Matej Marinč · Razvan Vlahu

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Matej Marinč
University of Ljubljana
Faculty of Economics
Department for Money and Finance
Kardeljeva pl. 17
1000 Ljubljana
Slovenia
matej.marinc@ef.uni-lj.si
and
Amsterdam Center for Law & Economics (ACLE)
University of Amsterdam
Roeterstraat 11
1018WB Amsterdam
The Netherlands
m.marinc@uva.nl

Razvan Vlahu
De Nederlandsche Bank
Postbus 98
1000 AB Amsterdam
The Netherlands
r.e.vlahu@dnb.nl

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Preface

This book shows that a special bank bankruptcy regime is desirable for the efficient restructuring and/or liquidation of distressed banks. We first explore in detail the principal features of corporate bankruptcy law. Next, we examine specific characteristics of banks including public confidence, negative externalities of bank failures, opaqueness and the asset substitution problem, and liquidity provision. These features distinguish banks from other corporations and are largely neglected in corporate bankruptcy law. Other implications arise from the pressure of multiple regulators. Finally, we make recommendations for necessary changes in both prudential regulation and reorganization policies, which should allow regulators and banking authorities to better mitigate disruptions in the financial system and minimize the social costs of bank failures. We support our recommendations with a discussion of bank failures from the 2007–2009 financial crisis.

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Chapter 1
Introduction

The 2007–2009 financial crisis has shown that bank failures are a common threat in both developed and emerging economies. Hundreds of lenders have failed since the onset of the crisis. One lesson from the recent financial turmoil is the need for more effective systemic regulation. In addition to improvements in the current prudential and regulatory measures that should allow regulators to identify risks at an early stage and prevent them from threatening the entire financial system, there is an increased demand at the national and international level for a specific bank bankruptcy law. This special regime for dealing with troubled banks should create appropriate tools for prompt intervention in the case of bank distress that would allow for efficient reorganization and closure of these institutions in order to limit their impact and protect the safety of the system. Since the onset of the financial crisis, it has become evident that the legal frameworks for resolving troubled banks vary widely across countries. This lack of uniformity between resolution regimes (and, in many instances, the total absence of such regimes) has proved inadequate when dealing with large distressed specialized and/or universal financial institutions, particularly when they had foreign branches and subsidiaries. The immediate consequence has been a disorderly intervention by financial authorities in many countries, which required immense liquidity support for financial institutions and asset guarantees worth several trillion dollars in total.

The objective of this book is twofold. First, it provides a literature review on corporate bankruptcy law, characteristics of banks, systemic crisis, and bank bankruptcy regimes. Second, the book gives recommendations for optimal design of a bank bankruptcy law and emphasizes the differences between the existing corporate bankruptcy law and a special bank bankruptcy regime. The first step in discussing optimal bank restructuring policies and cross-country bank insolvency regimes is to focus on general corporate bankruptcy law. We show that, even though the objectives and economic principles driving the management of corporate distress are well defined and an optimal design for reorganizing and liquidating commercial companies is in place, corporate bankruptcy law largely neglects some distinctive characteristic of banks. Subsequently, we review those features that distinguish banks from other corporations. We acknowledge the special role played

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by banks in a country's economy and describe their main functions: (1) liquidity and payment services provision, (2) asset substitution, and (3) screening and monitoring of borrowers. Consequently, we explore how the distinctive features of banks create the need for a special bank resolution regime.

Public confidence is crucial for the banking sector. Once trust in the financial sector is lost, banks can be subject to runs, which affect not only an individual bank but may lead to panics and spread through the entire banking sector with repercussions for the economy at large. Negative spillover effects from a bank failure to other banks in the system spread to the real economy through, for example, credit rationing for small enterprises or disruption of the payment system, and can even create a currency crisis and sovereign defaults. The enormous social costs call for regulatory intervention. In particular, there is a strong demand for a special resolution regime that is effective in restoring public confidence and stabilizing the system.

