Corporate Governance in Central and Eastern Europe: Transition management is a tough job

Two papers by
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Introduction

The transition process from centralized economic systems to market economics is very demanding. Decision makers in companies and in financial institutions must learn to cope with the tough conditions which characterize market mechanisms.
If managers cannot fulfill the efficiency requirements, their companies or institutions must eventually go out of business. Some inefficient companies or banks may survive for a while because of close relations to political decision makers, but connections to and financial support from Government agencies in Central and Eastern Europe are not nearly as important as they were before 1989. The pressure on managers for efficiency is much stronger.

The authors of the two papers in this SUERF Study have analyzed the changing demands, which banks and other financial institutions have had to meet in Central and Eastern Europe since 1989. Debora Revoltella has studied the financial systems in Poland, the Czech Republic and Hungary. She explains how the observed patterns of financing in the three countries have been affected by the inadequate protection of creditors due to the unsatisfactory state of collateral and bankruptcy laws in the first years after the transition.
Information asymmetries are important, because monitoring of the performance of corporate managers by banks and shareholders depends on reliable data on earnings and trustworthy evaluations of the risks involved. The author argues that there is room for cautious optimism with regard to the role of banks in the future Corporate Governance System in the three countries. The future role of the stock market depends on an appropriate development of the financial infrastructure and the legal framework.

In their paper, Peter Haiss and Gerhard Fink focus on the influence exerted by banks on enterprises and on the banks' own restructuring problems. They look at the financial sectors in Bulgaria, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovania. The mixed experiences since 1989 with respect to privatisations, handling of bad debts, inadequate supervision and recapitalizations are described and compared. The authors express a certain concern about the ability of banks wich have difficulties to manage themselves to exert a positive influence on the management of corporations. They find the policies of the post-communist governments weak, slow and often contradictory. The overall prospects for the future are according to the authors somewhat more uncertain than the prospects described in Revoltella's paper. Read together the two papers may give the reader a fairly balanced view of the Corporate Governance situation at the end of the 20th century in this important part of Europe.

Morten Balling

Financing Firms in East European Countries:
an asymmetric information and agency costs approach

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1. Introduction

Enterprises in transition economies need strong financing to support restructuring of the productive system. However, the presence of asymmetric information and agency problems hinders ready availability of external financing; investors feel insufficiently protected and prefer to reduce financing to firms. This kind of liquidity problem can only be resolved by offering enterprises incentives for good behavior and by offering financiers better legal protection while allowing them governance powers.

This paper analyses financing problems of enterprises in transition economies, arising from adverse selection, moral hazard and agency costs and it shows how credit and capital market transformation, as well as legal development, can affect enterprises' financial structure. Generally speaking, the second section shows, from a theoretical perspective, how contractual mechanisms commonly used to guarantee control over enterprises, debt and shares, can effectively resolve information asymmetries and agency problems. Using this approach, the third section analyses specific problems in financing enterprises in Poland, the Czech Republic and Hungary, during the first years of transition. We shall show how legal and institutional changes and development of the financial sector affect the availability of external funds. Due to data availability, the focus is on the first years of the transformation process, up to 1995; however, further development will be considered and their impact on credit and capital markets will be forecasted. The analysis will distinguish between financing to enterprises by debt and by shares and, given the type of contract chosen, also among several types of financiers. Special attention will be devoted to financing from banks. In particular, using a structure-conduct-performance approach, an in depth analysis of the banking sector will be developed, in order to evaluate the transformation occurred and to understand the determinants of banks' credit and investment policies.

In the fourth section the analysis focuses on enterprises' financial structure, using balance sheet data. A sample of 570 companies listed in the Czech capital markets is considered and it is shown how they actually finance their investment. In particular, we will show that financing decisions are influenced by asymmetric information and agency problems, thus providing evidence for the need of a real policy intervention to resolve inefficiencies. By distinguishing among different kinds of credits, we check which one implies the stronger control. Although it is not possible to generalise the results to the other two countries, this empirical analysis can provide some useful remarks concerning the effects of some specific problems of transition on enterprises' financing behaviours. Results from the empirical analysis and from the previous parts suggest some policy conclusions.

2. Asymmetric information, agency problems and possible solutions: the theory

2.1. Financing firms in the presence of adverse selection, moral hazard and agency problems

In case of adverse selection, the investor is unable to judge the quality of firms applying for financing. Any firm may be ‘good’ if it has an investment plan with positive net present value, or ‘bad’ if it has an unprofitable plan. The investor only knows the percentage of sound or unsound enterprises on the market, but information on single firms is unavailable. This situation could lead to a failure in the financing market; because of the inability to distinguish among enterprises, the financier might find it more convenient not to invest at all, thus depriving firms with sound plans of good opportunities for gain (Akerlof (1970)).

A different situation arises from moral hazard and agency problems. In the former case, the financier is unable to fully monitor the workings and decisions of the firm; thus the firm could decide to behave in a way damaging to the financier and not guarantee a fair return for the investment. In the latter case, it is not asymmetrical information but contractual incompleteness (since financiers are not in a position to specify *ex ante* what the managers must do in each and every state of the world) together with uncertainty factors that could lead to actions damaging to the interests of financiers. Investor awareness of these problems discourages supplying finance to firms, depriving them of financing or curtailing access to external funds. In the absence of adequate internal resources an enterprise may have to forego profitable opportunities. Thus these drawbacks (information problems of the adverse selection and moral hazard type and agencies) may lead to inefficient allocation of resources (Stiglitz and Weiss (1981) and Holmstrom and Tirole (1993)).

2.2. Mechanisms for resolving the inefficient allocation problem

Theoretical solutions to resolve inefficient allocation problems treat the three questions discussed here as being distinct. The main solution suggested for adverse selection is for the financier to bind supplying of funds to a sort of quality signalling. This signalling may take several shapes: the firm (Ross 1977) could voluntarily provide it, or the financier could explicitly request it. In the latter case, the financier tries to create a separating equilibrium, by binding debt contracts to particular collateral requirements or, in case of financing by shares, using the financial structure of the firm as a (albeit imperfect) signal for its reliability (Hayashi (1982)). Moreover, it should be stressed that fully guaranteed financing (i.e. debt with collateral) avoids risks to the financier and so the firm’s quality becomes irrelevant.

Where the information problem takes the form of moral hazard however, the financial agreement must provide incentives to align the interests of the enterprise to those of the financiers. This type of solution often endangers any chance of reaching a first best equilibrium, although it avoids the allocative inefficiency associated with suspending finances.
With agency problems, the difficulties for firms in gaining access to external financing arise from contractual incompleteness, making it impossible to resolve allocative inefficiency by relying on agreements which contemplate specific clauses or incentives; the financier must have some form of governance, either active or passive – corporate governance mechanisms, in fact.

Despite the distinction made in the literature between the three causes of allocative inefficiency, contractual mechanisms used to resolve corporate governance problems (among which the most commonly used are debt and shares) may be seen as a solution common to all three questions, once we accept Shleifer and Vishny’s definition[2], according to which ‘corporate governance deals with the ways in which suppliers of finance to corporations assure themselves of getting a return on their investment’. According to this interpretation, contractual mechanisms, like debt and shares, aim to hinder the occurrence of inefficiencies in the allocation of resources by giving investors control rights over firms. In this way, by resolving inefficient allocation of resources *ex post* they guarantee *ex ante* a greater flow of funds to the enterprise.

We shall now go on to examine the roles of debt and shares as means for financing enterprises, and as contractual mechanisms used in obtaining a form of corporate governance. Seen in this light, a debt is a contract by which the debtor (the firm) receives funds from a creditor (the investor) promising a certain flow of money in the future, in general upon the offer of collateral and with the guarantee that certain conditions will be observed (covenants). If the debtor violates the contract, if he does not pay back the debt or does not observe the covenants, the creditor will gain governance rights. These may be active (intervention in running the business) or passive (retaliation on collateral). The debt contract is therefore an effective mechanism for corporate governance insofar as the threat of rights of ownership passing from the managers to the creditors, where contractual conditions are not observed, gives the supplier of finance a fair return and therefore guarantees a greater flow of external funds to the firm. If we want to be more precise concerning the role of debt as a solution to each of the three problems considered above (adverse selection, moral hazard and agency) we could say that the collateral required in debt contracts aims at creating a separating equilibrium, allowing the financier to distinguish among sound and unprofitable firms, thus resolving problems of adverse selection[3]; covenants and in general the possibility of retaliation on collateral are incentives to resolve moral hazard, while active and passive governance rights help in the management of agency problems. All this of course depends on the presence of an adequate legislative and institutional context.

In general short term debt contracts allow for more effective governance than long term ones, not only because creditors have a greater incentive to monitor business activities, but also because the necessity of providing continuous refinancing imposes sterner discipline on the firm itself. A short term contract, however, does not allow the firm long term planning, due to the fact that firms should avoid financing long-lived assets with short term borrowing (maturity-hedging). Moreover in a situation of temporary illiquidity short term creditors may be encouraged to investigate an inefficient liquidation of the firm (Harris and Raviv (1990)). Diamond (1991) shows that the borrower choice for debt maturity depends on the solution of a trade off between short term preferences, due to private information concerning future profitability, and liquidity risks. Furthermore, Berglof and von Thadden (1994) show that there should preferably be both long and short-term creditors, as this reduces the need for inefficient liquidation without eliminating the disincentive for strategic default. It should not be overlooked that governance through debt is most effective when the enterprise has debts towards more than one creditor. In the case of high concentration and a debt not completely guaranteed, in fact, the creditor might be stimulated to refinance the firm; with scattered creditors renegotiation of the debt is definitely more difficult (Gertner and Scharfstein (1991)[4]. Bank debt allows corporate control at a smaller cost compared to non-intermediated debt, due to the existence of economies of scale in monitoring (Diamond (1989).

