia, namely privatisation and the role of foreign direct investors.

2. Key features of the Slovenian banking sector

2.1 Bank rehabilitation

Slovenia's banking sector was in a difficult situation at the beginning of the 1990s. In addition to the inherited bad debt problem, many customers defaulted on their loans as a result of the transition recession in 1990-92. Moreover, the National Bank of Yugoslavia seized most of the foreign currency assets of Slovenian banks (85 percent of foreign currency assets had to be kept with the National Bank of Yugoslavia in Belgrade). And then, banks lost claims on borrowers in other Yugoslav republics while they still had to honour liabilities such as "joint" Yugoslav liabilities to foreign creditors.

To address the bad debt problem, the Bank Rehabilitation Agency (BRA) was established in October 1991. Its purpose was to design and administer the bank rehabilitation programme, which started in early 1993. A bank was put under rehabilitation if non-performing assets exceeded 50 percent of its capital. This was the case with the two largest banks (LB and Kreditna banka Maribor or KBM), accounting for more than 50 percent of total banking sector assets. Two new legal entities were created (Nova Ljubljanska banka or NLB and Nova Kreditna banka Maribor or NKBM) to disconnect all links with branches and subsidiaries in other Yugoslav republics (4).

In rehabilitating the banking system, the state assumed ownership of the largest banks and removed a good part of the bad debt from their balance sheets.

The bank rehabilitation strategy comprised three main elements:

- Two-thirds of the value of NLB's and NKBM's bad loan portfolio were transferred to the BRA and replaced with government bonds (about EUR 900 million, equivalent to 10 percent of GDP in 1993). The remainder stayed on the balance sheets of NLB and NKBM to induce them to restructure and possibly recover non-performing loans. The policy of forcing banks to actively contribute to the resolution of the bad debt problem gave them useful experience in the workout of bad loans (Moore and Zajc, 1999).
- The ownership of NLB and NKBM was transferred from non-financial enterprises to the state. In contrast to other CEECs where bank restructuring was a precursor to the privatisation of state-owned banks, the Slovenian state became an owner of the largest banks only in the context of the bank rehabilitation programme (5).
- The management of NLB and NKBM was replaced. The motivation for this was not only to put the banks in the hands of adequately skilled staff but also to ensure arm's-length lending instead of connected lending.

4) In January 1994, Kreditna banka Nova Gorica was the third bank to participate in the rehabilitation programme. In 1995, this bank merged with NKMB. The need for rehabilitating other banks was less pronounced. While they also received some government support, the rehabilitation programme did not cover them.

5) As for the other banks owned by non-financial enterprises, there was only an indirect change of ownership when the status of these "socially-owned" non-financial enterprises was clarified. See Ribnikar (1998) and Moore and Zajc (1999) for a discussion of social ownership, "ownershipisation", and privatisation in Slovenia.

Bank restructuring and recapitalisation has resulted in a well-capitalised banking sector.

As to banks' liabilities, it is worth pointing out that Slovenia adopted a territorial principle in dealing with deposits. This meant that following the break-up of the Yugoslav monetary system, clients could withdraw deposits only if they were with banks - Slovenian or non-Slovenian - on Slovenian territory. At the same time, deposits with Slovenian banks in other Yugoslav republics could not be withdrawn. This contributed, on the one hand, to establishing confidence in the Slovenian banking sector. On the other hand, the default of Slovenian banks - essentially LB - on deposits taken in other Yugoslav republics became a major obstacle to the expansion of Slovenian banks into other Yugoslav republics, notably Croatia; in addition, there have been attempts to sue NLB, i.e. the successor of LB (6).

Overall, the bank rehabilitation process, which ended in June 1998, was successful. NLB and NKBM, which were essentially insolvent at the beginning of the process, reached capital adequacy ratios of over 10 percent in 1997. Bad loans have been partly recovered and partly written off, and new loans are extended following modern risk appraisal methods.

2.2 Ownership structure and concentration

In 2000, the banking sector that had emerged after the completion of the rehabilitation process differed markedly from the banking sector in most other CEECs. For one thing, with a share of 42 percent of banking sector assets in 2000, state-owned banks (i.e. banks in which the state holds at least 50 percent of the equity) dominated the market (see Table 1). In fact, the number of state-owned banks and their market share did not change very much in the second half of the 1990s. In addition to NLB and NKBM - with a 40 percent market share - the government owned the Postal bank (7). Taking into account indirect state ownership, such as NLB stakes in other banks, the total market share potentially controlled by the state is much larger. For another, foreign banks (i.e. banks in which non-residents hold at least 50 percent of the equity) played only a marginal role, accounting for less than 6 percent of banking sector assets.

Table 1. Number of banks and market shares

	1996	1997	1998	1999	2000
Number of banks	31	28	24	25	25
of which: state-owned	3	3	3	3	3
foreign-owned	4	4	3	5	5
Market share (in % of assets)					
State-owned banks	40.1	40.2	41.3	41.8	41.6
Foreign-owned banks	5.3	5.4	4.9	4.8	5.5
3 largest banks	51.7	50.8	51.7	51.4	50.2
5 largest banks	62.6	62.2	63.3	63.5	62.5

Source: Bank of Slovenia.

6) The Republic of Slovenia claims that pre-independence deposits are subject to intergovernmental negotiations of successor states. However, private lawsuits against NLB have been or are being filed by depositors from Croatia, Bosnia and Herzegovina, and Macedonia.

7) In 2001, state ownership of banks slightly increased as the City of Ljubljana through its public utility companies acquired a majority share in Slovenska investicijska banka (SIB).

State ownership and a limited role of foreign investors continue to be a salient feature of Slovenia's banking system ...

Table 1 also shows that concentration in the Slovenian banking sector is fairly high. The three largest banks (NLB, NKBM and SKB) account for half of the market and the five largest for almost 63 percent. To put things into perspective, many EU banking sectors have similar, if not higher, concentration ratios (Belaisch *et al.*, 2001). Concentration in the Slovenian banking sector increased at the end of 2001 when three NLB group member banks merged with NLB. Moreover, the concentration is even higher if assets of other NLB group member banks, in which NLB holds a minority equity stake, are considered. In the future, an increase in market concentration is likely to further consolidation among Slovenian banks.

2.3 Financial depth and the size of the banking sector

Has the large presence of state-owned banks and the virtual absence of foreign-owned banks hampered the development of banking in Slovenia? Figure 1, which shows three commonly used indicators to investigate the financial depth of the Slovenian economy and the importance of banking, suggests that this has not been the case. One indicator is the ratio of broad money to GDP (8). As Figure 1 shows, this ratio increased from about 30 percent in 1993 to 50 percent in 2000. While this certainly suggests an increasing role of money in the economy, the ratio remains well below the average EU level of 80 percent.

An indicator that focuses directly on the intermediation of funds through the banking system is the ratio of domestic bank claims to GDP (9). In 1993-2000, this ratio increased by 20 percentage points, reaching almost 50 percent. There is thus clear evidence that the role of banks in the economy has become more important, though it remains below the degree of bank intermediation observed in the EU. But it is of more relevance to note that bank claims to GDP are not only higher but have also grown far more rapidly in Slovenia than on average in the CEECs.

The previous indicator does not distinguish between different groups of borrowers. There seems to be little doubt that the provision of funds to the private sector is of particular importance for economic growth and development. With this in mind, the third indicator in Figure 1 pictures the share of bank claims on the domestic private sector. We find again an encouraging trend, with bank claims on the private sector increasing from 19 percent of GDP in 1993 to 35 percent in 2000. Again, on this count, Slovenia has outperformed many CEECs.

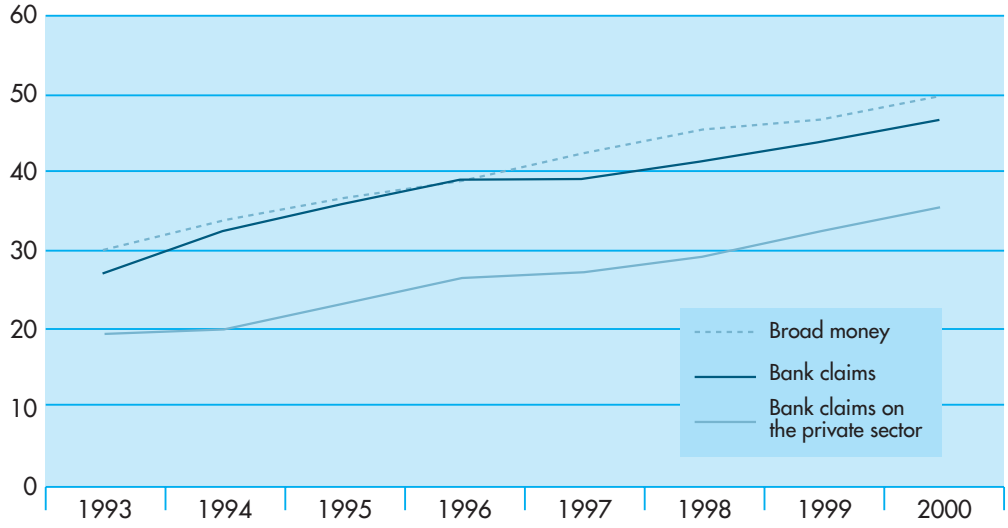
In sum, during the first decade of transition, Slovenia's banking sector has grown rapidly though from a low base. Relative to EU countries, Slovenia is still lagging behind but this is not at all surprising as the process of catching up with more advanced economies was bound to take time. It is worth emphasising that banking in Slovenia has developed more rapidly than in many other CEECs.

8) Broad money is defined as the sum of money and quasi money. Broad money is often used as proxy for M2. See Beck et al., (1999) for a discussion on financial development indicators.

9) An alternative measure for the size of a country's banking sector is the ratio of bank assets to GDP. The coverage of bank assets is broader than that of domestic bank claims. Bank assets also include claims on foreigners and fixed assets as well as the assets of banks that the IFS database of the IMF do not cover. The bank asset-to-GDP ratio confirms the speedy development of banking activities in Slovenia. The ratio increased from about 65 percent in 1995 to almost 80 percent in 2000.

... but this does not seem to have been an obstacle to increased bank intermediation.

Figure 1. Indicators of financial depth and banking sector size, in % of GDP



Sources: International Monetary Fund, IFS.

2.4 The structure of banks' balance sheets

We have seen that Slovenia's banking sector has grown relative to the size of the economy. But have some sectors of the economy participated more in this development than others? To shed some light on this question we investigate the structure of bank assets and liabilities.

The most visible change on the assets side of banks' balance sheets is the steep decline in the share of foreign assets in total assets, reaching 14 percent in 2000 (Table 2). This has been mainly due to an increasing confidence in the domestic currency (the Tolar) and a change in prudential regulations that allowed banks to hold up to 60 percent of their statutory foreign exchange reserve in foreign currency denominated securities issued by the Bank of Slovenia.

As for domestic assets, there has been a rapid rise in the share of claims on households, reflecting a debt-financed consumption spree after years of suppressed consumption (10). By contrast, claims on domestic enterprises have become only slightly more important in the portfolios of banks, accounting for about 31 percent of total assets in 2000. While some claims on enterprises do not reflect the intermediation of funds (e.g. bonds and equity acquired in secondary trading rather than through initial and secondary public offerings), the bulk of such claims are indeed the result of intermediating funds between savers and enterprises (11). What is more, almost all of the bank claims on enterprises are loans. Obviously, loans to enterprises must not be confused with lending to the private sector as they include lending to state-owned enterprises, which are still numerous in Slovenia - not only in traditional public sectors such as telecommunications, energy and transport.

10) There has been, for example, a strong increase in loan-financed car purchases.
11) In any case, 90 percent of the domestic, non-financial sector securities held by banks are government securities.

Table 2. Structure of banking sector assets, in %

	1996	1997	1998	1999	2000
Domestic assets	**79.6**	**84.9**	**86.6**	**87.2**	**86.0**
Claims on financial sector	**15.4**	**21.8**	**19.5**	**17.1**	**17.1**
Claims on central bank	11.6	19.5	17.4	14.7	13.9
Claims on domestic banks	3.8	2.3	2.1	2.4	3.2
Claims on non-financial sector	**58.1**	**57.1**	**60.8**	**63.4**	**62.3**
Claims on enterprises	28.3	27.2	30.5	30.7	30.9
Claims on households	11.5	11.5	12.6	15.9	15.1
Claims on government	17.8	17.8	16.9	15.5	14.7
Claims on other organisations	0.5	0.6	0.8	1.4	1.6
Other domestic assets	**6.1**	**6.0**	**6.3**	**6.6**	**6.6**
Foreign assets	**20.4**	**15.1**	**13.4**	**12.8**	**14.0**

Source: Bank of Slovenia.

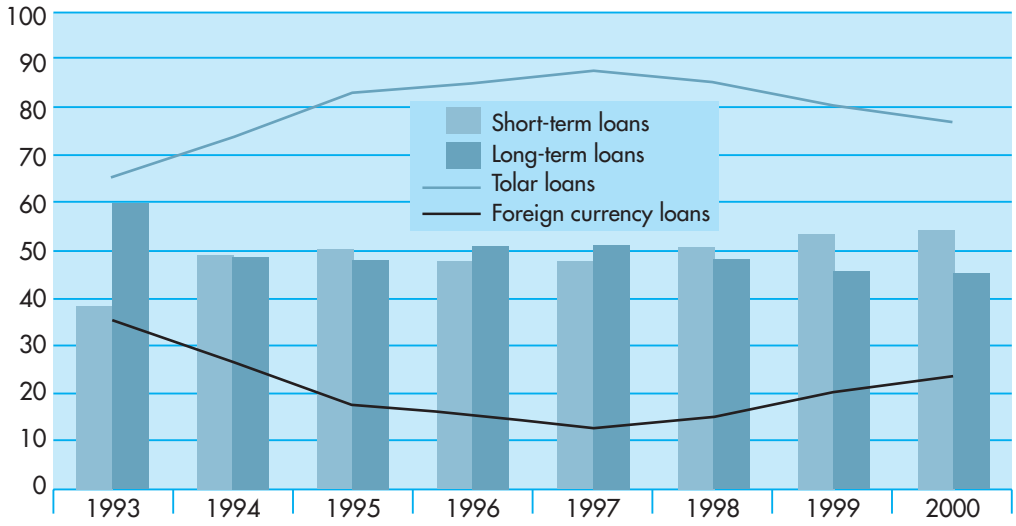
Reflecting the country's success in catching-up with more advanced economies, bank lending to enterprises and households has grown faster than economic activity.

