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## BANKRUPTCY PROCEEDINGS

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### Abstract

Bankruptcy has become a crucial legal institution in market economies all over the world. We try to explain some aspects of bankruptcy law and discover that economic theory provides explanation for many, but not all, attributes of bankruptcy law. Both legal and economic scholars have been engaged in a long series of discussions on the meaning of these attributes.

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### 1. Introduction

The word ‘bankruptcy’ originates from the Italian word ‘banca rotta’, an old expression that indicated that the bench of a trader was broken when he was not able to pay his creditors. For a long time bankruptcy has been an important legal institution in market economies. It enables the market system to dispose of inefficient firms and reallocate the assets of insolvent debtors. Also, the possibility of becoming bankrupt has been considered to be a positive incentive for behaving in an efficient way, both for individual traders and company managers.

Bankruptcy law has traditionally been researched by lawyers, not economists. But in the last two decades many studies on the economics of bankruptcy proceedings have been published. Behind the technicalities of the legal regulation of bankruptcy lies a clear economic rationality. At the origin of a bankruptcy proceeding there is a financial crisis of an individual or company. Economists analyze bankruptcy law as the legal instrument to achieve the best possible outcome, which implies a minimization of social costs. Traditional legal theory, however, usually focuses its analysis on the

fairness and equity aspects of bankruptcy. From a law and economics perspective the efficiency of the bankruptcy procedures are the core of the analysis.

Bankruptcy law, as it exists in most countries, can also be understood as a device to increase the efficiency of commercial relationships. In any contract the parties could introduce clauses regulating what should happen in case of default and how the assets of the bankrupt company should be managed. However, the transaction costs of writing and implementing such contracts would be very high. And, since a firm's balance sheet is something dynamic that changes every day, creditors would be forced to renegotiate their contracts every time new creditors make claims against the debtor's estate or every time the debtor acquires new assets or pays his previous debts. Therefore, it may be considered efficient to have standard procedures regulating the possible outcomes of a firm's default (see Aghion, Hart and Moore, 1992).

This chapter studies the efficiency of the most relevant aspects of bankruptcy law. Although most bankruptcy codes share many characteristics in their way of dealing with bankruptcy proceedings, each legal system has its own peculiarities and no international economic organization has yet been able to draft an international bankruptcy code. Therefore, this chapter will not focus on any specific national bankruptcy law, but rather will discuss the most relevant general issues while occasionally commenting on some particular national institutions. Also, our main attention will go to business bankruptcy. The issue of personal bankruptcy is touched sporadically, for example in the discussion on discharge in Section 3 (for more on personal bankruptcy, see Apilado, Dauton and Smith, 1978; Shiers and Williamson, 1987; Warren, Sullivan and Westbrook, 1988, 1989, 1994a).

The second section of this chapter presents bankruptcy proceedings as a collective action of creditors to recover their credits in the most efficient way. In Sections 3 and 4 the main objectives of bankruptcy and the most relevant costs of a liquidation proceeding are discussed. Sections 5, 6, 7 and 8 deal with some of the economic agents involved in bankruptcy proceedings: the debtor, the creditors and employees. A specific section is devoted to the role of employees as a special type of creditor. The liquidation-reorganization dilemma is discussed in Sections 9 and 10. The final section comments on the possible alternatives to the existing bankruptcy proceedings. The problems of secured credits and bankruptcy priority rights will be taken into account occasionally; they are treated elsewhere in Volume II (Chapter 1500, Security Interests, Creditors' Priorities and Bankruptcy) and in Volume III (Chapter 5660, Regulation of the Securities Market).

## **2. The Collective Action of Creditors**

The meeting of creditors, in most bankruptcy legislation a prerequisite before adopting any final decision concerning the bankrupt firm, may be a good example of the various efficiency aspects in bankruptcy procedure. From a law and economics perspective this compulsory meeting can be understood as a useful means to reduce transaction costs in collective action. Negotiations between various creditors are often difficult and expensive. Although an agreement is certainly not guaranteed in this meeting, procedure costs may be substantially reduced.

In more general terms, bankruptcy law can be defined as a set of rules that institutionalizes collective action in debt collection (Jackson, 1986a). When collecting their credits out of a bankruptcy procedure creditors play a non-cooperative game, in which each individual maximizing strategy produces an inefficient outcome. Social costs will increase when each creditor tries to get the highest possible percentage of his credit. These individual strategies cannot raise the value of the debtor's estate. On the contrary, they reduce the net value of the assets to be distributed among the creditors will be reduced. However, the principle of collective action seems to conflict with another generally accepted principle of bankruptcy law, the existence of secured credit, and the principle according to which bankruptcy law should not change the previous structure of the debtor's liabilities.

An important characteristic of some secured credits - mortgages, for instance - is that creditors can sell off part of the company's assets, aside from the normal bankruptcy proceedings, in order to collect their credits beforehand. This possibility not only breaks the principle of collective action - such secured creditors are usually not interested in what may happen to other creditors - but may also reduce the net value of the bankrupt company because of piecemeal liquidation.

