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Bankruptcy laws and debt renegotiation

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Abstract

This paper analyzes the effect of the toughness of bankruptcy law on the number of liquidations in a simple model of borrowing and lending with asymmetric information, where the creditor cannot credibly commit to liquidate the firm if the default occurs. In our setting we consider a bankruptcy law to be a one-dimensional variable that influences creditor's expectation value of collateral. We find that there is an interval of the bankruptcy law, where the number of liquidations decreases in the toughness of the bankruptcy law. We also find that if the liquidation costs are high, softer bankruptcy law is preferred.

JEL classification: G33; K22

Keywords: Bankruptcy law; Debt renegotiation; Soft budget constraint

1. Introduction

Bankruptcy laws are recognized as fundamental institutions necessary for growth of credit markets and entrepreneurship (Aghion et al., 1992). They define the rules and procedures under which a creditor can take possession of entrepreneur's assets and hence directly influence the creditor's incentives to liquidate an insolvent company. Ideally, a bankruptcy law should protect creditors, impose financial discipline on managers, induce restructuring, and free assets from inefficient use (Lambert-Mogiliansky et al., 2000). However, there is no clear agreement on the optimal bankruptcy law design. Moreover, bankruptcy laws differ across countries substantially along many dimensions such as allocation of control rights, priority rules or the role of judges and courts. Not surprisingly, it is unlikely that a single design of these bankruptcy laws fits all

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possible situations[1] and different bankruptcy law designs have different effects on the number of liquidations in the country. Claessens and Klapper (2005) observe different effects of the bankruptcy law on the number of liquidations with respect to different quality of law enforcement.

Given the role of the bankruptcy law to protect creditors, we consider a bankruptcy law to be a one-dimensional variable that influences creditor's expected value of assets that can be recovered. High values correspond to a tough bankruptcy law giving the creditor substantial rights, while low values represent low protection of creditor's rights (Biais and Mariotti, 2003). We analyze the effect of the bankruptcy law on the number of liquidations in a simple model of borrowing and lending with asymmetric information, where due to the possibility of renegotiation the creditor cannot credibly commit to liquidate the debtor if the default occurs. Our model is based on Bester (1994) and we modify the renegotiation stage according to the soft budget constraint literature (Berglöf and Roland, 1997). The environment is designed as follows: there is one entrepreneur who needs to raise capital to finance a risky project. The project is financed by a creditor, who cannot observe whether the project was successful or not. The bankruptcy law allows the creditor to liquidate the debtor's firm (take possession of debtor's assets) in case the entrepreneur defaults and does not pay back the debt. Without the possibility of liquidation, the entrepreneur does not have any incentive to pay back the debt. The model captures the principal-agent problem between the creditor and the debtor, where both parties have symmetric information about the ex-ante profitability of the project, but the absence of state verification creates the informational asymmetry at the time the project is realized. Due to the fact that the firm can make a renegotiation offer, the creditor cannot commit to liquidate an insolvent firm. If the creditor accepts the offer, the debtor avoids the liquidation and this option soften the debtor's hard budget constraint created by the bankruptcy law, as the entrepreneur knows that the unsuccessful project may not be liquidated.

We focus on studying the bankruptcy law, considering ex-ante and ex-post effects. The analysis of bankruptcy law often focuses on the ex-post effects, i.e. how the bankruptcy law influences the value of an insolvent company. However, in our model we consider ex-ante effects, i.e. the effects on the behavior of the agents before the bankruptcy occurs.[2]

There is a growing literature on the optimal bankruptcy law. Our paper is related to this literature in several ways. Berkovitch et al. (1998) consider the effects of bankruptcy law on ex ante decision-making taking into account debt contract renegotiating. They derive the optimal bankruptcy law that implements ex-ante efficient solution. They present two restrictions on the bargaining game between the claimants that the bankruptcy court can use to prevent strategic

[1] Hart (2000) notes that: It is unlikely that "one size fits all"... Which procedure a country chooses or should choose may then depend on the other factors, e.g. the country's institutional structure or legal tradition. One can also imagine a country choosing a menu of procedures and allowing firms to select among them. It is important to recognize that bankruptcy reform should not be seen in isolation: it may be necessary to combine it with legal and other reforms, e.g. the training of judges, improvements in corporate governance and the strengthening of investors rights, and possibly even changes in the international financial system.

[2] The ex-post efficiency requires that the bankruptcy law maximizes the value of the insolvent firm for all stakeholder. If we consider the tough bankruptcy law giving substantial right to creditors, such a law does not necessarily maximize the social welfare. Berkovitch and Israel (1999) argue that the managers in the firm might have better information and actually cancelling a part of the debt and keeping the management in power might be socially optimal. Biais and Mariotti (2003) mentions that the creditor might not internalize all the effect of liquidation, e.g. the unemployment costs that arise due to the firm liquidation. On other hand analyzing the problem from the ex-ante point of view, soft bankruptcy laws influence the management actions and this make the contracting of debt financing in principal-agent setting even more severe. The managers profit from continuation of the project as they can extract the residual cash flow and private benefits. The tough bankruptcy law that gives the creditor substantial rights makes the liquidation more profitable for creditor thus makes the continuation less likely.