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Survival rates in Bankruptcy Systems: Overlooking the Evidence

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ABSTRACT

Extensive research on bankruptcy still has not made it possible to end the efficiency discussion concerning the need for a reorganization provision in bankruptcy laws. In this paper, I discuss the pervasiveness of asset sales in bankruptcy procedures and the effect it has on survival rates. Without these figures on going concern asset sales Western countries show astonishingly low firm survival rates. In addition, it becomes clear that the bankruptcy system in the US may be under-researched to such an extent that it seriously confounds our view of bankruptcy resolution.

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1 Introduction

Bankruptcy has been a fruitful area of research. Especially, Chapter 11, the reorganization procedure in the American Bankruptcy Code, has been subject of many theoretical and empirical studies. Despite this research, academics and practitioners are yet not fully resolved around the issue whether or not Chapter 11 can be seen as an efficient institution. Although Chapter 11 offers firms a way out of financial troubles, doubts remain whether it does not lead to the continuation of firms that should have been liquidated, redistributes value in such a way that it provides incentive for opportunistic behavior, and in the duration of procedures provides – presumably- ample opportunity for legal service firms to earn a living.[1] A similar discussion has also been going on in Europe. Based on sparse evidence regarding their respective liquidation procedures, a number of European governments (France, Finland, Germany and Belgium in chronological order) have concluded that it leads to liquidation in too many cases. One of the consequences could be that such a procedure would stifle entrepreneurial risk taking. Given the idea that especially the new, small firms innovate and that the US is top-performer in this respect, it is no wonder that Chapter 11 has been a major inspiration to various European lawmakers in seeking to redress the failings of their respective systems. It is the mix of the unresolved efficiency discussion, the lack of empirical findings and the drive towards new bankruptcy rules in Europe that motivates this paper. The purpose of this paper is to find out how different systems perform with respect to the survival of the debtor-firm, either by way of a going concern asset sale or a restructuring of liabilities. The major findings are that, firstly, much stylized facts about bankruptcy resolution give rise towards more questions than answers, and secondly, that the focus on Chapter 11 as the model for the restructuring of liabilities leads one to overlook the importance of the other major mode of restructuring in bankruptcy, i.e. the going concern asset sale.

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1 See, among others, Gilson (1997), Hotchkiss (1995), Franks & Torous (1994).

2 Bankruptcy: an asset or a liability management problem?

In principle, at least from an economic point of view, it should not matter whether a firm in bankruptcy sells all the assets, or rewrites its financial contracts. Selling off the assets to the highest bidder provides the estate's trustee with the cash to compensate the claimholders of the bankrupt firm. The bidder may choose any way in which to organize the assets and its corresponding capital structure. With a rewriting of the financial contracts one merely skips the cash-part associated with the asset sale. Financiers are asked to accept new financial contracts, specifying payments that are in line with the value of the firm. From this perspective, going concern asset sales and financial re-contracting are equal alternatives in resolving financial distress. It follows that one should look at both mechanisms of financial distress resolution. It is obvious that imperfections in asset markets and re-contracting failures may lead to differences in the (direct and indirect costs) associated with each of these modes of restructuring.[2] However, for the moment, I merely want to make the point that both modes are equal alternatives in resolving distress.

If one takes a look at some bankruptcy procedures around the developed world, then liquidation-based rules, i.e. systems in which the rules facilitate, or even "force", the sale of assets, seemed to be the norm not so long ago. Especially, European insolvency law seemed geared towards liquidation. France, Germany, Belgium and Finland added a reorganization chapter to their insolvency laws only fairly recently. As an example of such a system that "forces" the trustee to sell assets in bankruptcy, consider the Dutch situation. Legal rules in Dutch Civil Code allow firms to sell the assets to another firm. In the process of selling these assets the employee contracts are automatically transferred to the buying party. Only in bankruptcy does this rule not

[2] For a discussion of asset market illiquidity see Schleifer and Vishny (1992), and Pulvino (1999) and Strömberg (2000) for some empirical evidence concerning asset illiquidity. See Gilson (1997), Hotchkiss (1995) for some evidence concerning the re-contracting failures.

apply.[3] The idea behind this rule was a European Directive to protect employees for a sudden (opportunistic) asset sale in order to shed employees. As such, the Dutch rule finds its equivalent in various forms in the other European countries.[4] Apart from other rules in the Dutch system that have an impact upon the way to solve distress, it seems only logical to hypothesize that this rule leads to many an asset sale in bankruptcy.