The possible conflict of these two principles should be one of the basic problems to be discussed by any economic analysis of bankruptcy law. Most lawyers and economists acknowledge the existence of such a conflict. Bankruptcy law should offer a solution. In some cases collaterals can be subtracted from the assets to be distributed and secured creditors denied the vote in the bankruptcy proceedings. In other cases bankruptcy law can provide the receiver or the administrator the option of paying secured credits by selling assets if the goods given as collateral are considered to be essential for an efficient reorganization or for selling the company as a going concern. The existence of secured credits does not mean, therefore, that the principle of collective action has to be abandoned.

### 3. The Objectives of Bankruptcy Law

The major objective of bankruptcy law is supposed to be the (*ex post*) maximization of the proceeds. Assuming that more is preferred to less, economic theory holds that bankruptcy law should maximize the total value of the firm *ex post*.

Although an efficient allocation of the debtor's assets is usually its main objective, bankruptcy law may have other purposes. One objective may be to impose costs on individuals and firm managers, in order to provide them (*ex ante*) with adequate incentives to perform well (Easterbrook, 1990). Historically these costs were imposed by criminal sanctions to the bankruptcy debtor. Bankrupts went to prison or, in cases of fraudulent bankruptcies, even to the galleys of the scaffold. Contemporary scholars justified these stern measures against fraudulent bankrupts in terms of a rational crime theory. According to Becker (1968) the expected cost of crime has two elements for the criminal: the sanction and the probability of this sanction being imposed. If criminals are risk neutral, a low probability of conviction should be matched to a severe sanction. Adam Smith argued in favor of the highest sanction - the death penalty - for fraudulent bankrupts because, as he puts it, 'there is no fraud which is more easily committed without being discovered' (see Cabrillo, 1986). Although imprisonment for insolvency disappeared in the nineteenth century, most criminal codes still attach penalties of imprisonment to certain frauds committed in bankruptcy procedures.

Note that these two objectives may conflict with each other (Berkovitch et al., 1993). If only the *ex ante* objective mattered, there would be nothing wrong with closing down bankrupt firms. From an *ex post* viewpoint this might be a very bad idea. Even well-managed firms sometimes go bankrupt, due to uncertainty or external factors. Bankruptcy law should be designed to strike the right balance between both objectives (Aghion, Hart and Moore, 1992).

In bankruptcy procedures creditors try to capture the highest possible percentage of the value of their credit. Without the rules of bankruptcy law, creditors would adopt non-cooperative strategies which generate an outcome resembling that under a prisoner's dilemma (on creditor misbehavior and secured credit as a sensible response to the common pool problem, see Picker, 1992). In each case, the dominant strategy, directed to raise the probability of recovering their credits, is non-cooperative. Creditors will waste resources trying to be the first to seize their collateral or to obtain a judgement against the debtor (Jackson, 1986a). This race may lead to premature liquidation of the firm's assets, which may cause a loss of value for all creditors if the firm is worth more as a whole than as a collection of

pieces (the insight of the 'collective action' problem in bankruptcy was raised by Jackson, 1982). Therefore, the virtue of bankruptcy law is that it initiates a collective legal procedure by which all claims against the firm are settled in an orderly fashion (Baird and Jackson, 1985; Ang and Chua, 1980; Bulow and Shoven, 1978; White, 1980). However, critics argue that the common pool argument is overstated because in practice debtors react to threats of loss and dissipate assets prior to bankruptcy, leaving nothing to divide (Bowers, 1990, for empirical support, see LoPucki and Whitford, 1993, and Gilson, 1996). Others have argued that any *ex-post* collective action problem can be eliminated by the use of *ex-ante* optimal credit contracts (Adler, 1993), security devices (Picker, 1992) or by relying on the existing nonbankruptcy default rules of secured credit (Bowers, 1991).

Another objective of bankruptcy law may be what is generally referred to as 'discharge of the debtor'. Discharge, the doctrine that frees the debtor's future income from the chain of previous debt, is a characteristic institution of British and American bankruptcy law, but is rarely encountered in continental law. Discharge was first introduced in England in the Statute of 1906, passed to protect honest bankrupts from the greed of their creditors and in particular to keep them from rotting away in jail. With the certificate of discharge the bankrupt was freed from his debts and allowed to keep a part of his estate to help him make a fresh start (Hoppit, 1987, pp. 19-24). Later the discharge of the debtor became an important chapter of American bankruptcy law and received a significant reinforcement under the Bankruptcy Reform Act of 1978.

Discharge may be understood not only as a measure to help the honest debtor, but also as an efficient incentive to avoid asset concealment. Search and transaction costs may be reduced and the efficiency of the procedure is increased.

Jackson (1985) uses analytics from psychology and economics to find support of the non waivable right of discharge in several of the characteristics of human behavior. Another justification would be that it eliminates the incentive structure that causes the debtor to become less productive once a large part of his wages start flowing to creditors. Discharge has also been approached as a supplement to the welfare system. The non waivable right to discharge discourages people to use assets that are essential to the minimal wellbeing. By prohibiting the use of welfare payments as collaterals, discharge law renders 'necessary assets' valueless (Jackson, 1986b; Posner, 1995, 1997). Also, it discourages high-risk behavior that would be induced by welfare. The right of discharge forces creditors to raise interest rates, because of the weaker position the creditors find themselves in, which discourages some debtors to engage in risky behavior that would be externalized by the taxpayer (Jackson, 1986b).