When the allocation of credit among different enterprises is considered, specific firms’ characteristics appear to be relevant. Titman and Wessels (1988) show that size, collateral availability, profitability, uniqueness, sector of production and growth opportunities of a firm can affect its ability in accessing credit markets, due to the presence of asymmetric information and agency problems.

The second contractual mechanism commonly employed to resolve problems of corporate governance works through the voting right conferred by each share. Investment in shares does not give the specific right of repayment of the sum invested but entitles stockholders to share profits or residual value of the firm in case of liquidation; by conferring the voting right, it also allows participation in the decisions making process of the firm. The right to vote is therefore a key element in considering the share itself as a mechanism of corporate

governance; through the exercise of this right, in fact, shareholders can control the management's workings. In general, for shares to have a role in corporate governance there must be a concentration of property in order to gain control of the firm followed by vote. This governance may be entrusted to various institutions – groups of shareholders, investment funds, banks (which must have the right incentives to monitor) or foreign investors. Shares may also stimulate a passive role of corporate governance, given they can be bought and sold; this requires strong liquidity in the share market, with legislation to protect minority investors and to guarantee the spread of information.

3. Asymmetric information, agency problems and financing firms in East European countries: Poland, Hungary and the Czech Republic

As we have seen in the above theoretical analysis, if there is to be a better supply of finance to enterprises, financiers must be guaranteed a fair return. With particular reference to Poland, the Czech Republic and Hungary, we shall now analyse the various forms of external financing available to firms in 1995. In particular we shall examine the effectiveness of the two main contractual mechanisms used to resolve problems of corporate governance – i.e. debt and shares. Furthermore, we must distinguish among different types of financiers, for the very important reason that different types of financiers can cope with different information and agencies, because they are subject to different sorts of incentives. This means that, given the contractual mechanism chosen (debt or equity), incentives to provide funds to the firm can depend upon the nature of the financier.
While analysing each source of finance, we will highlight the main features of the related legal framework, in order to evaluate the level of protection granted to financiers. The analysis will focus on the first years of transition, up to 1995. Further developments of the legal and institutional context will be analysed, with particular attention to their impact on credit and capital markets efficiency and effectiveness. We will consider the development and reform of credit and equity markets and, keeping in mind the main theoretical conclusions of the previous section, we will try to understand which source of funds is able to guarantee the stronger financial discipline and thus lead to the transformation of the economy at the micro level.

3.1. Financing firms by debt in East European countries in the presence of adverse selection, moral hazard and agency problems

The definition of debt as a mechanism of corporate governance underlines how the creditors' possibility of active or passive recovery gives debt an effective role of governance, granting therefore a solution to information asymmetries and agency problems. In reality, this possibility of recourse depends on several factors: the existence of laws governing collateral and bankruptcy, the efficiency of regulatory institutions and the capacity and will of creditors to make use of them.

Up to 1995, in Poland, the Czech Republic and Hungary, collateral and bankruptcy laws were not developed as to guarantee adequate protection for creditors. Regarding collateral, insufficiently clear property rights and registration systems, priority on credit lines privileging the State and complex and costly repayment procedures induced creditors to require guarantees of more than 100% of the value of the loan.
Table 1 concerns collateral laws in 1995 and shows the existence of factors limiting its efficacy. The awarding of points necessarily contains important subjective elements[5],
however, by using information synthesised in the Annex 1, it allows us to distinguish among the three fast transforming countries in this respect, thus providing us with an additional instrument to evaluate the transition process in each country.

Table 1: Role of collateral as an instrument of debt guaranty in Poland, the Czech Republic and Hungary in 1995[6]

Poland
Czech Republic
Hungary

Legend: 1. Presence of factors limiting protection of creditors
2. Presence of factors partially limiting protection of creditors
3. Presence of factors guaranteeing sufficient protection of creditors

Given the generalised inefficiencies concerning collateral laws, reforms have been adopted in Hungary and in Poland. In 1996 the Hungarian Civil Code was amended in order to provide for a uniform system for the registration of non-possessory pledges over movable property and a computerised and centralised register was introduced in May 1997. Similar measures are provided in the Polish new Registered Pledge Law, in force since the 1st of January 1998. The weakest country in terms of collateral law efficacy is still the Czech Republic – the only country not yet to have renewed its regulation.

An analysis of bankruptcy legislation in the three countries, in terms of protection granted to creditors, provides similar results, although different normative approaches gave rise to a dissimilar degree of coverage. In transition economies, legislation regulating bankruptcy under the form of reorganisation or liquidation has been implemented to resolve the problem of inefficient resources allocation by favouring the use of strict market constraints on the workings of firms and making debt governance easier, thus enhancing capital flow to enterprises, but at the same time avoiding too much damage to the economic system. Given these objectives there has been a trade-off between benefits deriving from a greater flexibility and those deriving from a greater rigidity in the application of the law. On the one hand, flexible laws may lead to the continuation of soft budget constraints attitudes while, on the other, rigid laws might lead to liquidation of enterprises that are only temporarily insolvent and the real value of which is higher than that of liquidation. The efficiency of legislation depends on the solution to this trade-off.
The 1991 Hungarian bankruptcy law was strictly based on principles of rigidity. The automatic trigger[7] and the requirement for unanimity among creditors in the decision to implement reorganisation have been used as an instrument to obtain an immediate enhancement in financial discipline of enterprises. The rigidity of this approach most definitely guaranteed an immediate disciplinary effect as testified by the number of proceedings for bankruptcy (in 1992 and 1993 there were 17,133 liquidation trials and 5,156 cases of reorganisation) but perhaps at too great a cost, in terms of chain dissolution of commercial relations. Amendments brought to the Hungarian law in 1993 attempted to re-establish equilibrium between rigidity and flexibility of the law by eliminating the automatic trigger and unanimity of agreement among creditors for reorganisation[8].

In Poland and the Czech Republic bankruptcy legislation has followed more flexible principles. Governments in these countries have preferred to guarantee better protection for enterprises, avoiding interference from bankruptcy rules in privatisation and the liquidation of temporarily insolvent (because of inherited debt through trade arrears) enterprises. In the Czech Republic the fear of chain bankruptcy has caused lengthy delays in the implementation of legislation and the concession of derogation for several sectors[9] even beyond 1993. This extremely flexible approach has certainly had a price; it has limited creditors' incentives to monitor and has allowed the continuation of

soft budget constraint attitudes, without becoming the only instrument available to avoid chain bankruptcy reactions, due to some specific dispositions of the local laws.

In Poland too, application of legislation has followed the principle of flexibility but at the same time, more care has been taken over the problem of incentives towards restructuring and the adoption of hard budget constraints. In particular, a temporary law has been introduced concerning joint restructuring of banks and firms (March 1993), with the aim of overcoming the limits of the 1934 bankruptcy laws. The basic point of this new law is the possibility of following proceedings for bank conciliation by which credit cleaning may be implemented if the firms undertake a credible restructuring programme, with the aim of making themselves profitable once more and credit worthy. Several measures may be used to this end: firms may enjoy a discount on the debt; a portion of the debt may be converted into shares, while another may be re-negotiated with rate facilities. Moreover, the government guarantees a reduction in tax arrears to firms undergoing restructuring and offers banks involved Treasury bills, guaranteeing a form of re-capitalisation. The new legislation is an important example because it deals with the problems of banks and firms at the same time and also because it provides for a whole range of measures that can be adapted case by case to the various needs. Furthermore, it provides useful tools in order to incentivise reorganisation instead of liquidation of firms. For this reason, the proportion of reorganisation procedures filed in 1995 is considerably higher in Poland (13%) than in Hungary (2.2%) and in the Czech Republic (0.4%).

If legislation in the three countries is compared (table 2), although the awarding of points is necessarily subjective, it is apparent that a policy based on incentives for banks towards monitoring, like Poland's, is the most promising. In absolute terms however, for it to work properly and guarantee on the one hand effectively reaching a hard budget constraint and on the other real debt control and therefore better financing to undertakings, bankruptcy legislation and the institutions that support it still need to be developed in all three countries.

Table 2: Effectiveness of bankruptcy regulations in Poland, The Czech Republic and Hungary in 1995[10]

Poland
Czech Republic
Hungary

Legenda: 1: Presence of factors limiting the effectiveness of bankruptcy regulations
2: Presence of factors partially mining the effectiveness of bankruptcy regulations
3: Presence of factors that guarantee with sufficient effectiveness in bankruptcy regulations.

With these considerations on legal protection granted to creditors in mind, we shall now proceed to our study distinguishing between different kinds of financiers, for the very important reason that different creditors face different incentives in monitoring enterprises.