Although modest, the increase in loans to enterprises in percent of assets at a time when bank assets have been growing faster than the Slovenian economy implies that lending to the enterprise sector has grown more rapidly than economic activity itself. This was not necessarily to be expected, given a number of factors that tended to curtail the demand for or the supply of loans. First, having emerged from a bad debt problem, it would not have been completely surprising if banks had taken an excessively cautious approach towards new lending. Second, because of solid economic growth at home and in major export markets, Slovenian enterprises performed well in the second half of the 1990s and, thus, internally generated funds contributed considerably to the financing of investment. Finally, although still modest, foreign direct investment and other international capital flows have increasingly become alternative sources of finance, for large companies with international operations in particular.

Before moving on to the liability side of the banks' balance sheets we take a look at the term and currency structure of assets. Figure 2 indicates that the share of short-term loans to domestic enterprises in total loans to enterprises increased from 38 percent in 1993 to almost 50 percent a year later and continued to rise thereafter, reaching 54 percent in 2000. On average, the maturity of bank loans to enterprises therefore shortened. Figure 2 also indicates that in recent years the currency composition of loans to enterprises changed in favour of foreign currencies. The share of foreign currency denominated loans started to increase in 1997, reaching 25 percent of the total in 2000. This has demand-side as well as supply-side explanations. The demand for foreign currency loans went up in response to an increasing export orientation of the Slovenian economy (the country's export-to-GDP ratio is around 50 percent). In essence, foreign currency loans better match exporters' (foreign currency) revenue than domestic currency loans (12). On the supply side, banks could safely increase the supply of foreign currency loans to domestic enterprises because they were successful in mobilising more foreign currency denominated funds.

12) Table 2 demonstrates that the increase in the share of foreign currency denominated loans went together with a decline in the share of foreign assets in total assets. This confirms that Slovenian borrowers accounted for the increase in foreign currency loans.

Figure 2. Maturity and currency structure of loans to domestic enterprises, in % of total



Source: Bank of Slovenia.

The importance of deposits, in particular from households, has increased with growing confidence in the country's banking sector.

Turning to the structure of bank liabilities, we note first that the breakdown into domestic and foreign liabilities has changed little since the mid-1990s: The share of domestic liabilities in total liabilities averaged about 90 percent (Table 3); foreign liabilities are equivalent to some 10 percent of the balance sheet and continue to fall short of foreign assets (Table 2); the Slovenian banking system has thus maintained its net external creditor position with the rest of the world.

What is more striking, however, is the change in the composition of domestic liabilities, most of which occurred in the first half of the 1990s. As Table 3 shows, the share of financial sector liabilities dropped from 12 percent of the total to below 4 percent in 2000. About 80 percent of financial sector liabilities are interbank liabilities and the remainder reflects banks' borrowing from the central bank. The decline in financial sector liabilities went together with an increase in liabilities to the non-financial sector of the Slovenian economy, which increased from about 50 to 65 percent of total liabilities. Securities issued by banks represented a very small source of funding (3 percent of total liabilities).

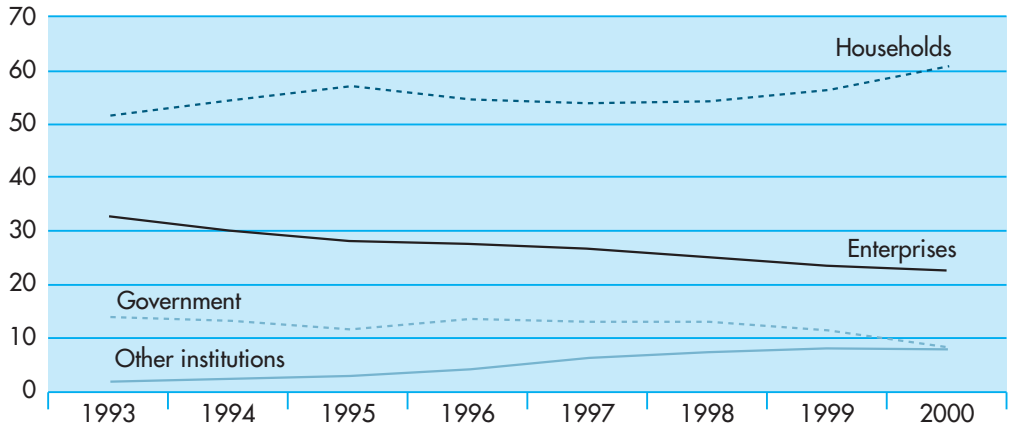
Table 3. Structure of banking sector liabilities, in %

	1993	1994	1995	1996	1997	1998	1999	2000
Domestic liabilities	**85.0**	**87.3**	**88.0**	**88.6**	**90.2**	**91.1**	**89.8**	**88.5**
Financial sector	12.0	8.9	7.1	4.9	3.1	2.3	3.2	3.7
Non-financial sector	51.3	54.7	56.3	62.1	65.7	68.0	66.3	64.6
Equity and reserves	15.2	17.5	16.9	15.9	15.3	14.7	14.2	13.5
Securities issued	2.0	1.7	2.9	2.1	2.5	2.4	2.2	2.6
Other liabilities	4.5	4.5	4.8	3.6	3.6	3.7	3.9	4.1
Foreign liabilities	**15.0**	**12.7**	**12.0**	**11.4**	**9.8**	**8.9**	**10.2**	**11.5**

Source: Bank of Slovenia.

Figure 3 provides details on the composition of non-financial sector liabilities. The share of household deposits increased by ten percentage points, reflecting growing confidence of the population in Slovenia's banking sector after years of uncertainty arising from the bad experience of depositors with the domestic (Yugoslav) financial system. Deposits with the banking sector remain the most important saving instruments for households given that the Slovenian capital market is small and illiquid and that investment funds are still in their infancy. Mirroring the increase in liabilities to households, the share of enterprises in banks' non-financial sector liabilities declined steadily and reached 23 percent 2000. In essence, enterprises have been under pressure to use their funds productively or return them to owners, but not to keep excessive bank deposits.

Figure 3. Breakdown of domestic non-financial sector liabilities, in % of total

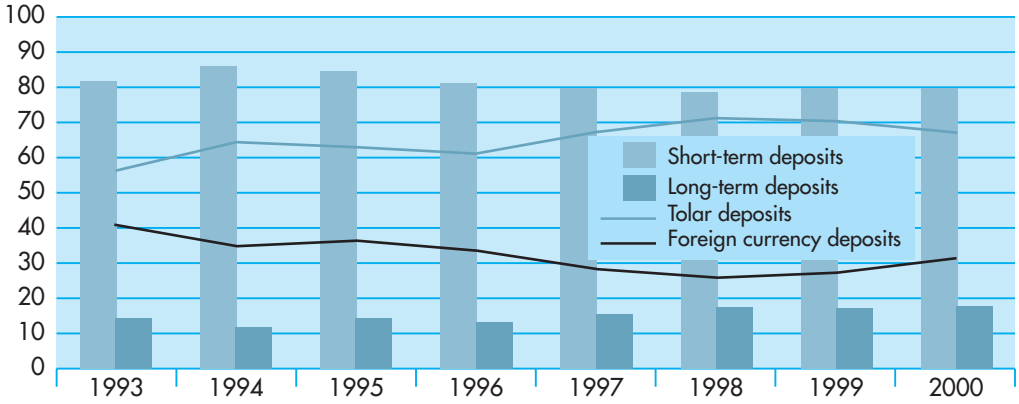


Source: Bank of Slovenia and own calculations.

The term structure of bank assets and liabilities has shortened and long-term funds continue to be scarce.

The term structure of liabilities to the domestic non-financial sector shows a slightly increasing share of long-term deposits, which accounted for around 17 percent of total liabilities in 2000 (Figure 4). Although this trend is promising, it is not very strong and the shortage of long-term sources of funds remains a characteristic of the Slovenian banking sector. The share of foreign currency deposits in total liabilities fell in the period through 1998, but has increased again since then, reaching around 30 percent in 2000.

Figure 4. Maturity and currency structure of non-financial sector liabilities, in % of total



Sources: Bank of Slovenia and own calculations.

2.5 Distribution channels and banking products

In terms of banking sector products and the channels used for offering them to customers, Slovenia is closer to the EU benchmark than most other CEECs (13). Each bank in Slovenia serves on average 80 000 inhabitants, which is also the average for the euro area (14). More informative than this indicator is the number of inhabitants per bank branch. In Slovenia, one branch serves around 3 500 inhabitants, which compares to a euro area average of 2 000 (15). There are also similarities in the number of employees per bank branch, which is 19 in Slovenian and 15 in the euro area.

The depth and type of distribution channels of the Slovenian banking sector are relatively advanced.

Like elsewhere in the world, branch networks are becoming less important in Slovenia as new distribution channels increasingly replace the need for physical contact with a bank employee. For instance, the availability of automatic teller machines (ATMs) more than doubled from 1996 to 2000. As a result, one ATM currently serves about 2 300 inhabitants, which is close to the euro area average of about 1 900. In addition, the range of services offered through ATMs increased as well. Phone and internet banking (introduced in 1997) has been on the rise as well.

As to banking sector products, bank accounts have been around in Slovenia for several decades and people use them extensively (16). In 2000, almost 80 percent of the population older than 15 years had a bank account and almost three quarters of them use bank cards. Furthermore, the use of credit and debit cards has become very popular: By mid-2001, 770 000 credit cards and 1 440 000 debit cards had been issued, which was for a population of two million.

In sum, the Slovenian banking sector seems fairly advanced in providing low-cost distribution channels for key banking services.

2.6 A brief summary

Slovenia's bank rehabilitation programme has been successful in creating confidence in the banking sector. Privatisation and foreign direct investment have been late and, as a result, private ownership of banks and the degree of foreign involvement are considerably lower than elsewhere in the region. Interestingly enough, this does not seem to have been an obstacle to an increase in financial depth and bank intermediation. The growth in bank intermediated funds has spread across all sectors of the economy, but non-financial enterprises and, in particular, households have benefited most. While lending to and borrowing from non-residents has become less significant, the Slovenian banking sector has maintained its net external creditor position with the rest of the world. Finally, the range of bank services and distribution channels is beginning to resemble that of a modern banking system.

The progress made in creating a functioning banking sector has supported Slovenia's economic development. But it is clear that this process is sustainable only if banks are profitable in mobilising and allocating financial savings and in providing other banking services. We address this issue next.

13) We focus here on a comparison of Slovenia with the EU. For data on selected CEECs see, for instance, Hampel (this volume) and Riess et al.*, (this volume).*
14) Euro area data are for 1998 and exclude Luxembourg (see Belaisch et al.*, 2001).*
15) When comparing these numbers, one has to bear in mind different geographic and demographic characteristics of the countries. For example, a high concentration of the population in urban areas reduces the number of bank branches but increases the number of employees per branch.
16) Although prohibited by law, many Slovenians, due to a relatively liberal regime in the former Yugoslavia, also opened and kept bank accounts abroad, mostly in the neighbouring provinces in Austria and Italy.

3. Profitability and soundness of Slovenian banks

3.1 Profitability

To arrive at an answer to the question of whether banks have been profitable, we note first that, despite some decline in recent years, the income from intermediating funds (i.e. banks' net interest income) continues to be far more important for Slovenian banks than for EU banks. Table 4 shows that interest income accounts for about 73 percent of gross income in Slovenia, compared to a EU average of 58 percent (17). Obviously, the importance of interest income in Slovenia mirrors the still relatively limited scope for providing other banking services, notably investment banking and asset management services. But it is also explained by a comparatively high interest margin (i.e. the ratio of net interest income to average earning assets). Figure 5 indicates that the interest margin of Slovenian banks has been, on average, close to 5 percent since the mid-1990s. This is substantially above the EU average of 1.5 percent.

Net interest margins are high, reflecting still relatively large provisions and write-offs as well as a lack of competition.

A variety of factors determine interest margins, but the level of operating costs, the need to provide for non-performing loans, and the degree of competition seem to be most critical. Table 4 indicates that the cost-to-income ratio (i.e. operating cost in percent of gross income) of Slovenian banks is around 60 percent, which is essentially the same as in the EU. Turning to provisions for non-performing loans and write-offs, Table 4 shows that this item in the income statements of Slovenian banks has remained high, accounting for 22 percent of gross income in 2000, which is almost double the EU average. Evidently, high provisions suggest that Slovenian banks still have to cope with a substantial bad loan problem, an issue to which we will return below. Finally, it has been observed that Slovenia's banking sector is not very competitive, reflecting - in part - the high degree of concentration (IMF, 2000b). Overall, it seems fair to conclude that a lack of competition and large provisions explain a good part of the high interest margins in the Slovenian banking sector.