Some effects of discharge of the debtor remain controversial. Discharge seems to discriminate in favor of debtors with a relatively high stock of human capital and against bankrupts with a relatively high stock of physical capital. Physical assets - and their future returns - are appropriated by creditors. But the future returns of human capital - a substantial part of the debtor's wages - remain the bankrupt's property.

Distribution of the costs of discharge is also controversial. Debtors, like creditors, want to minimize costs. The right to discharge increases the cost of credit. The fact that creditors will be prevented from collecting some of their debts will be reflected in higher interest rates. Higher risks for creditors will raise the interest rates (on the adverse selection and moral hazard effects of higher interest rates, see Stiglitz and Weiss, 1981). Creditors do not possess the relevant information in order to discriminate between low-risk and high-risk debtors. Therefore, they will pass higher costs to all consumers. Part of these higher costs, caused by high-risk debtors, will therefore be passed on to low-risk, more reliable debtors. Although favored by those who already have a lot of debt (*ex post*), the non waivable right of discharge will (*ex ante*) be rejected by the vast majority of people (Dye, 1986).

There is some debate among bankruptcy scholars whether a bankruptcy procedure should preserve the absolute priority of claims (Buckley, 1986; Adler, 1993; Triantis, 1992). Under the absolute priority rule each priority class is paid in full, to the extent that sufficient assets are available, before the next class is paid. General creditors, without security interests or priority status, receive payment if any assets are left over (for efficiency justifications of the instrument of security interests, see Scott, 1977; Jackson and Kronman, 1979; White, 1980, 1989; Buckley, 1986; Triantis, 1992, 1994; Adler, 1993; dissenting, Schwartz, 1981; LoPucki, 1994; see Chapter 1500 for an overview of the debate on the 'secured credit puzzle'). If the structure of debt priority, as agreed upon by parties, could be violated within bankruptcy, people will be reluctant to invest (Meckling, 1977). Secured creditors, for example, paid for their specific security entitlement by accepting a lower rate of return and should, therefore, be enabled to retain the benefits of their original bargain by receiving an equivalent value for their collateral in bankruptcy (Scott, 1986). Critics argue that the absolute priority rule will induce management, acting on the behalf of shareholders, to engage in risky behavior when a company is close to bankruptcy (on entrenchment and investment incentives, see Chapter 1500, section 28). If things go badly creditors bear the losses. If the firm does well equity holders will reap the profits.

Another objective of bankruptcy law is the redistribution among groups of claimants. Redistribution is promoted through the dynamics of a reorganization procedure (Eisenberg, 1989, p. 133; on the redistributive nature of the US bankruptcy code, see, for instance, Bowers, 1991). The

'objective' rationale would be that by preserving the going concern value of the company reorganization may enable creditors to capture a higher value than would be possible under liquidation (see Clark, 1981). Although Chapter 11 of the American Bankruptcy law is the best known rehabilitation procedure, most countries have already introduced reorganization procedures in their bankruptcy laws. The positive and negative aspects of reorganization have been widely discussed. Sections 9 and 10 of this chapter will deal with the reorganization-liquidation dilemma.

Finally, according to Bufford (1994), bankruptcy serves an important role as a safety net for economies. It prevents secured creditors from collectively initiating a downward spiral of foreclosures and bank failures which would result in worldwide economic depression, such as in 1933. From this viewpoint, bankruptcy protects imperfect markets and weak economies by allowing debtors to wait out an economic downturn.

#### **4. Reallocation of Assets through Bankruptcy: The Costs of a Liquidation Procedure**

An efficient legal procedure should minimize social costs. There are three main costs to a liquidation procedure. First of all, the social value of specific - both physical and human - capital assets is reduced when the new allocation of productive resources takes place. Secondly, productive resources remain unemployed during the legal proceedings. Thirdly, a liquidation procedure involves certain litigation expenditures.

The bankrupt firm can be sold piecemeal or as a going concern. In piecemeal liquidations, assets are sold in the market and employees move from a bankrupt firm to a more efficient one. This increases social productivity of both physical and human capital. However, part of the value of these capital goods and of employees' human capital is lost in such a procedure. This loss of value is mainly due to the fact that the productivity of capital invested in a given asset, integrated within a production process, is reduced when this asset is sold piecemeal, as the market value of used capital goods does not reflect the discounted value of the asset's expected yields in its original production process. Also, there can be a loss of human capital inasmuch as there is a loss of specific knowledge regarding the handling of specific assets under certain conditions. This loss of value of both physical and human capital is used as an argument in favor of reorganization and against liquidation.