3.1.1. Government, Trade Partners and Public as Enterprise Creditors

On the subject of the role of government as creditor to firms, we must distinguish between voluntary and involuntary credits. While the former type of credit has been rapidly falling into disuse since the early years of transition, partly because of the large budget deficit in these States, the latter has become more widespread. Involuntary credits consist mainly in payments, in the form of taxes, custom duties and contributions to the social system, due but not paid, and may represent a consistent share of the debt, particularly for firms in financial difficulties. In the early transition years, this form of credit enabled firms to hold on to a soft budget constraint, thanks mainly to the incapacity and unwillingness of the State to financially discipline its debtors. In Poland for example[11], 1993 tax and social security debts were respectively 12.6% and 6.5% of total short term debts in non financial firms. In recent years however, the State is gradually gaining back its role as first claimant of firms, as the reduction in the share of tax and social security on total short term debts shows (from 19.1% in 1993, to 16% in 1995), but more so by the reduction in the real value of these credits in themselves, as can be seen in graph 1. This reduction is certainly due to improved financial performance by firms in recent years, but it is also linked to the new debt governance role, arising from the realisation that soft budget constraints may determine biased incentives for firms.

Graph 1: Poland: short term credits to enterprises from 1993 to 1995 in millions zloti (1992 constant prices)
Data source: Central Statistical Office

Another important component of short-term credit to enterprises is commercial credit.
In the early years of transition firms in Poland, the Czech Republic and Hungary often availed themselves both voluntarily and involuntarily of this type of credit, as a way to relax the restraints imposed by the new financial regulations; this gave rise to authentic debt chains. Towards the end of 1993 commercial debts in the Czech Republic reached 100 billion crowns[12], i.e. roughly one third of total debt for firms. In Poland, it was equal to 52% short-term credit of enterprises while in Hungary it reached 27% total short-term credit for large ones[13]. Although on the one hand this situation raised – and still raises – fears for the stability of the system, on the other several authors, among whom Fan and Schaffer (1994), have pointed out that commercial credit is widespread in Western economies too, and that their volume in transition economies is becoming stable. Data available for Poland agree with this interpretation; in particular, graph 1 shows that real commercial credit value gradually fell between 1993 and 1995. Similar trends have been experienced in the Czech Republic and in Hungary.

In all three countries the stabilisation of the volume of commercial credit is without doubt a consequence of better financial discipline enforced by the firms themselves and obtained through large scale incentives for monitoring, among which is the fear of chain bankruptcy. It is already widespread practice to require full payment for goods before handing them over.

It is still not possible in transition economies to speak of a governance role for firms' publicly issued debt. In all three countries in fact, because of limited availability and widespread lack of information, creditors are only willing to buy this type of debt if there are adequate guarantees concerning the firm's performance and profitability. This makes placing the debt difficult and fairly uncommon. In Poland the issue of debt securities by enterprises and municipalities has been regulated only since 20 August 1996. In Hungary in 1993 this kind of debt accounted for 2% of total liabilities of large enterprises and from 1994 to 1995 there were only 38 debt issues on the primary market from enterprises, equal to total borrowing of 9,9 billion HUF. In the Czech Republic data concerning bond issues from enterprises are not

available; consequently we consider the average ratio for large listed enterprises between long term payables and total liabilities as an overestimating proxy for publicly issued debt: its 3% value highlights the limited recourse to this form of financing.

Although leasing is not a conventional form of financing, it is a way widely used in transitional economies to enlarge or restructure productive activity. Advantages connected with leasing are high: enterprises do not face liquidity problems and do not need to provide collateral; creditors, who continue to hold property rights on goods, face lower risks.
In terms of asymmetric information and agency problems, leasing contracts represent a good solution, granting a strong creditor control over debtor. For all these reasons, leasing is becoming the most important form of finance for small and medium enterprises. Data concerning leasing in East European countries are difficult to collect; however considering that in the Czech Republic and Hungary 20% of industrial investment is financed through leasing can provide an indirect measure of the relevance of this form of financing.

3.1.2. The role of banks as creditors to firms

To analyse the role of banks as suppliers of finance to enterprises and that of bank debt as a control mechanism, we must examine the results of the transformation undergone by the overall banking system. The reasoning behind this analysis is that a stable and functionally efficient system is able to guarantee an appropriate share out of resources by overcoming information problems and economic uncertainty partly thanks to strict governance of debt. The focus is still on the first years of transition, up to 1995. The link existing between stability and efficiency in a financial system has been analysed at length for Western economies. In particular it has been stressed how the trade-off in the short term between these two concepts is overcome in the long term, since efficiency is a necessary condition for the stability of the system.

In Poland, the Czech Republic and Hungary, efficiency and stability problems in the financial system arose more or less together, right from the earliest times of transition. Banks, which were created by dividing up the assets and the liabilities of the monobank[14], were asked to work according to market forces without being in a condition or having
the incentives and skills to do so. Low capitalisation and the unreliability – original or derived – of a large proportion of debts registered in their portfolio[15] gave rise to a bad debt stock problem, while the inexperience of staff in dealing with the new rules and procedures, combined with delays in assimilating this transformation, gave rise to a bad debt flow problem. From the very start of transition therefore, the short-term trade-off between stability and efficiency became firmly binding. Because the instability problem was urgent, the authorities were driven to regulating the sector by creating a system of payment among banks, control over capital and insurance of deposits, as well as offering themselves as lenders of last resort and taking an active part in this field. Whereas regulation now tends to be in line with Western countries, especially with the European Union, the measures for active intervention adopted have often proved to be an obstacle to allocative efficiency and competition, as well as creating biased incentives for banks and obstructing attainment of functional efficiency.

The risks from these interventions in economic policy have been theoretically stressed in the work of Berglof and Roland (1995), who analysed banks incentives in an environment of undercapitalised institutes, with low quality portfolios, in the presence of political pressure to re-finance firms even when unprofitable. If the State has an interest in avoiding bankruptcy of firms and is unable to commit itself credibly *ex ante* not to re-finance enterprises in difficulty *ex post,* banks might consider it a good thing to re-finance unprofitable projects while waiting for a bailout from the State. In this way, the presence of a government soft budget constraint restricts banks and enterprises alike and so delays restructuring. If the authorities wish to guarantee hard budget constraint equilibrium[16], they must favour the accumulation of reserves among bank assets. These reserves must be entirely employed in compensating part at least of bad debts in cases of a bank's illiquidity and this reduces gains from a bailout for the bank itself. Berglof and Roland note however that if a bank is to accumulate reserves, this implies the reduction of funds available for a credit policy. So there is a trade-off between the necessity of avoiding a soft budget constraint and that of avoiding forms of credit rationing.

In the light of these theoretical considerations let us now analyse the policies adopted in Poland, the Czech Republic and Hungary to deal with the problem of stability. We shall see to what extent they have been effective and their impact on the system's efficiency. We shall also calculate the capital adequacy ratio for the banks of these three countries.

In Czechoslovakia (before the federation divided), the Consolidation Bank underwrote 80% of all bad debts inherited by commercial banks from the monobank. Following this, numerous plans were implemented for re-capitalising banks. The first attempt dates October 1991, and involved 50 billion CK, part for direct re-capitalisation of banks and part in debt for bond swaps. Furthermore, specific actions were implemented to resolve crisis situations like that caused by the Kreditni a Promyslova Banka Praha[17], by the Banka Bohemia and by the AB Banka. Although intervention in re-capitalisation of the banks was prompt, the follow up of several different manoeuvres, none of which was strong enough, has only partly resolved the stock problem, and has created moral hazard, so intensifying the bad debt flow problem. Moreover, only after the first half of 1993 and following stricter regulations, did the banks begin to adopt a more prudent credit policy.

Efficiency and solidity problems still remain in the Czech banking system. Bad loans went from 18% of total bank loans in 1992 to 34% in 1995; even in 1996, a year of economic recovery, 8 bankruptcy proceedings were opened for as many banks, one of which was the Kreditni Banka, as a consequence of which the Agrobanka – the fifth largest in the Czech Republic, had to be rescued. In October 1996 a new consolidation program, covering 13 small banks, which account for 5% of the Czech-banking sector, was implemented. Meanwhile, amendments to the law of investment funds and investment banks have been implemented. The Governments is also interested in restricting the commercial banks investment activities, in line with the EU regulations, in order to enhance financial stability and discipline.

In Hungary recapitalization of the financial system was undertaken between 1992 and 1994, using, a mix of different strategies. In 1992 the government offered guarantees for 50% bank debts inherited from the monobank in 1987, while at the end of the year it agreed to swap low interest bonds with bad loans but with the provision for banks to consolidate between 20% and 50% of the swapped loans. In the second half of 1993 the State bought part of the debt of a few large state run firms and between the end of the year and May 1994 some institutes were re-capitalised to guarantee, in the first place, a 0% capital adequacy ratio and later, 4%. By the end of 1994 the government issued subordinate loans to the four leading banks to enable them to achieve a capital adequacy ratio of 8%. A new banking act has been adopted in 1996, in order to strengthen prudential regulation in the country.