Table 4. Average income statement of Slovenian and EU banks, in % of gross income

	1997	1998	1999	2000	EU 1998
Gross income	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Net interest income	75.3	74.0	70.8	72.6	57.5
Net non-interest income	24.7	26.0	29.2	27.4	42.5
Operating costs	**61.4**	**63.3**	**65.2**	**58.9**	**61.2**
Labour costs	31.5	31.5	32.6	28.9	33.7
Other operating costs	29.9	31.8	32.6	30.0	27.5
Net income	**38.6**	**36.7**	**34.8**	**41.1**	**38.8**
Provisions and write-offs	19.8	15.4	19.7	21.9	11.7
Profit before tax	**18.8**	**21.3**	**15.0**	**19.2**	**27.1**
Tax	5.1	8.1	7.5	7.4	9.0
Profit after tax	**13.7**	**13.2**	**7.5**	**11.7**	**18.0**

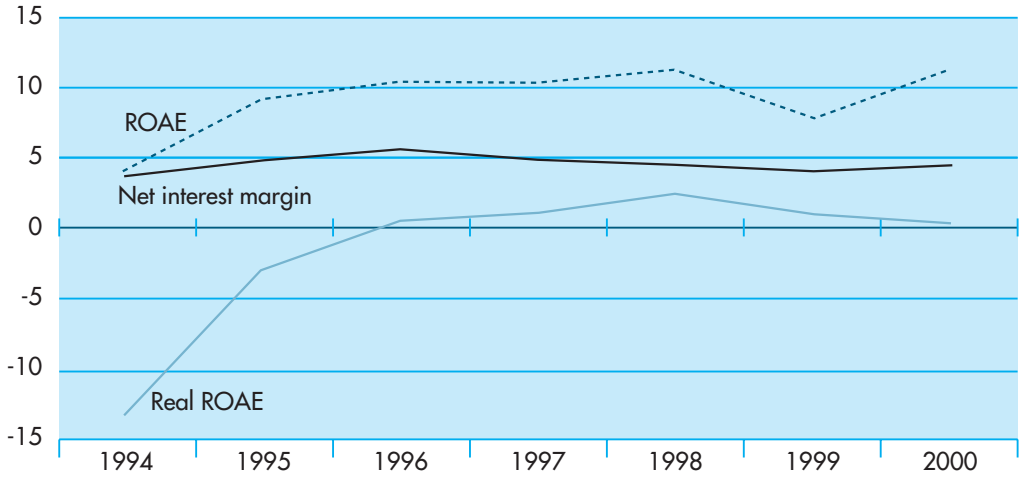
Notes: Net interest income is the difference between interest income and interest expenses. Likewise, net non-interest income is the difference between commissions/fees received and paid. Gross income is the sum of the two. Sometimes gross income is labeled operating income.
Sources: Bank of Slovenia, OECD (2001).

17) In the EU, the share of interest income ranges from 41 percent in France to 68 percent in Spain.

Moving on to profits, Table 4 suggests that interest margins have been sufficiently high to generate profits despite considerable provisions and write-offs. Indeed, Figure 5 demonstrates that Slovenian banks have generated positive nominal returns on equity since 1994. The nominal return on average equity (ROAE) has been close to, and in some years even above, the EU average. Have Slovenian banks therefore generated adequate returns to shareholders? Apparently not! Inflation in Slovenia has been much higher than in the EU and the comparison of nominal returns is thus misleading. To take this into account, Figure 5 also shows inflation-adjusted returns on equity for the Slovenian banking sector. The results are fairly disappointing: While real returns have been positive since 1996, they have remained below 2.5 percent, which is some six percentage points below the EU average.

Banks' profitability appears acceptable in nominal terms, but real returns on equity are disappointing.

Figure 5. Key performance indicators of the Slovenian banking sector, in %



Sources: Bank of Slovenia and own calculations.

It is worth pointing out that the profitability of Slovenian banks has been low, despite a number of peculiar institutional features that have worked in favour of banks. To begin with, in 1995, the Bank of Slovenia endorsed an agreement among banks to cap interest deposit rates while leaving banks free to set lending rates (IMF, 2001). The background to this was an aggressive attempt, of small banks in particular, to expand their lending base by offering high deposit interest rates. In these circumstances, the cap on deposit rates was considered an instrument to contain systemic risks and to avoid excessive borrowing costs. Although the agreement was officially abolished in early 1999, *de facto* it remained effective until late 2000. In addition, in contrast to other investment income, interest revenues from bank deposits are not taxable. This tends to reduce banks' funding costs without necessarily triggering downward pressure on lending rates.

Second, banks benefit from an asymmetric inflation indexation of assets and liabilities. Inflation indexation of financial contracts was introduced in the early 1990s to restore confidence in the domestic currency following a period of hyperinflation. Interest rates are set in real terms and a revaluation clause ensures that nominal rates are adjusted to compensate for past inflation (IMF, 2000b). However, indexation of bank assets is more comprehensive than that of bank liabilities. For instance, demand deposits are not indexed and are remunerated at 1 percent nominal interest rate. Evidently, banks benefit from an inflationary environment. Indeed, estimates suggests that the

interest income arising from asymmetrically adjusting financial contracts for inflation has been equivalent to about 40 percent of total net interest income. What is more, a Bank of Slovenia study (18) seems to suggest that without the interest revaluation gain only five of the 25 banks covered in Table 4 would have reported positive profits in the second half of the 1990s (19).

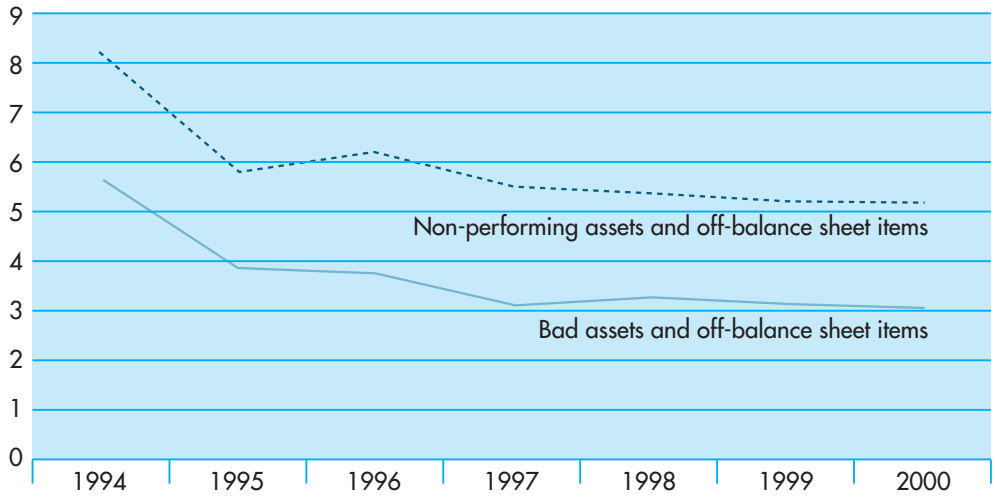
The performance of banks has benefited from a number of peculiar institutional features that are now being removed.

Finally, banks have benefited from the ready availability of high-return, low-risk Bank of Slovenia securities, which reflect the central bank's attempt to sterilise the injection of liquidity resulting from its foreign exchange market intervention that have aimed at containing the real appreciation of Slovenia's currency.

3.2 Soundness

We conclude this section with a brief assessment of the soundness of the Slovenian banking sector. A sign of improving soundness is that the share of non-performing assets and off-balance sheet items in total on- and off-balance sheet items declined from 8 percent in 1994 to 5 percent in 2000 (Figure 6). During the same period, bad assets and off-balance sheet items - a subcategory of non-performing assets and items - declined to around 3 percent.

Figure 6. Non-performing assets and off-balance sheet items, in %



Note: Non-performing assets are subdivided in "substandard", "doubtful" and "loss". Only the latter two categories are included in bad assets.

Source: Bank of Slovenia.

Another encouraging sign is that Slovenian banks are well capitalised. Although the average capital adequacy ratio (i.e. banks' capital in percent of risk-weighted assets) has fallen from almost 22 percent in 1995 to about 14 percent in 2000, it still remains well above the Basel guideline of

18) This study has not been published but reported about in Slovenia's financial press. See, for instance, Gospodarski vestnik (2001).

19) A big-bang abolition of indexation is not planned. Instead, a gradual phase-out is envisaged so that banks have time to refocus their operations. The plan is to gradually lengthen the maturity of non-indexed financial contracts. The first step was taken in 2001 when the indexation of financial contracts with a maturity of up to 30 days was abolished. The indexation of other short-term financial contracts is to be abolished by end of June 2002.

8 percent and the EU average. In fact, some reduction in the capital adequacy ratio from the high 1995 level was to be expected as banks tried to achieve higher returns on equity and given that less capital became necessary on the back of declining non-performing assets.

While standard prudential indicators suggest that Slovenia's banking sector is relatively sound, its long-term viability requires a boost in profitability.

In sum, while the soundness of Slovenia's banking sector has improved, banks' profitability is not what it appears to be at first sight. Real returns on equity are low and have to rise in order to sustain the long-term expansion of the sector. So, the challenge is clearly to improve the efficiency and profitability of banking, and one wonders whether further privatisation and a larger engagement of foreign investors can be helpful in this respect. This takes us to a question Slovenia has been struggling with for quite some time.

4. What to make of privatisation and foreign investors?

Empirical evidence suggests that state ownership in banking slows down financial sector development and economic growth (see, for instance, World Bank, 2002). There is also evidence that the entry of foreign banks raises the efficiency and stability of banking in emerging markets, thus contributing to economic growth (IMF, 2000a). Obviously, foreign ownership in the banking sector may have costs such as potential systemic instability and problems in supervising multinational banks (Clarke *et al.*, 2001). But these issues seem to be less relevant for the Accession countries of Central and Eastern Europe given their increasing economic and political integration with the foreign investors' home countries. Against this background, multilateral development institutions and the EU advised Accession countries to privatise state-owned banks and to engage foreign strategic investors in this process.

Most CEECs followed this advice - some did so sooner than others. By contrast, Slovenia pursued an inward-looking, gradual strategy in rehabilitating its banking sector. The sector has been kept relatively closed and protected from foreign competition. It would be difficult to argue, however, that Slovenia has been less successful than more radical CEEC reformers in creating a functioning banking sector. On the contrary, we have seen that bank intermediation developed quite rapidly and no major banking crises occurred (20). It is true that the sector lacks profitability, but as Riess *et al.*, (this volume) argue, this is a feature that Slovenia shares with other CEECs.

While Slovenia has been sceptical about both privatisation and strategic foreign investors, things have started to change recently. To begin with, in 2001, Société Générale of France acquired SKB, the third largest bank in Slovenia (21). And then, this year SanPaolo IMI of Italy bought Banka Koper. Moreover, Raiffeisen Zentralbank of Austria is planning to take over Krekova banka. All these acquisitions involve private Slovenian banks and thus do not reduce the role of state-owned banks. In this respect, changes are on the horizon with the planned sale of NKBM, the second largest state-owned bank, to foreign strategic investors. Overall, the transactions mentioned here would increase the market share of foreign-owned banks to around 35 percent, up from 6 percent in 2000; at the same time; the share of state-owned banks would fall from over 40 percent to 30 percent.

20) Two smaller banks were closed down, Komercialna banka Triglav in 1996 and Hipotekarna banka Brežice in 1998. This did not cause instability in the banking sector.
21) See Table A.1 in the Annex for a list of all Slovenian banks.

As mentioned above, the sale of NKBM to foreign strategic investors is planned rather than realised. Public opinion in Slovenia continues to be in favour of selling NKBM and, eventually NLB, to domestic investors, arguing that this would better serve the national interest. We find national interest difficult to define, but it is clear that Slovenia must have a keen interest in an efficient, sound, and shock resistant banking sector. Arguably, a very high proportion of foreign bank ownership is not a panacea but we have little doubt that an increased presence of foreign banks is beneficial for the Slovenian economy. In any case, Slovenian financial institutions and pension funds do not have the strength to acquire the country's large state-owned banks and this leaves privatisation to foreign investors as the only realistic option for some time to come. Whether the sale of NKBM will be completed this year is still uncertain although privatisation proceeds have already been accounted for in the 2002 government budget.

A number of private Slovenian banks have been sold recently to foreign banks, but the degree of involving foreign investors in the privatisation of large state-owned banks continues to be debated.

A 35 percent market share of foreign-owned banks and increasing competition from cross-border lending should be sufficient to produce the hoped for benefits of foreign bank ownership. Domestically-owned banks will have to become more efficient to remain in business, but there is little reason why they should not be successful in coping with this challenge. After all, Slovenian banks are stronger than banks in other CEECs had been when they were exposed to foreign competition. In the end, the foreign-domestic ownership structure emerging in Slovenia may turn out to be more balanced than elsewhere in the region.

The future will bring new challenges for Slovenia's banks, no matter who owns them. The institutional setting, which may have been helpful in protecting an infant banking industry, is being revamped. With the phasing out of the asymmetric inflation indexation of financial contracts a substantial source of bank revenues will disappear and banks will have to find other sources of revenue, better exploit existing ones, and reduce costs. These are no minor tasks for Slovenia's banking sector in the second decade of the country's independence.

