Wharton

Financial Institutions Center

# *Problems of Bank Lending in Bulgaria: Information Asymmetry and Institutional Learning*

by
Kenneth Koford
Adrian E. Tschoegl

97-41

The Wharton School
**University of Pennsylvania**

## THE WHARTON FINANCIAL INSTITUTIONS CENTER

The Wharton Financial Institutions Center provides a multi-disciplinary research approach to the problems and opportunities facing the financial services industry in its search for competitive excellence. The Center's research focuses on the issues related to managing risk at the firm level as well as ways to improve productivity and performance.

The Center fosters the development of a community of faculty, visiting scholars and Ph.D. candidates whose research interests complement and support the mission of the Center. The Center works closely with industry executives and practitioners to ensure that its research is informed by the operating realities and competitive demands facing industry participants as they pursue competitive excellence.

Copies of the working papers summarized here are available from the Center. If you would like to learn more about the Center or become a member of our research community, please let us know of your interest.

Anthony M. Santomero
Director

*The Working Paper Series is made possible by a generous grant from the Alfred P. Sloan Foundation*

# Problems of Bank Lending in Bulgaria: Information Asymmetry and Institutional Learning [1]

September 8, 1997

Executive Summary: Why are there such severe problems in lending in the transition countries? This research took a microeconomic and institutional look at part of the problem. We conducted interviews in Bulgaria and Hungary and sought answers to two questions. First, how do banks making "normal" loans insure that they were making "good" loans? Second, how do banks get their money back on loans that have turned bad? Clearly, weaknesses at either stage could explain both past loan failures and present reluctance to lend.

The bankers we spoke to reported significant difficulties at both stages of the credit process. First, the bankers reported difficulties in accumulating the information to evaluate borrowers and their projects. The bankers also reported problems with encouraging borrowers to repay and difficulties with seizing collateral, and using legal action in collecting bad debts. Although many of the problems are universal problems of bank lending, many seemed specific to transition economies in general and Bulgaria in particular.

We identified specific problems with obtaining and using the evidence about borrowers that might have been available. Bulgarian bankers were often less than fully effective in collecting all available information, or in considering later how they could improve their methods of evaluating clients. One method that more banks might usefully adopt is systematic review of loan losses and the incorporation of lessons learned into the training of new loan officers. In addition, there were serious difficulties in sharing information about borrowers among bankers and between bankers and other firms. Some relaxation of bank secrecy would be appropriate.

We also identified policy areas where improvement appears appropriate. *Reputation* can be effective in ensuring that borrowers fulfill their contracts. However, there is a general lack of credit reporting institutions to share information about credit-worthiness; this need to be remedied. The heavy reliance on *collateral* imposes high costs on borrowers and lenders. For collateral to work properly, banks must be able to perfect the collateral and to dispose of it quickly. Finally, *fraud* against banks was common, but typically went unpunished; prosecutors were apparently not interested in such cases. Bankers and prosecutors must make the prosecution of bank fraud a priority.

We base our findings on the 24 banking interviews we conducted in Bulgaria. We also conducted 12 interviews in Hungary. Bankers were surprisingly candid in describing most of their problems.

---

[1]Kenneth Koford is at the Department of Economics, University of Delaware, Newark, DE 19716, and Faculty of Economics and Business, Sofia University "St. Kliment Ohridski," Sofia, Bulgaria. Adrian Tschoegl at the Department of Management, The Wharton School, University of Pennsylvania, Philadelphia, PA.

We would like to thank the National Council for Eurasian and East European Research for the funding for this study. We also wish to thank our Bulgarian research associates, Boyko Atanassov, Dimitrina Dimitrova, Tatiana Hubenova, and Anastassia Miteva, for their work in helping to develop, arrange, and then carry out the interviews. In Hungary, Istvan Abel's introductions were invaluable and Viktor Szabo performed ably as guide and translator. We would also like to thank the bankers, executives, officials and economists who gave of their time to answer our questions. Still, all errors of fact or interpretation remain our responsibility

## Table of Contents

# Problems of Bank Lending in Bulgaria: Information Asymmetry and Institutional Learning

## 1.0 Introduction

For banks, lending in the transition countries has been both a controversial and a difficult matter. On the one hand, firms complain about the lack of credit and the excessively high standards set by banks. On the other hand, banks have suffered large losses on bad loans. Lending inherently requires that the lender "trust" the borrower to repay the loan at a later date. For the lender to be able to trust the borrower, the lender must have means of screening out incompetent and untrustworthy borrowers.

However one chooses to put it, the bank's problem is to distinguish between good and bad firms (or projects), and good and bad character. By good and bad firms (or projects) we mean expected return and risk. By good and bad character we mean the borrower's honesty.

This paper reports the results of our investigation of how Bulgarian banks deal with these problems. It draws on the interviews we conducted in Bulgaria (please see the Appendix for details). We found that Bulgarian banks have trouble distinguishing good from bad in both firms and character. This was partly due to intrinsic problems in Bulgaria, and partly due to their own methods. We found that the solutions adopted by banks often seemed inefficient from the perspective of a profit-maximizing bank. This, we believe, reflects both incomplete learning by banks about the most effective way to make loans, and internal incentive problems that banks have not solved.

Our objective in conducting the research was to develop a sense of the state of the art of banking in Bulgaria. On the basis of this understanding we hoped to be able to make policy suggestions that would interest bankers and policy makers in Bulgaria but perhaps also in other transition economies as well.

We begin in Section 2 by putting the situation in Bulgaria in context. We look both at analyses of historical occasions of the development of banking systems and at analyses of the contemporary situation in other transition economies. In Section 3 we present a conceptual discussion of the

lending problem. In Section 4 we report how banks in Bulgaria separate the wheat from the chaff, that is, how they try to determine who is creditworthy and who is not, and the problems they face. In Section 5 we report on how banks use the mechanisms of reputation, collateral and punishment to influence who will approach them for loans, to encourage repayment and to limit their losses when loans go bad. In Section 6 we make some policy recommendations. The last section is a conclusion.

## 2.0 Putting Bulgaria into context: some comparisons

Bulgaria has recently suffered a severe banking crisis that included the collapse of over one-third of the banks including well-established government banks and many of the new private banks. Often a country's difficulties appear "unique," and "Bulgaria is unique" was a common theme in our interviews.

However, Bulgaria's experience is not unique. Caprio and Klingbiel (1996a & 1996b) provide an informative survey of recent severe banking crises in developed, developing and transition economies (including Bulgaria). They find three reasons for system-wide banking failures: large-scale macroeconomic shocks, such as hyperinflation and depression; faulty or perverse government regulations, especially rules that encouraged risky lending; and substantial errors on the part of banks, particularly waves of optimism. As Koford and Tschoegl (1997) point out, Bulgaria, has suffered from all three factors.

Nor is the current situation unique. Accounts of Bulgarian banking between the World Wars suggests that much of what we now see has its precedents in that period. Berov (1995) covers banking in Bulgaria between the world wars. Lamp and Jackson (1982) and also Avramov (1995) cover this period as well as the period before the First World War. There is not much specific evidence on the detailed banking practices that are our concern, but from the nature of the lending and the discussion one can learn much. In brief, these authors report that the greatest part of the Bulgarian system consisted of a small number of government-owned banks engaged primarily in supporting the government budget and in policy lending. There was also a small private sector in

which foreign-owned or foreign joint venture banks played an important role. In general there was a lack of long-term credit and an absence of securities markets.

Two volumes edited by Cameron (1967, 1972) describe the early banking history of most European states and Japan and Serbia. The articles describe the general nature of banking, bank lending, and problems that occurred. Banking crises involving large-scale failures of debtors to repay their loans were common everywhere, Switzerland, Germany and southeast England excepted. Moreover, the banks very often suffered from what we would consider today poor lending practices.

The banks appeared to have had concentrated loan portfolios, with a large share of loans being made to business associates of the bank officers and directors. The banks often provided long-term finance (debt and equity) to intrinsically risky industrial ventures such as railroads, mines or textile mills. Apparently, the lack of adequate capital markets created a vacuum that the banks stepped in to fill. However, in providing long-term capital, the banks performed a function that they were ill-equipped to perform.

In making “insider” loans, the information about the borrower’s character available to the banker may have been more accurate than information about “outside” lenders. This was, after all, before the development of financial accounting standards or independent accounting firms. However, insider loans may have been subject to a bias with respect to judgments about the quality of the investment project. Normally arms-length bankers ask skeptical questions that optimistic firms do not, forcing firms to be more cautious. However, apparently on insider loans the lenders frequently put the cautious external perspective into abeyance.