As evidence from the 2007–2009 financial crisis and from previous banking crises has shown, the authorities have usually chosen between two actions in the absence of adequate resolution regimes for dealing with insolvent financial institutions. They have either applied a general insolvency procedure (when dealing with individual bank failures), or they have recapitalized troubled banks by using public funds (when the failing banks were considered to have a systemic impact). Both actions proved to be very costly on the one hand, and to have undesired collateral effects on the other hand.

A general insolvency regime is ill-suited to deal with bank insolvency because it is more concerned with value maximization for bank claimants, thus ignoring the systemic stability of the banking system. This can have dire consequences for the financial system at large, as Lehman Brothers' collapse in 2008 has shown.

Relying purely on public funds is not a proper panacea for failing banks either. Generous public support for failing banks can create an ex-ante moral hazard and can give banks incentives to take more risk when the financial system functions normally. When offered unconditionally (e.g., without any restrictions on management compensation schemes or replacement of existing management, or without limitations on bank activities), liquidity injections from banking authorities or asset guarantees have the perverse effect of subsidizing creditors at taxpayers' expense, with a huge cost to the government budget,[1] while eliminating market discipline and allowing illiquid (and even insolvent) banks to compete with well-capitalized and well-managed banks. We argue that the special resolution regime for banks should allow banking authorities to wind down systematically important players in an orderly way. Different resolution tools should be available to deal with both an individual bank failure and, more importantly, a systemic failure.

The 2007–2009 financial crisis has refuted the naive thinking that prudential regulation of banks may prevent bank failures and negative externalities associated

[1] See the AIG (American International Group) bailout by U.S. banking authorities in September 2008.

with them. Some of the regulatory rules implemented by banking supervisors (i.e., deposit insurance and implicit government guarantees) may even exacerbate banks' risk-taking incentives and increase the likelihood of distress. We emphasize that an optimal bank resolution regime should complement prudential regulation and supervision. More market discipline is desirable for reducing banks' incentives for excessive risk-taking. This can be realized both ex-ante by minimizing the coverage of deposit insurance and ex-post by imposing losses on uninsured creditors when resolving troubled banks.

Finally, banks' activities are often supervised by several regulators with different individual objectives. Coordination among them is difficult, particularly in times of distress and in the presence of political pressure. The coordination failure between domestic regulators can be mitigated by imposing information-sharing agreements and supervisory cooperation during the pre-insolvency phase, as well as by creating clear triggers for the bank insolvency regime and shared responsibilities during the resolution process. The resolution process nevertheless becomes more complicated when failure threatens a large cross-border bank with subsidiaries spread across different national jurisdictions. National authorities would have a strong incentive to protect domestic creditors, and various insolvency regimes may not be synchronized across countries. Hence, optimal bankruptcy law needs to consider the cross-border implications of bank failure under the current fragmented legal framework.

We show that these special features of banks are typically not taken into account in corporate bankruptcy, and we argue that this makes corporate bankruptcy law ill-suited for resolving bank bankruptcies. We also make policy recommendations with respect to the special rules needed for resolving troubled banks. Our recommendations are centered on four main themes: (1) ex-ante optimal regulation, (2) timely intervention by the regulator, (3) ex-post optimal resolution of distressed banks, and (4) the need for international coordination to create a uniform resolution regime for banks in distress.

While establishing a specific resolution regime for banks, one should first address those regulatory features that may increase the likelihood of distress and ex-ante moral hazard. One way to ensure the mitigation of these problems is the introduction of procyclical capital ratios. Banks should be required to hold more capital in good times. This limits the share of risky assets in the bank balance sheet during upturns and reduces the likelihood of distress in downturns, and the accumulated cushion allows banks to run normal activities during recessions, when access to funding is more difficult. Another way is to increase the importance of market discipline. Finally, transparent quantitative ratios should be used when estimating the risk of bank distress, and the reliance on credit-rating agencies' input should be reduced and their activities regulated.