In Poland reform of the financial system was carried out by focussing on the creation of adequate incentives towards better efficiency and on refinancing banks for their re-capitalisation. The problem of bad debts was tackled in 1992, through a series of laws and guidelines with the aim of providing incentives for banks to resolve their portfolio situation. By making the most of artificially high margins and inflation, which was gradually eating away the value of the debt, banks transferred their profits into reserves as well as adopting a policy of staff training and reorganisation. In March 1993 the temporary law on joint restructuring of banks and enterprises was approved[18], while in September of the same year the State began a final, consistent re-capitalisation and injected new funds into seven state banks. Amendments to the banking law (no. 72/1992) were proposed following a similar line of thought, like the recommendations to the Central Bank of 2

August 1993, concerning conditions for guaranteeing credit. A new banking act is in force since January 1996, adopted in order to strengthen prudential regulation, reducing the maximum amount of equity investment a bank can make to 15% shareholder equity.

In terms of capital adequacy, ETA (equity over total assets) has been considered as a proxy for the Basle ratio. Graph 2 shows that the overall capitalisation of the banking system increased in all the three countries; it seems that the adoption of the main requirements concerning international banking regulation brought some constraints to the operations of single banks, forcing them to a greater stability.

Graph 2: Bank capital adequacy ratios[19] in Poland, Hungary and in the Czech Republic

Generally speaking, comparing interventions by authorities in the countries analysed, although this implies subjective evaluations, it immediately springs to our attention what different effects they have had. In Poland, placing strong emphasis on incentives has given the banks a more active role in solving the bad debts problem and this has persuaded the banks themselves to follow a more rigid policy in conceding new credits with fewer soft budget constraint risks. This approach however, has left the problem of stability open much longer (table 3 gives 2 points for stability taking especially the presence of bad loans into account). The approaches adopted in Hungary and the Czech Republic (which do not sufficiently counteract the incentives for banks to hard budget constraints) are similar, although the different economic situation and differences in regulations over bankruptcy and bank supervision have meant that the Hungarian banking sector has managed to achieve better levels of stability.

Table 3: Effects of intervention by public authorities to stimulate reform in the banking system[20]

Poland
Czech Republic
Hungary

Legenda: 1: Presence of factors which limit an active monitoring role for banks
2: Presence of factors which partially limit an active monitoring role for banks
3: Presence of factors which guarantee sufficient monitoring by banks

Although a specific examination is beyond the scope of this paper, it appears advisable, while on the subject of bank incentives and government policies in these countries, to stress how attaining a hard budget constraint is strictly linked to the property structure of banks. An important step in the transformation of the financial system is the completion of the privatisation process; State banks may in fact be forced to accept a credit policy in support of large public firms, even if it is inefficient from the allocative viewpoint, and they may receive erroneous incentives insofar as the State tends to re-capitalise them when faced with risk of default. Moreover, a structure that provides for joint property between banks and enterprises invalidates the capacity of credit institutes to adopt efficient policies and increases the risks in the system.

In the three countries in question, privatisation is still incomplete; in the Czech Republic, a considerable share of the four biggest banks is still partially public property, due to an uncompleted voucher scheme privatisation, while the privatisation funds are an example of joint property of banks and enterprises, generating corporate governance problems and thus stability problems of the overall economic system. In November 1996 the Government approved in principle the complete privatisation of these four large banks. In Hungary privatisation of the big state banks was begun, in 1995, with a substantially large sale of shares to foreign investors among others. The privatisation strategy did not really take account of banks' incentives; however, a strong supervision and the presence of foreign investors granted a good level of stability of the system. In Poland privatisation of banks has always been considered an important strategic objective and was started in 1992. Strict rules were applied concerning the percentage of shares to be sold to various sorts of investors, while a great emphasis has been placed on creating adequate well-behave incentives for banks. The prosecution of the privatisation process has been subordinated to the effective capacity of banks of sustaining competitive pressures.

The progress in terms of efficiency of banks in Poland, the Czech Republic and Hungary has been considered, with an analysis of the banking sector following the structure-conduct-performance approach[21]. First changes in the structure of this sector – essentially in terms of concentration – are analysed and considerations of conduct – credit and interest rate policies – are drawn; thus conclusions on performance of banks are derived. Our choice of a more traditional approach, is determined by the consideration that in transitional economies the role of strategic barriers and policy interdependence in the banking sector is limited, thus the explicative power of the structure-conduct-performance approach is unaffected. For this purpose aggregate data, country by country, as well as balance sheet data for each credit institute, made available by the central banks, have been analysed. A study with disaggregated data was made for a sample of banks, making up 80% of total assets in Poland, 70% in Hungary and 75% in the Czech Republic. Additional information available on the structure of the banking system in the latter two countries made it possible to allocate the remaining share of assets among the banks grouped by size, whereas for Poland it must be understood that the sample is biased against small banks[22].

Before we consider the question of concentration we shall make one important point.
In capitalist economies in fact, an adequate level of concentration is an ever more necessary condition to be able to bear competition in the international scene. In the context of transition economies however, the real problem is still that of creating internal competition. This implies of course the existence of a great number of banks and the reduction of a 'socialist' type of concentration[23].

Over recent years the number of banks operating in each country has increased considerably (77 in Poland, 55 in the Czech Republic and 43 in Hungary at the end of 1995), but a small number of large institutions continues to hold a large share of the market; Herfindal's [24] index, calculated on the total assets, testifies to the concentration in this sector, in the form of hegemony of a small number of banks[25]. Analysis of the trend of this indicator in all three countries does show however a progressive improvement over the years which may partly be explained by the decreasing relevance of big banks, in which the State has a large stake, but mostly by the dynamic attitude of medium sized credit institutes which are prevalently either foreign holdings or under foreign control. The increased relevance of this group takes on a particular relevance since the awareness of not being too big to fail forces these banks to follow more prudent policies that drive them to stimulate a hard budget constraint.

Focusing on small banks in Poland, we should first point out that after considerable initial growth in the number of institutions with less than 1% market share in 1992 (due to the deregulation in the sector) the following years saw a reduction in their number, while their share of total assets has increased thanks to growth in size of the banks themselves, through acquisitions and mergers. This fact is insufficiently highlighted in available data because this type of financial institutions is under-represented in the sample.

Table 4a: Market shares of different groups of banks[26] in Poland, Hungary and in the Czech Republic (as from total assets)

	Czech Republic			Hungary			Poland		
	Small	Medium	Large	Small	Medium	Large	Small	Medium	Large
1992	6.08%	17.42%	76.5%	5.21%	12.21%	82.58%	3.09%	17.18%	79.73%
1993	10.13%	22.23%	68.29%	6.02%	12.56%	81.42%	4.69%	20.43%	74.88%
1994	10.7%	24.18%	65.12%	7.35%	15.13%	77.52%	4.87%	19.73%	75.4%
1995	9.0%	31.0%	60.0%	9.33%	18.71%	71.96%	5.28%	19.7%	75.02%

sources: own calculations based on individual banks balance sheet data, available from Central Banks

Table 4b: Herfindal concentration index based on total assets of banks

	Czech Republic	Hungary	Poland[27]
1992	0.165	0.162	0.113
1993	0.145	0.147	0.103
1994	0.127	0.135	0.099
1995	0.105	0.123	0.101

sources: own calculations based on individual banks balance sheet data, available from Central Banks

To continue our analysis of concentration in the sector we must deal with each market separately; bank credit will be examined first, distinguishing, where data are available, between the short and the long term.

Analysis of the short term credit market (table 5) in Hungary reveals that medium sized banks have a fairly high – and rapidly expanding – share (30.15%), far higher than their share in total market assets (18,71%) and that in the medium term loans market (18,83%)[28]. The greater proportion of medium sized institutes present in the short term loans market is indicative of a more cautious policy than that of the large banks and is a drive towards greater competition in the less risky credit market (also testified by a value for the Herfindal concentration index which is 0.07). This tendency is confirmed in 1996; data available from the Central Bank bulletin show that medium banks account for 37% of the short term credit market, while their role in long term credit market is limited to a share of 24%.

Table 5a: Market shares of different groups of banks in Poland, Hungary and in the Czech Republic (as from short term bank loans to customers)

	Czech Republic			Hungary			Poland[29]		
	Small	Medium	Large	Small	Medium	Large	Small	Medium	Large
1992	10.23%	12.57%	77.20%	4.64%	14.04%	81.32%	2.58%	15.89%	81.53%
1993	11.91%	20.65%	67.44%	6.19%	14.54%	79.27%	5.12%	17.23%	77.65%
1994	9.98%	25.96%	64.06%	8.89%	20.03%	71.08%	4.93%	14.53%	80.54%
1995	9.06%	28.79%	62.15%	13.02%	30.15%	56.83%	6%	16.93%	77.07%

sources: own calculations based on individual banks balance sheet data, available from Central Banks

Table 5b: Herfindal concentration index based on short term bank loans to customers

	Czech Republic	Hungary	Poland
1992	0.155	0.152	0.145
1993	0.208	0.145	0.121
1994	0.146	0.122	0.109
1995	0.165	0.07	0.096

sources: own calculations based on individual banks balance sheet data, available from Central Banks

If we analyse data concerning the Czech Republic, apart from growth in the share of small and medium sized banks and a decrease in that of large banks, we notice an increase in the concentration index; this may be due mainly to the trend in short term credit conceded by one large bank – the Komercni Banca[30]. A similar trend in market share of the groups of banks emerges from analysis of total credit granted by Polish financial institutes, although with a smaller concentration index.