Two particular examples (the US and Japan) may help elucidate the strengths and weaknesses of insider lending. Lamoreaux (1991 & 1994) has argued that insider arrangements were common in the early United States -- specifically in New England. Between 1820 and 1850, merchants in New England established banks with the goal of providing loans to themselves. The banks then also provided loans to business associates of the owners. The system worked fairly well. The insiders watched each other to assure competence and honesty, as they were collectively responsible for the success of the bank. In the absence of accounting systems, personal knowledge of each other gained

from years of contact in schools, social activities and business was probably the best source of information. Also, the merchants were descendants of New England puritans and were extremely concerned about their personal reputations for honesty.

In describing banking in Japan, Tamaki (1995), and the authors in Aoki and Patrick (1995) and Aoki and Kim (1995), describe institutions substantially different from either the Anglo-Saxon or German forms of banking. In Walter's (1992) terminology, the Japanese financial system is an ultra-insider system and stands in contrast to the Anglo-American outsider system and the Franco-German insider system.

In the pre-World War II Japanese *zaibatsu* system, family-owned holding companies owned both a bank and industrial companies. The bank then lent primarily to group companies. The post-World War II Japanese *kigyo shudan* system consists of mutually exclusive groups of firms that own shares in each other and in a bank, with the bank also owning shares in the firms. Because the bank lends to firms in which it owns shares and that own its shares, loans to related parties are *de facto* standard.

These *zaibatsu* and *kigyo shudan* lending arrangements have been successful overall in terms of creating incentives to repay, but have been less effective in ensuring that lenders receive arms-length information about the merits of loans and investments. Also, government has acted to enforce rules and often to rescue failing banks.

We can sum up this historical record as showing two things. First, in developing and developed economies, banking crises are common and banks often make serious mistakes in lending. Second, insider or "connected" borrowers are common and represent a substitute for objective financial or accounting information.

## 3.0 The Lenders' and Borrowers' Problems, and the Equilibrium

We begin our analysis by dividing the lending process into two stages: the decision to lend and the response if problems occur. In the first stage, the decision to lend, the basic problem is one of

information. The bank wishes to screen-out bad borrowers (borrowers likely to default), and for this it needs information. However, whenever a borrower presents himself, there is an asymmetry: the borrower knows more about himself, his firm and his project than the bank knows. Although the bank can demand that the borrower disclose information as a condition for making the loan, the borrower has an incentive to conceal any potentially deleterious information. Still, at this stage the bank has the money and the borrower is a supplicant.

Once the bank has made a loan, the situation changes. Now the borrower has the money and the bank must depend on the borrower's willingness and ability to repay the loan. If the borrower is unwilling or unable to repay the bank will suffer a loss. The bank's problem is two-fold. First, it must create incentives to discourage borrowers who are able to repay from defaulting. Second, the bank must minimize its losses in cases where the borrower is willing to pay but unable to do so.

Spot contracts can solve many contracting problems between firms though at the cost of some loss in efficiency (Koford and Miller 1996). However, bank lending exists precisely to reduce these inefficiencies. The production of goods takes time; absent intermediaries or capital markets, entrepreneurs would have to save the entire initial investment themselves before commencing production. Bank loans, the savings of others, bridge the time gap between production and sale.

The following simple Gibrat model (Sutton 1997) of the growth of the firm and the lending decision may help provide a starting point for understanding the banker's problem with respect to selecting good firms to which to lend. The model has its limitations and we will return to these later in the discussion. For now, let us assume the following model of the growth of the firm's assets:

$$\ln A_{t+1} = \mu + \ln A_t + \varepsilon_t$$

where $\ln A_t$ is the natural logarithm of the assets at time *t*, $\mu$ is the expected growth of the assets, and $\varepsilon_t$ is the firm's overall luck. Luck depends on many factors and is equally likely to be good or bad. We therefore assume that it has a Gaussian distribution with mean (0) and variance ($\sigma^2$). The growth

of the firm's assets depends on its expected profitability and its luck. The firm's assets grow with its undertaking projects that it correctly expects to be profitable on average and with good luck. The firm's assets decline with losses which are attributable to bad luck.

The firm can increase its assets by borrowing. This gives rise to a third parameter of interest to the banker that we will call $\Delta_t$ -- the amount by which the firm's assets exceed its liabilities.

The probability of default depends on $\mu$, $\sigma^2$ and $\Delta_t$. We may put this more formally. Insolvency occurs at the point at which liabilities exceed assets ($\Delta_t < 0$). Then the firm's expected first passage time to the point of insolvency increases with $\mu$ and $\Delta_t$, and decreases with $\sigma^2$. The more profitable the firm, and the less risky and levered the firm, the lower the probability that the firm will go bankrupt during any given period. The banker wants to find firms that have a high $\mu$ (expected profitability), low $\sigma^2$ (low risk), and high $\Delta_t$ (low leverage). The banker also does not want the firm to take any actions that would reduce $\mu$ or $\Delta_t$ or increase $\sigma^2$ after he has made the loan. This is the moral hazard problem in lending.

To reduce the moral hazard problem, the banker will demand loan covenants that enjoin the borrower from actions that worsen the banker's claim. One forbidden action is taking on debt that is senior to the bank loan in the event of bankruptcy. Another forbidden action is a material change in the business of the firm. Actions that reduce the probability of default are, of course, welcome.

The banker has to estimate the three parameters to determine the probability of a loss. Estimating $\Delta_t$ is relatively straightforward. The banker needs balance sheet data that shows all the outstanding claims against the firm. Obviously the banker will prefer situations where an auditor has certified that the firm has correctly prepared the accounting data.[1] It is in estimating $\mu$ and $\sigma^2$ that problems of information asymmetry are most severe.

The borrower generally will know more about her business, industry and prospects than the lender does. The lender, if his scale is large enough, can mitigate the problem somewhat by letting loan officers specialize in certain industries but the problem of knowing the borrower and her firm remains.

The banker takes into account m, $\sigma^2$ and $\Delta_t$, together with an assessment of the risks of information asymmetry, moral hazard and adverse selection to calculate the likelihood that the loan will get into trouble. The lender then wishes to charge an interest rate that is high enough for the earnings on good loans to offset the losses on bad ones. The gains on all the loans that do not get into trouble pay for the losses on the few that do.

The lender does not have a free hand to set interest rates. Not only is she competing with other lenders, but she also knows that the more she charges, the lower $\mu$ will be. Some potential loans are so risky that attempting to price to take the risk into account becomes a self-fulfilling prophecy. In that case the banker will refuse to lend, even if the borrower expresses a willingness to accept the rate. The willingness to accept the rate is itself an averse signal about the borrower. The result is that the lender rations the borrower out of the market.

The problem of distinguishing good firms from bad continues after the bank has made the loan. If the banker could monitor the firm continuously and accurately the banker could close the firm the minute $\Delta_t = 0$. When $\Delta_t = 0$, the firm's assets exactly cover its debts.

When the borrower has difficulty paying, the bank has to determine if the situation is one of illiquidity, i.e., cashflow, or insolvency, i.e., $\Delta_t < 0$. The key insight for the banker is to realize that as long as $\Delta_t > 0$, the borrower has equity in the firm and does not want to surrender the firm to the lender.

Also, the lender can demand collateral. The transactions costs to establishing collateral reduce the return to the bank and to the firm. However, collateral gives the bank first claim to the pledged assets in the event of default. Even if the firm is insolvent, if the collateral is adequate the bank recovers its loan in full. On default, the bank seizes and liquidates the collateral. The bank uses the proceeds to pay of its loan and returns any surplus to the other creditors.

So far, we have assumed that the only estimation problem that the banker faces is one of inaccuracy in her assessment of the borrower's firm. The discussion of the historical evidence suggests though that in the case of insider loans, lenders and borrowers do not make independent

assessments. Instead they may make a joint estimate in which they overestimate $\mu$ and underestimate $\sigma^2$.

Apparently in some circumstances, a community of opinion or information cascade may form (Bikhchandani *et al*., 1992 and Orléans 1995). In the banking context, particularly in the case of lending to related parties, the result is that the bank's officers suspend their normal good judgment. Tschoegl (1995) describes the governance problem with the metaphor of Odysseus tying himself to the mast and plugging his crews' ears with wax to enable them to resist the Sirens' song. Many of the governance mechanisms that banks and regulators apply such as ex ante lending limits on loans to related parties, to particular firms, or particular sectors, are a form of tying oneself to the mast or putting wax in one's ears. They prevent the banker from acting even if he becomes enraptured with the Sirens' song of a "can't lose" lending proposition

Dörner (1996) points out that one problem with safety rules is that breaking safety rules is frequently reinforced, i.e., it pays off. Safety rules impose a constraint and generally at a level well before crisis stage. Ignoring the rules gives the actor an increased freedom of action and generally an improved immediate result, with no immediate adverse consequences. If Odysseus had not plugged his crew's ears with wax, all would have enjoyed the Sirens' song and all would have been well until the last moment when the boat smashed upon the rocks. In the banking context, ignoring the safety rules leads to higher profitability for long periods before disaster strikes. That is why it is important that regulators who have little stake in $\mu$ but a great concern with $\sigma^2$, enforce the bank's own safety rules.