These costs are considerably lower when the bankrupt company is sold as a going concern. In a world of perfect information and perfect capital markets this would then be the best liquidation procedure for any firm

(Baird, 1986). Any individual or company interested in the insolvent firm would be able to raise all the necessary capital - even if the bankrupt firm is a big public corporation - to buy it. However, in a world of information costs and imperfect capital markets, it may prove very difficult to find partners or banks willing to offer enough capital to buy the firm - especially if it is a big corporation - and piecemeal liquidation will be the outcome of many bankruptcy proceedings of companies that would have survived under new ownership and management.

The second cost is created by unemployment of productive resources. If bankruptcy implies that the firm is closed while its assets are being sold, assets will be left idle during the proceedings. The longer the duration of the procedure, the higher the social costs associated to it (on the administrative costs of corporate bankruptcy, Ang, Chua and McConnell, 1982). There is another source of social loss: the obsolescence of capital assets. Replacement value of high technology capital assets - computers, for instance - decreases every day. And again, the longer the duration of the procedure, the higher will be the social costs of unemployment of productive assets because of obsolescence will be.

Litigation expenditures are also an important part of the social costs associated with bankruptcies. In any other legal procedure, higher expenses on legal services are assumed to increase the probability of a favorable decision from the court. However, in bankruptcy proceedings, the net value of the debtor's estate cannot be increased through litigation. High litigation expenditures lower the total net value available for distribution among the creditors.

Social costs of litigation in bankruptcy proceedings may be higher if these expenditures are partially paid by government through public subsidies. The overall positive external effect - a reduction of uncertainty and, therefore, reduction of future litigation - explains why partial subsidies paid by government may be efficient. But at the same time subsidies present lower costs to the litigators and thereby provide an incentive to increase litigation in the short run.

## **5. The Debtor in a Bankruptcy Procedure**

Originally, bankruptcy law was established to protect the creditor's interests and proceedings were always initiated by a creditor's petition. It was not until the nineteenth century when voluntary bankruptcy was introduced in most countries. At present, a substantial number of petitions are filed by debtors; and in some countries, with legal provisions generous to debtors, this number exceeds 50 percent (in Spain, for instance, during the period of

1982-86, debtors initiated more than 80 percent of all bankruptcy proceedings, see Cabrillo, 1986, pp. 75-76).

The risk of bankruptcy provides a positive incentive to management. They want to avoid bankruptcy (it creates a bad reputation, and so on) and therefore it is in their own interest to prevent the firm from having large deficits. Both private and public sector enterprises can go bankrupt. Bankruptcies of public sector enterprises are extremely rare. In fact, the absence of the bankrupt threat is one of the most important differences in the incentives for efficient management of private and public enterprises.

Normally, a bankruptcy proceeding finds its origin in a financial disequilibrium that compels the debtor to suspend payments. The financial structure of the firm, and more precisely the ratio liabilities/equity, is an important factor to determine the probability of an economic crisis of a firm that might end in bankruptcy. According to the Modigliani-Miller theorem (Modigliani and Miller, 1958), under certain assumptions, the market value of a firm is independent from its capital structure. The risk of insolvency, and therefore of bankruptcy, depends substantially on the value of its current liabilities relative to the value of its liquid assets. If the ratio liabilities/equity increases, the risk of bankruptcy will increase. *Ceteris paribus*, the rise of this ratio in firms will increase the number of bankruptcy proceedings.

Managers and firm owners usually prefer to have debt as a significant part of the firm's capital structure and not to finance its business just through equity. There are several reasons for this preference. First, a mixed capital structure allows different risks and different returns from the capital invested in the firm. In absence of default risk, the leverage effect of a higher amount of debt would allow higher returns to equity holders. But when default risk is introduced into the model, leverage is associated with a higher probability of bankruptcy. Managers and firm owners try to determine an optimal debt-equity ratio, taking into account both the profits of the leverage effect and the probability of bankruptcy.

Secondly, governments are not neutral when it comes down to the assessment of firms' capital structure. The corporation income tax is imposed on the net income of corporations. Net income is defined as revenues minus costs. This way the fiscal regime actually creates incentives to debt financing of corporations.

It can also be argued that a capital structure based on both equity and debt, under the limited liability principle, allows managers and corporation owners to pass a part of the bankruptcy losses to creditors. Thus, in this respect, bankruptcy creates negative externalities. Rational creditors will discount the cost of these negative externalities - the value of the debt multiplied by the probability of default - and charge higher prices and interest rates - or the cost of insurance - to their customers. Debtors, as a

class, will internalize these externalities. In a world where information is imperfect, unreliable debtors, who have a higher probability of default than average, will pass a part of these costs to reliable debtors.

## **6. Creditors in a Bankruptcy Procedure**

Most credits or commercial deals involve a risk of default. Although risks are inevitable, they can be reduced through monitoring or transferred to a third party through insurance. Creditors may follow two different strategies when they face the risk of losses caused by bankruptcies. Self-insurance, where a fund to cover possible losses is created, may be one option. Banks and large companies employ self-insurance for bankruptcy losses by having a large number of customers which allows them to pool the risks. Another option is the purchase of credit insurance from an insurance company, which pools the risks of various firms. Such a service is commonly offered in Europe. Insurance companies that specialize in bankruptcy risks usually offer their customers informational services on the financial reliability of their potential clients. Firms that purchase this kind of insurance profit from the economies of scale which are generated by the large number of customers. Insurance companies often share their data on insolvent debtors or debtors with a high default risk.