Taking into consideration that various bankruptcy procedures were, or still are, geared towards liquidation, i.e. selling assets, it is amazing to find so little research that sheds light on the issue of asset sales in bankruptcy. Most of the studies on bankruptcy concern the US Bankruptcy Code and focus on Chapter 11. Chapter 11 gives debtors the possibility to restructure their liabilities, i.e. adjust their capital structure. Chapter 7 of the Code regulates the orderly liquidation of the assets of the firm. The empirical studies on Chapter 11 focus on the restructuring efforts of larger firms. The asset sales in these restructurings are not central to the resolution, but are supposed to provide the financial means for the liability restructuring and/or to eliminate loss-making subsidiaries.[5] White (1984) is one of the first to study smaller firms in Chapter 11. She finds that 23% of her sample firms resolves distress by selling all assets. Thorburn (2000) studies the Swedish liquidation-based bankruptcy system. She finds that 75% of her sample involves a going concern sale in which the most important parts of a firm's activities are continued, either by the old manager/owner or by new owners. If this percentage is taken as a valid measure for the successful restructuring of firms in Sweden,[6] then it is in stark contrast to Chapter 7 in the US, which, as most scholars assume, ends in piecemeal liquidation of firms. Lawless et al. (1994) point out that relatively much is known about Chapter 11 procedures, but nearly nothing is

[3] Dutch Civil Code Book 7:662-666.

[4] See Kaiser (1996) and Franks, Nyborg & Torous (1996) for a similar comment concerning the French situation.

[5] See Gilson, John & Lang (1990), Franks & Torous (1994), Brown, James & Mooradian (1994).

[6] It should be noted that Thorburn studied firms with a minimum of 20 employees. This size criterion probably leads to an upward bias in her study in the number of firms "surviving" bankruptcy with respect to the surviving fraction of firms in the population of bankrupt firms in Sweden.

known about small firms in either Chapter 11 or 7. A recent large-scale study by Warren & Westbrook (2000) focuses on (small) business bankruptcies, either in Chapter 7, 11, or 13. They find surprisingly different patterns in resolving financial distress. Especially, smaller firms seem to be using Chapter 11 much more often that hitherto has been assumed. However, the research project does not yet reveal what happens to the assets of firms in Chapter 7, i.e. going concern sales, or piecemeal liquidations.

Notwithstanding this lack in our understanding in the resolution of financial distress in smaller firms in the US or the UK, even much less is known about other countries. In Germany, not much more is known than the publications by the national bureau of statistics. These data do not make it possible to find out what happens to the assets of the bankrupt firm. Besides, the new bankruptcy code has been in effect from only January 1, 1999. No data are yet available on this new situation. With respect to France, some more is known, especially through the work of Kaiser (1996), but this is still insufficient to judge the efficiency of this system. Although many data are simply not available, or have never been collected before, it is possible to provide some evidence on the issue of the pervasiveness of asset sales in bankruptcy.

Before proceeding, it is necessary to point out that the discussion below can only be indicative in nature. This is due to the fact that many studies are based on samples with different characteristics and in many instances cannot be considered as statistical good representations of bankruptcy populations. Nevertheless, putting these figures together, with due regard for the difficulties in comparing them, still provides a tale worth telling.