Lastly, there is the issue of the maturity of the loans. Although it is not a part of the model, we have treated loans as being discrete, long-term contracts. Actually, a major role of banks is to fund working capital requirements. Usually the bank funds working capital with a line of credit or overdraft line, repayable on demand. The "on demand" feature merely allows the banker to call in the loan at the first sign of insolvency rather than having to wait for default. From the firm's point of view, working capital is essential to the operation of the business and so the need is long-term. Only

the amount required fluctuates, and that around some long-run, growing level as the firm grows. A good way to think of the banker is as a central inventory of working capital for firms (Rajan 1996); the banker nets demands within the bank, goes to the inter-bank market with her net demands, and the banking system adjusts short-term rates to draw or release funds to the personal sector to meet its net demand.

Before we leave the model and turn to the problem of ensuring that the borrower pays the loan, it is important to note that the two stages of whether or not to lend and how to ensure repayment are not independent. The bank's own policies will affect which borrowers will approach it for loans. If the bank does a good job of creating incentives, it will discourage potential bad borrowers from even applying and will encourage possibly borderline borrowers to bond themselves to be good.

In the discussion below we emphasize the issues of creating incentives that will induce the borrower to repay; we neglect the issue of the borrower's ability to repay. We believe that this is the correct way to consider the incentive issue. Ability to repay ex ante is rarely a matter of certainty: the reason that borrowing is an interesting issue is that there is risk that bank and borrower evaluate. Ability to repay ex post is also commonly not a matter of certainty: with sufficient time and inducement to effort, borrowers will repay many apparently bad loans. However, there are two key reasons that ability to repay is not an incentive issue. One reason is that as a first order approximation we can take ability to pay as being outside the control of borrower or lender. The second reason is that if the borrower intends to defraud the lender, ability to pay is irrelevant. The third reason is that honest borrowers expect to be able to repay. If the firm fails, the borrower loses his investment in the firm but if the firm does well, the borrower keeps all the profit net of the loan repayment.

Banks have several ways to ensure that borrowers repay their loans. The three mechanisms we discuss briefly below and again in Section 5 are reputation, collateral, and punishment for fraud. All can and may involve court action. For both the lender and borrower the value or cost of civil action depends upon the probability of collection and the costs of legal action.

In brief, default incurs reputation costs to the borrower of which the most important is the effect

on the borrower's ability to borrow in the future. This includes not only the ability to borrow from the bank in question, but also from other banks, from suppliers in the form of trade credit, and even from the firm's own workers in the form of the time between paychecks. Furthermore, a firm known to be in trouble will have difficulty securing the long-term contracts on which it may depend. An important social variable (a constant for the bank and firm) therefore, is how public is the knowledge of default likely to be and how harmful will that knowledge be to the firm's owners.

If a loan goes bad, the lender's first line of defense in Bulgaria is to seize and sell the collateral. Seizing collateral results in explicit and implicit costs. The explicit costs are the (minimal) legal and court costs. The implicit costs are the possibility that seizure of collateral may turn a situation of illiquidity into one of insolvency; the seizure of collateral may make it impossible for the firm to operate and so force it into bankruptcy. The bank must compare these costs with the expected loss from waiting in the hope that the borrower will eventually be able to repay.

Lastly, the final recourse for a bank upon discovering fraud is court prosecution. The effectiveness of a recourse to courts in this case depends on whether the legal system treats this as a civil or criminal matter, and whether the court system assigns it a priority. The old maxim, "Justice delayed is justice denied" is apropos.

Competition between banks ensures that in deciding who to lend to, how much to lend, and at what price, each bank will use the lowest cost combination of disclosure and enforcement mechanisms. Using one mechanism effectively can mean relying less on another means. On the other hand, if the least cost combination is ineffective, then the bank must rely more heavily on another combination at an overall higher cost. If one mechanism becomes less effective, the bank may turn down potentially problematic loans until the expected probability of repayment reaches an acceptable level. Alternatively, the bank may make other adjustments to increase the probability of repayment. This of course increases costs and so reduces the amount of lending. Most importantly, if practices and institutions reduce information asymmetry, this allows the lender to adjust other margins as well. Then the price of loans will fall and the total amount of lending in the economy will rise.

In our data, there are two over-riding problems. The first is the banks' ability to distinguish good and bad loans, perhaps due to inexperience or to being a state-owned bank. The second is limitations on the social and legal costs of failure to repay. For both problems the banks' solution involves increased reliance upon collateral with all its costs for the banks, firms and society.

## 4.0 Separating the wheat from the chaff

All banks try to avoid making bad loans. Loans go bad for one of two broad reasons; the firm runs into difficulty or the borrower has engaged in fraud. Petersen and Rajan (1995) put the issue another way. They suggest that the three character defects of greatest concern to bankers are incompetence, laziness and dishonesty. Incompetence and laziness result in waste and missed opportunity. The incompetent or lazy harm the banker by reducing the firm's expected profitability and hence the firm's ability to service the loan. The dishonest steal, either directly from the banker, or indirectly by stealing from the firm and hence imperiling the loan.

We separate our discussion in this section into two parts. The first part represents the banker's task of avoiding firms that are likely to run into trouble whether because of incompetence or laziness, or simply great risk. The second part represents the banker's task of avoiding crooks.

### 4.1 Good firms and bad firms

The firm may run into difficulty because of $\mu$, $\sigma^2$ or $\Delta$. That is, the firm may pick poor projects in which to invest, it may be unlucky, or it may be indebted to the hilt. It is the banker's job to avoid lending to firms that have or are picking bad projects. Luck is ex post; by definition there is nothing the banker can do to determine whether a firm will be lucky or unlucky, beyond remembering the adage, "Fortune favors the prepared." Bankers can however estimate variance and select against companies that are taking too much risk for the expected return. Bankers can also determine the firm's leverage and refuse to lend to firms that have too much debt outstanding.

In developed countries banks use the device of asking for several years (3-5) of audited

financial statements as the first screen to separate good from bad firms. As Diamond (1984) points out in his seminal article, the passage of time helps to separate good firms from bad firms that have simply been lucky. If a firm has operated successfully for several years this is a sign that management has been picking good projects and is competent. The longer the firm has been operating successfully, the less likely it is that the firm's past success has been due to luck. Audited statements are a sign of well constructed accounting systems and some openness to disclosure.

Most small to moderate-sized Bulgarian firms are unable to provide several years of good financial records and they generally do not have well-audited financial records. First, the firms are almost all young. Many have only been trading in their present form since the early 1990s. Second, as one banker explained, it is very expensive to use a "Big Six" accounting firm. Most firms used less reputable local accountants. Bankers allege that these local accountants are willing to be generous to a firm if it "suggests" that good numbers would be appropriate. Still, a number of bankers noted that it now was easier to ask for three years of audited financial statements than it had been several years ago.

A second screen that bankers in some developed economies use are the reports of commercial credit reporting firms such as Dun and Bradstreet. In Bulgaria, as in other transition economies, the information available on firms from other sources is poor. The kinds of information that Dun and Bradstreet provides in many countries are not available in Bulgaria. This makes it hard for banks to learn whether firms are paying their trade debts on time. The lack of trade credit information deprives the banker of a useful early warning signal. The signal arises from the fact that firms in difficulties are more likely to delay their payments to their trade creditors than they are to delay their payments to their bankers.

A third screen is to visit the premises of the borrower. By visiting the premises, an experienced banker can get some sense of whether the firm is busy, well-organized, and appears successful without being spendthrift. The banker can also find out whether or not the firm exists (see below). Bankers reported that they did visit firms as a matter of course, both before making a loan and during the life of the loan. They reported that they might make several visits before approving a

loan. They also reported that not all borrowers welcomed the visits.

Some borrowers regarded visits as unwarranted intrusions on the borrower's privacy. It is possible that this attitude is a hangover from an earlier era in which banks simply acted as administrators of capital allocation decisions made in industry ministries and in which visits from authorities were ill-omened. It is also possible that individuals and firms in Bulgaria, as in many other countries, see themselves as existing in a non-cooperative, predatory environment. Cooperation, in such an environment, leads not to reciprocal cooperation but to exploitation. As Axelrod's (1981) seminal work suggests, cooperation may evolve, but this will take time.

The macro political and economic environment in Bulgaria increases the risk that firms and their bankers face relative to the situation in the developed market economies. Our respondents provided numerous examples of both sources of risk.