In a stable commercial relationship the risk assumed by the creditor may change at every moment and might be very different from the risk at the beginning of such a relationship. The basic problem for the creditor is how to adopt the most efficient strategy when the risk of losing his credit increases, due to the probability of bankruptcy of the debtor. When the debtor suspects that the probability of bankruptcy is rising, he may try to raise the total value of his debts in order to solve his short-run financial problems. The new debt may reduce the risk of default as it may be able to prevent bankruptcy in the short run. However, at the same time, the overall debt increases and there is some danger of 'risk alternation' - the debtor may behave in riskier fashion as a result of the additional obligation (see Kanda and Levmore, 1994). It is uncertain whether the product of the amount of credit times the risk of default will increase or decrease.

In a world of perfect information the optimal strategy of a creditor would be to minimize the value of this product when making the decision to offer new credit to his client or to refrain from doing so. But in the real world information is imperfect and asymmetrical. The debtor can discriminate among creditors to help some of them and, at the same time, cause bigger losses to others. Furthermore, all credits are not equal in bankruptcy

proceedings. Creditors' strategies are therefore more complex than they would be in the case of perfect information and the non-existence of secured credits.

There are clear incentives for both the debtor and some creditors to reach agreements that are harmful to other creditors before bankruptcy proceedings begin. Creditors can raise the probability of getting their money back; and the debtor can maximize the expected value of his commercial relationship, discriminating in favor of those creditors that will be able to help him in other businesses.

In most legal systems discriminated creditors can file a petition to the court for annulment of payments to other creditors or changes of unsecured credits into secured credits. Usually the formal declaration of bankruptcy has retrospective effect and annuls these agreements. These retrospective effects may impose high costs on both the owners and the managers of the bankrupt firm. Bankruptcy petitions can be used as a threat to force the debtor not to favor some specific creditors and harm others. These threats often play a significant role in creditors' strategies as there is always uncertainty regarding the relevance of the retrospective effects.

When a creditor files a bankruptcy petition, he usually tries to improve his position and recover at least part of his credits. He expects that, at the end of the bankruptcy proceeding the value of his recovered credits will be higher than the procedure costs he will have to pay. More precisely, a creditor will file a bankruptcy petition only if  $X.P / (I + r)^t > E$ , where  $X$  represents the value of the credit,  $P$  the percentage of the credit that he expects to recover if he wins and  $E$  the procedure expenditures. The very low value of  $P$  for unsecured creditors in many bankruptcy proceedings explains why many creditors decide not to go to court, even in cases where there are illegal agreements between the debtor and some creditors.

However, some secured creditors - and especially insurance companies representing unsecured creditors - file the bankruptcy petition and go to court even in cases where the value of  $E$  is expected to be higher than the value of the recovered credits. The best explanation for this behavior is to qualify these creditors - especially insurance companies - as long-run utility maximizers. They are prepared to lose money in a single bankruptcy case if these losses allow them to build a reputation of going to court in cases of suspected fraud (Mitchell, 1993).

Government can also exert influence on a creditor's behavior. Firstly, the corporation tax reduces the creditors' losses caused by bankruptcy. With this tax government shares the risks of companies. The deduction for losses against other income reduces the losses caused by other firms' bankruptcies in the percentage of the corporation income tax that the company is obliged to pay.

A second result of the corporation income tax is its effect on risk behavior of companies. There is some dissension over the effects of the corporation income tax on risk taking; but most economist think that, if the tax is not progressive and there are no limitations in the magnitude of losses that can be offset, it increases risky behavior by firms. Under this assumption, we should expect two effects on creditors' behavior. First, creditors should be ready to assume a higher risk and offer more credit to a debtor to help him avoid bankruptcy. Secondly, if there is uncertainty about the distribution of the debtor's estate or fraud by the debtor, creditors would have an incentive to go to court to recover their credit. Assume that, according to the model sketched in the previous paragraph, when the creditor renounces to go to court he loses the total amount of his credit,  $X$ , but can lose  $X + E$ . Going to court to recover a credit in bankruptcy proceedings is, therefore, a risky decision, and, when assuming the previous conclusions about taxation and risk taking, we should expect an incentive to go to court as a result of the corporation income tax.

### **7. Employees in Bankruptcy Proceedings**

The foundations of current bankruptcy law were developed within an economic framework characterized by private contracts freely undertaken by all parties, often accompanied by only a low level of government control on economic activity. Such is the way that this institution is modeled even today in the majority of countries. However, it would be tantamount to turning a blind eye to reality not to acknowledge that important changes have taken place in the framework of bankruptcy law. Government control and intervention has modified the original concept of most commercial relationships.

