DESIGNING FINANCIAL SYSTEMS IN TRANSITION ECONOMIES
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DESIGNING FINANCIAL SYSTEMS IN TRANSITION ECONOMIES
Introduction: Financial Systems in Transition

Anna Meyendorff and Anjan Thakor

The dramatic political and economic transformation of Central Europe that began 10 years ago with the fall of the Berlin Wall has provided new opportunities and raised new challenges in finance and economic research. On the one hand, rapid liberalization of both financial and real markets in the formerly state-controlled economies of Central Europe provides a new testing ground for existing theory. On the other hand, the noisy environment and poor data quality has made empirical research difficult. The unprecedented experiment being conducted in reforming centrally planned economies has also drawn academics into the inner circles of policymakers, as newly elected governments are struggling to create markets and institutions virtually overnight.

The William Davidson Institute organized a conference on the design of financial systems in Central Europe in May 1998. The conference brought together leading academics from Europe and North America, including both experts in the area of finance and banking and scholars specializing in the transition of Central European economies. The conference was intended to generate discussion about financial system design for transition economies, drawing on recent advances in research on financial restructuring, bankruptcy law, prudential regulation, and the role of banks. This volume is one result of that conference.

Collectively, the chapters address four important questions about economic reform in transition economies. The first two questions relate to the reform of financial institutions and markets, whereas the last two questions relate to the efficient structure of firms in transition economies. The four questions are:

1. How should we deal with the fact that banks in transition economies often have balance sheets that are burdened with excessive nonperforming assets?
2. What are the optimal policies for financial sector reform in transition economies?
3. What is the effect of ownership structure on economic performance?
4. Is conglomeration of nonfinancial firms optimal in transition economies?

The chapters that address the first question focus on financial restructuring in transition economies. Prior to the transition period, the primary function of Central European banks was to maintain the accounts of and channel subsidies to state-owned enterprises. Not surprisingly, the majority of loans on the books of these banks were not viable, and cleaning banks’ balance sheets is a first and important step in imposing hard budget constraints on both firms and banks. In chapter 2 Janet Mitchell develops a general framework for analyzing trade-offs among various
policies for cleaning banks’ balance sheets of bad debt. Mitchell applies her framework—a two-tier hierarchy consisting of regulators, banks, and firms—to analyze three types of policies that have been advocated or employed in transition economies. Her analysis identifies two effects of policy choice: a direct effect of the policy on bank behavior and an indirect effect on firm behavior. A central insight of the chapter is that a tough recapitalization policy results in banks’ rolling over loans in default in order to conceal the full extent of their loan losses, with the resulting indirect effect of extending soft budget constraints to firms.

Philippe Aghion, Patrick Bolton, and Steven Fries, extend this approach, in chapter 3, emphasizing the information asymmetry inherent in transition economies, where institutions for evaluating and disclosing the banks’ credit-worthiness are weak. In addition to reproducing Mitchell’s result that tough recapitalization policies lead to a softening of firms’ budget constraints, they find that a soft approach to recapitalization leads banks to be excessively tough on firms and to exaggerate their own recapitalization requirements. The chapter finds a socially optimal outcome when recapitalization occurs through the buying out of nonperforming loans rather than a simple injection of funds, using a nonlinear transfer pricing mechanism to combat healthy banks’ overreporting of bad loans.

The second set of chapters addresses the question regarding optimal policies for financial sector reform in transition economies. In chapter 4 John Bonin and Mark E. Schaffer provide an important cautionary lesson about the design of financial sector reforms, which can have significant detrimental effects if the particular institutional framework is not taken into account. They describe Hungary’s experimentation with an “automatic trigger” requiring liquidation or reorganization proceedings by firms with overdue debt to any creditor. Whereas the legislation intended to impose financial discipline on firms and speed restructuring, the absence of mechanisms to promote efficient resource allocation created a situation in which many viable firms were faced with temporary liquidity constraints. By not distinguishing among the various causes of overdue debt, the automatic trigger took down “good” firms along with the “bad.” This also forced the government into very rapid recapitalization of banks.