Government manipulation of regulations and import and export controls to help or hurt particular clients can make a firm's future profits depend upon the firm's political connections. Many people believe and allege that some firms associated with one faction of the former socialist government, for example, received "policy" credits while firms associated with the other main faction suffered government attacks. Several interviewees (not from First Private Bank) alleged that First Private Bank, once the largest private bank in Bulgaria, suffered from political problems more than business problems. They attribute its difficulties with the authorities to its links to the out-of-power socialist faction.

The erratic movements in the Bulgarian economy and in individual sectors over the past six years mean that the past is a poor guide to the future. A firm that has done very well in the past may not be able to do well in the future. Exchange rate changes were a particular source of problems for firms both for business and financial reasons.

Importing did not appear to create information asymmetry problems; bankers viewed the risks in lending to importers as small. The primary risk was that the importer could not sell the goods. The problem importers faced in 1996-97 was the dramatic depreciation of the Bulgarian lev against the US$ and the DM. The result was that lev prices for imports soared more rapidly than wages and

incomes, pricing the goods out of the reach of many consumers.[2]

A second source of exchange rate related problems for many firms were the hard currency loans they negotiated before the lev's sudden depreciation. Many Bulgarian firms had borrowed in US dollars or in German DM because of the attractive interest rates at the time. However, the firms either had no offsetting hard currency cash flows, or the cash flows shrank. Essentially, the problem appeared to be that both bankers and borrowers were inexperienced in evaluating and dealing with foreign exchange risk.

Political and macroeconomic developments are difficult to track, let alone to forecast. As a result, one can expect that a Bulgarian banker will have a worse loss experience over time than an equally able British or French banker.

Most of the bankers we interviewed reported that their banks funded working capital, seasonal requirements (agriculture and tourism), and trade credit more than specific projects. The legal maturity of most loans was quite short, in general less than a year. Again, banks and firms both expect that these loans will roll-over indefinitely so long as the firm remains solvent.

Financing export sales to well-known European firms was perhaps the bankers' favorite reason for lending. The credit risk was slight because the lender would typically receive the revenue first as the cash would come from the overseas buyer through the bank.

As part of their credit evaluation, many banks required prospective borrowers to provide a business plan and the credit officers evaluated the plan. Several bankers reported that many of their clients had no idea how to write a business plan and the officers themselves ended up teaching the borrower. Also, some firms resorted to consultants who would provide a generic and hence meaningless business plan. Still, the requirement of a business plan acted as another screen against fraudulent borrowers (see below) and poorly managed firms.

There is a second problem that bankers reported regarding business plans. Firms appeared to be genuinely too optimistic about the possibilities of their business. The bankers claimed that business plans did not deal seriously with the possibility of bad events, particularly of bad macroeconomic events. It appeared that the problem was inexperienced businesspeople. The businesspeople had

never weathered hard times and did not naturally think about how to respond to adversity. The result was that the business plans were not very useful. While the plans could show realistic cash flows under good conditions, if conditions worsened significantly the businesses were unprepared with a contingency plan and so were immediately in trouble.

The borrowers' reluctance to present pessimistic scenarios may also have been another example of the operation of information asymmetry. The borrower may know more than the bank about possible risks and be reluctant to reveal them to the less knowledgeable loan officer. The borrowers may fear that revealing the risks they face will increase the probability that the bank will refuse to lend to them.

Bankers considered the information problems associated with lending working capital to be large. First, firms were typically unwilling to describe their business in realistic detail. We are not sure why this would be true; it seemed to be a much bigger problem for Bulgarian banks than for foreign banks. The high trust and information exchange between banks and firms that one sees in developed economies appeared far less frequently in relations between Bulgarian banks and their borrowers. However, some foreign-controlled lenders reported that this was not a problem for them: their clients, in their reports, were conscientious in providing good information and of building trust based on that information.

The difference in the experience of the foreign-owned banks from that of the Bulgarian banks probably comes from the difference in the client bases of the two sets of banks. The foreign banks tended to deal only with the best Bulgarian firms and the local subsidiaries of home-country clients. The Bulgarian banks and bankers were much more likely to be dealing with new, small to medium-sized Bulgarian firms and large government-owned firms in difficulties. Also, Bulgarian borrowers may feel more vulnerable vis-à-vis foreign banks.

Bankers also reported that firms were not always forthright about revealing their total debt outstanding. Audited statements are a help to the banker. A loan register can provide a second channel through which the banker can find out how much the borrower owes other banks. Such a register is not yet active in Bulgaria. Bankers reported that one way they could detect some hidden

debts was to ask the borrower why he was approaching the bank in question and not his local bank. Attempting to borrow from a distant bank was a sign of hidden adverse information about debt or character.

The reluctance to provide detailed information must be due to the borrowers' lack of concern about the shadow of the future. A borrower who anticipates wanting to borrow again in the future will realize that past experience gives the lender excellent information on the borrower's past veracity. When the borrower has shown himself prone to providing unreliable or false information, the bank will surely discount future information and refuse to lend.

The borrowers' lack of concern about future consequences may have been due to several causes. First, the deregulation of the Bulgarian banking system had resulted in an explosion in the number of banks and the subsequent failure of many. The number of banks may have led borrowers to expect to be able to go from one bank to another. Furthermore, if the bank from which you borrow has a high probability of going bankrupt this too reduces the shadow of the future.

Second, borrowers may not have felt that secretiveness would cost them much. If the social norm is secretiveness and even dissimulation in disclosure, bankers, as members of society, will not penalize the dissimulation either by refusing to lend to the firm or by reporting the firm's behavior to others. Even if the bankers object to dissimulation, if the social norms against being an informant are strong enough, the banker will not inform other banks and the borrower will be free to try again elsewhere.

Still, it is not clear what borrowers fear that disclosure to their bankers will cost them. The reluctance to disclose may reflect a distrust of the bankers themselves. First, the newness of the borrowers' relationships with the banks may have been a factor in many cases. Second, the environment in Bulgaria may be one in which people generally not only do not expect cooperation but actually expect others to take advantage of any perceived weakness.[3]

Banks monitor the firm's solvency by requiring the borrower to pay interest periodically. The bankers we spoke to reported that almost all the loans they made required monthly interest payments at the minimum. Few banks made much use of discount credit and that only for foreign receivables

and for very short time periods. Some foreign banks, with their higher quality clientele, specified quarterly payments. Several bankers, including one young Bulgarian from a private bank, made a further point. The bankers reported that if a borrower was having difficulty repaying a loan, they might renegotiate the terms of payment, but they would insist that the borrower make some regular payment. The young banker we spoke with motivated the demand that the borrower start to make some payment with reference to affirming the principle in the borrower's mind that loans must be repaid. Still, the economic justification is clear; if $\Delta_t < 0$ (and reputation costs are 0 – see below), a rational borrower will default totally. If $\Delta_t > 0$, a rational borrower will spend up to $\Delta_t$ to avoid having the lender declare the firm in default.

**4.2 Good character and bad character**

Both Bulgarian and foreign bankers stated that an assessment of the borrower's character was critical in the loan decision. Actually, a few exceptions to this rule did exist. The character of the borrowing firm's executives was irrelevant when the borrower was the Bulgarian subsidiary of a major multinational firm; the banks relied on the parent. Also when the borrower was a very large firm involved in international business, the lenders relied on reputation costs. Lenders said that a default would embarrass the borrowers too much. Lastly, some Bulgarian banks gave pride of place to collateral. Generally though banks made substantial efforts to learn whether the borrower was of a "type" that would want to pay off the loan. Overall, the Bulgarian bankers generally acknowledged that although they wanted to determine the borrower's true type, doing so was difficult.

The devices that help a banker screen out incompetent borrowers obviously also help in screening out the dishonest. A history of successful operation, credit reports, company visits, and business plans all provide useful information on honesty as well as competence. We have already discussed the lack of history and credit reports. Visiting companies and requiring business plans of borrowers however were possible and the bankers we spoke to do use them.

Visiting the premises of firms obviously helped but was not fool-proof in ensuring that the bank

would not suffer losses on loans to "credit millionaires" and "*phantomi*." Some entrepreneurs set up paper firms just to capture credits. After the bank made the loan, the credit millionaires simply ignored demands for repayment while living well. Some borrowers simply disappeared. *Phantomi* were very common in Bulgaria after the collapse of Communism. Our bankers reported that they are now much less common but have not disappeared entirely.

Some lenders argued that identifying crooks was not so difficult. They used the business plan in ways that were probably quite successful. One lender said that he quizzed borrowers on the financial details of the plan. The loan officer asserted that *phantomi* who had no intention of making money through the success of the business had not thought it through well. Detailed questioning would generally reveal whether they truly cared that the plan's financial projections were realistic or not. Another lender (in Hungary) emphasized the material side of the business plan. Discussing the investment in machinery, production plans, logistics, and similar issues in detail would quickly indicate which borrowers really understood and cared about their business, and which borrowers were simply going through the motions.