3 Reorganization in different systems

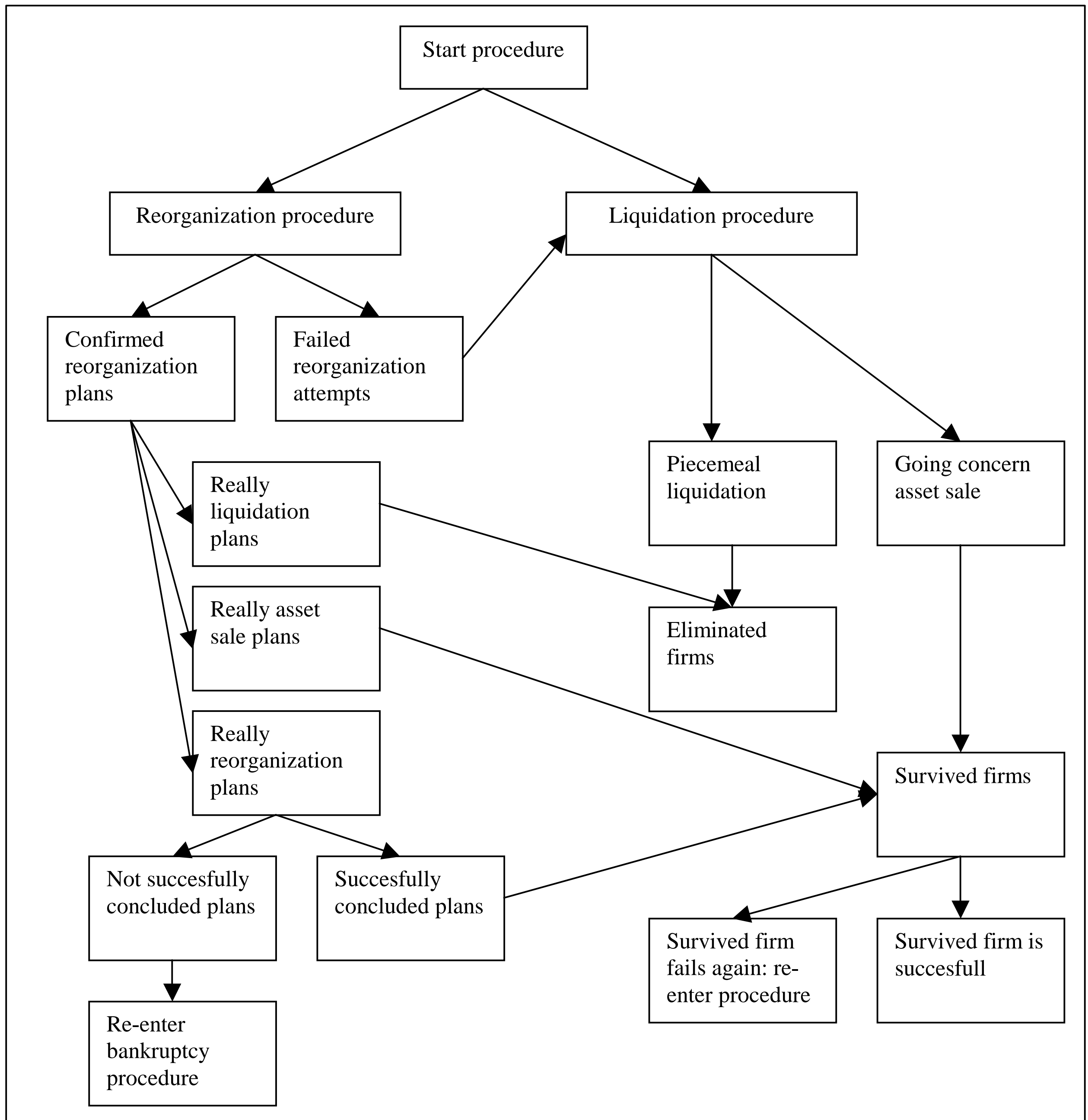
The purpose of this paper is to find out how different systems perform with respect to the survival of the debtor-firm, either by way of a going concern asset sale or a restructuring of liabilities. To complicate things, different bankruptcy systems offer firms different routes that ultimately lead to the survival of firms. To make things

clear, figure 1 gives a more or less generalized overview of survival routes through a bankruptcy system that incorporates a reorganization and a liquidation procedure.