Anna Meyendorff, in chapter 5, similarly describes unintended effects of financial-sector policy measures. Using a simple theoretical model, she shows the negative effect Russia’s policy of enforcing corporate tax payment through the banking system has had on credit allocation in Russia. This type of enforcement, inefficient in any economy, is particularly costly when fiscal authorities are weak. As the chapter indicates, it significantly retards financial sector development by discouraging the most profitable firms from interacting with the banking sector.
In chapter 6 Thomas Hellmann, Kevin Murdock, and Joseph Stiglitz point out pitfalls in the process of financial liberalization, discussing the impact of various forms of prudential regulation on bank behavior at a time when banks have not yet attained the desired level of capital. They argue that deposit rate restrictions will be more effective than increases in capital requirements in imposing discipline on banks’ lending practices and that a policy of “regulatory overshooting” ensures both a faster and safer transition to a liberalized banking sector. Gary Gorton and Andrew Winton similarly argue in chapter 7 that high capital requirements imposed on banks may be detrimental to the development of a banking sector in the transition setting. As an alternative, they recommend that regulators seek foreign bank capital, grant domestic banks implicit capital through monopoly rents, or simply allow banks to operate with lower capital requirements.

The issue of financial reform is also examined by Anna Meyendorff and Anjan Thakor in chapter 8. They analyze the current state of the Romanian banking sector and prospects for reform and outline a set of policy recommendations applicable to many other emerging markets. In addition to discussing the problem of bad debts in the existing banks, they take a broader view of financial-sector development, stressing the interaction between real-sector reforms and the development of both bank lending and equity markets.

Picking up on Bonin and Schaffer’s ideas in chapter 4—that optimal policies depend on initial conditions—Raghuram Rajan discusses the permissible scope of banking in chapter 9. Rajan argues that universal banking and unrestricted competition in the provision of financial services may not result in the creation of efficient institutions. In particular, if the markets in which the institutions compete are not naturally competitive, choosing inefficient structures may be a dominant strategy for institutions. This is of particular importance to transition economies because of the legacy of nontransparency and poor accounting they have inherited from the days of central economic control.

The third group of chapters addresses the question of ownership structure and its effect on firm performance. These chapters focus more directly on the interaction between real- and financial-sector reform in the context of the Czech Republic. Andrew Weiss and Georgiy Nikitin, in chapter 10, use survey data to assess the effect of ownership structure of Czech firms on their economic performance by measuring the relationship between changes in performance and changes in the composition of ownership structure at the firm level. They find that ownership concentration in the Czech Republic is associated with improvements in the performance of operating companies, but only if ownership is concentrated in hands other than investment funds. Whereas Czech investment funds were designed to counteract the diffuse firm
ownership created by the Czech voucher privatization program, the incentive structure of the investment fund managers undermined this original intent.

In chapter 11 Lubomír Lízal and Jan Svejnar, using data from most of the industrial firms located in the Czech Republic between 1992 and 1995, find that domestic firms cannot easily borrow investment funds externally and that investment varies with and is financed from retained earnings. Although the finding that investment is constrained by internal cash flow has also been documented in the United States, this chapter lends support to the argument that the financial sector in the Czech Republic is not yet playing the necessary role of intermediary.

The final set of chapters examines the fourth question regarding the role of conglomerates and financial-industrial groups in the transition setting. In chapter 12 Arnoud Boot and Anjolein Schmeits make the analytical argument that conglomerations in banking seems to be optimal when rents are low and market discipline weak. Internal cost-of-capital allocation schemes may create an internal discipline that complements the weak external market discipline. Enrico Perotti and Stanislav Gelfer close the volume in chapter 13 with a focus on Russian financial-industrial groups, in which large firms are affiliated with one or more large banks in a complicated pattern of cross-ownership. Their empirical analysis shows that firms that belong to one of these financial-industrial groups allocate capital better than firms that do not.