We were surprised to discover that the banks made so little serious use of third-party guarantees. Even more than collateral, guarantees provide information. We had expected to see the emergence of something like the *compradore* system but we found no trace of such institutions.[4] At this point we do not know why we did not see more use of third-party guarantees; their absence may be due to no more than the newness of the situation.

One foreign lender to small firms did make extensive use of guarantees from people who knew the borrower well. This lender found that doing so was costly in time and effort; however the loans had a very high pay-back ratio. Fraudulent borrowers had difficulty finding reputable cosigners and cosigners would generally assist the lender by exercising 'moral suasion' if that became necessary.[5]

## 5.0 Encouraging repayment

Encouraging loan repayment involves three incentive mechanisms: reputation, collateral and

legal punishment. First, does a defaulting borrower suffer a reputation cost that reduces the gains from default? Second, does a defaulting borrower forfeit collateral that is sufficiently valuable and marketable to pay off the value of the loan? Third, does a fraudulent borrower suffer legal punishment sufficient to deter fraud? Again, the sign that the mechanisms work well is that the problem of an unwillingness to pay crops up rarely.

Recourse to legal action may be part of any one of our three incentive mechanisms. First, the firm can go to court to win a judgment that harms the borrower's reputation. Second, the firm may go to court to establish title to collateral, or in the event there is no specific collateral, to take its place in the queue of claimants. A judgment is also necessary to enlist the court's assistance in seizing assets. Third, the firm may go to court to punish fraud with a view to discouraging others from attempting fraud in the future.

Bankers claim that the costs of legal action in Bulgaria are negligible even for small loans. Bulgaria has a code law legal system so the cost in time of preparing documents and filing claims is small. Large banks have lawyers on their staffs so they argue that their marginal cost is only court fees.[6] If they win the judgment then their fees become part of their claim. Instituting a civil claim is thus the natural response to default and insufficient collateral.

Bankers and firms in Bulgaria often do resort to the courts, though all assert that courts are slow and inefficient (Koford and Miller 1995). We will discuss the purpose and efficacy of going to court as we discuss reputation, collateral and punishment below.

### 5.1 Reputation

All our interviewees agreed that a major lending criterion was the bank's experience with the borrower, that is, his or her reputation within the bank. Borrowers with poor reputations would have difficulty getting new loans or would get new loans only with more onerous conditions and restrictions. A poor reputation may encompass a history of slow payment or even just a general lack of cooperation and openness.

For reputation to work as a general incentive, the borrower has to know that his lender's

experience with him will become public knowledge. Other banks and firms must be able to find out easily whether someone is a good payer or not. In Bulgaria, this public knowledge was essentially absent.

Banks pointed out that the bank secrecy law prevented them from informing the public about problem borrowers. In principle, the law allowed them to inform other bankers of certain facts about borrowers, through a system that the BNB was to establish. However, that system was yet in place -- wrangling between different groups of banks has caused a delay of years.

Little information seemed to pass between banks, for several linked reasons. First, there had been some hostility between state and private banks that reduced communication. Second, as one banker said, “They are our competitors; why should we help them?” Third, several bankers said that it hardly made sense to tell a competitor that a particular borrower was in trouble. If the borrower got a loan from the competitor, it would make it more likely that the first bank would be repaid -- from the money the competitor had lent.

Any information exchange between institutions would generally help the new, upstart private banks at the expense of the established state and ex-state banks. It is the established banks that have records of their dealings with firms and individuals. It is the new banks that would like access to this information so that they could woo the best customers and decline the worst. By contrast, by not providing the information, the established banks increase the probability that the new banks will unknowingly lend to borrowers that the established banks have declined for good cause.

What moderated this institutional problem was reciprocity based on personal ties among bankers. As some bankers pointed out, bankers know each other and would cooperate within the limits of the law. Over the long run, you would need information as often as you would receive requests for it. Thus cooperation was emerging from reciprocity; informally, bankers were exchanging some information. Bankers in smaller cities seemed more willing to pass hints along; bankers in state banks seemed most ready to follow the bank secrecy law. The difference may have something to do with tenure in the job, particularly tenure in a particular location. Personal networks take time to build up and reciprocity requires the expectation by both parties that the relationship

will last into the indefinite future (Telser 1980).

Bankers invariably reacted negatively to the idea that they would pass information about borrowers on to others. We therefore did not learn very much about how those others -- other banks, business partners, potential investors, would respond to negative information. Instead, we observed an extreme case of "information impactedness" (in Williamson's terms) -- firms had very poor information about other firms. Only a firm that had long and close contacts with another firm could "trust" it to be reliable. Firms could not rely upon other firms or upon third parties to reveal accurate information. In contrast, newspapers often carried highly scandalous but possibly quite inaccurate stories about business firms. Overall, firms had great trouble in showing that they deserved a good reputation, and bad firms could easily claim to be good.

Often, people express the issue to us in cultural terms: information is very valuable, and so should not be passed around. Holding unique information gives power. This view of information means that a system based on the free flow of information has great trouble developing.

We found further confirmation of the problem of business and credit information through an interview with a major business information firm in Eastern Europe. Firms in the formerly communist countries were highly reluctant to provide data to the firm and as a result, they did not have access to useful information about business trends or specific other firms. It is hard to find a specific reason for the reluctance. It may be due to the general feeling noted above that "information is power" and that others may use the information in a harmful way.

The lack of good objective information about businesses in Bulgaria (balance sheets, past cash flows, value of capital, history of paying debts) suggests that informal information through close personal relations should be more important. This is the pattern in many countries and we found some evidence of this in Bulgaria. Bankers would often say "Bulgaria is a small country," or "Sofia is a village." The implication was that one could readily find out about people; still our sense is that gossip was more effective in towns rather than cities.

A mechanism that one observes in situations where business information is difficult to obtain is that businesses typically operate through close-knit "groups" where trust will be better. When

objective data is not available, knowledge of individual personalities is a partial substitute. Moreover, when one works with a small, intimate group of other business-people, violating an agreement should bring a collapse of business relations.

We remain puzzled by the lack of groups of independent but close associates who monitor each other and build substantial degrees of mutual financial support based on "trust." These are important in both established and emerging market economies. In Bulgaria they are either missing or involve "mafia" connections. For example, bankers mentioned "groups" that were not capable of making profitable investments but were effective at political lobbying. These include groups involving government-owned firms and banks that continue pre-1990 relationships.

Perhaps we have just not uncovered the good groups; a number of the bankers we interviewed worked for government-owned or foreign banks, neither of which would be involved in groups. Also, private groups may make use of financial firms rather than formally chartered banks. We should also note that almost all of the new private banks in Bulgaria collapsed in 1996-97. According to the BNB, the failures were largely due to poor lending practices, typically involving insider loans. Lastly, groups develop out of a nucleus of business-people with capital to invest; the newness of the situation in Bulgaria means that there are many managers looking for capital but few entrepreneurs with capital to invest.

Still, in asking how banks build business we looked for evidence of close, long-standing business ties and did not receive explicit answers supporting their presence. Koford and Miller [1996] did find such ties between the directors and owners of one group of firms, including cooperatives, and their bank. One of our interviewees worked for a bank associated with cooperatives and he too reported similar close ties.

We also heard numerous stories of bankers who lent to friends and relations who did not repay the loan (and who may never have intended to repay the loan). The implication generally drawn in Bulgaria is that "insider" loans were more likely to lead to default, despite the better information. Presumably this meant that the reputations of the bankers and borrowers were not so important, and that there was a problem of internal control in the bank.

In the early days, it appears that some individuals saw the lack of internal controls as an opportunity to make “one big hit” and then flee the country. One interviewee reported that the going rate to a bank officer for making an unsecured loan was US$10,000. As the business situation in Bulgaria was rather unstable, some people may have applied a high discount rate to future consequences. Clearly some borrowers saw defaulting now, even if this led to a bad reputation and reduced prospects later, as a worthwhile risk. Today we do not know whether this was a wise strategy or whether engaging in “corruption” has serious negative consequences for one’s future career and life.

The bankers we spoke with all reported that their banks had improved controls. The mechanisms their banks had adopted included separating loan origination from loan approval, loan approval by committee, or the requirement that every loan approval carry three authorized signatures. Some banks had a risk assessment or loan evaluation department separate from the commercial loan officers. In general, the amount an officer could now commit on his own signature alone was less than US$10,000.

In the event of fraud or default, banks do seek recourse in the courts. The primary reason has more to do with establishing and enforcing claims than with reputation. Still, court action does have an effect on the borrower’s reputation. Suits appear in public databases of legal actions, as do judgments. Other publicity mechanisms exist too; newspapers report on interesting suits, and lawyers talk to each other. Not only may a defaulting borrower (and his family) suffer personal embarrassment, as we discussed earlier, when the borrower tries to establish a new business, trade creditors and bankers may find out about his history.