When a firm enters a bankruptcy procedure it can either opt for reorganization or liquidation. In the reorganization procedure firms are given the opportunity to renegotiate with creditors in order to adjust their liabilities. This process may take some time in which the firm is sheltered from "aggressive" creditors that demand repayment, or want to collect collateral. If such a process yields an acceptable agreement, i.e. plan or composition, then a court has the power to confirm that plan. Confirmed plans can be forced upon dissenting creditors.[7] Those firms that fail in their attempts to get a plan accepted are in most instances transferred to the liquidation procedure. Empirical research, to be discussed below, shows that either the confirmed plans can be liquidation plans in disguise, going concern asset sales, or "real" reorganization plans. These real reorganization plans can either be successful or not. Those firms that cannot comply with the terms of the plan normally re-enter the bankruptcy procedure. Only those firms that either successfully fulfill their obligations associated with the plan, or those that sell their assets going concern to a third party, can be categorized as "survived firms". Note, however, that survived firms can get into trouble for a second time, in which the whole procedure starts again. Those firms that have a liquidation plan in disguise are categorized as "eliminated firms", i.e. these are the firms that sell their assets piecemeal. Consequently, the synergies that existed by combining these specific assets are lost.

[7] Bankruptcy procedures specify several minimum requirements a plan must attain in order to get confirmation, e.g., with respect to voting requirements, pay out forms and priority rules.

Figure 1 Survival routes through bankruptcy



In the liquidation procedure firms can either sell their assets piecemeal, or, via a going concern asset sale, sell assets as a complex in which the asset specific synergies may be retained. Although the corporate form of these latter firms may ultimately cease to exist, the economic activities of these firms survive, probably in another corporate shell.[8]

In the next section, I give a brief overview of the "setup" of some bankruptcy systems in order to make clear how these various procedures are to be reconciled with figure 1. The choice of these systems is constrained to those for which data is available to "fill" in figure 1. This actual "system-performance" is to be discussed in subsequent sections of the paper.

3.1 An overview of survival routes in different systems

Obviously, many systems are more or less look-a-likes, but some systems differ remarkably in their basic setup. For instance, the basic set up of bankruptcy systems of the Netherlands, Germany, Sweden and Finland (before the change in 1993) looks very much alike,[9] but the English system and the American system differ remarkably from each other as well as from the other systems. In this section, I briefly discuss the set up of these look-a-likes (using Sweden as the prime example), France, Germany, United Kingdom, and the United States.

3.1.1 Sweden

Thorburn (2000, p. 338) characterizes the Swedish bankruptcy system as an auctioning system, with no effective reorganization provision. Nevertheless, a

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8 Note that even bankruptcy systems that can be seen as liquidation-based systems (e.g., the Dutch Code, Swedish Code, the old German Code), still offer firms both procedures. However, they differ substantially from reorganization-based systems in the requirements the firms have to meet in order to successfully conclude the reorganization procedure.

9 It should be noted that although the basic set up is similar, the details may differ substantially.

composition procedure is provided for in the law, but is seldom used by firms to resolve financial distress.[10] In the composition procedure the firm may offer its ordinary creditors a composition. The composition rules do not apply to secured creditors and those holding priority claims. The procedure does not provide for an automatic stay of creditors. Any write down on the secured and priority claims by these creditors is voluntarily. In Finland and Sweden a firm can only offer a composition if ordinary creditors are offered at least 25% of their nominal claim (see Sundgren, 1995, p. 177). This means that the reorganization route in figure 1 is effectively non-existent in these two countries. If the composition procedure is not used, then the only alternative is the bankruptcy liquidation procedure. Firms, as well as creditors may petition for bankruptcy. With the start of the proceedings an independent trustee, appointed by the court, replaces the incumbent management team. This trustee has a fiduciary responsibility to creditors. The liquidation procedure in Sweden offers the trustee the possibility to continue operations under an automatic stay provision and to attract debtor-in-possession financing with super-priority (according to Thorburn, this DIP-financing is in most instances provided for by trade creditors). The trustee organizes a sale of all the assets, either piecemeal or as a going concern. The proceeds of this sale are to be distributed according to absolute priority. Administrative costs and DIP-financing have super-priority; secured claims are entitled the proceeds of the sale of the collateral, any unpaid part is treated as an unsecured claim; next in line are audit claims, tax claims, wage claims, and lastly, unsecured claims. It seems clear that if firms are to survive in these systems the only route is the one via a going concern sale in bankruptcy.