Several important themes emerge from the chapters in this volume. The first is the critical interaction between financial- and real-sector reform. On the one hand, the way that policymakers and banks address the issue of bad loans has a significant impact on firms, either subsidizing the continued existence of firms that should be liquidated or prematurely liquidating firms that could be profitable. On the other hand, the quality of firms in the real sector circumscribes financial-sector development. When banks cannot find good credit risks, they cannot improve the quality of their portfolios. Until there is a critical mass of viable firms in an economy, its equity markets will be thin and ineffective.

The second important theme is that policies that are successful in developed market economies may have substantially different and even undesirable outcomes in less developed or transition economies. In Central and Eastern Europe, both markets and the institutions that support them have developed at a slow and often uneven pace. Missing markets and institutions have distorted policy outcomes. Thus, both researchers and policymakers must think creatively about how to avoid these distortions. As argued in several of the chapters, policy solutions and institutional arrangements which have been rejected outright in developed market economies could be particularly appropriate, if only on an interim basis, in economies in transition from socialist to market-based systems.
2 Banks’ Bad Debts: Policies, Creditor Passivity, and Soft Budget Constraints

Janet Mitchell

2.1 Introduction

Economies in transition, like those of many other countries around the world, have suffered banking crises in recent years. Like those in other countries, troubled banks in transition economies (TEs) have not always openly revealed the extent of bad debt on their balance sheets. Despite their inaccurate knowledge of the amounts of bad debt on banks’ balance sheets, governments in TEs have acknowledged the problem of bad debt relatively rapidly, and they have employed a variety of policies to clean banks’ balance sheets. As a consequence, considerable discussion has taken place in these economies regarding which policies to apply to banks in distress.¹

A unique set of historical conditions faced by the TEs explains both a greater vulnerability to banking crises in TEs than in other emerging market economies and authorities’ recognition of banks’ problems. In particular, each country’s commercial banks received a sizeable (though unknown) quantity of bad loans on their books at the point of their inception, and each of these economies had a history of soft budget constraints.² Because of this history, one of the objectives of the transition has been to harden firms’ budget constraints. However, whereas in these previously socialist economies the government was formerly the source of soft budget constraints (SBCs) through its bailout of loss-making state-owned firms, their transition to market economies has given rise to a new source of SBCs via banks’ rollover of loans (and potential refinancing).

This chapter reports on a line of research that views banks as sources of SBCs and models banks’ decisions to roll over or refinance loans in default. The assumptions on bank behavior in the model presented here derive from the analysis of creditor passivity in Mitchell 1993, which defined the concept (banks’ passively rolling over their loans in default rather than actively pursuing their claims) and identified a number of potential explanations for the behavior.

The observation that banks may be responsible for SBCs is not new. In the first paper to formalize Kornai’s notion of SBCs, Dewatripont and Maskin (1993) show that banks that are “too large” may create SBCs (since the amount of available funds prevents them from committing to not refinancing “bad” projects for which it is actually efficient to refinance after default). Dewatripont and Maskin (D-M) demonstrate that commitment problems are at the heart of SBCs and focus on sunk costs as the source of these commitment problems. This focus somewhat limits their model’s usefulness for analyzing banking crises and potential policy responses. In
contrast, I show that the motivations for bank passivity generate SBCs in situations in which they would not arise in the D-M model and that a model allowing for bank passivity is well suited to analysis of banking crises.

The model of bank behavior that I present in this chapter illustrates an important motivation for bank passivity: troubled banks may have an incentive to roll over loans in default in order to avoid revealing the default. It also illustrates how this passivity can actually worsen banks’ financial conditions, thereby exacerbating any resulting banking crisis. I incorporate this model of bank behavior into a general framework for analyzing real trade-offs among policy choices for dealing with troubled banks. Because the explanations for (and the observation of) banks’ rolling over of loans are actually quite general and are not limited to TEs, the model elaborated here may be easily applied to analyzing banking crises in other settings.

Despite the frequent occurrence of banking crises in TEs and around the world, no research has formalized trade-offs between policies for dealing with troubled banks’ bad loans. This chapter and the model it presents constitute the first to attempt to fill this vacuum. (A more detailed analysis of the model appears in Mitchell 1998.) The model’s framework consists of a two-tier hierarchy comprising a regulator, banks, and firms. Hidden information and moral hazard are present at each tier of the hierarchy.