### 5.2 Collateral

Bulgarian National Bank regulations require banks to have sufficient collateral to ensure repayment in case of the borrower’s failure to repay the loan. Bankers often described the lending system as being based on the guarantee that even in default the lender would remain whole. In practice, this was neither a very efficient nor effective system.

Demanding collateral may be inefficient when making a loan. Often the bankers really did not want to obtain collateral. The bankers usually attributed the avoidance of collateral as reflecting the preferences of "other" bankers, implying that they themselves followed BNB regulations. However, avoidance of collateral could occur in two quite different situations. Sometimes bankers were describing "inside deals" where both the bank officer and the borrower expected the loan to default. Banker and borrower were arranging to defraud the bank and real collateral would undermine the fraud. The other situation was one in which the loan was a good one based on the firm's cash flow. Here arranging collateral imposed costs on both borrower and lender well in excess of any benefit. The requirement for collateral was regulatory, not economic. In both the fraud situation and the efficiency situation, "guarantees" by third parties were a common way to honor the letter of regulations while bypassing the spirit.

Some international bankers regarded collateral as a minor matter and said that having a good borrower with a good business was far more important a basis for lending. However, foreign banks tend to lend to firms where collateral is less necessary by virtue of the borrower's ownership, size, profitability, disclosure, etc.

Seizing collateral may be an inefficient response to default. A common cause for default for most Bulgarian bank loans is the borrower's failure to make interest payments. If the borrower is only illiquid rather than insolvent, seizing the collateral could damage the firm, at best making it harder for the firm to operate and at worst driving it into bankruptcy. Also, banks with a reputation for seizing first and asking questions later will have trouble finding good clients.

The main problems with collateral as security are universal. The ineffectiveness of collateral in Bulgaria stemmed from several sources, only some of which are perhaps more idiosyncratic to Bulgaria and other transition economies.

The first problem with collateral is to give it a value. We asked a series of questions regarding the valuation of collateral, and basically received puzzled responses, wondering why this required so much emphasis. The banks employ specialists to evaluate collateral, and our respondents generally felt that the specialists do a good job with regard to buildings and similar properties. What helps the

evaluation is that fairly good market prices are available for apartments and houses. Good market prices exist for securities such as government bonds. Obviously the banks tended to prefer and to accept only those securities for which prices were readily available.

Sometimes though, establishing the value of collateral is difficult. Bankers remarked that they did not like to accept unique machinery as collateral. If the borrower went bankrupt there would be no one else to whom to sell the equipment. In Bulgaria as in much of Eastern Europe, the equipment may be obsolete and the firm may have been a monopolist. The collateral then will be worth more to the existing owner than to the bank or any other buyer. Also borrowers often evaded the collateral rules; either through fraud or with the connivance of the bank, borrowers would sometimes provide notional collateral that was not really valuable.

The second problem with collateral is that it may lose value as prices change. The big negative shocks that recently hit the Bulgarian economy often caused both the firm and the collateral it had pledged to lose value. Banks were ready to require additional collateral when this occurred, but often it was not practical to do so.

The third problem with collateral is administering it. The law recognizes several types of collateral. Bankers reported that sometimes collateral would “disappear” and so they had to watch it carefully. Bankers seemed to think it was normal for borrowers to play a kind of “cat and mouse” game trying to keep the collateral from being seized or causing it to disappear. Bankers told of collateral disappearing from warehouses, for example.

Frequently the bank would have the borrower place moveable collateral in bonded warehouses. This turns the banker into a pawnbroker.[7] Clearly seizing trucks on the highways is more difficult than if they are in a bonded warehouse. However the value to the owner of trucks immobilized in a bonded warehouse must be low.

A fourth major problem with collateral is perfecting the collateral, that is, establishing clear title. Bankers reported that the bank might go to seize collateral only to find that the borrower had already pledged the collateral to several banks. The stories may have been apocryphal or have exaggerated the incidence of such occurrences; often these stories were about other banks than the

respondent's.

Bankers can seize most personalty without any ado. Other types require only a minor court formality, in principle. Lastly, some types require a full court hearing. Only a court can sell realty.

Shortly before our interviews, the government passed a law establishing a central collateral register for personalty, that is moveable property, as distinct from realty or immobile property. Most banks seemed aware of the register but generally viewed it as of limited use. An interview with the U.S. expert who had established the register confirmed that it was not yet operating effectively.

Similar problems applied to real estate. Bankers could check for liens on real estate locally in each area but there is no national registrar for such assets.

The fifth problem with collateral is obtaining the collateral after a default. This may be more of an issue in Bulgaria than in countries where both the political and legal system are better established. Several bankers stated that they did not expect fair treatment from the judges. Bankers, one said, have a negative reputation in society and judges tend to be populistic. Bankers believed that some borrowers could influence some courts in their own favor. When the judge has to decide between a bank and some firm, bankers believe the decision usually favors the firm regardless of the contractual merits. Out-of-town banks suing local firms would fare particularly ill. Bankers also alleged that judges protect firms with an important local presence; they suggested that such situations are common in the smaller cities in Bulgaria.

Lastly, if the borrower resisted the bank's action in court the borrower could impose additional costs on the banks, even if the lender would ultimately prevail. The bankers reported that they no longer faced (by 1997) the long delays in coming before the judge that had occurred some years earlier. Still even when the law was clear borrowers, or rather their attorneys, could use procedural issues to impose substantial delays. In an environment of high inflation, this was very costly to the banks. The collateral, if not a nominal security such as a bond, would hold its value. However, by the time the bank could dispose of the collateral, the loan's real value could fall. Worse, the bank would then have to return to the borrower the current value of the collateral in excess of the nominal value of the loan. Nor could the lender gain relief through the interest on the loan. Even though under

Bulgarian law debtors must pay interest on their overdue debts, due to the economic crisis, for most of 1996 and early 1997, the real interest rate was substantially negative.

Overall, our impression is that the collateral rules were not fully effective, even though the specific procedures were reasonable (with some exceptions). Our impression is that some Bulgarian banks, especially the state-owned ones, placed an excessive reliance upon collateral. The reliance on collateral was part of a generally more bureaucratic approach to business. In a bureaucratic environment, following the procedures and the rules absolves the lending officer of any responsibility for the outcome.

### 5.3 Punishment

We asked bankers if they believed there were many cases of fraud among borrowers; the responses varied between "many" and "few." (Specifically, we asked them if there were borrowers "who never intended to pay back the loan" or "who could pay but would not pay.") In such cases punishment, or the threat of it, can influence the borrower to reevaluate the situation.

Punishment can take several forms. Lenders may resort to private or to public justice. Some of what appears to be extortion or strong-arm tactics in transition economies is a resort to private justice because public justice is flawed or non-existent (Rubin 1995).

The simplest form of private enforcement if the borrower just fails to repay, is a call or visit by the lender to "discuss" the matter with the borrower. The discussion will certainly be unpleasant, especially if the borrower has not warned the lender that difficulties were starting to develop. Lenders may call the borrower regularly to "remind" the borrower of the obligation, and may employ "strong young men" to help with the reminder. Banks generally denied using this last approach, although they said that "other" banks might do it. One interview was with a specialist in collections who was very physically robust for a banker.

Several banks had investigation and security departments staffed with former policemen. These departments had responsibility for investigating borrowers when necessary, and especially in cases of default.

Taking a default to court registers the case with public databases that banks and firms can use. Such an action damages the firm's reputation. However, firms stated that they were unlikely to take such an action to warn other banks and firms.

We asked the lenders if they would refer cases of fraud to the police or to prosecutors. Most bankers thought about this question before answering, and then generally said, "Yes, but we do not expect any results." One banker noted that his bank had referred cases to the prosecutors nearly a year before, but they had so far done nothing. A central bank official noted that his office had referred several cases of obvious fraud by bankers to the prosecutor's office, but without result. The prosecutors appeared to show no interest in pursuing these cases.

Our last interview in Bulgaria, in a small city, gave the following story. A prominent politically well-connected businessman in the city has obtained substantial loans from several banks, ostensibly for business purposes. Instead he used them to support the local sports team, buy two Mercedes and enjoy a lavish lifestyle. The banks have been unable to collect payment on their loans and are even under considerable pressure to make new loans. If the banks or prosecutors were to act against the "businessman" they might face physical retaliation.

Overall, therefore, we must conclude that in Bulgaria one can expect little decisive civil action or punishment for fraud against a bank.

## 6.0 Improving the situation

The recent history is banking in Bulgaria is not an equilibrium: banks are making too many bad loans, and cannot be profitable over the long run. The recent banking collapse makes this clear. We suggest some ways in which Bulgarian banks can improve their effectiveness, and ways in which the Bulgarian government can improve the banks' effectiveness.