Timely intervention by the regulator is crucial for mitigating the negative effects of bank bankruptcy. A pre-insolvency intervention can address financial weaknesses at an early stage. Intervention should consist of a set of recommendations to correct the problem identified by the regulator, a request for raising fresh capital, and restrictions of activities. To ensure the success of pre-insolvency intervention, it is critical to set a clear trigger for this intervention in a transparent way and above the insolvency and (long-term) illiquidity. If the bank fails to take corrective actions, the regulator should impose more rigorous sanctions. Financial authorities should be able to take rapid actions, without the approval of a bankruptcy court, or the consent of shareholders or creditors.

The objectives of an ex-post resolution for distressed banks differ substantially from those of corporate bankruptcy. Whereas containing the negative externalities of bank failure is the main concern for bank bankruptcy regimes, in corporate bankruptcy the main objective is to maximize the total value of the firm. An optimal resolution mechanism should allow for effective tools to deal with failing banks. This set of tools should include (1) selling assets (entirely to a private-sector purchaser or in parts), (2) partial or total transfer of assets and liabilities to a new entity (i.e., a good bank–bad bank scheme or a bridge bank tool), (3) temporary public control, and (4) capital injection.

An international agreement for the resolution of multinational (i.e., cross-border) banks is also necessary. We acknowledge that the establishment of such an agreement is challenging and needs adequate time to be implemented due to various particularities of bank bankruptcy regimes across countries. Nevertheless, once accomplished it will assure the convergence of national insolvency regimes and it will eliminate the disputes between domestic regulators regarding national interest and sovereignty. The optimal agreement should provide equal treatment to the creditors of a multinational bank regardless of their location and should contain an effective mechanism for sharing losses, supervisory duties, and responsibilities between national authorities during the resolution process.

As set out in detail above, an effective resolution process for banks, given their distinct features, is needed. It should allow regulators and banking authorities to quickly mitigate disruptions in the financial system and to minimize the social costs associated with bank failures. The specific bank insolvency procedure should consider other objectives than maximization of value, with the most important being the containment of systemic risk, the promotion of market discipline, and the mitigation of moral hazard.

This book is organized as follows. In Chapter 2, we present the principal elements of corporate bankruptcy law. In Chapter 3 we discuss the main characteristics of banks that differentiate them from non-financial corporations, and we explain what these characteristics entail for the bankruptcy process involving banks. Chapter 4 reviews the theoretical and empirical literature on systemic crises, and Chapter 5 explores general issues related with the optimal bank restructuring policies. Chapter 6 presents the legal frameworks and resolution regimes for bank insolvency in various countries. Chapter 7 explores recommendations for the necessary changes in both prudential regulation and reorganization and closure policies and presents recommendations alongside real banking crisis cases from the 2007–2009 financial crisis. Finally, Chapter 8 contains the book's conclusions.

Chapter 2
General Issues in Bankruptcy Law

The primary aim of this book is to understand bank bankruptcy law and to make suggestions on how to improve its design. In order to be able to do this, one first needs to understand the principles behind the general bankruptcy law.[1]

We first synthesize various rationales for the existence of general bankruptcy law given in the economic literature. Bankruptcy law needs to satisfy divergent objectives. It needs to prevent coordination problems among creditors. It also needs to promote efficiency in the relationship between a debtor and creditor in the ex-ante sense, when the debtor is solvent, and in the ex-post sense, when the debtor is already insolvent.[2]

2.1 Coordination Problems

The need for bankruptcy law is most evident in the case of a corporation borrowing from several creditors. Without bankruptcy law in place, *coordination problems* between creditors may trigger bankruptcy prematurely (Jackson 1986). Even upon a slight perceived problem with a corporation, each creditor may try to be on the safe side and sue the corporation first in order to be repaid before other creditors. Creditors would then race to collect their debt in a behavior similar to a run on a bank. Secured creditors could cash in the collateral. Short-term creditors could decide not to roll over their loans. This would force the premature liquidation of a corporation that may be worth more as a going concern.

[1] *Encyclopedia Britannica* defines bankruptcy as "Status of a debtor who has been declared by judicial process to be unable to pay his or her debts." However, the question is why such a status of bankruptcy is needed in the first place.

[2] We focus here on corporate bankruptcy law. See White (2005) for a comparison of corporate and personal bankruptcy law.