Analysis of the results obtained using the model demonstrates that the policy chosen by the regulator (who is unable to observe banks’ precise levels of default) to clean troubled banks’ balance sheets will influence banks’ decisions to be active or passive in pursuing claims in default. A particular bank’s response to the regulator’s policy is labeled the direct effect of the policy. The bank’s choice to be active or passive—referred to in the model as a choice of workout versus rollover—affects the amount of a loan that the bank will ultimately recover; therefore, it affects the bank’s value. A policy to which banks respond by rolling over their loans in default will cause the level of default on banks’ balance sheets to appear lower than it actually is and will result in lower bank values than a policy that induces banks to work out their claims. In contrast, workout (a term that refers to actions such as bankruptcy procedures or out-of-court workouts) is costlessly observable; hence, the level of default becomes known when a bank chooses this action. Revelation of a high amount of bad debt in a particular bank may be detrimental to the bank’s manager if she suffers penalties or a loss in private or reputational benefits as a result.

In addition to the direct effect policies have on bank behavior, they also affect firm behavior. A bank’s choice of workout or rollover of loans will influence the decision by the manager of the borrower firm on whether to divert the firm’s assets (or its earnings) for the manager’s private benefit. Asset dissipation by the firm manager
decreases the firm’s future value and the amount of the bank loan the firm ultimately repays. A choice of rollover by the bank motivates firm managers to choose higher levels of asset dissipation than does a choice of workout. A firm manager’s choice of asset dissipation as a function of the occurrence of default and of the bank’s choice of workout or rollover is referred to as the indirect effect of the policy. Whereas existing models of bank closure policies such as those in Boot and Thakor 1993 and Mailath and Mester 1994 focus entirely on the direct effects of policies, the analysis in this chapter of policies’ indirect effects is new to the literature and shows that indirect effects can be important.

The framework presented for evaluating policy trade-offs is applied in the chapter to analyze three policies that have been either advocated or employed to clean banks’ balance sheets in TEs. The policies considered are debt transfer, whereby the debt is left on firms’ balance sheets but transferred from commercial banks’ balance sheets to a specialized “bad-debt bank”; self-reliance, whereby the debt is left on firms’ and commercial banks’ balance sheets and the banks are required to work out their own problems; and debt cancellation, whereby the debt is cancelled from firms’ and banks’ balance sheets. It is straightforward to extend the framework to analyze additional policies (for example, see Aghion, Bolton, and Fries, this volume).

One finding of the analysis of policy trade-offs is that policies that leave debt from a past regime on firms’ books may be beneficial. Default on this debt triggers a process of information gathering by the bank and valuation of the firm (see Harris and Raviv 1990). If this information allows the bank to better monitor the firm manager and to slow asset dissipation, then the sum of the net worths of the firm and the bank will be higher than it would have been if the debt were canceled and no default had occurred.

This observation implies that debt cancellation in TEs may actually lower bank and firm values. This is a significant result, in part because it runs counter to the intuition invoked by a number of prominent economists advocating debt cancellation in TEs, who have argued that cancellation of the inherited debt from state-owned firms’ and banks’ balance sheets early in the transition would have no net effect on the value of state-owned assets.

A second finding of the analysis of policy trade-offs is that different policies that leave bad debt on firms’ books may differ in their effects on asset values. Policies of self-reliance require that banks restructure or work out their bad debt on their own. Although workout involves resource costs, a policy of self-reliance allows commercial banks that choose workout to make use of “inside” information about the debtor that the commercial bank has acquired through its relationship with the debtor but that a bad-debt bank may not possess. This inside information is useful both for
valuing the debtor and for limiting the degree of asset dissipation. Commercial banks may thus have a higher rate of loan recovery in the course of a workout than would the bad-debt bank. Indeed, the assumption that banks acquire private, inside information about their debtors is common in the financial economics literature (see, for example, Rajan and Petersen 1994 and Gorton and Winton, this volume). Slovin, Sushka, and Polonchek 1993 and James 1991 provide empirical evidence supporting the claim that information is lost when loans are transferred from the original commercial bank to other institutions.