### 6.1 Learning to be better bankers

Obviously, banks need better methods of evaluating borrowers. Bankers are generally aware of

this, but not so aware specifically of how they could do better.

The Bulgarian National Bank could play a positive role in improving quality by providing seminars for bankers, and by improving the quality of its lending inspectors. Adding some experienced international bank inspectors (perhaps retirees) to its staff on three to five year contracts would also be very helpful. As a central bank, the BNB can afford the expense, and experienced and capable bankers could have a substantial positive influence. External review of bankers by highly capable central bankers from several countries could give the banks additional information on best practice.

A more immediate route to "best practice" banking is importing foreign expertise directly into the Bulgarian banks. We observed or were aware of several mechanisms. These included the hiring of management consultants (of the McKinsey type) to establish structures and procedures, twinning arrangements between a foreign bank and a Bulgarian bank, the dispatch of trainees to training courses run by foreign banks outside Bulgaria, and management contracts. Foreign banks have not yet acquired any Bulgarian banks. This may change under the Bulgarian government's plan to privatize five banks before the year 2000.[8]

We observed much more effective lending procedures in foreign banks both in Bulgaria and Hungary. It is our sense that the parent banks were able to transfer their procedures to their Bulgarian or Hungarian banks very quickly by training and the force of example.

One practice that we observed only in foreign institutions was the systematic review of past problems and the incorporation of lessons learned into the training of new officers and into current practice. The idea was to learn systematically from past unfortunate lending experiences about sources of problems.

One lender regularly had loan officers come together with each officer in turn presenting his or her problem loans. This process had two good features. First, the process resulted in information dissemination. One example the respondent gave was when several officers reported problems with loans to pig farmers, it became clear that the problem was with pig-farming and not just with less-able farmers. Second, loan officers could learn from the mistakes of others in a context where each

had an incentive to avoid problems that would lead to public embarrassment later.

Two foreign banks reported that their banks made a practice of taking particularly informative bad loans and having trainers write the loans up as case studies. These case studies then became part of the training programs for all new lending officers. This can be especially salutary in making it clear why the bank has the safety rules it does.

Overall, a systematic review of problems is an important element in making banks think about their long-run goal of avoiding bad debt problems when their day-to-day activities do not see these long-run consequences. It is particularly important to the younger bankers who have not had the experiences of losses.

### 6.2 Making it possible for reputation to work

Bankers in most communities have a combination of social and informational organization, in which they come to know each other well, learn who is capable and reliable, and share useful information. While this exists in some cities in Bulgaria, it seems much weaker and less effective than is normal. Building these social ties is important in ensuring that bankers have an "information community" that gives all reputable bankers timely access to valuable information. We would suggest that similar organizations should exist among businesses, making it harder for *phantomi* or less-reputable firms to thrive.

### 6.3 Reducing the reliance on collateral

The Bulgarian banking system's reliance on collateral seemed excessive. Requiring collateral aims to ensure that borrowers borrow only when they expect to be able to repay the loan, and that bankers are made whole if the loan turns bad. In practice, these hoped-for results did not occur. Bankers seem to have abdicated their responsibility to screen borrowers. Instead they have been willing to lend to bad risks while relying on collateral to save them from their mistakes. Bankers must be in the business of determining who are good borrowers, and making judgments about the quality of firms and of managers.

### 6.4 Making adjudication more efficient and effective

Court action to recover debts is difficult everywhere, contrary to some Bulgarians' expectations at the beginning of the transition (Koford and Miller 1995). It seems that gradually courts have become more knowledgeable about dealing with business contracts -- starting from essentially zero in 1989. There have been numerous training courses offered by the European Union, and also experience with cases. However, the court system remains quite inefficient. Changes in the legal procedures may be appropriate, although we did not examine this issue in detail. Reduced inflation and normal levels of real interest rates will eliminate some benefits from failing to pay one's obligations.

One possible improvement would be the encouragement of the use of binding arbitration in commercial contracts.[9] For binding arbitration to work, however, the court system must accept and enforce the arbitrators' decisions. Arbitration is cheap and fast and in time arbitrators may develop substantial expertise.

### 6.5 Making punishing fraud a priority

Most cases of fraud in Bulgaria have not been sophisticated or subtle. To date, the environment has not exerted much selection pressure. The perpetrators of fraud appear to have relied upon the inefficiency of the system or their political connections to avoid prosecution, not skill. The recent (April 1997) elections brought into power a coalition that claims the intention of rooting out crime. If they have such intentions, it should not be difficult for them to uncover it or to find good evidence. This would substantially reduce the incentives for borrowers to engage in fraud, and this in turn would increase the ability of banks to lend.

Connections between the Bulgarian legal system and those of other countries may also be valuable. We heard numerous cases in which businesspeople fled Bulgaria to end legal problems. These cases included examples both of civil failure to pay despite the possession of considerable assets abroad and of criminal violations. It appears that people consider that leaving Bulgaria leaves

them “home free” from any legal problems, and with the right to enjoy any financial assets they have sequestered abroad. Obviously, in a small open country such as Bulgaria, this situation is extremely dangerous for the rule of law. Other countries seem able to pursue lawbreakers abroad, and to ensure that those facing civil action do not place large amounts of assets abroad. Bulgaria should adopt the policies of these other countries.

### 6.6 Letting banks be banks

Firms should not need to go to the banks to finance investment or growth. Banks should not be either venture capital firms or long-term lenders. Bankers are providers of short-term liquidity (Rajan 1996). The use of banks in both roles in Bulgaria and other transition economies reflects both history and the current lack of alternatives.

Under the planned economy, banks were simply arteries and accounting organs that moved funds on the basis of decisions made elsewhere and then kept track of the sums. Absent market interest rates the tenor (duration) of the allocation was irrelevant. Because banks were the only channel for funds, the tendency is to continue to treat them as the only channel. However, in a market economy, banks should have a more limited function.

In developed economies, banks do not act as venture capitalists. The problem in Bulgaria and the other transition economies is that the proportion of new ventures among all firms is greater than in more mature economies, and the supply of venture capital is less. In most capitalist economies there are numerous wealthy individuals and families prepared to place money (and influence) in promising ventures. It appears that informal routes to obtaining private investments are very weak in Bulgaria, leading firms to try to obtain more bank financing than would be normal in a market economy.

Also, in mature market economies, much, perhaps most, long term capital comes from non-bank channels. Debt comes from commercial credit companies, specialized long-term banks, and bond markets. Equity comes from equity markets.

Firms’ efforts to find long-term capital -- their need to do so -- cause substantial problems in

banking. The problems are of two types: banks generally should provide only some long-term debt, and banks should not provide debt when the firm needs equity.

First, banks are specialists in liquidity, both for borrowers and for depositors. When banks fund long-term debt with demand and other deposits, as typically they are asked to do in transition economies, they expose themselves to interest rate risk from the maturity mismatch. Banks generally do not issue long-dated deposits. These are non-negotiable and so illiquid and therefore not very popular. Ideally, banks should issue bonds, but this requires functioning bond markets.

Second, firms need to be able to issue equity rather than to substitute debt for unavailable equity. Otherwise the firms become undercapitalized, or equivalently, too leveraged. Bulgaria needs to develop the stock market and perhaps create an informal, over-the-counter market for shares in closely-held firms.

The availability of detailed business information on firms is necessary if investors are to put risk capital into firms. Bulgaria should change the “information climate” from one of secrecy to one of openness. The most immediate act to help this progress would be the suppression of mafia-type protection rackets. Beyond that, ensuring that the laws protect minority and majority shareholders is important. The authorities should lead by example by taking legal action when appropriate and by amending laws when problems show up in them.

## 7.0 In sum...

Our overall impression is that there was a wide variance in the Bulgarian banks' ability to identify good and bad borrowers. Although information is difficult to obtain in Bulgaria, some lenders were failing to use the information that was available. Others appeared to do better. The intrinsic difficulties appeared greatest in determining whether firms and projects were good, while the failures of banks to be effective seemed greatest in determining the character of the borrower.

Several common ways of enforcing loan contracts in developed market economies are quite weak in Bulgaria. Fraud against a bank is rarely punished. The courts defend creditors’ rights only

weakly even on collateral. Firms do not need to fear a bad reputation from failure to keep their contracts. Finally, the lack of good information about good and bad businesses forces banks to expect many bad loans and so be cautious in making loans.

## Appendix: The interviewing process

We carried out interviews with bankers in Bulgaria in May and June 1997. We also carried out interviews in Hungary, to provide a comparison with a country in a different stage of the transition. The thrust of our questions was to elicit responses about the problems they faced in extending good loans and ensuring repayment. In addition, we arranged for 12 interviews in Bulgaria of borrowers from banks; these involved questions similar to the banking questions, but from the reverse perspective.