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Bankruptcy law aims to mitigate this coordination problem. A common mechanism in most bankruptcy laws is to impose a legal stay (also called an automatic stay) in which debt repayment in bankruptcy is frozen. Creditors with equal debt contracts are given equal standing in bankruptcy. Early collection of debt no longer puts them in front of other creditors. This mitigates the race to collect debts. It gives the corporation close to insolvency more breathing space and can prevent its premature liquidation (Hotchkiss et al. 2008; von Thadden et al. 2010).

Although bankruptcy aims to mitigate coordination problems due to multiple creditors, the question is why corporations borrow from multiple creditors in the first place. Financing from multiple creditors and the threat of early collection is beneficial because it exerts additional pressure on the debtor. A debtor in a good financial state, knowing that renegotiation in an adverse situation is difficult, restrains from excessive risk-taking, exerts sufficient effort, and has no incentives to strategically default on his debt repayment (Bolton and Scharfstein 1996). A multitude of creditors also have lower incentives to engage in rent-seeking activities (Bris and Welch 2005).

However, having multiple creditors may create inefficiencies. In particular, financing from multiple creditors can lead to duplicated monitoring of creditors (Winton 1995). Creditors will free ride on monitoring the debtor (Bris and Welch 2005). Difficult renegotiation between multiple creditors may induce excessive liquidation even when continuation is optimal and when default is beyond the debtor's control (Bolton and Scharfstein 1996). It is the aim of bankruptcy law to allow for the benefits and at the same time mitigate the drawbacks of having multiple creditors.

However, this is not an easy task. Bankruptcy law only partially mitigates coordination problems between creditors. Creditors have means to put themselves before other creditors despite bankruptcy law. One possibility is to engage in leapfrogging. That is, a creditor may improve seniority and quality of the collateral in renegotiation of his loan with a debtor. For example, the creditor can condition rolling over his loan on improvement of his seniority and collateral, thereby increasing his payout in bankruptcy.[3]

The argument against bankruptcy law may also be that a debtor and his creditors can renegotiate debt contracts on their own through voluntary debt restructuring, for example.[4] Debt restructuring can be beneficial for debtors *and* creditors if a corporation with a viable business has only temporary financial problems but profitable long-term prospects. However, coordination problems may hinder negotiation between a debtor and multiple creditors. A hold-out problem can occur, in

[3] The existing creditors may also try to renew their loan after the bankruptcy has already started because in most bankruptcy laws this could automatically give them a super-senior status against all remaining creditors.

[4] Institutional lenders can also coordinate on their own in order to prevent coordination problems. See Brunner and Krahnen (2008) for the case of bank pool formation in distressed lending in Germany.

which a small creditor could oppose restructuring of debt and demand overcompensation (Gertner and Scharfstein 1991). Because voluntary debt restructuring needs the unanimous consent of creditors, even a small creditor may have excessive power in the negotiation process. Bankruptcy law commonly mitigates the hold-out problem because the corporation in bankruptcy needs less than unanimous support of the creditors for restructuring. Bankruptcy proceedings are usually designed to facilitate negotiations between shareholders and creditors. An important question of optimal design of bankruptcy law is how to set a trigger for bankruptcy.

Optimal bankruptcy trigger: Bankruptcy law aims at setting the optimal timing of *when* the corporation would enter bankruptcy and, by doing so, mitigates coordination problems between creditors. Coordination problems act as countervailing forces in pushing for bankruptcy. On the one hand, running to collect debt triggers bankruptcy prematurely. On the other hand, the hold-out problem hinders voluntary negotiation between the corporation and multiple creditors, and may postpone the start of bankruptcy proceedings. In this respect, an important ingredient of bankruptcy law is who can trigger bankruptcy and under what conditions.