Whereas commercial banks may be better able to recover loans through workouts than a bad-debt bank, a commercial bank in financial distress may have the incentive to roll over rather than work out its loans. In this case the benefits of workout (and the policy of self-reliance) are lost. Loan recovery (and bank value) is lower in such a case than it would have been with a policy of debt transfer, provided that the bad-debt bank to which the loan is transferred is reasonably skilled at undertaking workout. On the other hand, if the bad-debt bank is poorly skilled at workout and if the problem of asset dissipation among firms is not too serious, then debt cancellation may yield higher bank value than debt transfer, since it avoids costly workouts by the bad-debt bank.

In any particular case, the regulator chooses the policy that maximizes the expected value of bank and firm values, where the expectation is taken over the regulator’s prior regarding the level of default on banks’ balance sheets. The policy trade-offs described above imply that no policy will be optimal in all situations. Which policy is optimal in a given economy will depend on the expected levels of default on banks’ balance sheets, the seriousness of the problem of asset dissipation among firms, and the potential skill of a bad-debt bank relative to commercial banks at recovering loans. It should be a straightforward task in practice to evaluate the importance of each of these factors. The trade-offs analyzed here can thus be useful for policymakers in the actual selection of policies.

This chapter is one of only a few studies to examine banks’ actions in response to debt in default as opposed to banks’ ex ante choices of riskiness of investment. Mitchell 1997 analyzes a model in which creditors may choose to be passive in response to default and the appearance of too many troubled banks may force regulators to undertake multiple bank rescues. This model of “too many to fail” complements that in the current chapter by taking account of the potential effects of systemic risks created by a banking crisis on regulatory response to the crisis and on the design of banking regulation. Perotti 1993 studies the incentives of banks to “throw good money after bad” as a result of the debt overhang created by inherited debt at the beginning of transition.
Other research treats bank response to default in developed market economies. O’Hara 1993 points out the possibility of banks’ rolling over their bad loans in response to market value (as opposed to book value) accounting rules. Rajan 1994 analyzes a model of bank behavior in which banks may choose to be passive (lenient, in his terminology) to avoid a negative reputational effect associated with the revelation of loan defaults.

The chapter proceeds as follows. Section 2.2 discusses the links between bank behavior and SBCs. It provides a taxonomy of cases in which SBCs may occur and identifies the cases corresponding to the D-M model and those that arise with the model of creditor passivity. Section 2.3 outlines the merits of the policy of debt cancellation and describes actual policies applied in the banking crises in Hungary, Poland, and the Czech Republic. Section 2.4 presents the model and analyzes trade-offs among the policies of debt cancellation, self-reliance, and debt transfer. Section 2.5 discusses policy implications and concludes the chapter.

2.2 Soft Budget Constraints and Creditor Passivity

Although Kornai proposed the concept of SBCs, there is no consensus on the exact definition of the concept. For example, D-M’s interpretation of SBCs differs from Kornai’s original discussion of government bailout of loss-making firms. Even Kornai’s own interpretation of SBCs has evolved over time. For the purposes of this chapter, I formulate a definition of SBCs that is general enough to encompass both the D-M interpretation and Kornai’s original description.

**Definition 2.1** A firm has a soft budget constraint if (1) it has negative expected net present value but receives financing, or (2) a financial decision of a creditor or the government following default allows the firm to continue in operation although its assets would yield a greater return in an alternative use.

This definition allows for a number of differing cases of SBCs. It is possible to classify these cases according to two criteria: whether the decision to finance a firm is ex ante efficient, and whether a continuation decision is ex post efficient. Ex ante decisions are those made prior to default; ex ante efficiency corresponds to the financing of only firms (or projects) with positive expected net present value. Ex post decisions are those made following default; ex post efficiency refers to the continuation of only those firms whose returns to creditors are higher in continuation than in liquidation.