We based our interviews on a detailed questionnaire that we are willing to send to any interested reader. As we heard the individual responses we followed up with additional questions to enable us to understand the specific situations more precisely. On average, each interview took two hours. The number of interviewers ranged between two and four and averaged three persons. The Bulgarian members of the team were all faculty of Bulgarian universities. We carried out our interviews in both English and Bulgarian. Two-person teams consisting of one U.S.-based professional interviewer and a Bulgarian economics faculty member carried out the interviews with borrowers. These interviews were done in cooperation with the IRIS Center of the University of Maryland. The interpreter-translator in Hungary was an undergraduate in Economics with experience as a teaching assistant.

We arranged the interviews through "connections," so we do not have a statistically valid sample. However, as we used four different sources to obtain interviews, and the set of available banks is not large, we believe that we have a reasonably broad-based sample. Most of our interviews were, however, in Sofia, with a few in Varna and in a smaller town near Sofia. Thus, we have under-sampled small-town lending practices.

We carried out 24 interviews in Bulgaria, of which there were:

| | |
|---|---|
| Full interviews with bankers | 11 |
| Incomplete interviews with bankers | 5 |
| Interviews with central bankers | 5 |

| | |
|---|---|
| Interviews with leading economists | 3 |

In addition, we carried out 12 interviews in Hungary:

| | |
|---|---|
| Full interviews with bankers | 8 |
| Incomplete interviews with bankers | 2 |
| Interviews with service firms | 2 |

## References


Avramov, Roumen. 1995. The rebirth of the market in Bulgaria – "Economic Memory" and Transition. Centre for Liberal Strategies, Sofia, Bulgaria.

Axelrod, Robert. 1981. The Emergence of Cooperation Among Egoists. American Political Science Review 75: 306-318.

Berov, Ljuben (1995) Budgetary Policy, Money Supply, and Banking in Bulgaria between the Wars. In Charles F. Feinstein, ed. Banking, Currency, and Finance in Europe Between the Wars (Oxford: Clarendon Press), pp. 374-394.

Bikhchandani, Sushil, David Hirshleifer and Ivo Welch. 1992. A Theory of Fads, Fashion, Custom, and Cultural Change as Informational Cascades. Journal of Political Economy 100: 992-1026.

Bogetic, Zelijko and Heywood Fleisig. Forthcoming. Collateral, Access to Credit, and Investment in Bulgaria. In Derek Jones and Jeffrey B. Miller, eds., The Bulgarian Economy During Early Transition, (Aldershot, U.K.: Avebury).

Bonin, John P. 1996. Banking in the Transition: Privatizing Banks in Hungary, Poland and Czech Republic. Wesleyan University, unpublished paper.

----, and Bozena Levin. 1996. Polish Bank Consolidation and Foreign Competition: Creating a Market-Oriented Banking Sector. Journal of Comparative Economics 23: 52072.

Cameron, Rondo, ed. 1967. Banking in the Early Stages of Industrialization (New York: Oxford University Press).

Cameron, Rondo, ed. 1972. Banking and Economic Development: Some Lessons of History (New York: Oxford University Press).

Callier, Philipe. 1990. Informal Finance: The Rotating Saving and Credit Association – An Interpretation. Kyklos 43: 273-276.

Caprio, Gerard, Jr., and Daniela Klingebiel. April 1996. Bank Insolvency: Bad Luck, Bad Policy or Bad Banking? Annual Bank Conference on Development Economics, World Bank.

Caprio, Gerard, Jr., and Daniela Klingebiel. April 1996. Bank Insolvencies: Cross Country

Experience. World Bank.

Diamond, D.W. 1984. Financial intermediation and delegated monitoring. Review of Economic Studies 51: 393-414.

Dörner, Dietrich. 1997. The Logic of Failure. (Reading, Mass.: Addison Wesley).

Hallagan, William. 1997. Speed and sequencing of market reforms: The case of banking in Latvia. Contemporary Economic Policy 15: 24-34.

Khandker, Shahidur R. 1996. Grameen Bank: Impact, Costs, and Program Sustainability. Asian Development Review 14: 97-130.

Koford, Kenneth and Jeffrey B. Miller. 1995. Contracts in Bulgaria: How Firms Cope when Property Rights are Incomplete. IRIS working paper, June.

Koford, Kenneth and Adrian E. Tschoegl. 1997. The Problems of the Banking Sector in Bulgaria. The Wharton School of the Univ. of Pennsylvania, unpublished paper.

Lampe, John R. and Marvin R. Jackson. 1982. Balkan Economic History: From Imperial Borderlands to Developing Nations. (Bloomington: Indiana University Press).

Lamoreaux, Naomi. 1991. Information Problems and Banks' Specialization in Short-Term Commercial Lending: New England in the Nineteenth Century. In Peter Temin, ed., Inside the Business Enterprise: Historical Perspectives on the Use of Information (Chicago: University of Chicago Press).

Lamoreaux, Naomi R. 1994. Insider Lending: Banks, Personal Connections and Economic Development in Industrial New England (New York: Cambridge University Press).

Orléan, André. 1995. Bayesian interactions and collective dynamics of opinion: herd behavior and mimetic contagion. Journal of Economic Behavior and Organization 28: 257-274.

Petersen, Mitchell A. and Raghuram G. Rajan. 1995. The Effect of Credit Market Competition on Lending Relationships. Quarterly Journal of Economics 50: 407-443.

Rajan, Raghuram G. 1996. Why Banks Have a Future: Toward a New Theory of Commercial Banking. Journal of Applied Corporate Finance 9: 114-28.

Rozental, Alek A. 1968. Branch Banking in Thailand. Journal of Developing Areas 3: 37-50.

Rubin, Paul H. 1995. Private Mechanisms for the Creation of Efficient Institutions for Market Economies. In Laszlo Somogyi, ed., The Political Economy of the Transition Process in Eastern Europe. (Aldershot, UK: Elgar), pp. 558-70.

Sutton, John. 1997. Gibrat's Legacy. Journal of Economic Literature 35: 40-59.

Telser, Lester G. 1980. A Theory of Self-enforcing Agreements. Journal of Business 53: 27-44.

Tschoegl, Adrian E. 1995. Comment. In Ronald J. Daniels and Randall Morck, eds. Corporate Decision Making in Canada (Calgary: Univ. of Calgary Press).

Walter, Ingo. 1992. The Battle of the Systems: Control of Enterprises and the Global Economy. Journal of International Securities Markets 6: 309-317.

Zeller, Manfred. 1994. Determinants of Credit Rationing: A Study of Informal Lenders and Formal Credit Groups in Madagascar. World Development 22: 1895-1907.

## Endnotes

[1] Note: traditionally, the auditor does not verify that the accounts are free from fraud though an audit will detect some frauds and will draw attention to weaknesses in the firm's procedures that might facilitate fraud.

[2] At the time we interviewed, the BigMac PPP estimate suggested that the lev was about 40% undervalued against the US$; an undervalued exchange rate means that goods are cheaper at home than abroad and thus acts like a tax on imports and a subsidy to exports. In June of 1997, the Bulgarian government instituted a currency board system. The government fixed the exchange rate at BL 1000 = DM 1. This action froze the exchange rate at the then 40% undervaluation.

[3] The following anecdote may provide a small indicator of expectations. A student was surprised when one of the authors suggested that the student write to a US academic to request a copy of a paper. The student expected that the author would automatically ignore all such requests because of the lack of any personal benefit from responding.

[4] In the Far East, foreign banks often relied on *compradores* when making loans to local borrowers. Rozental (1968) describes the operation of the institution in Thailand. The *compradore* was a local merchant who posted bond with the bank and who would, for a fee paid by the borrower, guarantee the repayment of the loan to the bank.

[5] There is now a large literature on ROSCAS (rotating savings and credit associations) in less developed countries (Callier 1990) following the success of the Grameen Bank in Bangladesh (Khandker 1996). In the ROSCAS, the lender lends to a group of borrowers who jointly and severally agree to repay the loan. Empirical work such as Zeller's (1994) in Madagascar has confirmed theoretical arguments that community-based groups have an information advantage over distant formal bank agents.

[6] The need to have lawyers on the staff means that the average cost could be high.

[7] A pawnbroker retains possession while the borrower retain title. A mortgage lender retains title while the borrower retains possession. Normally with collateral, the borrower retains possession and the lender has priority in establishing title in the event of default.

[8] The privatization of United Bulgarian Bank in 1997 has resulted in the bank having majority, though dispersed, foreign ownership.

[9] In Eastern Europe one has to careful with terminology. Arbitration is usually translated as arbitrage and is associated with the discredited Communist commercial dispute resolution system.