In the Czech Republic deposits market there has been a gradual reduction in concentration (the indicator went from 0.17 in 1992 to 0.12 1995) while the market share of medium sized banks has grown along the same lines as total assets. The share of groups of institutes in 1995 is represented in graph 3. A ratio of 78% between short term deposits and total liabilities in 1995 testifies the development of retail banking forms in the country, a difference from what has happened in Poland, where this ratio, calculated for total deposits (excluding those belonging to the inter-bank market) was 47%. Again, in Poland, the share of medium sized banks in this market was considerably higher than that for total assets, a demonstration of the greater importance given by these credit institutes to retail banking. Unfortunately, data disaggregated for deposits in Hungarian banks do not allow this type of analysis[31].

Graph 3: Market share of different groups of banks in Poland and in the Czech Republic, as from deposits[32] in 1995

To conclude, a trend towards less concentration and a reduction in the role of large banks emerges at the end of 1995, thanks mainly to the increased share of medium sized foreign held banks. Because of their superior assets and debt conditions, incentives deriving from foreign participation and the conviction of not being too big to fail, these credit institutes have to be more efficient than the others are. This is reflected in a larger presence and competition in more profitable and less risky markets that could be expressed in terms of price but more generally takes the form of improvement in quality.

We shall now proceed with an analysis of the evolution in banks' conduct, which will concern interest rates and credit policies; a primary indicator considered[33] is the trend in bank interest rates spread. During transition high spreads have in general allowed the large commercial banks to attain sufficient profits to cover bad debt risks. New banks, with substantially stable credit portfolios, later entered without reducing to any great extent the interest rates spread, in collusion with the already present credit; this is evidence of a lack of competition in the bank credit and deposit markets. Only at the end of 1995 interest rate spreads started to decrease, testifying the development of a new competitive environment in the banking sector. The two following graphs (4A and 4B) concerning Hungary and the Czech Republic confirm this[34]. It is not possible to provide a graph for Poland concerning interest rates for the same period, due to discontinuity of the data.

Graph 4: Lending and deposit rates
Data source: National Bank of Hungary, Czech National Bank and IMF
To gain a broader view of competition linked to rate policies adopted by banks, the reactivity in adjustment of bank rates to variations in market yields was analysed. Estimated equations place the (active or passive) bank rate as a function of its lagged value and the three months Treasury bill (as a proxy for market yields) contemporaneous and lagged, following the structure of an Autoregressive Distributed Lags (1,1) model. This analysis allows us to quantify the instantaneous impact and the long run effect of these variations, as well as the progressive adaptation, enabling also further observations concerning the level of efficiency and competition of banks at the end of 1995.

Graph 5: Reactivity in adjustments of the bank rate to variations in market yields
Data source: National Bank of Hungary. In the second graph only the regressions on lending rates were statistically significant. Anyway this
study allows us to draw some considerations on bank competition
For Hungary, (graph 5), our analysis concerned lending and deposit rates applied to firms[35]. In particular, a weighted mean rate was used for deposits, to overcome statistical problems in estimations based on the current account deposit rate. Delay in adjustment of the average deposit rate to variations in the Treasury bill rate therefore is partly due to the downward stickiness of collecting not on demand**.** Our analysis[36], which focuses on the 1993-1995 period, reveals that on the whole the banking system is unable to fully exploit variations in market returns. Usually, after a rise in the market rate, banks attempt to raise the lending rate and delay adjustment in deposit rates; this increases the rate spread in the short term and brings in higher profits; when, on the other hand, the leading rate falls, banks lower the deposit rate as quickly as possible and delay adjustment of the lending rate. As the first section of graph 5 shows, where short and long term adjustments are similar for both lending and deposit rates, Hungarian banks have not succeeded in making the most of this opportunity. This may seem either the result of almost nil competition (so that banks adjust their rates to the market, more or less immediately and try to keep their spread at a fairly high level), or alternatively, of strong competition in the Hungarian banking sector (so that banks adjust their short term rates to the market to avoid losing customers to other institutions). In reality, the second part of the graph, where a distinction is made between lending rate policies of large banks and the rest, shows that the latter group, in particular medium sized banks with a prevalent foreign share, takes better advantage of short term fluctuations in money market returns. Even so, in the space of a few months, the behaviour of these two groups of banks tends to become similar; it must also be noted, among other things, that large banks start from higher average lending rates in the period in question. Stronger competition is evident if we look at the trend in minimum and maximum lending rates; quicker adjustment to rises in the market rate (particularly in the first part of the sample) is seen for lending rates to 'worse' customers and leads to higher adjustments over the long term (0.54%) in comparison to those for 'better' customers (0.33%).

A similar analysis was developed for the Czech Republic and an ADL(1,1) was estimated, to evaluate the reactivity of bank rates to changes in the leading market rates during the 1993-1995 period. However, the coefficients of market rates were never significant, proving that bank credit and deposit rates in the country are not sensitive to changes in the economic environment. This result reveals a substantial inefficacy and rigidity of Czech banks' pricing policies. No significant data were available for Poland. However Papi and Negret (1997) show that bank interest rate spreads decreased all over the 1993-1995 period, as a consequence of increased competition and of a better portfolio situation of banks[37].

Following our study on the conduct of banks, changes in their credit policies, during the first years of transition, are analysed. Graph 6 shows a reduction in the share of bank net lending over total assets both in the Czech Republic and in Poland during the 1993-1995 period. This trend may be explained by a reduced demand for credit (because of high interest rates) but also by a lower offer, due to more prudent lending policies (because of asymmetric information and control problems). In the presence of pronounced asymmetrical information, with high average risk in the market and weak powers of governance over debtors, in fact, banks undergoing restructuring are stimulated to reduce provision of credits. A credit squeeze ensues: enterprises unable to provide adequate security cannot obtain credit; at the same time, despite the excess on demand, banks do not find it worthwhile to raise the lending rate to clear the market, because in doing so they run the risk of further degrading clients' quality (Stiglitz and Weiss (1981)). Bank assets are thus directed to less risky activities, like Government securities.
Graph 6: Share of bank net lending over total assets in Poland, Hunagry and in the Czech Republic (as from aggregate bank balance sheets)

Graph 7: Bank lending by maturity in the Czech Republic and bank lending by dimension of the firm in Hungary
Data Source: Czech National Bank and National Bank of Hungary

In Hungary the share of bank net lending over total assets, after a marked reduction between 1990 and 1993, started increasing, indicating recovery in the economy as a whole but also more confidence of banks, actually stemming from the partial resolution of information problems which previously limited credit expansion[38].

Data available for the Czech Republic (graph 7) reveal a substantial re-composition in the duration of credit granted to firms, seen in a slight increase in short and medium term credit compared to a marked reduction in long term credit. In terms of maturity hedging firms should avoid financing long term assets with short term borrowing, however, in light of the theoretical considerations previously developed, the recomposition in terms of maturity of bank lending is evidence of greater caution on the part of banks and of their new

monitoring rule over enterprises. This must be considered good in a transition economy, where the aim of achieving a hard budget constraint must prevail over all others – including security for long term loans to firms and reduction of the costs of re-negotiating credit.

Data for Hungary (graph 7) reveal the different way banks treat small firms. These generally suffer more from information problems (Galeotti, Schiantarelli, Rondi and Sambenelli (1992)) and have less collateral at their disposal. In particular, the amount of real credit at the disposal of small firms between 1990 and 1995, is evidence of the low level of trust the banking system places in the small manufacturer. Personal interviews with experts in this sector actually reveal an all-out failure in the bank credit market to help small enterprises. This is due to the inability to check the quality of the firms applying for loans and the conviction on the part of the banks that the percentage of reliable small firms is extremely low[39] (a clear reference to Akerlof (1970)).

Data for Hungary also enable us to distinguish between bank loans to firms in HUF and in hard currency. The latter type of credit has grown rapidly in recent years, as shown in graph 8, and compensates for the decrease (also in nominal terms) in bank loans to firms in HUF. Enterprises demand foreign currency credits, taking advantage of stable exchange rates and lower interest rates; in general the more reliable firms, those less risk prone and more highly capitalised, apply for this kind of credits and this self-selection in demand enables banks to offer better conditions in the contract. From the offer viewpoint, the banks which have the advantage of being able to grant this sort of loan are generally foreign (either with a foreign share or foreign owned) which follow criteria of efficiency in loan allocation. Therefore the currency loan market has on average a higher quality clientele and better discerning powers than the banks, making their contractual conditions more advantageous for firms. A separation equilibrium with self selection sets in, of the type highlighted by Hayashi (1982): the best enterprises, i.e. those which offer best security, apply for hard currency loans and banks grant them at particularly advantageous conditions. The other firms turn to the HUF credit market but, because of greater risks, contract conditions are less advantageous than before the separation of the markets and there is a credit squeeze for this category, which is seen in the data as a fall in bank loans in florins granted to firms, actually in nominal terms. Analogous theoretical considerations explain the sharp increase in hard currency loans in the Czech Republic (graph 8).