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Annex

Table A1. Slovenian banks and their market share by bank assets, in %

Rank	Bank	1999	2000	2001
1	Nova Ljubljanska banka (NLB)	28.0	28.8	28.3
2	Nova Kreditna banka Maribor (NKBM)	12.0	11.5	11.7
3	SKB	11.4	10.1	9.6
4	Banka Koper	6.2	6.2	6.4
5	Abanka	5.6	5.9	6.2
6	Banka Celje	5.8	5.8	5.9
7	Gorenjska banka	4.8	5.0	5.0
8	Dolenjska banka*	3.3	3.2	3.1
9	Bank Austria Creditanstalt	3.1	3.0	3.1
10	Pomurska banka*	2.3	2.3	2.3
11	Krekova banka	2.2	2.1	2.0
12	Banka VIPA	2.0	1.9	1.8
13	Poštna banka Slovenije	1.8	1.8	1.8
14	Probanka	1.5	1.5	1.5
15	Banka Domžale*	1.4	1.4	1.5
16	Koroška banka*	1.4	1.5	1.4
17	SZKB	1.5	1.5	1.4
18	Banka Velenje*	1.4	1.3	1.3
19	Volksbank - Ljudska banka	0.9	1.0	1.0
20	SIB	0.9	0.9	1.0
21	Banka Zasavje*	1.0	0.9	0.9
22	Factor banka	0.7	0.8	0.9
23	Hypo Alpe-Adria-Bank	0.4	0.7	0.8
24	Banka Société Générale	0.4	0.4	0.5
25	Kärntner Sparkasse	0.0	0.0	0.5

Notes: For 2001, data as of end-June. * indicates members of the NLB group.

Source: Bank of Slovenia.

Successful banking in an enlarged EU

Erich Hampel

1. Introduction

From the single-tiered banking system of the late 1980s, still ruled by the communist party, Eastern Europe's financial system has evolved towards one which EU countries have long been accustomed to. Central and Eastern European Countries (CEEC) are now on the brink of EU membership, and accession to the European Union requires the implementation of the *acquis communautaire*, the set of laws that underpin the common market. As a result of adapting to the *acquis*, the CEEC financial systems have already been transformed to such an extent that the supervisory and legal framework has more or less reached EU standards.

Other papers in this volume describe how the size and sophistication of the financial system in the CEECs has evolved over the past ten years, and how it remains underdeveloped today. Complementing these papers, this paper presents the mid-term strategy of a commercial bank that has established a strong presence in the region.

In the next section, I will discuss the growth scenarios for the banking sector in the CEECs. Following ten years of far-reaching reforms, it is clear that the region constitutes an extremely promising market on our doorstep. In Section 3, I will explain our strategy, and how we at the Bank Austria/Creditanstalt/HypoVereinsbank (1) group are going about exploiting these opportunities. In particular, the view that Central and Eastern Europe, our second core market has motivated the expansion of our banking group for more than a decade (2). In Section 4, I will briefly summarise our achievements to date and where we are positioned vis-à-vis our competitors. Section 5 concludes the paper with a summary of how we assess the banking market in the region.

2. The growth potential of Central and Eastern European banking markets

It is fair to say that the financial services sector in Eastern Europe is still largely under-developed, despite the considerable progress that has been achieved in the past ten years. The enormous supply gap is evident in the degree of monetisation, which is clearly lagging behind the EU standard. Money in circulation plus deposits in the CEECs (i.e. M2) as a percentage of GDP is roughly equal to two-thirds the level seen in the EU. Bank intermediation, as measured by the standard indicator of bank claims on the domestic sector as a percentage of GDP, is even lagging behind to a greater extent. As Riess *et al.*, document in this volume, bank claims in percent of GDP amount to roughly one third of the corresponding EU measure.

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1) In 1997, Bank Austria acquired full ownership over the Austrian bank Creditanstalt. The group Bank Austria/Creditanstalt and the German HypoVereinsbank merged in autumn 2000. Within HVB Group, Bank Austria is responsible for Central and Eastern Europe. Erich Hampel is the responsible board member.

2) In the late 1980s, even before the collapse of communism, Creditanstalt was already present in Hungary, where the bank conducted, among other activities, offshore banking business. In the early 1990s, we were among the first banks to be established in the Czech Republic, and we were the first western bank in Slovenia. We also received the first full bank licence to operate in the Russian market.

This low aggregate measure of bank intermediation is reflected in low credit supply and a low level of customer deposits. In more detail, loans in percent of GDP stand at around 14 percent in South-East Europe, about 40 percent in the Czech Republic, Slovenia and Croatia, and at 30 percent on average in the CEECs. This compares to a ratio of over 100 percent in the euro zone. The situation is similar in the case of deposits: in the CEECs they amount to some 43 percent of GDP, while the comparable figure for the euro zone is 85 percent. In individual CEECs, the share ranges from 20 percent in Romania to about 70 percent in the Czech Republic and Slovakia.

There is a considerable growth potential for banking in Central and Eastern Europe.

The underdeveloped nature of banking in the CEECs coupled with strong economic growth prospects implies a banking growth potential that is unimaginable for the over-banked and low-margin banking market in the euro zone. And growth potentials also exist in other segments of the financial market. For example, the stock market capitalisation for the whole of Central and Eastern Europe amounts to no more than the stock market capitalisation in Ireland. The combined annual turnover on the stock exchanges in Prague, Budapest and Warsaw equals the turnover registered on the Frankfurt stock market on ten trading days. CEEC bond markets, which are dominated by government bonds, are equivalent to 5 to 20 percent of GDP; this compares to a figure of approximately 50 percent in the euro zone.

Table 1. Indicators of the current state of development of the financial sector, in % of GDP

	euro zone = 100
Loans	28
Deposits	50
Market capitalisation	21
Government bonds	37

Table 1 provides an overview of where the CEEC financial sectors stand at the moment in comparison to their EU counterparts (figures in Table 1 are presented in percent of the euro zone average). This Table clearly reveals that the use of external finance sources, such as bank loans, bonds, and stocks - is relatively limited. Corporates in particular must use other means to finance their investment projects. Smaller firms are likely to rely more heavily on retained earnings. However, larger firms, and especially blue-chip companies, also tap financing sources outside the region.

Looking into the future, the growth potential for deposits and, in particular, for new loans is higher than that for total assets. This is due to improved regulations for corporate governance, and to better ways and means of dealing with old problem loans. As a result, deposits and loans will experience a surge in volume by 2005. Table 2 shows that we expect growth rates of 69 and 85 percent in these sectors between 2000 and 2005.

Table 2. Forecast development of the CEEC banking market, bn EUR

	2000	2005	Change	
Total assets	291	471	+180	+62%
Loans	124	229	+105	+85%
Deposits	168	281	+113	+69%

Table 3 presents financial sector developments in individual CEECs from another angle - the degree to which banking products are currently used. In Germany and Austria, broadly speaking, between 90 and 100 percent of the population aged over 15 years have an account with a bank. In Eastern Europe the use of bank accounts is less widespread although striking differences exist between the accession countries. The comparable figure for Slovenia is close to 80 percent, which is not much below the level in Austria. The middle range of 45 to 65 percent comprises the Czech Republic, Croatia, Hungary and Slovakia. At the low end we find Poland - the largest applicant country - where the share is as low as 34 percent, and Bulgaria and Romania where even less than 10 percent of the population have opened a bank account. Other examples of retail banking products that, in a number of countries, seem to be under-supplied include bankcards, savings books, time deposits, mortgages, loans and securities. This shows that the region offers a huge business potential for a universal bank, once the economic catching-up process has got under way.

Central and Eastern Europe has become a prime target for the international banking community.

Against this background, it is hardly surprising that CEEC financial markets have become a prime target for the international, especially EU, banking community. Towards the mid-1990s, CEEC governments stepped up the privatisation process in their banking industries. Furthermore, some countries opened up their banking markets to foreign "greenfield" operations. As a result, in most economies of the region banking business has become a domain of foreign banks. Except for Croatia, Romania and Slovenia, the banking market is firmly in foreign hands (see Figure 1). It is worth noting, however, that in countries such as Slovakia the dominance of foreign banks is only a very recent phenomenon.

Table 3. Use of banking products in 2000

	% of total population over 15 years who use this product									
Product	A	D	BG	CRO	CZ	H	PL	RO	SK	SLO
Account (any)	89	97	6	60	64	46	34	8	55	79
Bank card	57	n.a.	n.a.	30	49	35	21	3	36	57
Savings books	68	n.a.	10	45	38	16	13	13	58	53
Time deposits	29	n.a.	11	4	12	8	6	21	14	15
Mortgages	56	30	0	1	20	2	0	0	15	3
Loans	18	22	3	10	7	7	14	4	6	17
Securities	15	n.a.	0	n.a.	3	4	n.a.	2	4	7

Note: A=Austria, D=Germany, BG=Bulgaria, CRO=Croatia, CZ=Czech Republic, H=Hungary, PL=Poland, RO=Romania, SK=Slovakia, SLO=Slovenia.

Foreign ownership can make a positive contribution to the transformation of the CEEC banking sectors by more than just making capital available. Employees are also often offered training to become familiar with modern banking techniques. To stress the importance of Western knowledge in banking, in one of the smaller CEECs it was decided that the governor of the central bank must be a foreigner for a certain initial period.

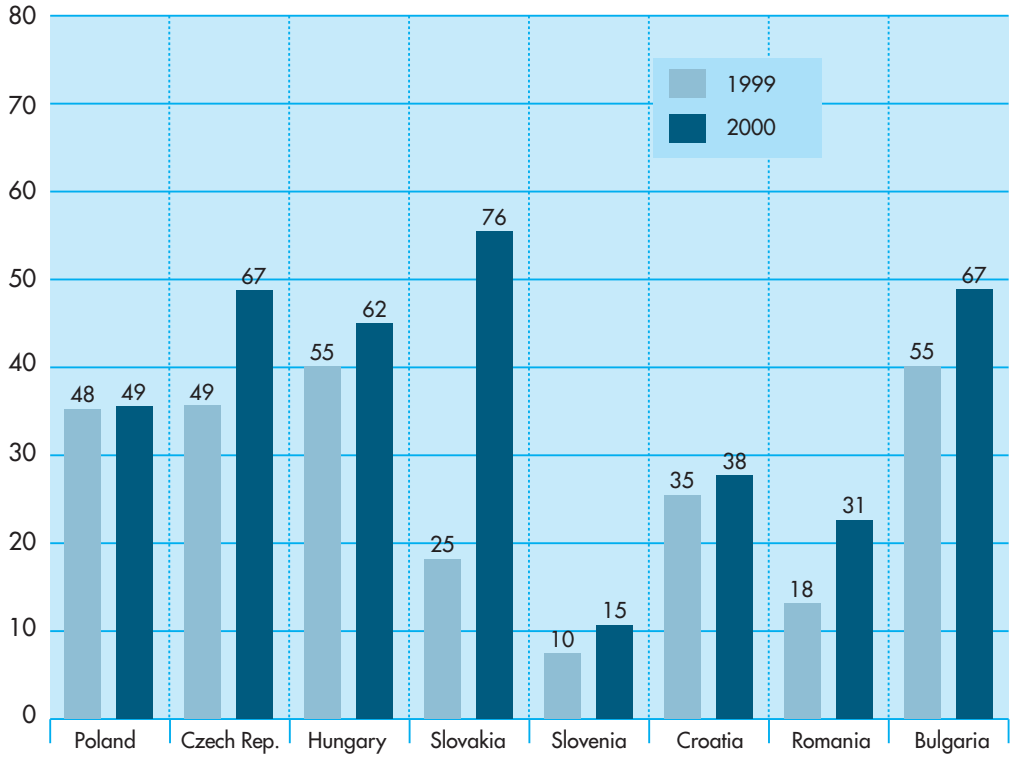
3. Our strategy

How is the HypoVereinsbank group going to turn this opportunity in the financial markets of the CEECs into a success story? What do we aim for?

Our view is that the region's banking sector differs substantially from other emerging markets.

An important point is that our starting position is excellent, as the businesses of Bank Austria, Creditanstalt and HypoVereinsbank fit together very well. Combined, they maintain a comprehensive network throughout the CEECs region in addition to the two home markets in Austria and Germany, a continuous region of 165 million consumers. Indeed, it is our view that the market in the CEECs differs significantly from other emerging financial markets in the world since it lies on our very doorstep. For our operations, we are not only taking advantage of our cultural similarities and generally good neighbourly relations, although such "soft" features are important. We are also taking advantage of the very close economic ties between the regions, both in terms of foreign direct investment (FDI) and trade.

Figure 1. Share of foreign banks in total assets, in %



Note: This Figure is based on equity interest reflecting the shareholder structure in 1999 and 2000, including holdings of the EBRD, IFC, and non-banks.

We also expect to benefit from an "early mover" advantage. All banks within our group became involved with this market at the very beginning. Such timing is highly significant. During the period in which this region found itself deep in a transformation crisis, we already maintained an office network there. Even though our business volume at the time was low, it now gives us an advantage in terms of know-how over competitors who remained absent. In addition, we succeeded at that time in establishing relationships with local customers which is essential to us today.

In the early stage of transition our philosophy was to commence activities in the region via "greenfield investments". At that time we discovered a banking sector that was still far from the banking sector structure to which we were accustomed in the West. The restructuring of banking and financial markets had yet to begin in most countries. Privatisations were still in the distant future and the bad loan problem had not been solved. In several cases, balance sheets did not meet international accounting standards. Therefore, to start business operations successfully in these countries, there was no other choice but to establish our own branch offices or affiliates.

Today, more than ten years later, the situation has changed significantly. Bank legislation along the lines of the EU directives has been implemented everywhere. CEEC governments have also dealt to a large extent with the bad loan problem and, in all countries except Slovenia, major commercial and universal banks have been privatised. This led to new opportunities for foreign banks to enter the region's market via the second route of purchasing existing "retail networks" on a large scale. Indeed, Bank Austria and the HypoVereinsbank purchased two major Polish banks, namely the Powszechny Bank Kredytowy (PBK) and the Bank Przemyslowo Handlowy (BPH). Following the merger of these two banks, the Hypovereinsbank group has actually become the third largest bank in Poland.

Central and Eastern Europe is the second core market for the HVB Group.