The position of employees in relation to their company has become very different from the relation of the firm with the rest of its creditors. Employees not only prefer payment of credits for non-paid salaries, but also expect the right to a part of the company assets as indemnity for the loss of their jobs. Some bankruptcy laws even allow employees to levy separate execution against the company by seizure of its assets to assure payment of these credits.

The relationship between firms and employees can be explained in terms of the implicit contracts model. According to this approach, implicit contracts within the company-employee relationship protect the employees against fluctuations of their salary. Insurance premiums, a part of these wages, permit them to receive the corresponding indemnity if the situation were to become unfavorable.

When we assume that employees are risk averse, they would prefer to contract this implicit insurance policy as it guarantees them indemnity in case they lose their job when the company goes bankrupt. Therefore, the employee is willing to 'sacrifice' a given fraction of his salary for insurance premiums.

The economic rationality of the lay-off compensation that employees receive in case of bankruptcy implies two requisites. In the first place, we assume that the employee suffers economic losses from losing his job when the firm is liquidated. Secondly, in the absence of alternatives on the market, the companies themselves are in the best position to play the role of insurer.

The damages incurred by an employee when losing his job can be the result of several factors. First of all, transaction costs are inevitable when searching the job market. In a situation of prolonged disequilibrium in the labor market laid off employees may face long periods of unemployment. In some countries the law admits only two forms of lay-offs, either dismissal as a sanction or unjustified lay-off with indemnity. Economically, this indemnity reflects the price that the company pays in order to buy the employee's 'property rights'.

Another possible way in which the employee might experience damages in case of bankruptcy is through the loss of his company-specific human capital. The employee might, for instance, have been an expert in working a specific machine that only the liquidated firm used. The loss of this type of human capital causes a reduction of the employee's marginal productivity of labor and consequentially the wages he could negotiate with other companies.

The second point to be considered is why the law compels companies to assume, at least partially, the risk of lay-offs. The answer to this question lies in the fact that no company in the market is willing to insure these risks. Thus, we are faced with a problem of risk allocation within the framework of a bilateral contractual relationship.

According to this implicit contract model, throughout the period of contract duration, each employee creates a fund through payment of his implicit insurance premiums. The company has at its disposal the sum of the funds corresponding with all employees and acts as an insurance company in its relationship with them. Because of its capacity to reduce risks by means of pooling, it is best placed to provide the insurance in this contractual relationship. Consequently, it is in the interest of efficiency that the employees transfer at least partially their risk of unemployment to the company. In this perspective indemnity to employees in cases of liquidation of the firm in a bankruptcy procedure can be explained in terms of efficiency.

In a similar way preferences in payments of both credits for debited salaries and lay-off indemnities can be explained. Preference in collection of

credit basically means an increase in the probability of a specific credit to be paid. If this probability is lower than 1 (as it is always in the case of bankruptcy), the variables to be taken into consideration by employees will no longer be the salary and the prospective indemnity for lay-off, but rather these variables multiplied by the probability of them being actually obtained. Any increase of this probability would permit the firm, therefore, to pay lower wages. Risk-averse employees would, expected values being equal, prefer combinations of higher probabilities and lower wages. With other creditors - banks, large companies or small traders - the risk of insolvencies in credits would be reflected in higher interest rates or higher prices charged to the clients. This would permit each creditor to create his own fund of self-insurance or to contract an insurance policy for unpaid credits under the conditions offered by the insurance markets. Firms are in the best position to provide insurance to the employees. Preference in collection of credits in case of bankruptcy would thus lend weight to the argument that the transfer of risk from employees to companies is efficient in situations in which the profitability of collection is lower than 1.

### **8. The Liquidation-Reorganization Dilemma**

The reform of bankruptcy law has been widely discussed in Europe and the United States in recent years and one outcome of these debates has been the substantial development of the reorganization procedures for bankrupt companies. Advocates of reorganization present it as an efficient procedure that avoids many unnecessary liquidations and reduces the social costs of bankruptcy. However, critics of reorganization find it to be an inefficient procedure that deprives bankruptcy from its main objective, the reallocation of the debtor's assets to more productive employments through creditors' collective action. Reorganization, they argue, raises the social costs of default, instead of reducing them (see Section 9).

Reorganization basically consists of the implementation of a rehabilitation plan in order to allow a firm to stay in business. Although the best known bankruptcy provisions for reorganization are those contained in Chapter 11 of the American Bankruptcy Code, similar provisions can be found in other countries. In Britain reorganization is referred to as 'administration', in Germany 'vergleich', in France it is termed 'reglement amiable' and 'redressement judiciaire' and in Italy 'amministrazione controllata'.

Each reorganization procedure has its own peculiarities. Some bankruptcy codes (the American Bankruptcy Code, for instance) permit the original management to stay in charge of the firm in most cases. Others, for example the British Insolvency Act of 1986, appoint an administrator to lead

the company during the bankruptcy proceedings. The role of creditors in the proceedings may also differ. Some procedures require the conversion of the debt into stock, while others offer diverse alternatives to the creditors. Credit priorities do not always receive the same treatment. Differences also exist between the voting systems on asset sales or postponement grants to the debtor. Employees play a relevant role in some reorganization proceedings, and almost none in others. But in every case, the main object of the procedure is to put the company on a solid base and to try to guarantee its survival.