Graph 8: Foreign exchange bank credits and local currency bank credits to non financial enterprises[40]
Data Source: Czech National Bank and National Bank of Hungary

To summarise, it is interesting to note that Polish, Hungarian and Czech banks started in 1995 to behave following economic roles. As the banks capital adequacy ratio shows government policies have begun to achieve positive results in terms of stability. There is growing attention towards bank incentives for restructuring and hard budget constraints. Our analysis of efficiency is carried out following the structure-conduct-performance approach; if we consider the former aspect, in all three countries small and medium banks are growing in relevance, to the disadvantage of the group of large ones, resulting in an overall fall in the level of concentration in the markets. As to conduct, analysis of interest rates on deposits and loans shows the presence of a certain degree of collusion among credit institutions, with the exception of credit granted to the best clients. However, the reduction in late 1995 of banks' interest rate spreads signals the growth of a new competition between banks. The trend in bank loans appears to show more careful attention towards the question of information: forms of short term loans to the larger firms are prevalent; there are furthermore forms of credit rationing and collateral is becoming a necessary element to gain access to credit markets.

In conclusion, it seems that banks are gradually improving efficiency; they are pursuing prudential policies and imposing hard budget constraints on enterprises. This positive evaluation concerning the transformation of the banking system stimulates an increasing role of banks, at least at this stage of transition. Provided banks have the right incentives, in fact, they seem to be the best engine of transformation at the micro level, due to their monitoring capacities over enterprises.

3.2 Financing firms through equities in the presence of adverse selection, moral hazard and agency problems

When we defined shares as an instrument of corporate governance we stressed that this form of investment does not give to the financier a specific right of repayment, but, by conferring him the voting right, it allows participation in the decision making process of the firm, thus granting direct control. Actually the success of this form of control over firms depends on several factors: the existence of sound and well regulated capital markets, adequate company and security laws, incentives and the will of different kind of stockholders to exert adequate control over firms.

In Poland, the Czech Republic and Hungary capital markets have been created or rebuilt in the first years of transition to support the privatisation process. In the Czech Republic the capital market is divided into three parts: the Prague Stock Exchange, the RM[41] system and the RTP, which is operative since mid 1996. Disclosure and capital conditions are required to any firm applying to be listed in the Prague Stock Exchange, in order to provide investors with sufficient information to evaluate the opportunity of investment, while no particular constraint limits access to the RM system; this situation leads to a restrict number of listed companies in the first market (41[42]), while more than 1500 firms, essentially those involved in the voucher scheme privatisation are quoted in the second one. An effective computerised central registration system is in use, which registers all transactions of property of shares and provides investors with an updated list of shareholders; disclosure of prices applied in transactions between sophisticated investors is also required, in order to provide small private investors with more information. From July 1996 new capital market regulations are in force; every investor must notify acquisitions or sales of holdings greater than 10%. Investors with more than a 50% stake are obliged to submit public take-over offer at a special floor price to minority shareholders. Although effort has been put towards disclosure of information, the overall Czech capital market in 1995 is still hindered by weak regulation; listed enterprises provide the minimum required information, thus stock prices tend to be sticky and do not really reflect the value of the firm. One could argue that enterprises' unwillingness to provide information hinders ready availability of external finance and thus capital markets tend to be a mean of transferring property rather than of rising new capital. In order to overcome these problems, the Czech Government is planning to establish an independent supervisory institution.

In Poland, the Warsaw Stock Exchange was created in 1991, following the Act on Public Trading and Trust Funds. This capital market is characterised by strict regulation and extremely high disclosure and financial standard requirements, in order to provide investors with sufficient information and to guarantee strong safety conditions; the Warsaw Stock Exchange itself is obliged to publish information on single listed companies. Strong admission requirements have however limited the number of listed companies, which in December 1995 was equal to 65; on the other side, the openness of the market to any kind of investor has stimulated foreign capital access (foreigners do not need to operate through local traders) and diffusion of speculative investors. Trading is also allowed over the counter, while roughly 90 enterprises are traded in a small list.

In Hungary a similar structure of capital market is in place, with the Budapest Stock Exchange, 42 enterprises listed, and a consistent part of trading over the counter; since 1993 a central depository and clearinghouse is in place. In November 1996 Parliament approved the new Security and Stock Exchange Act, now in force, which strengthens prudential regulations and mergers banking and stock exchange supervisory bodies. In all three countries insider trading in share transactions is not allowed.

As we have shown, regulation and disclosure requirements aim at granting sufficient information to investors to evaluate different opportunities; protection of shareholders' interest against management opportunism and of small investors against large ones is rather a matter of company and security laws. In Poland, the Czech Republic and Hungary Commercial Codes define the main issues concerning joint stock companies; Supervisory Boards, as well as Boards of Administration, are completely separated and directly elected by shareholders. Great flexibility entitles enterprises to adapt legislation to specific needs. If we consider active monitoring from investors, it is possible to highlight a great lack of control. Institutional investors are underdeveloped in their role of monitoring (Coffee 1996, on the Czech Republic experience) and although banks have a full licence that allows them to invest in shares, they do not have a monitoring role, comparable to that of financial institutions in Germany and Japan.

All this leads to low efficiency in using shares as an instrument for corporate governance in transition economies, a hangover of asymmetric information and agency problems, and fewer opportunities of access to external capital for enterprises. Rather than a conventional instrument for financing firms, issuing shares is an instrument for transferring property, mainly linked to the process of privatisation. The liquidity level in capital markets (total value of traded equities over market capitalisation) can be considered as an indirect measure of the capacity of firms of rising funds through this form of financing. A low level means that transaction costs are high and that capital markets are essentially considered a mean of transferring property through privatisation; high levels can be associated with low transaction costs and greater opportunities of financing. The data show (tab.6) that capital markets in the Czech Republic are affected by high transaction costs; in Poland market liquidity seems to be high, while Hungarian capital market lies in between. However, if we also consider the ratio between market capitalisation and total bank credits to non-financial corporations, we can argue that the overall efficiency in providing funds of the three capital markets is quite the same.
An extremely low level of this indicator for Poland shows that, despite high liquidity, this capital market is small compared to the economy, thus representing only to a limited extent a form of financing for enterprises[43]. The high value obtained by the Czech capital market is a consequence of the large number of enterprises traded (in the PSE and in the RMs); however, if we consider the low liquidity ratio, the limited extent of this form of financing is evident.

Tab.6: Capital markets (end 1995): means for transferring property or financing instrument?

Poland
Czech Republic
Hungary

Data source: IFC, Emerging Stock Markets Factbook 1996

Summing up, although capital markets in transitional economies have experienced an impressive development during the last years and up to 1995, their activities are mainly related to the privatisation process. Equities are mainly related to transfers of property and are not a conventional source of finance. Furthermore, only a limited number of enterprises use this source of finance. We should thus conclude that equities do not perform adequate control over enterprises. They are not able to strengthen firms' budget constraints and thus it is not possible to rely on them in order to stimulate the restructuring process. Further development of capital markets and related regulation should be pursued before equities take an active role in enterprises' financing. Governments in the three countries are moving in this direction.

3.3 Financing firms through foreign direct investments (FDIs) in the presence of adverse selection, moral hazard and agency problems

FDI is not a conventional way to finance a firm; it is mainly connected with property transfer and internalisation decisions of enterprises. However, when firms in transition economies are analysed, the lack of capital allows us to consider it as a source of funds. This is possible because FDIs from West to East are generally flows of funds implying the acquisition of equities of a new or an existing firm by a foreign partner. For the East European partner, in any case, FDIs represent a quick injections of financial resources.

FDIs guarantee an effective solution to information asymmetries and agency problems. Generally speaking Kogut (1996) notes that FDIs can provide three different forms of corporate governance: an organisational one, an institutional one and a competitive one. Organisational governance applies when the foreign firm has superior methods and controls the East European enterprise through supervision, authority and incentives. Institutional governance applies when the foreign firm controls the East European one directly (by means of the creation of oversight institutions) and indirectly (through debt or shares). Competitive governance applies when FDIs increase competition in the host country, thus creating an environment where inefficiencies are not sustainable.

In the transition economy context, the local environment does not allow an effective role for competitive governance; the main forms of governance are organisational and institutional. If we want to be more precise about the possibility of resolving asymmetric information and agency problems through these two forms of governance, we should note that FDIs can guarantee the coincidence of interests among parties, thus ensuring fair returns from investments. Even if this coincidence of interests is not achieved, governance through FDIs has some advantages in terms of costs of monitoring. As we have previously noticed, in fact, FDIs can be considered an internalisation decision for a firm; the foreign investor is a sort of internal auditor, which has direct access to all the information he needs; monitoring and incentive costs are thus reduced and governance is more effective.

Furthermore, where there is a strong foreign investor, there is often easier access to other forms of finance, partly because there is a sort of transfer of reputation and partly because, thanks to the investor's connections with foreign banks, the possibility of financing in foreign currency is enhanced. This makes FDI an important form of finance, from the information viewpoint, for firms during transition.

The improvement in firms' access to financing explains to some extent the reason for regulations protecting FDI and for incentives to develop them. Full protection of FDIs is in force in the Czech Republic, Poland and Hungary and off-shore zones have been created, in order to stimulate FDIs. Furthermore, in Hungary particularly favourable fiscal and financial laws concern FDIs; as a result, a large number of enterprises have been registered as foreign (4431 in 1995 and 1874 in the first semester of 1996). Similar incentives for FDIs have been removed in the Czech Republic and Poland.