Our business focus has also 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 HypoVereinsbank 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. This distinguishes our Eastern European strategy from other international activities. In other parts of the world, the group often only operates as a special-purpose bank. However, in the CEECs we wish to set up a true universal bank that differs from local banks only in that it has a foreign owner and that it is hopefully more cost efficient and profitable.

To achieve this last goal, we pay special attention to business organisation. The HypoVereinsbank group operates with the know-how and standing of Europe's third-largest bank - but without forgetting the basic sales principle that "all business is local". We are well aware that every transaction requires a healthy combination of both a decentralised and a supra-regional presence. Our banking strategy, on the one hand, means being aware of, and serving, the needs of local customers. Our banking subsidiaries should fulfil this task with entrepreneurial initiative and in a decentralised fashion, with short lines of operative decision-making. On the other hand, our strategy is founded on the supra-regional group - the reason why we have called our approach the *bank of the regions* - with a uniform strategy that involves centralised control and risk management, and binding corporate guidelines, which regulate all regional activities.

To conclude, what we are, and what we want to be in Central and Eastern Europe, is both local and international. The HypoVereinsbank group operates according to local needs by creating universal bank subsidiaries, but at the same time, these subsidiaries are an integral part of an international network that we place at the disposal of our local customers. Naturally, we believe this banking strategy is the one that is most likely to succeed over the longer term.

4. Achievements

That we feel confident about our approach to the region comes from our successes so far. Before the announcement of the merger with HypoVereinsbank, the Bank Austria/Creditanstalt group was already running operational units in nine CEECs. At the end of 2000, our bank was well ahead of its main international competitors such as Société Générale, Citibank, ING and the Raiffeisenbank by operating the largest banking network in Eastern Europe. At that moment, Bank Austria/Creditanstalt managed roughly EUR 15 billion in total assets. The merger with HypoVereinsbank brings in an additional EUR 6 billion of total assets. The group is currently active in thirteen countries in the region. Our latest subsidiary was opened on the 29th of October 2001 in Belgrade, and we will soon open a representative office in Sarajevo.

The early involvement and achievements of the group in the region provides a sound basis for further extending its activities.

The key figures presented in Figure 2 for the HypoVereinsbank group in Central and Eastern Europe speak for themselves:

- The combined total assets amount to EUR 21.3 billion.
- The banking network comprises almost 750 offices.
- The market share in individual countries stands at between 5 percent and 10 percent.
- The group employs 18 500 employees in the CEECs, which is more than in Austria.
- The group manages accounts for 2.6 million retail customers (also more than in Austria).
- The group serves 80 000 corporate customers.

At present, 25 percent of total income is generated in the CEECs. In nominal terms, our banking business is more profitable in Eastern Europe than in Austria. At the moment, the total return on equity in our subsidiaries in the CEECs is around 20 percent whereas in Austria this is about 10 percent. And we have set ourselves the mid-term policy objectives of increasing the return on equity to 30 percent and the share of income generated in the CEECs to 50 percent.

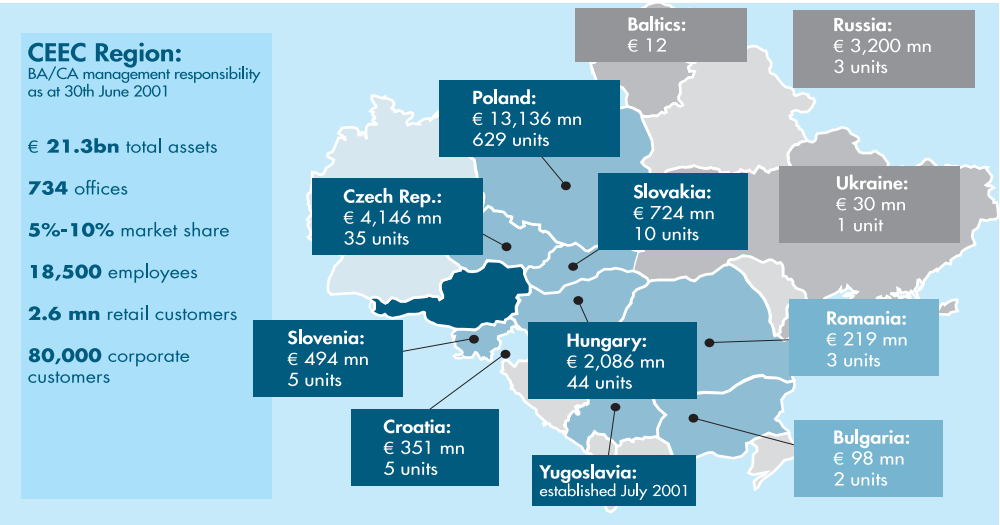
5. Summary

To conclude with a summary of how we assess the banking market in Central and Eastern Europe:

Firstly, despite the reforms and progress made in Central and Eastern Europe over the past ten years, the financial markets in the region are still largely under-developed. The aggregate total assets of the credit institutions in the CEECs stand currently at EUR 290 billion, which is roughly equal to the size of Landesbank Baden-Württemberg in Germany. This demonstrates that there is a truly fantastic potential for growth. Indeed, the prosperous outlook for the development of the CEECs banking industry has attracted the interest of many Western, especially EU, banks. As a result, the majority of bank assets are now in foreign hands.

Secondly, the expectation that the CEECs will soon be part of the Single Market is evidently one of the driving forces behind the decision of EU banks to enter the region's market. This includes the HypoVereinsbank group. With EU enlargement, it is also likely that part of the region will soon join the common currency zone of our two home markets of Austria and Germany.

Figure 2. HVB and Bank Austria/Creditanstalt in Central and Eastern Europe



Thirdly, from the very start many Western banks were active in corporate lending and some, like our subsidiary Creditanstalt Investment bank, were making important transactions on the capital market. Now, after ten years of transition, the time is ripe for exploring business opportunities in retail banking. Thanks to the policy achievements of CEEC governments, foreign banks could purchase large retail networks. With this background, the HypoVereinsbank group decided to consider the region as a core market in all its facets.

A thorough understanding of the market is the key to success.

Fourthly, the secret of success in the CEECs is not really a secret. It is simply what is always demanded of successful business people throughout the world. This is an understanding of the market, close proximity to customers, and competitively priced products and services. The "gold rush" is part of the past. But those seeking business opportunities - even if they do not have a gold rush mentality, or perhaps precisely for that reason - will find Central and Eastern Europe an attractive market that is certain to prosper over the long term.

The future of Eastern European capital markets

Jens Köke

Michael Schröder

1. Introduction

Capital markets are - by definition - a fairly new phenomenon for countries that started embracing capitalism a little more than ten years ago. More specifically, the first securities exchanges in Central and Eastern Europe (CEE) opened at the beginning of the 1990s and the last had been set up by the mid-1990s. Given their short history, it is not surprising that CEE capital markets continue to be relatively small. What is more, the global market downturn over the last one and a half years has not left CEE capital markets unscathed. Against this background, this paper examines the status of CEE capital markets - including their contribution to the financing corporate investment - and discusses strategies to advance their development.

Table 1 summarises key characteristics of CEE and Western European stock and bond markets. It confirms that the CEE stock exchanges are relatively underdeveloped. Only the Warsaw Stock Exchange is comparable to the smallest Western European exchange - the Vienna Stock Exchange. All other CEE stock exchanges have a low market capitalisation - both in absolute terms and relative to GDP. In most western exchanges, stock market capitalisation is well above 50 percent while it typically amounts to less than one-fifth of GDP in the CEE stock markets. This means that only a small fraction of the total value of CEE companies is traded at stock exchanges.

Another important characteristic of stock markets is liquidity, which is often measured as the ratio of market turnover to market capitalisation. This ratio indicates how often the total value of stocks is traded on average during a year. A high ratio points to a relatively liquid market. Market liquidity is particularly important for institutional investors that usually have large order sizes. With the exception of Austria, the Western European stock markets have a turnover ratio of 90 percent to 170 percent. With the exception of the small Baltic exchanges, the other CEE stock markets have surprisingly high turnover ratios. Although the economic relevance of these markets is rather limited, the degree of trading activity is comparable to Western exchanges.

Table 1 also shows the capitalisation of bond markets. These figures should be interpreted with caution, however, as a large part - in some countries even the majority - of bonds are traded over the counter, and these bonds are not included in the data. Cognisant of this caveat, the table demonstrates that CEE bond markets are also very small compared to their Western European counterparts.

The rest of the paper proceeds as follows. In Section 2 we review the status of securities markets in the Czech Republic, Hungary and Poland in more detail. These markets can clearly be identified as the best developed amongst the group of CEE countries. Section 3 deals with the importance of CEE stock and bond markets for corporate finance. In Section 4 we analyse the prospects for the CEE securities exchanges, focussing on the question of what would be the best strategy for further

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developing CEE capital markets. Section 5 concludes and gives some recommendations for economic policy.

Capital markets in Central and Eastern Europe are small, but this is not entirely surprising given their short history.

Table 1. Major characteristics of CEE stock and bond markets, 2000

	Stock Markets (Domestic Companies)			Bond Markets	
	Market Capitalisation		Market Turnover	Capitalisation	
	In USD billion (in % of GDP)		In % of capitalisation	In USD billion (in % of GDP)	
Czech Republic	9.7	(19)	69	5.2	(10)
Estonia	1.8	(41)	17	0.04	(1)
Hungary	11.9	(26)	102	9.2	(20)
Latvia	0.56	(8)	48	0.46	(7)
Lithuania	1.6	(14)	13	0.39	(4)
Poland	29.6	(19)	65	17.9	(11)
Slovak Republic	0.44	(2)	123	2.2	(7)
Slovenia	3.1	(17)	30	1.1	(6)
Austria	29.9	(16)	32	114.1	(59)
Germany	1 270	(67)	167	2 077	(109)
Greece	107.5	(90)	88	79.5	(66)
Portugal	60.7	(57)	90	49.0	(46)
UK	2 612	(187)	(175)	1 424	(102)

Notes: Market turnover shows all transactions that pass through the trading system or the trading floor for all countries except Latvia and the UK. The last two countries show all transactions under the supervision of the market authority (off- and on-market). These two sets of figures are not directly comparable. The bond market capitalisation figure for Germany and Greece is from 1999.
Sources: IMF, national central banks, FIBV, national stock exchanges.

2. Developments in Budapest, Prague and Warsaw

So what is the situation at the more developed CEE exchanges of Budapest, Prague and Warsaw? After a brief tour of three key sub-sectors (stock markets, bond markets, and derivative markets) we review fee structures and listing requirements and comment on the role of institutional investors in each of the three countries.

2.1 Developments on securities markets

Stock Markets

Among the CEE stock markets, Poland has the largest market in terms of the number of stocks listed. In 2000, a total of 225 stocks were listed on the Warsaw Stock Exchange. This number was significantly lower for Prague (57 stocks) and Budapest (58 stocks). The number of stocks listed in Warsaw has also increased continuously, while it has tended to stagnate or even decrease in the other CEE countries (see Table 2).

Stock market growth has been uneven across countries, with developments in the Czech Republic being particularly disappointing.

A similar picture emerges when looking at market capitalisation as an alternative indicator for the growth of the stock market. Warsaw experienced a steady increase in market capitalisation relative to GDP while the other two markets went through a more erratic period; in fact, market capitalisation in the Czech Republic was not higher at the end of the period considered here than at the beginning. In absolute terms, the Polish stock market is the largest among all CEE economies (about USD 30 billion); however, in relative terms, capitalisation is higher in Hungary (26 percent of GDP) than in the Czech Republic (19 percent) or Poland (also 19 percent). Market turnover is also substantially higher in Hungary than the other two countries.

Table 2. Development of stock markets, 1995-2000

	1995	1996	1997	1998	1999	2000
Number of domestic companies listed:						
Czech Republic	54	82	91	92	74	57
Hungary	42	44	47	53	64	58
Poland	65	83	143	198	221	225
Market capitalisation (in % of GDP):						
Czech Republic	20	27	24	19	23	19
Hungary	6	12	35	29	36	26
Poland	4	6	9	13	20	19
Trading volume (in % of market capitalisation):						
Czech Republic	29	44	53	45	38	69
Hungary	14	30	48	116	84	102
Poland	61	62	61	43	36	65

Notes: Statistics for market capitalisation and trading volume exclude stocks traded in the unregulated free market. The data include only domestic companies. The data for Poland and Hungary include the regulated free market.

Sources: Budapest Stock Exchange (2001), International Federation of Stock Exchanges (FIBV)(2001), Prague Stock Exchange (2001), and Warsaw Stock Exchange (2001).

To allow a preliminary assessment of the role of CEE stock markets for corporate finance - an issue that we take up later in more detail - Table 3 shows the volume of equity issuance. In recent years, the amount of capital raised by already listed companies is small in all three countries. In 1998-2000, the largest amount of capital was raised in Poland (0.4 percent of GDP). The respective figure for Germany is also low, but the figures for Portugal (6.2 percent) and Spain (5.7 percent) are much higher. Looking at capital raised by newly listed companies, we find similarly low figures for the Czech Republic and Poland. Capital raised by newly listed companies played some role for corporate finance only in Hungary. It is noteworthy that Poland is the only CEE country where secondary public offerings raised more capital than initial public offerings (0.4 percent of GDP compared to 0.1 percent of GDP). This indicates that the Warsaw Stock Exchange has become more than an instrument for completing privatisation programmes.

A comparison of the period 1995-97 with that of 1998-2000 reveals that equity issuance of newly listed companies has shrunk in all CEE countries. This decrease is particularly strong for the Czech

Republic where large-scale privatisation in the mid-1990s via voucher programmes pushed stock market growth. The subsequent decline can be explained by weak regulation in the early years of the exchange, which led to a loss of confidence in the late 1990s.