3.1.2 France[11]

Among the European countries, France was among the first to fundamentally change its insolvency law. In 1985 an extensive reorganization procedure was added to its

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[10] Thorburn (2000) reports that only a negligible fraction of firms file for composition proceedings. Sundgren (1995) discusses similar results for the Finnish case.

[11] This discussion relies heavily on Joosen (1998), Kaiser (1996) and Moret Ernst & Young

bankruptcy system. Now France has two procedures that are aimed at reorganizing the firm and one procedure aimed at liquidating the firm. The negotiated settlement ("Réglement Amaible") is an informal procedure in which the firm tries to reach a voluntary agreement with its creditors concerning the payment on their claims. The president of the court may appoint a negotiator to assist in concluding an arrangement with creditors. After a change in the rules in 1994 the negotiator may ask for a stay of creditors in order to successfully conclude an arrangement. If a company has ceased paying his debts, then it cannot petition for a negotiated settlement anymore. Instead it has to petition for the second procedure, the "Redressement Judiciaire", or judicial arrangement. Not only the firm itself but also a creditor, the court, public prosecutor or workers council may request for a judicial arrangement.[12] The court ("tribunal de commerce") decides whether to start the proceedings, or if it is evident from the financial situation of the company that a reorganization is impossible, then the court may start a liquidation proceeding directly. With the judicial arrangement an observation period starts in which a court appointed administrator investigates whether the company should be reorganized.[13] During this period, management remains in charge, although the court may decide to leave certain responsibilities to the administrator. Furthermore, creditors face an automatic stay of individual collection proceedings during this period, and are obligated to continue their deliveries, or are obligated to keep the lines of credit open. The administrator ultimately advises the court either to reorganize or to liquidate the company. After hearing the various parties the court decides on this issue and in its judgment specifies whether the company should be reorganized according to a "plan de continuation", or whether it should be sold to a third party ("plan de cession"). In this sale not only

(1996).

[12] It should be noted that in France an early warning system is in place, in which the auditor has the obligation to report on the imminent financial problems. Since 1994 the auditor is obliged to send a copy of his report to the court if management or shareholders are unable to sufficiently guarantee the continuation of the firm.

[13] The judicial arrangement comes in two forms, one for large companies and a more simplified procedure for small companies. In the discussion the focus is on the procedure for the large companies. The observation period for large company procedure is 6 months, but may be extended twice.

assets are to be transferred, but also various contracts (e.g., contracts with trade creditors, leasing arrangements) that are deemed essentially for the firm to survive as a going concern. If assets are used as security for financing arrangements, then these arrangements are also transferred to the buyer. The buyer can acquire the collateralized assets free of the obligations, if he fully pays down the debt associated with the assets. When this system is put into the context of figure 1, then it seems obvious that the negotiated settlement and judicial arrangement are aimed at reorganizing the firm. The judicial arrangement should in principle lead to a, rephrased in the terminology of figure 1, confirmed reorganization plan. This confirmed reorganization plan has two important forms in solving financial distress, that is the "plan de continuation", or the "really reorganization plan"-box in figure 1, and the "plan de cession", or the "really asset sale plan"-box in figure 1. Last but not least, in the liquidation procedure ("Liquidation Judiciaire") the assets of the firm are sold and after settling the claims, the company ceases to exist. It seems unlikely that in the liquidation procedure firms may continue operations via a going concern asset sale, given the fact that the going concern asset sale is explicitly defined and regulated in the "plan de cession". Furthermore, the regulations concerning the transfer of the various contracts (especially employment, leasing and financing contracts) in this "plan de cession" makes it difficult to execute an asset sale in the liquidation procedure. The presumption thus found in the literature is that most firms in the liquidation procedure are sold piecemeal.