To mitigate the race to collect debt, creditors should have the power to trigger bankruptcy. Each creditor can then prevent early collection by other creditors (e.g., seizure of collateral by secured creditors) that could lead to premature liquidation. If the hold-out problem is an issue, a debtor should also have the power to trigger bankruptcy. In this case, a debtor could, by entering bankruptcy on his own, override a small creditor that would oppose restructuring. However, the conditions to exercise a trigger need to be precisely stated, otherwise the debtor would strategically enter bankruptcy to rid himself of his debt. Usually the firm needs to be illiquid (i.e., unable to repay debts as they fall due), but in several bankruptcy laws in addition to illiquidity the corporation needs to be insolvent as well (i.e., the value of liabilities needs to surpass the value of assets).[5]

Von Thadden et al. (2010) explicitly model the differences between debt collection and bankruptcy. Each creditor's right to liquidate assets will protect him against opportunistic behavior by the debtor. In contrast, bankruptcy law through an automatic stay limits the individual rights to liquidate assets. In this setting, giving the right to trigger bankruptcy to creditors is not always optimal because creditors would want to foreclose individually if this offers them higher value than in bankruptcy. In such a case, the debtor should have the power to trigger bankruptcy to defend against an excessive foreclosure (see also Baird 1991).

Going back to the need for bankruptcy law, cannot creditors and debtors mitigate potential problems on their own by writing detailed contracts that would appropriately contain coordination problems? The incomplete contract theory recognizes that writing complete contracts (i.e., contracts that are contingent on all future states of nature) is simply too difficult a task.[6] In this view, the design of bankruptcy law

[5] An example is the UK corporate bankruptcy law.

[6] In Bolton and Scharfstein (1990) and Hart and Moore (1994) a court cannot precisely verify which state of nature has occurred; hence, a contract contingent on the states of nature has no legal value because the court cannot determine the contingent obligations of creditors and debtors.

should mitigate inefficiencies that may arise in individual contracting between a debtor and his creditors.

Importantly, bankruptcy law should not create new inefficiencies. Debtor and creditors could adjust debt contracts and circumvent unwanted features of bankruptcy law only to a certain extent. Davydenko and Franks (2008) empirically compare different bankruptcy laws and confirm that creditors adjust debt contracts to the special features of bankruptcy law, but can only partially mitigate the suboptimal features of bankruptcy law.[7]

Now we analyze how bankruptcy law affects incentives and the behavior of a debtor and his creditors.

2.2 Ex-Ante Efficiency: Incentives in Bankruptcy Law

The main objective of bankruptcy law in the ex-ante sense is to elicit optimal incentives and behavior from debtors and their creditors before bankruptcy occurs. Bankruptcy law should refine the features of debt contracts in bankruptcy to (1) evoke optimal control of debtors by creditors, (2) give debtors incentives to undertake optimal risk and supply sufficient effort, and (3) affect optimal timing of bankruptcy.

Several theoretical contributions specify the benefits of a debt contract for efficient contracting between a debtor and his creditor. In a standard debt contract, the creditor is entitled to a fixed payment and the debtor to the residual. However, if the creditor cannot be repaid, the bankruptcy occurs with the debtor receiving zero and all the proceeds going to the creditor.

In a costly state verification framework, in which creditors can only audit debtors' returns at a cost, Gale and Hellwig (1985) and Townsend (1979) show that an efficient contract that minimizes auditing costs contains the main features of a standard debt contract. If a debtor repays the borrowed funds and the interest, the audit is not necessary and auditing costs are not incurred. However, if a debtor defaults on loan repayment, the creditor needs to audit the debtor and seize the debtor's remaining funds.

In the free cash-flow theory of Jensen (1986), debt serves to pump cash out of the firm and out of the reach of a manager that would spend it for his own perks, instead of using it to the best interest of shareholders. In the asymmetric information framework of Myers (1984), debt is less informationally sensitive than equity and therefore easier and cheaper to raise. In the incomplete contract approach, Hart and Moore (1998) show that debt contracts are optimal because they allow debtors to reinvest the most in good states of the world when this is valuable (e.g., when the

[7] Davydenko and Franks (2008) show that French banks require more collateral to respond to a creditor-unfriendly bankruptcy code. However, they show that bank recovery rates remain remarkably different across countries with different bankruptcy laws.