Should liquidation or reorganization be the main concern of courts and judges in bankruptcy cases? Some codes consider liquidation and reorganization of the firm as alternatives, without showing any special preference for one or the other. Other codes - such as the French law passed in 1985 - favor the rehabilitation of the firm.

In any bankruptcy procedure it is essential to value the firm's assets and liabilities in the most accurate way, since the decision between liquidation and reorganization usually depends on this valuation. Most bankruptcy codes are, however, very vague when dealing with the value of a company (on the problem of valuation which is inherent to the fictional sale under reorganization, see Bebchuk, 1988). Judges have therefore significant discretionary powers in a subject they usually know little about. For instance, there is substantial evidence to suggest that, in the United States, the valuation of bankrupt firms by judges in order to consider its possibilities for rehabilitation is systematically too high (Jackson, 1986a, p. 220). This concern has led a number of scholars to seek alternative procedures that provide market-based estimates of a firm's value (see Section 10).

There are two main methods to value an insolvent firm: the balance method and the feasibility method. The balance method is static. It uses the market value of assets and liabilities in order to determine whether the company has a positive or negative net worth. A negative net worth would imply liquidation, while a positive net worth would pave the way for reorganization. This method has two inherent problems: first, there is the usual problem with valuation of equipments and inventories when they may have to be sold in the short run. This possibility requires that these evaluations should be made as cautious as possible. For instance, if inventories can be valued at the original cost or at the present market value, the lowest one should be used.

Second, the fact that there is a net worth does not guarantee the future survival of the firm in the market. A company whose net worth is positive because it owns expensive equipment or valuable buildings should be liquidated if there is no demand for its product in the market.

The feasibility method is dynamic. It does not focus on the static value of the firm's assets and liabilities but rather on the probability of survival that a reorganized company would have in a specific market. According to this method a firm should be rehabilitated if the discounted value of its future returns flow is expected to be positive. There are two problems with this method. First of all, the subjective judgements, unavoidable in these evaluations, permit different interest groups to seek rents (more on this in the following section of this article). The second problem is the question how to distribute the stock or debts of the reorganized company to the creditors, when the firm is rehabilitated.

However, the use of either method, does not exclude the application of the other. Assume a bankrupt company proposes a reorganization plan. In order to evaluate the plan a feasibility study should be made. If the court opinionated that the company can be rehabilitated the plan will be implemented and the assets can be evaluated as parts of an ongoing business. If, however, the court should not make a feasibility finding, the court should opt for liquidation. In that case the assets should then be valued according to their market value.

### **9. Why Reorganization?**

American data from the late 1980s show that as many as nine out of ten small and middle-sized firms fail after going into a Chapter 11 reorganization (for data on firms under reorganization, see Franks and Torous, 1989). Italian 'amministrazione controllata' has been criticized as a useless and expensive prologue to liquidation or even as a procedure that anaesthetizes creditors. In France the 1985 law is not working as was hoped. And in Britain, where 'administration' has been considered to be an improvement of the old bankruptcy law, its relative success has been due to a most efficient system of liquidation that allows the new managers to sell the profitable divisions of the bankrupt firm for better prices.

Bankruptcy scholars claim that reorganization is time-consuming, that it involves high administrative costs and often reduces the company's value (Baird, 1986; Bradley, 1992; Cutler and Summers, 1988; Lopucki and Whitford, 1990, 1993 and Weiss, 1990). It has been debated on philosophical, political and economic grounds because of its role in increasing the accessibility and attractiveness of bankruptcy (DiPietro and Katz, 1983; Lunnie, 1984; Oswald, 1984; for data on the increase in the incidence of business bankruptcy in the United States since the passage of Chapter 11, see Johnson, 1986, p. 668) .

Efficiency arguments fail to explain why so many firms with such low probabilities of survival are being reorganized. The existence of interest

groups and rent-seeking behavior, often disguised as public interest efforts, provide one possible explanation.

A firm may be conceived as a framework of interests and property rights. Property implies three different rights over the firm: the right to control it; the ownership of the firm's assets; and the right to take possession of the firm's profits. According to a complex net of legal provisions and contracts owners have to share these rights with creditors, employees and the government.

Discussions over priorities in the use of these rights are a characteristic feature of bankruptcy procedure. Business experience reveals that the preference for reorganization or liquidation is often determined by the property right framework, as defined by law. The interests of secured creditors may be very different from those of unsecured creditors when faced with a choice between liquidation or reorganization. Employees and unions may think that reorganization is the most beneficial outcome for their interests. The incumbent managers may prefer reorganization if the procedure allows them to stay in charge of the reorganized firm (Gilson, 1990; on the motivation of managers to initiate a bankruptcy proceeding, see Baird, 1991; Berkovitz, Israel and Zender, 1993; Rose-Ackerman, 1991). They might be opposed to reorganization if it seems likely that an external administrator will be appointed to lead the firm.