It is quite difficult to collect firm level data concerning the amount of FDIs injected in a firm; thus it is impossible to calculate the role of FDIs in financing firms in Eastern Europe. However, by analysing the total flow of FDIs (graph 9) and by considering the largest ten initiatives in each country (table 7), it is possible to have an idea of the relevance of the phenomenon.

Graph 9: FDIs in East European countries (millions of US$)
Data source: Unctad 1996, World Investment Report

FDI flows directed to Poland, the Czech Republic and Hungary have considerably increased during the transition period. Among the three countries in analysis, Hungary seems to be the most receptive, with an aggregate level of investments higher than the other two, (except in 1994). This can be a consequence of a more favourable environment for FDIs, in particular of more protective laws and higher incentives.

When the top ten initiatives in each country are considered, it is immediate to note that investments in the Czech Republic are on average higher than those in other countries.

Summing up, although FDIs are definitely an important source of funds for firms in transition, we should remember that this is not a conventional form of finance, but is mainly connected with a transfer of property. In addition, it provides funds only to a limited number of enterprises. The relationship between FDIs and growth is still under theoretical discussion; however it seems that, although FDIs have an important role at the beginning, they cannot be considered an engine of growth for transition economies.

Foreign Partner	Host Partner	Investor's country	Type of Investment	Equity Share	Total Investment (1000 US$)	Initial Investment (1000 US$)
Volkswagen-Audi	Skoda Automobilova AS	Germany	Joint Venture	70%	2161	992
Kolbenschmidt	AGMetal AS	Germany	Acquisition	83%	750	750
Swiss Telecom	SPT Telecom	Switzerland	Joint Venture	27%	2771.4	1450
PTT Netherland	SPT Telecom	Netherlands	Joint Venture	3.5%	1267.9	607.1
Philip Morris Holland BV	Tabak AS	Netherlands	Acquisition	67.8%	492	492
Linde AG	Linde Technoplyn	Germany	Acquisition	51%	257	257
Dow Chemical CO	Chemicke Zavody Sokolov	United States	Acquisition	na	250	250
IFC Kaiser	Nova Hut AS	United States	Acquisition	na	215	215
Mercedes-Benz	Avia Bus	Germany	Acquisition	31%	272	210
Cmobil	Radiomobil	Germany	Joint Venture	49%	200	200

4. Financing firms' investment in the Czech Republic: a firm level data analysis

Until now we focused our analysis on the different sources of external finance for enterprises; in particular, by considering aggregate data, we highlighted the main features of the different sources in terms of control over firms, thus estimating indirectly their role in transition. In this paragraph our attention will move to financing decisions of individual enterprises. In particular, we will consider listed enterprises in the Czech Republic and by using firm level balance sheet data we will see how each firm finances its investment projects. Similar data for Hungary and Poland are not available. To create a link between investment and financing decisions, we considered only those enterprises that increased their overall capitalisation in the 1994-1995 period; the analysis covers 570 enterprises. Although no generalisation to the other two countries can be made, the results of the analysis on Czech firms can provide useful remarks concerning the effect of some specific features of transition on enterprises' financing choices.

The following forms of financing have been distinguished: self-financing, new equity, bank debt and other debt. Self-financing is the sum of all internal resources which are not provided by partners or by de-investment. It includes non-distributed profits, changes in funds and depreciation. Due to the lack of information about distributed dividends, we used the overall change in reserves plus depreciation as a proxy. Equity financing has been calculated as the change in own capital, while bank debts are new credits (of the short and the long-term type) offered by banks. Other kind of debt includes commercial debt, public debt and other forms of debt. We standardise liability categories by dividing each for total investment, in order to evaluate the proportion of investment that each source finances. Following one of the basic accounting equations:

$$I^* = \Delta Banks + \Delta Other\ credits + \Delta Equity + Self\ Financing,$$

Which means that, by definition, changes in the firm's assets (total gross investment, I*) equal changes in firm's liabilities plus depreciation (change in bank debt, ΔBanks, plus change in other debt, ΔOther credits, plus change in equity capital, ΔEquity, plus Self Financing). The analysis is in terms of flows; the increase or the reduction in the use of each source of finance is considered, thus the importance of each source in financing same year investment is evaluated.

Graph 9 synthesises the results of this analysis for Czech enterprises in the 1994-1995 period. It is interesting to note the relevance of self-financing over all sources of funds. This could be a consequence of higher costs of external financing and of constraints in credits and capital markets. More generally, both asymmetric information and agency models predict the prevalence of this form of financing. The second source of finance for Czech enterprises is other credit, a category that includes, among others, commercial credits and publicly issued debt of enterprises. Finally, graph 11 shows that Czech enterprises finance the 7% of their investment expenditures through new equities. A similar share is financed through bank debts. These results are in line with those provided by Mayer (1990) for developed countries and by Singh (1995) for developing ones.

Graph 9: How do enterprises finance investment in the Czech Republic? A flow analysis concerning the 1994-1995 period

As previously noted, the inefficient legal framework regulating credit and capital markets and the consequent limited control power of financiers can determine the limited role of debt and equity financing for the Czech firms. In particular, the role of bank debt can be explained when one considers that we are dealing with a flow analysis. As previously mentioned, banks are largely reducing their financing to enterprises, as a first step in the process of transformation towards a greater financial discipline.

In order to investigate further this movement towards a stronger discipline imposed by debt financing, we developed a stock analysis concerning the determinants of debt choices for enterprises.

The analysis method is an indirect one; we tried to show what kind of variables influences the level of debt without testing a specific model. As a dependent variable,
we used the leverage ratio in 1995, which has been calculated as total debt over total assets (DTA – in equation 1) and as bank debt over total assets (BDTA – in equation 2). We used the following independent variables: intangible assets plus inventories, divided by total assets (IGPTA94) as a proxy for the collateral value of assets, profits over total assets (PROTA94) as a proxy for firm's profitability and the logarithm of sales (lnsal94) as a proxy for dimension.

The estimated equation is: $DTA = a + b_0 PROTA94 + b_1 lnsal94 + b_2 IGPTA94 + \varepsilon$.

Equation n.1:

$$DTA = 0.136 - 0.467PROTA94 + 0.198lnsal94 - 0.122IGPTA94$$

(2.423) (-3.006) (5.064) (-2.498)

In the first equation, a highly significant and positive value for the parameter concerning the lnsal94 variable allows us to say that a firm's dimension influences its financing decisions. In particular, small and medium enterprises have a lower debt ratio, being discriminated in credit markets and thus have to rely much more on internal resources. This result is in line with theoretical models that assume asymmetric information and agency problems (among them Holmstrom and Tirole (1994), Stiglitz and Weiss (1981)). The coefficient of the PROTA94 variable is significant and negative, providing evidence to the fact that the most profitable firms use to a lesser extent foreign sources of finance. Theoretically this result can be explained by considering the high costs of external funds, due to asymmetrical information and agency costs (Hart and Moore (1995); Jensen and Mackling (1976)). The negative sign of the variable IGPTA94 is in contrast with our theoretical a priori (Holmstrom and Tirole (1994), Jensen and Mackling (1976), Myers (1977)); it can be explained by considering the heritage of financial practices of planned economies. In particular, before the transition, firms used to finance their investments in fixed capital through new equities issues, while debt was used to finance working capital. A slight reduction of the positive correlation between fixed assets and equities in the last years shows that this link is still present.

The results of the regression do not change if the dependent variable is specified as the ratio between bank debt and total assets (equation 2); the only relevant change concerns the sign of the parameter of the variable IGPTA94, which is now positive. This means that the level of enterprises' indebtedness with banks depends on the collateral value of assets, thus showing that banks allocate credits according to market and prudential roles[44]. In addiction, we should note that the strong relationship between bank debt and the collateral value of assets could be a consequence of the greater ability of revenge of these credit institutions.

Equation n.2:

$$BDTA = -0.02 - 0.303PROTA94 + 0.008lnsal + 0.065IGPTA94$$

(-0.055) (-2.969) (3.054) (2.029

The empirical analysis concerning the determinants of firms' indebtedness shows that bank debt has a disciplining role over enterprises, which is not performed by other forms of debt. This observation allows us to consider bank debt as an effective form of corporate control in transition, thus as a relevant form of financing for enterprises.
The firm level analysis thus confirms the results of the previous section.

It is also shown that small and medium enterprises have lower debt ratios, probably due to the worse conditions they face in credit markets; thus, other things equal, they have to rely much more on internal resources. This affects their financial structure.

5. Relevance of different forms of financing and policy implications

The analysis concerning the transformation process in Poland, the Czech Republic and Hungary, up to 1995, from a legal and institutional perspective, as well as the empirical investigation developed through aggregate data for the three countries and through individual firm data for the Czech Republic allow us to drive some conclusions in terms of economic policy and to suggest some possible reforms for policy-makers. In doing so, we distinguish among different sources of funds and financiers.