Table 3. Equity issuance volume, 1995-2000

	Capital raised by already listed companies (in % of GDP)		Capital raised by newly listed companies (in % of GDP)	
	1995-1997	1998-2000	1995-1997	1998-2000
Czech Republic	0.3	0.3	6.7	0.0
Hungary	0.1	0.1	1.0	0.7
Poland	0.2	0.4	0.2	0.1
Germany	0.4	0.4	0.3	0.7
Spain	0.5	5.7	0.2	5.5
Portugal	0.6	6.2	0.0	1.6

Notes: Statistics are calculated as a three-year average across the periods of 1995-97 and 1998-2000.
Sources: FIBV (2001) and IMF (2001).

Bond Markets

Bond markets are dominated by public sector debt securities, with the exception of the Czech Republic where corporate bonds are significant

Table 4 shows the number of bonds listed on the three CEE exchanges. Again these markets are small. Most debt securities are from public sector entities, though in the Czech Republic a comparatively large share of bonds are issued by private, domestic corporations. For Poland, there has only been one corporate bond listed on the Warsaw Stock Exchange since April 2000.

Table 4. Development of bond markets, 1995-2000

	1995	1996	1997	1998	1999	2000
Number of bonds listed or registered for trading (of which: private domestic)						
Czech Republic	20 (n.a.)	27 (n.a.)	35 (n.a.)	36 (n.a.)	33 (n.a.)	41 (20)
Hungary	37 (3)	38 (2)	35 (7)	38 (8)	40 (8)	38 (7)
Poland	33 (0)	42 (0)	44 (0)	44 (0)	47 (0)	48 (1)
Trading volume in % of GDP for listed or registered bonds (of which: private domestic)						
Czech Republic	5 (3)	9 (7)	26 (15)	38 (22)	55 (34)	46 (27)
Hungary	<1 (0)	2 (0)	12(0.2)	24(0.2)	29(0.1)	5(0.4)
Poland	3 (0)	2 (0)	1½ (0)	1 (0)	½ (0)	<½ (0)

Notes: Statistics for the number of bonds include domestic private, domestic public and foreign bonds. Trading volume excludes bonds traded in the free market.
Sources: Budapest Stock Exchange (2001), Prague Stock Exchange (2001), Warsaw Stock Exchange (2001), FIBV (2001).

Trading volume differs significantly between the CEE countries considered here. We find the largest trading volume for the Czech Republic (46 percent of GDP in 2000), with much lower trading in Hungary (5 percent), and almost no trading in Poland (0.3 percent). There has been a steady increase

in trading volumes for the Czech Republic (though with a significant drop in 2000). Hungary is noteworthy for the drop of over 80 percent in public bond trading in 2000. For Poland, the data suggest that bond trading is very low and decreased throughout the entire period 1995-2000. However, it is important to note that the statistics presented in Table 4 only refer to listed or registered securities traded on exchanges. They include neither debt securities traded in the free market nor securities traded over the counter (OTC), for which no reliable data are available. According to Deutsche Bank Research (2001), the OTC market is of significant size, in particular in Poland.

Another approach to examining the importance of CEE bond markets is the analysis of all debt securities outstanding. The advantage of this approach is that it (i) includes not only publicly traded securities and that it (ii) distinguishes between domestic and international debt securities. According to the definition of the Bank for International Settlements, domestic debt securities are bonds issued by local issuers in local currency. International debt securities are (i) bonds issued by local residents in the domestic or international market, denominated in foreign currency or (ii) bonds issued by international issuers (corporate or other institutions such as the EBRD or the EIB) issuing in domestic markets, denominated in local or foreign currency.

Table 5 illustrates the data following from this approach for the three CEE countries and selected EU members. It confirms that the Czech Republic has, relative to GDP, the largest domestic debt market. But in absolute terms, the Polish market for domestic debt securities is the largest with USD 33.9 billion in 2000, suggesting that the OTC market in Poland is indeed significant. Additionally, we find that non-financial corporate bond markets are insignificant with the exception of the Czech Republic. Regarding international debt securities, there is a significant market in Hungary. But again, the largest fraction of these international debt securities is issued by the public sector, therefore contributing little to corporate finance. International debt securities are primarily issued by non-financial corporations only in Poland.

Table 5. Outstanding debt securities as a percentage of GDP, end 2000

	Domestic Securities			International Securities		
	Financial	Corporate	Total	Financial	Corporate	Total
Czech Republic	5.5	5.3	46.1	n.a.	n.a.	n.a.
Hungary	n.a.	1.5	35.5	0.4	0.4	23.0
Poland	n.a.	0.0	20.3	0.3	2.3	3.3
Germany	49.7	1.3	90.2	39.9	6.7	47.7
Spain	5.3	4.8	59.0	14.8	6.2	27.2
Portugal	16.1	9.6	61.7	15.8	2.5	32.1

Notes: Total outstanding debt securities encompasses financial debt securities, corporate debt securities as well as public debt securities. The last category is not shown in this Table.
Source: Bank for International Settlements (2001).

Derivatives Markets

Derivatives markets are in their infancy.

Budapest and Warsaw are currently the only CEE exchanges that offer derivatives trading, though Prague obtained the permission to organise derivatives trading in August 2001. Table 6 gives a

brief summary of recent historical turnover volume for a variety of derivatives. Both in Hungary and in Poland, futures trading got off to a jump-start after its introduction. Futures trading on the Warsaw exchange (WIG20) reached a value of around USD 17 billion during the first nine months of 2001. However, futures trading in Budapest (BUX) peaked in 1998 but has declined steadily since then. In Budapest, the trading of interest derivative products declined sharply after 1998, with trading in interest futures even coming to a halt in 2001. One reason for this decline is probably the improvement in macroeconomic conditions and stabilising interest rates.

Table 6. Turnover of derivatives trading (in USD million), 1995 - 2001

	1995	1996	1997	1998	1999	2000	2001[a]
Hungary:							
BUX	4	322	5 376	8 313	4 719	3 126	822
Currencies	30	731	1 803	4 543	96	101	61
Stocks	–	–	–	240	570	1 564	824
Interest	47	198	401	592	52	7	0
Poland:							
WIG20	–	–	–	< ½	1½	9 042	17 144
Currencies	–	–	–	–	< ½	130	234
Stocks	–	–	–	–	–	0.0	158

Notes: a) January-September 2001.

Source: Budapest Stock Exchange (2001), Warsaw Stock Exchange (2001).

2.2 Listing requirements and fee structures

Listing requirements and fees obviously influence the functioning of securities exchanges. The Tables in the Annex give an overview for the CEE exchanges in Budapest, Prague and Warsaw, together with those Western European exchanges where stocks or depositary receipts of CEE companies are listed.

Strict listing requirements and high fees in the official market may explain why firms have a strong preference for being listed in the free market segment.

A comparison of the rules for securities is difficult. This is particularly due to the ambiguous effects of these rules. For example, relatively high minimum standards for market capitalisation can be an obstacle for an IPO but probably they have a positive effect on the liquidity of listed stocks. Strict disclosure rules may increase the costs for companies, but could also improve the quality of information, thereby attracting more investors.

It is also not easy to compare the rules for each of the CEE stock exchanges due to different definitions. Even the classification into the three main market segments of the "official market", the "regulated market" and the "free market" is not that simple. For example, in the Czech Republic and in Poland the free market is regulated and should therefore be compared to the regulated markets in other countries. This also means that these two countries actually have two different regulated markets. In Hungary, there has been no free market for domestic companies since April 2001. Since then, the free market consists only of dual listings of foreign companies.

In general, the CEE securities exchanges have much higher minimum standards for market capitalisation - both in the official and regulated markets - than Frankfurt or London (see Tables A.1 and A.2). The highest minimum levels can be found on the *Newex* (New Europe Exchange), which aims at becoming a central exchange for CEE stocks. Probably due to these high standards most of the companies listed on *Newex* are listed in its free market (*NX.others*). Most CEE exchanges have additional requirements concerning the number of shareholders to guarantee a minimum of liquidity.

Companies listed in the official market (Table A.1) on the three CEE exchanges are required to publish their financial information according to the International Accounting Standards (IAS). These exchanges also call for quarterly company reports. On the regulated markets (Table A.2), also called parallel or secondary markets, the listing requirements are a compromise between the strictly regulated official markets and the almost fully unregulated free markets (Table A.3). Nevertheless, the Prague Stock Exchange as well as the *Newex* requires financial statements of companies according to IAS.

On most CEE exchanges, only a minority of companies are listed on the official markets. Only on the Warsaw Stock Exchange is the number of listings on the official market (131 listings) larger than on the other two market segments (70 listings). The large number of listings in the free market segments could be because domestic companies consider listing requirements for the official markets too strict and the fees too high.

In a recent study, Hüfner and Köke (2000) found that stocks of CEE companies traded abroad are mostly listed on the free market segments of the German stock exchanges in Frankfurt/Main, Munich and Berlin (1). Since mid-2001, the segment for CEE stocks on the free market in Frankfurt has become part of the *Newex*. There are also some listings on the *NX.plus* market of the *Newex*, but the vast majority of CEE companies are listed on the unregulated market segment (*NX.others*).

2.3 Institutional investors

Given the importance of unregulated markets one might expect to see a relatively modest involvement of institutional investors. Table 7 - providing data on the three CEE countries and selected EU members - sheds some light on this issue. Among the CEE countries, assets under institutional management are most significant in the Czech Republic, with 20 percent of GDP. One reason for this considerable involvement of institutional investors is the Czech voucher privatisation scheme, which ultimately made the (often publicly owned) investment funds the new owners of the privatised companies. Institutional assets are smaller (relative to GDP) in Hungary (11 percent) and in Poland (4 percent), though institutional ownership is steadily growing at high speed.

1) The trade in depositary receipts (DR) is concentrated in London and New York. However, in 1999, the total turnover in stocks of CEE companies on all German exchanges was about EUR 430 million. This was not more than 1 percent of the total turnover of all CEE stock exchanges together. The trade in depositary receipts absorbs a larger part of liquidity: usually 3 percent to 6 percent of a company's shares have to be deposited. But, all in all, the vast majority of turnover and therefore liquidity is concentrated at the domestic exchanges in Central and Eastern Europe.

Table 7. Financial assets under institutional management (in % of GDP), 1992-2000

	1992	1993	1994	1995	1996	1997	1998	1999	2000
Czech Republic	n.a.	22.8	17.3	17.8	21.4	19.0	16.8	20.3	n.a.
Hungary	2.5	2.8	3.9	4.4	6.1	7.5	8.9	10.7	12.8
Poland	0.0	0.6	1.9	1.5	2.0	2.6	3.2	4.2	5.4
Germany	34.0	38.9	41.3	45.3	50.6	58.7	66.1	76.8	79.7
Spain	21.9	29.3	32.3	33.4	44.3	56.0	66.5	65.4	62.1
Portugal	18.3	27.5	29.8	38.3	43.2	53.4	48.7	50.8	n.a.

Notes: Data for 1999 and 2000 are provisional.
Sources: IMF (2001), OECD (2001).

Activities of institutional investors remain modest but have increased recently - with social security reforms providing a key stimulus.

Table 8 examines the composition of financial assets owned by institutional investors. For the Czech Republic, we confirm our interpretation that institutional investors are significant due to the privatisation process. This is reflected by the large fraction of stocks (21 percent) in total financial assets. For Poland, we also find that a relatively large share of assets is invested in stocks (15 percent); however, due to the comparatively larger size of the Polish stock market, the role of institutional investors is still small (their assets amount to only 2 percent of total market capitalisation). For Hungary, institutional investors appear to be risk-averse, investing over three-quarters of financial assets in government bills or bonds - and they play an insignificant role for corporate finance (2).

Table 8. Financial assets under institutional management (in %), 1998

	Czech Republic	Hungary	Poland	Germany	Spain	Portugal
Bonds	42	79	58	43	53	58
Loans	1	0	1	30	17	1
Stocks	21	7	15	22	1	14
Other	35	14	26	5	29	27
Total	**100**	**100**	**100**	**100**	**100**	**100**

Notes: The category 'other' mainly consists of cash and deposits.
Sources: IMF (2001), OECD (2001).

Thus, the role of institutional investors in CEE remains small when compared to Western economies. Aside from the regulatory issues we have already mentioned, other factors behind this include a still young insurance sector. On the other hand, growth in Hungary and Poland has undoubtedly been stimulated by the reform of social security (pension reforms introduced private pension funds in Hungary in 1997 and in Poland in 1999) (3).

2.4 Some conclusions

What do we gather from this short review? Overall, even the most developed CEE stock and bond markets are still small. Equity issues appear to contribute relatively little to the financing of corporate

2) However, the National Bank of Hungary (2001) notes that private and voluntary pension funds hold a larger fraction of risky assets, with about 14 percent of the total invested in stocks.
3) Recent statistics (for 2000) show that assets owned by pension funds amount to about 13 percent of GDP in Hungary (National Bank of Hungary, 2001).

investment and only the Polish stock market seems to be attractive for new share issues. Likewise, the markets for corporate debt securities are underdeveloped. Only the Czech Republic has a significant and active primary market for domestic corporate debt securities and only Poland has a significant primary market for international corporate debt securities. Derivatives markets are in their infancy.

And what are the main factors influencing this development? There may be relatively high costs associated with CEE exchanges. The listing requirements of the official market segment are high compared to Western European exchanges, and the strict requirements for the official market are probably a cause for the small share of listings in this top segment. Most CEE companies are listed at the free market and therefore have no obligations concerning regular publication of financial information. This means that most of the companies listed at CEE stock markets are fairly unattractive for international or domestic institutional investors as the information costs and the uncertainty about the financial situation of these companies are high.

Indeed, we find a very small role of institutional investors in the CEE economies compared to some advanced western economies, though there is a clear trend towards larger institutional engagement, particularly for those countries that implemented social security reforms (Hungary and Poland).