3.1.3 Germany[14]

The German system has many features in common with the Swedish system. However, with the introduction of the new "Insolvenzverfahren" in 1999 a completely new procedure, specifically aimed at the reorganization of the firm, replaced the existing system. Before 1999, German had a liquidation procedure ("Konkursverfahren") and a composition procedure ("Vergleichsverfahren"). The

[14] The discussion relies on Eger (2001), Franks, Nyborg & Torous (1996), Kaiser (1996), and Moret, Ernst & Young (1996).

composition procedure was meant to avoid a "Konkurs". Its aim was to offer the firm a way out of financial distress, by giving the firm the possibility to offer its ordinary creditors partial payment on their claims. However, the composition rules did not apply to secured and preferred creditors. The procedure did not provide for an automatic stay of the secured and preferred creditors. Furthermore, management remained in control of operations. In order to get a composition accepted ordinary creditors had to be guaranteed at least 35% of their claim. If an agreement could not be reached, then the court could directly transfer the firm to the liquidation procedure. In a "Konkursverfahren" management lost all control to a court appointed trustee. The trustee could continue business activities if deemed necessary. However, the focus of the procedure was to sell all assets. Unsecured creditors faced an unlimited automatic stay. Ultimately, all proceeds were to be paid out to creditors according to absolute priority, with the usual ranking (i.e., secured creditors, administrative costs and estate creditors, certain employee claims, taxes, unsecured claims). The new "Insolvenzverfahren" merges both procedures into one. The aim of the procedure is to come to an insolvency plan ("Insolvenzplan"). In this plan the firm may be continued, sold off as going concern, or be liquidated piecemeal. This plan is to be made up by the trustee within at most three months, in which an automatic stay is in effect for all creditors. In the new procedure secured creditors are obligated to shoulder some of the estate costs and most preferred creditors (especially employees and the state) have lost their former preferential treatment. All creditors are classified into groups according to their ranking, or business interests. A plan is agreed upon if each individual group accepts it on a simple majority vote (on both the number of creditors as well as on the total amount of claims). The court may cram down the plan on a dissenting group if the plan leaves the group better off than under the old system (i.e., presumably a liquidation). The new procedure effectively groups the reorganization and liquidation together and leaves it to the participants to decide upon the best course of action.

3.1.4 United Kingdom[15]

The United Kingdom has an elaborate system of rules, which in some aspects differ remarkably from the continental systems. Four procedures are aimed at the reorganization of a debtor's business: Scheme of Arrangement, Company Voluntary Arrangement (CVA), Administration and Administrative Receivership. Two procedures are specifically aimed at the liquidation of the debtor's business: Creditors Voluntary Liquidation (CVL) and the Compulsory Liquidation. The Scheme of Arrangement is the least restrictive of the four reorganization procedures. It is simply a procedure in which the court sanctions an out-of-court arrangement between debtor and creditors.[16] The CVA is a court-supervised procedure in which the firm is to be reorganized according to a plan proposed to shareholders and creditors. The plan may specify a restructuring of liabilities and/or a disposal of assets. The proposal for such a plan is made by directors. The plan calls for the nomination of an insolvency practitioner to supervise the implementation. This practitioner advises the court whether creditors should consider plan. If this is the case then on a meeting of creditors the plan may be modified, rejected or approved. In the case that creditors accept the plan (on a majority of 75% in value of the creditors present and voting), then the practitioner supervises the implementation of the plan. The CVA does not provide for an automatic stay, nor can the plan infringe upon the rights of secured creditors. Administration is a court-supervised reorganization procedure in which many rules of the CVA are mimicked, but with far more powers for the administrator. CVA and Administration may even be combined in which the administrator takes on the duties of the insolvency practitioner. A company, its directors, or creditors may request the court for an administration order, but it will only be granted if the company will realize more value under an Administration order than under a

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[15] The discussion relies on the SPI document "Understanding Insolvency" (1999), Franks, Nyborg & Torous (1996), Kaiser (1996), and Moret, Ernst & Young (1996). It should be noted that I restrict the discussion to the procedures available to (corporate) debtors in England.