In the three countries in analysis, due to the underdevelopment of capital markets equities are mainly considered as a form of transmission of property, rather than as a source of finance. Only a few enterprises in each country are listed in the local stock exchange and new equity issues are usually connected to privatisation. This situation leads to a restrict role of equities as an instrument of corporate governance. Due to capital market inefficiencies, share prices do not reflect the real value of the firm; small shareholders are not adequately protected and monitoring incentives are rather weak. All these observations suggest some reforms in terms of economic policy; in particular, a strengthening of prudential regulations and information disclosure requirements is suggested, in order to enhance transparency and efficiency in capital markets.

Policy makers in Poland, Hungary and in the Czech Republic are starting to deal with these problems. New stock exchange laws have been prepared and approved. However, in the immediate future, it seems impossible that equities become an effective governance mechanism in transition economies. In order to achieve this result, in fact, a completion of the privatisation process is necessary and there should be sufficient incentives to monitoring for all equity holders. These transformations still require time.

While dealing with FDIs in transition economies it is immediate to note the great importance they have had. In terms of control, FDIs allow an effective solution to adverse selection and agency problems. All the interested countries seem to have developed effective laws on FDIs. However, the main observations concerning equity financing do apply. Only a limited number of enterprises is interested by the phenomenon; information on enterprises is not available, thus some potential foreign investors seem to be discouraged. Policy makers, both in the three transforming countries and in the partner ones, should guarantee a greater diffusion of information.

The other source of external finance considered is debt. In the above analysis we have highlighted the main limitations of the legislative framework connected to this form of finance. In particular, quicker bankruptcy proceedings and collateral laws should be developed, to guarantee a stronger protection of creditors. Bank debt seems to be the most effective form in terms of control over enterprises. This result has important consequences for policy makers. It seems advisable to develop the bank role in the economy, at least as credit intermediaries, due to their stronger incentives towards control. Policy makers should than encourage bank-enterprise credit relations, providing forms of joint restructuring and preventing too strict credit rationing attitudes. In the long run, however, the role of banks should be reduced and transitional economies should experience a de-intermediation period.

6. Conclusions

The various forms of external financing available to firms in Poland, Hungary and in the Czech Republic during the first years of transition and up to 1995 have been examined and the effectiveness of the two main contractual mechanisms used to resolve problems of corporate governance – i.e. debt and shares – was evaluated.

Debt as a mechanism for corporate governance

Up to 1995, in Poland, the Czech Republic and Hungary, collateral and bankruptcy laws were not developed as to guarantee adequate protection for creditors. However, some progress has been made since the beginning of transition and the role of debt as an instrument of effective corporate governance starts to appear. In particular, a certain level of financial discipline imposed by both trade partners and Government is detected and a new role of bank debt as a control mechanism and as a source of finance for enterprises emerges.

The importance of bank-enterprise credit relations suggested further investigation.
The analysis of efficiency of the banking sector, carried out following the structure-conduct-performance approach, shows that Polish, Hungarian and Czech banks in 1995 started to behave following economic rules. Growing attention towards bank incentives for restructuring and hard budget constraints have been detected, while, as the banks capital adequacy ratio shows, government policies are achieving positive results in terms of stability of the banking systems.

In terms of structure, in all three countries small and medium banks are growing in relevance, to the disadvantage of the group of large ones, resulting in an overall fall in the level of concentration in the markets. As to conduct, the analysis of pricing policies shows the presence of a certain degree of collusion among banks, with the exception of credit granted to the best clients. However, the reduction in late 1995 of banks' interest rate spreads signals the growth of a new competition. The trend in bank lending shows the growing attention towards the matter of information. Forms of short-term loans to the larger firms are prevalent; there are furthermore forms of credit rationing and collateral is becoming a necessary element to gain access to credit markets.

Generally speaking, it seems that banks are gradually improving efficiency; they are pursuing prudential policies and imposing hard budget constraints to enterprises. This positive evaluation concerning the transformation of the banking systems since 1995 stimulates an increasing role of banks, at least at this stage of transition. Provided banks have the right incentives, in fact, they seem to be the best engine of transformation at the micro level, due to their monitoring capacities over enterprises through debt. In the long run, however, the role of banks should be reduced and transitional economies should experience a de-intermediation period.

Shares as a corporate governance mechanism

In Poland, the Czech Republic and Hungary capital markets have been created or rebuilt in the first years of transition to support the privatisation process. Regulation in force is still ineffective, while a great lack of control emerges. Institutional investors are underdeveloped in their role of monitoring and although banks have a full licence, which allows them to invest in shares, they do not have a monitoring role, comparable to that of financial institutions in Germany. The low efficiency in using shares as an instrument for corporate governance in transition economies thus emerges as well as a hang-over of asymmetric information and agency problems and fewer opportunities for enterprises of access to external capital.

Issuing shares is a way for transferring property, mainly linked to the privatisation process, rather than a conventional instrument for financing firms; thus it is impossible to rely on equity financing in order to stimulate the restructuring process. Further development of capital markets and related regulation should be pursued before equities take an active role in enterprises' financing. Governments in the three countries are moving in this direction.

In terms of corporate control, FDIs allow for an effective solution to adverse selection and agency problems. All the interested countries seem to have developed effective laws on FDIs. However, only a limited number of enterprises is interested by the phenomenon; information on enterprises is not available, thus some potential foreign investors seem to be discouraged. Policy makers, both in the three transforming countries and in the partner ones, should guarantee a greater diffusion of information.

Empirical analysis on Czech Firms

An analysis of firms' financial structure, developed on balance sheet data for a sample of Czech firms during the 1994-1995 period, confirms the results in terms of corporate governance above mentioned and the relevance of asymmetric information and agency problems in financing enterprises.

The relevance of self-financing over all sources of funds emerges, as a consequence of higher costs of external financing and of constraints in credit and capital markets. More generally, the prevalence of this form of financing is predicted by both asymmetric information and agency models and is in line with results provided by Mayer (1990) for developed countries and by Singh (1995) for developing ones.

The inefficient legal framework regulating credit and capital markets and the consequent low control power of financiers explain the limited relevance of debt and equity for the Czech firms.

Furthermore, the empirical analysis concerning the determinants of firms' indebtedness confirms that bank debt has a disciplining role over enterprises, which is not performed by other forms of debt. Bank debt is thus considered as an effective form of corporate control in transition and as a relevant form of financing for enterprises.

It is also shown that small and medium enterprises have lower debt ratios, probably due to the worse conditions they face in credit markets; thus, other things equal, they have to rely much more on internal resources. This affects their financial structure.

Annex 1

The existance of factors limitng the role of collateral as an instrument of debt guarantee in Poland, the Czech Republic and Hungary in 1995

Property rights and registration system – The role of collateral as an instrument of debt guarantee depends on the existence of property rights and registration systems since the right to raise security on assets is always bound to the right of disposal of that same asset and therefore to ownership. Hungarian, Polish and Czech laws on this matter, conceive of private property for legal entities and private persons with the same protection as for public property. Some restrictions remain in the rules concerning free disposal of certain types of real property which limit their selling market and as a consequence, their value as collateral. In the Czech Republic the rules forbid selling land to foreigners[45]; in Poland a similar regulation was changed in 1996[46], not without some political controversy, whereby the sale must be approved by the Ministry for Internal Affairs. The new currency law, in force in Hungary since Spring 1996, made the property market much more free, the sale of real property to foreign physical or juridical persons is subject to the approval of the Administrative Office of the Region or the Capital, restrictions still apply to the sale of agricultural land.

Although the question of property rights has been to a great extent resolved, the need for adequate instruments for *registration of these rights and securities* may at times be a hindrance for a firm in obtaining a loan because of diminished disposability of the collateral. In the Czech Republic and Hungary, the problem arises essentially with real property due to the lack of registers. Usually the creditor has to actually take physical possession of the collateral, which may deprive the debtor of assets that may serve to production[47].

Priority in credit lines – The absence of an effective register for securities gives rise to the problem of establishing the order of priority among creditors, where more than one creditor has security in the same property, or when an asset used as collateral is involved in a case of bankruptcy.

Even when adequate means for registration exist, as for real property, problems may still arise whenever bankruptcy laws do not guarantee adequate protection for secured creditor. In Hungary, for example, following a law of September 1994, the government has acquired right of pre-emption if the firm defaults. In Poland the rules defining the order of priority are extremely confused and are insufficient to guarantee protection to creditors. According to the Civil Code secured creditors (banks and others) are awarded satisfaction when the costs of bankruptcy, employees and the government have been paid. Right of priority over other secured creditors is recognised for banks, while the rule of last-in-time-first-in-right holds; the last mortgage to be taken out is the first to be paid out. Rules on priority of creditors are doubtful in the Czech Republic too, although here the government does not automatically have first place in the redrafting order. Assured credit is however defined as third class and can only be satisfied on default of the firm once the costs of liquidation, taxes and debts with the social system have been paid.

Repayment procedures, costs and asset market – In all three countries analysed here; in order to open a lawsuit against an insolvent debtor, either the court or an arbitrator must intervene to grant the right to proceed against the debtor's property.[48]. To the normal material costs of proceedings there must be added those arising from the judges' lack of experience in commercial matters and their small numbers. Even if the creditor obtains the right to proceed, the *assets market* is often fairly limited and not liquid. Real property used as collateral (e.g. machinery) is often either highly specific or else is obsolete, and there are still the already-mentioned restrictions in the sale of real property.

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