3. The role of capital markets for corporate finance

The importance of internal finance for firms' investment is higher than in EU countries though there are exceptions such as Hungary.

In this section we explore in more detail the extent to which CEE firms tap capital markets to finance their investment. More specifically, the aim is to investigate whether investment is funded by credit, bond issues, and share issues. As to credit, we distinguish between resident bank lending, non-resident bank lending, and intercompany loans. Regarding bond finance, we account for the issuance of domestic as well as international bonds (4). As in the previous section, we focus on the Czech Republic, Hungary and Poland.

Table 9 reports the share of various funding sources relative to gross fixed capital formation (5). For the CEE economies, we find that the role of the various sources of debt finance varies greatly by country. The total contribution of debt is the largest in Hungary, where it reaches 42 percent of investment. This suggests that external debt finance contributes a comparatively large share to the financing of investment of Hungarian non-financial firms. Indeed, Table 9 indicates that external debt finance is as important for Hungarian firms as it is for companies in EU countries such as Germany and Portugal. By contrast, in the Czech Republic, the share of debt finance is much smaller (10 percent). Firms in the Czech Republic obviously have severe difficulties in raising funds and are likely to be constrained to using internally generated funds (e.g. retained earnings) for financing investment.

4) In more detail, resident bank lending is defined as the change in the credit stock provided by resident banks to non-financial enterprises while non-resident bank lending is defined as the change in the stock of loans taken abroad by "other sectors", a sub-item of the country's international liabilities (we thus assume that loans taken abroad by domestic households are negligible). Intercompany loans are loans of a parent company extended to its (non-financial) subsidiary. Domestic bonds are mostly local-currency denominated and international bonds are mostly foreign-currency denominated. The Bank for International Settlements (BIS) provides information on the net issue of both types of bonds, separately for the corporate, financial, and the public sector. Since we are interested in the funding sources of the non-financial enterprise sector, we focus on corporate sector bonds. Finally, data on share issues, both from initial and secondary public offerings, are taken from the International Federation of Stock Exchanges (FIBV).

5) To smooth short-run fluctuations, the data in Table 9 represent averages for 1999-2000.

Table 9. Sources of funding, as a percentage of gross fixed capital formation, average for 1999-2000

	(1) Credit from resident banks	(2) Credit from non-resident banks	(3) Inter-company loans	(4) Domestic debt securities	(5) Inter-national debt securities	(6) *Sum of (1) to (5)*	(7) Share issues (IPO&SPO)
Czech Republic	-2.6	4.1	4.4	4.4	n.a.	**10.3**	1.1
Hungary	18.6	15.4	5.6	1.4	0.9	**41.9**	7.6
Poland	11.1	6.7	3.6	0.0	2.2	**23.6**	1.3
Germany	6.6	1.8	14.3	2.3	11.4	**36.4**	5.2
Spain	44.6	11.7	2.6	4.5	10.3	**73.6**	67.8
Portugal	36.7	-0.9	3.4	2.6	4.4	**46.2**	36.3

Sources: Bank for International Settlements (2001), Central banks of the Czech Republic, Hungary, Poland, Germany, Spain and Portugal, IMF (2001).

Furthermore, Table 9 provides evidence on the relative weight of each of the funding sources. For Hungary and Poland, we find that credit by resident banks is the most important source of finance, followed by non-resident bank credit. In both countries, total bank credit accounts for more than three quarters of external debt finance. This contrasts sharply with the situation in the Czech Republic where resident bank credit was actually negative in 1999-2000. This signals severe credit constraints, which appears to be a result of excessive lending in the early years of transition, followed by a credit crunch and extreme risk aversion after the collapse of several financial institutions.

However, Czech firms appear to have been able to mitigate these constraints by accessing the market for debt securities. They raised a larger amount of capital (relative to gross fixed capital formation) by issuing debt securities than firms in Hungary or Poland. This finding is consistent with Section 2.1, which showed that the Czech corporate bond market is the most developed among the CEE economies in terms of size and trading.

Finally, the last column of Table 9 presents the amount of capital raised by newly or already listed companies via initial or secondary public offerings, again relative to gross fixed capital formation. We find that the largest amount of equity capital is raised on the Budapest Stock Exchange, whereas this source of finance is rather limited in the other two CEE countries.

Box 1. A case study on the sources of finance used by listed companies in Poland

Here we examine the financial statements for all non-financial corporations listed on the Warsaw Stock Exchange during the late 1990s. The main reason for selecting Poland is that the Polish stock market is the largest and probably the best developed among the CEE markets. In addition, disclosure requirements are very strict, requiring firms to submit quarterly information to shareholders that adhere to the International Accounting Standards.

Table 1.1 examines three sources of funding: internal funds (measured as net profit plus interest payments, taxes, and depreciation), asset divestiture (measured as inflows from investment activity, especially from the sale of fixed and intangible assets and from the sale of marketable securities) and external funds (measured as inflows from financial activity, especially loans taken and issues of bonds and shares). In 1998-2000, external funds played the dominant role among the three sources of gross finance. On average, external funds accounted for more than 50 percent of gross funds - regardless of firm size. Internal sources contributed much less to total funding, providing on average 14 percent and 25 percent of funds for small and large firms, respectively. Funds obtained from asset divestiture were also not negligible. A more detailed analysis shows that small firms generated funds predominantly from liquidating fixed or intangible assets and large firms from selling marketable securities.

Table 1.1 Gross sources of funding, 1994-2000

	1994-1997		1998-2000	
	Small Firms	Large Firms	Small Firms	Large Firms
Internal Funds	57.0%	42.6%	14.0%	24.7%
Asset Divestiture	9.3%	17.5%	30.3%	24.3%
External Funds	33.7%	39.9%	55.7%	51.1%
Total	100%	100%	100%	100%
Number of observations	380	382	344	345

Notes: All reported statistics are calculated at the mean. Gross sources of funding are measured as follows: internal funds (net profit + interest payments + taxes + depreciation), asset divestiture (inflows from investment activity, especially sale of fixed and intangible assets and sale of marketable securities) and external funds (inflows from financial activity, especially loans taken and issues of bonds and shares). Statistics are calculated as the average for each of the four sub samples. Large/small firms are firms with total assets above/below the year-specific sample median.
Source: Notoria Serwis S.A

Comparing the two sub-periods suggests that the importance of internally generated funds declined sharply during the 1990s. By contrast, asset divestiture became significantly more important. This is consistent with the notion that increasing product market competition eroded profit margins, thereby reducing the scope for generating funds internally.

Table 1.2 investigates the nature of external finance more closely, showing the components of this source of finance, namely loans taken, bonds and shares issued, and other sources. We find that the largest part of externally raised funds consisted of new loans, both for small and large firms. During 1998-2000, loans contributed on average 70 percent to external funding. By far the largest part of these loans was short-term (i.e. with maturity of less than one year). Bond (share) issues were less important, contributing

only 14 percent (9 percent) to external funds of large firms and 5 percent (18 percent) to that of small firms. Interestingly enough, share issues appear to be more relevant for smaller firms, suggesting that new stock is most likely generated in the course of an initial public offering. Overall, the analysis indicates that loans are more popular and probably more easily accessible than bond and equity issues.

Comparing again the two sub-periods reveals that loans as well as bonds became more common, mainly at the expense of equity finance. One reason for the decline in share issues was certainly the decline in IPOs, which in turn was due to the slowdown in privatisation activity.

Table 1.2 Composition of gross external funding

	1994-1997		1998-2000	
	Small Firms	Large Firms	Small Firms	Large Firms
Loans taken	56.3%	63.4%	69.8%	71.5%
short-term	(42.6%)	(45.0%)	(56.1%)	(54.7%)
Bonds issued	3.2%	8.1%	5.0%	13.6%
short-term	(2.1%)	(5.9%)	(4.5%)	(10.7%)
Shares issued	29.1%	22.1%	18.4%	9.4%
Other	11.4%	6.4%	6.7%	5.4%
Total	100%	100%	100%	100%
Number of observations	380	382	344	345

Notes: Composition of gross external funding is measured as follows: loans taken (long and short-term), bonds issues (long and short-term), shares issued (inflows from issue of own shares). 'Short-term' means maturity is less than one year. Statistics are calculated as the mean for each of the four sub samples.

Sources: Notoria Serwis S.A. and own calculations.

The major advantage of the top-down approach presented so far is that data are aggregated at the country level and therefore cover all domestic firms. It also allows us to make cross-country comparisons, including countries from the CEE and the EU. To complement this analysis, Box 1 presents a case study of the sources of finance for all non-financial corporations listed on the Warsaw Stock Exchange. The case study demonstrates that internal funds - together with proceeds from selling assets - play a much smaller role for listed firms than for all other firms in the economy. As is to be expected with listed companies, the issue of debt and equity securities is more important. Having said this, the case study also shows that bank credit is the dominant source of external finance and that issuing bond and equity remains a limited source of finance.

Indications are that bank credit is the dominant source of external finance even for listed firms.

In general, it is fair to conclude that underdeveloped capital markets curb the supply of market finance to CEE firms. As this may prevent the realisation of viable investment opportunities, it is of interest to discuss strategies for further developing CEE capital markets - an issue that we address next.

4. Successful strategies for CEE securities exchanges

The analysis thus far has shown a relatively unfavourable picture of the CEE stock and bond markets. All of the CEE securities markets have a low market capitalisation - both in absolute terms and relative to GDP. However, the Polish market, does show some promising signs.

Against this background, the CEE securities exchanges have to find a solution for their future business, taking into account the process of concentration and harmonisation that is shaping securities exchanges across Europe. With this in mind, we first consider what an optimal solution could look like. Then, we analyse whether real-world solutions tend to move towards the optimum, and what economic policy could do to foster an optimal solution for the whole region.

We start with a review of the costs and benefits of different forms of organisation of securities exchanges from the point of view of the major economic participants:

Strategies for developing Central and Eastern European security exchanges must strive for cost-effectiveness - both for companies and investors.

- **Private enterprises in CEE countries** are mainly interested in low costs of funding equity, and low fees for listing and trading at the exchange. The funding costs of equity are relatively low when the price-to-earnings ratio is relatively high. A high valuation of earnings depends mainly on the attractiveness of the stocks for domestic and international investors. Low liquidity induces a risk premium in the expected return and this means a relatively low stock price and a low valuation (= low price-to-earnings ratio). Therefore, private enterprises should be interested in being listed at an exchange with high liquidity. On the other hand, low fees for listing and maintenance are possible when competition amongst exchanges is relatively strong. Private enterprises might also be interested in a well-functioning local exchange in their own country as the companies are probably only well-known in their home country. There is possibly also a preference for issuing in the home currency as this avoids currency risk for the companies. Finally, private companies will be interested in a rapid and stable solution concerning the reorganisation process of CEE securities exchanges. Often changing institutional arrangements could lead to reluctance to use of stock markets by investors.

- **International investors** and particularly **institutional investors** prefer stock markets with a high liquidity (which guarantees a low market impact of large orders), low market access costs (in a broad sense), and a liquid market for financial derivatives. Market access costs comprise not only the direct costs of trading, clearing, and settlement, but also information costs necessary to cope with different accounting systems, trading systems, listing requirements and languages. With regard to these indirect costs, the CEE exchanges have already installed an infrastructure in the official market that should be fairly convenient to international investors. Nevertheless, the regulatory framework is still rather different across CEE exchanges and international investors would benefit from a harmonisation of these rules. The best solution would be a special segment for CEE securities - as part of an international exchange - where most of the CEE stocks and bonds are traded.

- **Domestic private investors in CEE countries** are interested in low costs and well-functioning local exchanges. There is - as in other countries - also a preference for trading and investing in the own currency. Therefore, they require access to local exchanges at low costs.

- **Domestic institutional investors** are probably very important for the future development of the capital markets. They have much smaller assets under management than Western European institutional investors and, therefore, the size and liquidity of the domestic stock and bond markets fit much better to their own portfolio volume. For example, in 1997, the total assets of institutional investors in Poland amounted to USD 4.5 billion, of which USD 1.2 billion were held in domestic stocks (OECD, 2000). Indeed, the Warsaw Stock Exchange might be sufficiently large to attract Polish institutional investors.

- **Governments in CEE countries** have probably a preference for national exchanges as they are often considered an essential part of the national financial sector. This should also be true with regard to the national supervisory bodies. However, as most of the CEE countries will become members of the EU in the next few years, the process of EU financial market harmonisation and integration will soon affect regulation in the CEE countries.

- **CEE securities exchanges** presumably would like to increase their own influence within a new system of European exchanges. The exchanges could therefore have a preference for doing business alone. Only those exchanges with a high risk of being closed have a strong incentive to enter into a close international alliance. Others might be interested only in loosely cooperating with other exchanges.

What could be the optimal solution that takes most of the preferences described above into account? First of all, there is an optimal solution of a Europe-wide organisation that has already been discussed in the literature (see e.g. Accenture, 2001; Fischer and Kunz, 2001; and OECD, 2001a). This is based on a full centralisation of trade, but a decentralisation of service. At the centre of this exchange network is a common trading platform that guarantees a concentration of liquidity and the use of a common trading system. The local exchanges are connected by remote membership to the trading platform. The task of these local exchanges is to offer service products to companies, intermediaries and special solutions for different types of clients. This means that there is no competition amongst trading platforms but only amongst service products offered to the investors, issuers, and intermediaries. This concept guarantees a full harmonisation of institutional arrangements such as listing requirements and the transparency of financial information published by listed companies.

However, with a view to ensuring sufficient competition in the field of trading systems and trading platforms there should be at least two or three of these trading centres, which could also be interconnected. Furthermore, there should also be free access of Alternative Trading Systems to guarantee potential market entry of new competitors from outside. The CEE securities exchanges could be members of such a system just like all other European exchanges, but as long as it is not realised, other solutions must be found.