All these property rights and interests collide in bankruptcy procedures and each group employs its own strategies. Their relative success will depend on the value of their credits, the nature of the applicable bankruptcy law and the public support they can secure for their demands.

Suppose that employees believe - which they almost always do - that reorganization is the most convenient outcome for them. They will follow a strategy that puts pressure on decision makers, local politicians and the media, in order to keep the firm in business. Some laws, like the French bankruptcy code of 1985, goes one step further and assigns an active role to employees in the negotiations. Public choice and rent-seeking models (see, Buchanan, Tollison and Tullock, 1980) offer plausible explanations for the possible success of this strategy and account for the public subsidies that some companies receive in case of reorganization.

It is quite common to present the liquidation-reorganization dilemma as a private vs. public interest problem. The complex framework of property rights and interests should be enlarged to include some kind of public interest in the survival of the bankrupt company. Unemployment or deindustrialization in a depressed area, for instance, are the most common arguments which are advanced to justify the public interest in avoiding the liquidation of insolvent private firms. From an efficiency perspective it may be hard to justify these arguments. Bankruptcy law is not the best instrument to deal with problems such as unemployment or deindustrialization. There is

no reason to consider the interests of unemployed employees or local interest groups more 'public' or 'social' than the welfare of the creditors, the taxpayers or the whole society - which will eventually pay for the misallocation of production factors. The costs of liquidation and reorganization are often misperceived. It may be easy to estimate the short-run social costs of the liquidation of a firm, especially in cases of high rates of unemployment. It is, however, more difficult to assert the long-run costs of an inefficient allocation of the social production factors. These long-run costs are usually downgraded by the public opinion, and public interest arguments often prevail over the efficiency arguments. Thus, the dilemma of reorganization is that, while it may allow some efficient firms to continue, it facilitates the reorganization of inefficient firms that should be liquidated (White, 1989, pp. 136-137).

## 10. Alternative Procedures

The bargaining based-approach of reorganization, such as found in Chapter 11 of the US Bankruptcy Code, has been criticized extensively in the literature. Equity holders, have been demonstrated to extract significant value, even in cases where the debt increased the value of the reorganization value (Franks and Torous, 1989). The power of equity holders to block or delay the approval of a reorganization plan would bring about deviations from contractual priority (on the deviations from contractual priority under the existing rules, see Eberhart, Moore and Roenfeldt, 1999; Weiss, 1990; for a formalized model on the mechanisms that underlie the bargaining process, see Bebchuk and Chang, 1992; Baird and Picker, 1991).

### 10.1 Auctions

Alternative solutions to the bargaining based-approach have been suggested to improve the alleged poor results of the reorganization procedure. One possible alternative is to merge the liquidation and reorganization procedures. Several proposals follow this path. It would be possible to sell every bankrupt firm as a going concern, free of debt and pay the creditors, according to the absolute priority rule, with the proceeds. Baird (1986) and Jackson (1986a) argue that bankruptcy reorganizations should be eliminated and replaced by a mandatory auction of the failed firm. (The merits (Hansen and Randall, 1998; Schleifer and Vishny, 1992) and imperfections (Baird, 1993; Cramton and Schwartz, 1991) of an auction regime have received consideration in the literature.) Roe (1983) suggests an initial public offering of 10 percent of the firms's new equity on the market to provide the market's estimate of the value of the firm.

### *10.2 Options*

Other proposals suggest that bankruptcy should involve an automatic financial restructuring, where all debts would be converted into equity. The decision whether to liquidate or reorganize would then be left to the incumbent management (Bebchuk, 1988).

The Aghion-Hart-Moore procedure is considered to be one of the most interesting alternatives advanced in the literature the past ten years (Aghion, Hart and Moore, 1992, 1994, 1995). This procedure, drawing upon the innovative mechanical scheme of distribution by Bebchuk (1988), consists of cancellation of all of the company's debt and to offer the creditors the stock of the new all-equity company. The creditors become shareholders in the new all-equity company. (For a critique on the debt-equity swap and the A-H-M scheme, see Bufford, 1994, pp. 844-846.)

A second version of the model proposes to leave the status of secured creditors unaltered if the value of the collateral is higher than these credits. Only unsecured credits would be transferred into debt. The essence of the procedure remains unaltered. In both cases the bankrupt company becomes solvent and creditors take the decisions concerning the firm as shareholders with voting rights. A trustee would supervise the process, solicit cash and noncash bids for the new all-equity company and allocate the right to shares in this company. In the final step the shareholders vote to select the various cash and noncash bids.

These, and other new proposals can certainly add to improved bankruptcy proceedings and to increase the efficiency of bankruptcy law.

## **11. Conclusion**

It is impossible to know how bankruptcy law will change in the next few decades. Especially in Europe, the predisposition in favor of reorganization procedures in legislative reform seem to be weakened. For instance, in France, the country with one of the most reorganization-favored bankruptcy codes in Europe, new reforms are initiated to reduce the excessive pro-rehabilitation bias of the 1985 law. Changing the foundations of traditional bankruptcy law has proven to be much more complicated than expected by most reformers.

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