Most CEE exchanges are too small to go their own way.

An obvious option is the "stand-alone" solution where each CEE exchange tries to do business on its own. The stock exchanges of Budapest, Prague, and Warsaw may be large enough to offer sufficient liquidity to domestic institutional investors. As these investors are probably most important for the future development of national CEE exchanges, a new organisation of CEE exchanges should always consider the interests and needs of this group. But it is also true that CEE exchanges

should try to attract international investors and particularly foreign institutional investors, as these investors can speed up the development of the CEE securities exchanges. Major obstacles for international investors are different trading and clearing & settlement systems as well as different and opaque rules concerning listing and supervision.

Alliances of CEE exchanges with EU partners are only second best.

An option that mitigates these obstacles builds on alliances with Western European exchanges. This is indeed what some CEE exchanges are trying to do. For example, the three Baltic exchanges of Tallinn, Riga and Lithuania have created the so-called Baltic list that aims at harmonising trade in 15 blue chip stocks of that area. The Baltic exchanges also intend to soon join the Nordic Stock Exchange (*Norex*), which is an alliance of the four Northern European exchanges in Copenhagen, Oslo, Stockholm and Iceland (6). At the same time, the Helsinki Exchange (HEX) holds 50 percent of the equity of the Tallinn Exchange. The HEX is also linked to the German Stock Exchange. This gives a relatively complex picture of the international connections of the three Baltic exchanges, but it also shows that these exchanges see the solution to their problems in joining stronger partners.

This is also the strategy of the Warsaw Stock Exchange, which signed a letter of intent to strengthen future cooperation with the London Stock Exchange in July 1999. The Warsaw Stock Exchange, however, also has contacts with *Euronext*. The probability of joining *Euronext* has increased with the introduction of the WARSET trading system, which was developed by the SBF-Paris Bourse for the Warsaw Stock Exchange. The Prague Stock Exchange has signed a Memorandum on Mutual Cooperation with the London Stock Exchange in mid-2000, while the other CEE exchanges - Budapest, Ljubljana and Bratislava - still try to continue business on their own.

For some CEE exchanges this might be a preferable solution. However, an important disadvantage is that any CEE exchange will only be a junior partner in such an alliance. Therefore, the influence on the business strategy of the alliance will be negligible. And then, each CEE exchange will probably join a different partner, implying that investors would have to use different trading and clearing & settlement systems if they wish to buy a representative portfolio of CEE stocks. Consequently, the attractiveness of CEE stocks in general will only slightly improve under this alternative.

Given these drawbacks, a better solution could be the creation of a pan-CEE exchange, organised around a common trading platform. Ideally, it should become part of an international alliance or a Western European exchange. In this case, the CEE countries would have a much bigger influence on the strategy of such an alliance and CEE securities would be much more visible than under any other solution.

But what about the interest of each of the stakeholder groups we identified before? Private enterprises and domestic investors would still have a local exchange and relatively low costs compared to international financial transactions. International investors would benefit due to the harmonisation of institutional and regulatory arrangements. The securities exchanges could still independently offer their own services. And the whole region could benefit due to the better visibility of the exchange to foreign investors. Although the liquidity would not increase directly (because

6) The negotiations between the Norex *and the three Baltic exchanges have come to a (temporary?) halt since May 2001.*

almost all of the liquidity today is concentrated on the domestic exchanges) the pan-CEE solution should attract both investors and new companies to participate in the market. Thus, in the medium term, this concept should lead to an increase in market capitalisation and turnover.

The *Newex*, founded in November 2000, aimed at concentrating the trade in CEE securities. The concept, though theoretically sound and convincing, did not succeed in attracting a sufficiently large part of liquidity. But the organisation of the *Newex* could be used - at least partially - as a blueprint for a pan-CEE exchange.

Is a pan-CEE exchange a realistic scenario? Currently, it seems that the cooperation amongst the CEE exchanges is not very strong and a pan-CEE exchange could be set up only if at least the three exchanges of Budapest, Prague and Warsaw agreed on a common way forward. Another hurdle for the creation of such an exchange are different currencies and national responsibilities for the supervision of securities exchanges. Although the introduction of the euro would make trading in CEE stocks easier, the example of *Norex* shows that a common currency is not a necessary condition for trading stocks on the same trading platform. *Norex* is indeed a good example for an international alliance that has a common trading platform (*Saxess*), a common regulatory framework, but the member exchanges are still relatively independent and trade in their own currency. Therefore, *Norex* shows that a pan-CEE exchange is a feasible option for the region. In addition, the harmonisation process in the EU will converge in the next few years to a set of mutually agreed rules concerning the regulatory framework of EU exchanges. As these rules will be part of the *acquis communautaire*, the CEE countries have to adopt them. Therefore it is only a question of time until the harmonisation of the supervision rules becomes a reality.

A pan-Central and Eastern European exchange seems to be the best way forward.

5. Conclusions

After a decade of transition, CEE capital markets remain fairly underdeveloped. The most developed stock markets are those of the Czech Republic, Hungary, and Poland - with the Polish Stock Exchange clearly being in the lead. The Warsaw Stock Exchange has the highest capitalisation in absolute terms, the largest official market segment - which is particularly interesting for foreign and institutional investors - and a liquid index future on the blue chip WIG20 index, which allows investors to efficiently hedge the stock market risk.

Reflecting the underdeveloped nature of CEE capital markets, internally generated funds - although declining in recent years - are even more important for corporate finance than they are in more advanced economies. The exception is Hungary, where external funds contribute as much to the finance of firms' investment as in Western countries. A closer analysis of the structure of external finance reveals that bank credit constitutes the largest part, whereas issues of debt and equity securities contribute relatively little to the financing of investment. An exception is the Czech Republic, where issues of domestic debt securities are relevant for corporate finance.

The CEE stock exchanges have an organisation comparable to Western European exchanges. They comprise three market segments: the official market, the regulated market, and in most cases a fully unregulated free market. The official markets and, in part, the regulated markets have relatively strict listing requirements; however, with the exception of the Warsaw Stock Exchange, only a

minority of companies use these markets. Usually, the unregulated free market has the highest number of listings. This limits the interest of domestic and foreign institutional investors due to the high costs of gaining information about companies.

Looking ahead, we consider the creation of a pan-CEE capital market an optimal strategy for developing CEE capital markets and, by extension, for increasing the supply of market finance to firms. A salient feature of such a market would be a central trading platform where most of the CEE assets are traded. Ideally, this trading platform would team-up with Western exchanges, thereby establishing a market environment where investors and CEE firms benefit from a harmonised regulatory framework, such as listing requirements, disclosure rules, fee structures, and supervision. Alternatives to this strategy, including "stand-alone" developments of each CEE market and bilateral alliances of individual CEE exchanges with different Western European partners, are only second best.

Harmonising the regulatory framework of national securities exchanges should be an important first step.

Following from these conclusions, our recommendations for policy action concentrate on the harmonisation of regulatory rules as a first step to create a pan-CEE exchange:

- CEE securities exchanges should harmonise their listing and disclosure requirements - at least for the official market segment. A central trading platform for the official market segments would be a first step towards creating a central CEE exchange where all stocks are traded.
- CEE governments should harmonise the supervision rules concerning securities exchanges and related financial services. This should facilitate cooperation amongst CEE exchanges.

Finally, CEE governments should initiate negotiations about the possibility of creating a pan-CEE exchange, as such a central exchange could be of great value for the whole region.

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Annex

Table A.1 Official Market (First Market)

	Budapest	Prague	Warsaw	Frankfurt	London	Newex (NX.one)
Market Capitalization	2 500 mn HUF (9,5 mn €)	500 mn CRZ (14 mn €)	40 mn PLZ (10 mn €)	2.5 mn DM (1.25 mn €)	700 000 GBP (1.1 mn €)	20 mn €
Free Float	Min. 25% of market cap., but min. 2 000 mn HUF (7.6 mn €) or min. 500 shareholders	Min. 25% of market cap.	Min. 25% and min. 32 mn PLZ/8 mn € (each shareholder < 5%) or min. 70 mn. PLZ/17 mn € and min. 500 000 shares	Min. 25% of market cap.	Min. 25% of market cap.	Min. 25% of market cap., and min. 5 mn €
Other Criteria	Min. 100 shareholders	–	Min. 500 shareholders, min. 65 mn PLZ/16.25 mn € book value	Min. 10 000 shares	Designated sponsor	Liquidity provider
Existence	Min. 3 years	Min. 3 years	Min. 3 years	Min. 3 years	Min. 3 years	Min. 3 years
Disclosure	Quarterly and annual reports	Quarterly, semi-annual and annual reports	Quarterly, semi-annual and annual reports	Semi-annual and annual reports	Semi-annual and annual reports	Quarterly and annual reports
Accounting Standards	IAS or US-GAAP	IAS	IAS not necessary	IAS or US-GAAP not necessary	IAS or US-GAAP	IAS or US-GAAP
In English	Not necessary	Not necessary	Not necessary	Not necessary	Yes	Yes, or in German
Admission Fees (single fee)	No fixed costs	50 000 CZK (1 400 €)	0.03% of market cap., min. 14 000 PLZ, max. 96 000 PLZ (3 500 € - 24 000 €)	Min. 1 000 € - 10 500 € (= 300 mn. € market cap.), in addition 500 € for each 50 mn €.	Stocks: 2 000 - 109 000 GBP (= 10 bn GBP market cap.) (3 280 € - 178 760 €), DR: 2 000 - 7 000 GBP	0.03% of market cap., min. 1 500 €, max. 30 000 €
Variable Fees (per annum)/ Maintenance Fees	Min. 250 000 HUF (1 000 €), max. 9.4 mn HUF (36 000 €) = 1.25% - 0.42% or lower	0.05% of market cap., max. 300 000 CZK (8 500 €)	0.02% of market cap., min. 12 000 PLZ, max. 60 000 PLZ (3 000 € - 15 000 €)	No annual costs	Stocks: 700 GBP - 10 700 GBP (1 100 € -17 500 €), DR: 2 500 GBP (4 100 €)	No annual costs
Other Fees	–	–	–	Evaluation of prospectus: 2 500 €.	3 000 GBP (5 000 €) application fee.	–

Sources: National stock exchanges.

Table A.2 Regulated Market (Secondary Market, Parallel Market)

	Budapest	Prague	Warsaw	Frankfurt	London	Newex (NX.plus)
Market Capitalization	100 mn HUF (380 000 €)	250 mn CRZ (7.1 mn €)	14 mn PLZ (3.5 mn €)	250 000 €	There is no secondary market at the London Stock Exchange	10 mn €
Free Float	No minimum	Min. 25% of market cap.	Min. 10% and min. 11 mn PLZ/2.75 mn € (each shareholder < 5%) or min. 35 mn. PLZ/8.75 mn € and min. 200 000 shares	Sufficient liquidity		Min. 25% of market cap. And min. 2.5 mn €
Other Criteria	Min. 25 shareholders	–	Min. 300 shareholders, min. 22 mn PLZ/5.5 mn € book value	Min. 10 000 shares		Liquidity provider
Existence	No minimum	Min. 3 years	Min. 2 years	–		Min. 2 years
Disclosure	Semi-annual and annual reports	Quarterly, semi-annual and annual reports	Quarterly, semi-annual and annual reports	Semi-annual and annual reports		Quarterly and annual reports
Accounting Standards	–	IAS	IAS not necessary	IAS or US-GAAP not necessary		IAS or US-GAAP
In English	Not necessary	Not necessary	Not necessary	Not necessary		Yes, or in German
Admission Fees (single fee)	No fixed costs	50 000 CZK (1 400 €)	0.03% of market cap., min. 8 000 PLZ, max. 34 000 PLZ (2 000 € - 8 500 €)	Min. 1 000 € - 5 250 € (= 300 mn. € market cap.), in addition 250 € for each 50 mn €.		0.015% of market cap., min. 750 €, max. 15 000 €
Variable Fees (per annum)/ Maintenance Fees	Min. 250 000 HUF (1 000 €), max. 9.4 mn HUF (36 000 €) = ca. 1.25% - 0.42% and lower	0.05% of market cap., max. 85 000 CZK (2 400 €)	0.02 % of market cap., min. 6 000 PLZ, max. 30 000 PLZ (1 500 € - 7 500 €)	No annual costs		No annual costs
Other Fees	–	–	–	Evaluation of prospectus: 2 500 €.		–

Sources: National stock exchanges.

Table A.3 Free Market (Third Market)

	Budapest	Prague	Warsaw	Frankfurt	London	Newex (NX.other)
Market Capitalization	Free market only for dual-listing of foreign issued stocks	Min. 1 mn €	Min. 4 mn PLZ (1 mn €)	No minimum	No minimum	No minimum
Free Float		Min. 25% of market cap.	No minimum	No minimum	No minimum	No minimum
Other Criteria		–	Min. 4 mn PLZ/ 1 mn € book value	–	Designated sponsor	–
Existence		No minimum	No minimum	–	No minimum	–
Disclosure		Semi-annual and annual reports	Quarterly, semi-annual and annual reports	Annual report	Semi-annual and annual reports	–
Accounting Standards		IAS not necessary	IAS not necessary	IAS not necessary	IAS not necessary	–
In English		Not necessary	Not necessary	Not necessary	Yes	–
Admission Fees (single fee)		–.	3 000 PLZ (750 €)	–.	No costs	–
Variable Fees (per annum)/ Maintenance Fees		–.	3 000 PLZ (750 €)	–	5 000 GBP (8 200 €)	–
Other Fees		–	–	–	3 000 GBP (5 000 €) application fee.	–

Sources: National stock exchanges.

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