[16] Although the plan will only be legally binding if a majority of the creditors in number representing 75% of the nominal value of the claims in any creditor class agree to the proposed arrangement.

liquidation order. Furthermore, secured creditors are given the opportunity to appoint a (administrative) receiver before the order is made. If the petition for Administration is successful, then the administrator takes over the control of the company. He has to prepare a reorganization plan that is to be presented to all creditors within three months. During this period all creditors are stayed. If the plan is accepted, the administrator implements the plan. If all goes according to plan, then control ultimately reverts to the directors of the company. In the case that reorganization of the company fails (and thus the company is insolvent), then Administration is followed by a liquidation order. Administrative Receivership is a similar procedure to the Administration; only now the creditor holding a floating charge appoints the administrative receiver (if the creditor holds a fixed charge then it is called a (fixed charge) Receivership). This procedure can only be started if the company is in default on its loan, or if a request has been made by the company for an Administration order. The receiver assumes control of the company with the aim to realize sufficient value from the assets to repay the loan. This value may realize via a reorganization of the company, or via an asset sale. In the majority of cases the assets are sold either as going concern or piecemeal. The assets that are to be sold are transferred unencumbered with the existing contractual provisions and employees are most often discharged by the receiver before such a sale (see Kaiser, 1996, p. 75). If the assets are encumbered by a fixed charge, the proceeds must be paid out to the charge holder. In (Administrative) Receiverships there is no stay of creditors, although the receiver may terminate contracts with suppliers and other contractors. In the case that sufficient funds remain so that ordinary creditors should receive compensation, then a separate liquidator must be appointed to distribute these funds. In the case that the firm cannot be rescued via reorganization, a liquidation procedure is started. Assuming that the firm is insolvent, the procedure can be started by shareholders (a Creditors Voluntary Liquidation), or via a petition to the court (a Compulsory Liquidation).[17] A creditor, administrator, receiver or the court itself may instigate the latter upon request. The assets in a liquidation order may be sold going concern, or

[17] If the firm is solvent the procedure to be followed is the Members' Voluntary Liquidation, in which a liquidator is appointed by shareholders.

piecemeal. The proceeds of this sale are distributed to creditors and, ultimately, the company will cease to exist. When all procedures are put into the context of figure 1, the schemes of arrangement, CVA's and Administrations are aimed at the reorganization of the company. The plans that are to be proposed to creditors can be interpreted as either confirmed reorganization plans, or as failed reorganization plans. These plans may involve either a restructuring of liabilities, or a disposal of assets. The receivership procedure is more problematic. It is classified as a court-supervised reorganization procedure, although it seems that in many instances it involves a sale of the business. In the remainder, I follow this interpretation of receiverships as a reorganization procedure. Lastly, the liquidation procedure may obviously end in either a going concern asset sale or piecemeal sale of assets.

3.1.5 United States[18]

The United States offer companies two main procedures to resolve financial distress: Chapter 7 (liquidation of the firm) and Chapter 11 (reorganization of the firm). A firm or creditors may file a petition for liquidation under Chapter 7 of the Bankruptcy Code. The court appoints a trustee who closes down the business and sells all assets. He pays out the proceeds to the creditors according to the standard priority rule in the following order: administrative expenses, claims with (statutory) priority, and unsecured claims. Secured creditors stay out of this ordering. They have the right to claim specific assets, or the revenues of the sale of these assets, of the firm. Firms as well as creditors may file a petition for reorganization of the firm under the Chapter 11 procedure. The procedure suspends the collection efforts of secured and unsecured creditors (automatic stay), and the firm may continue to use the creditor's collateral in his business. The procedure gives the debtor the exclusive right for 120 days to file a reorganization plan. The court may extend this period. If the debtor does not succeed in filing a plan, or creditors do not agree with its terms, then creditors may file their own. In the plan all creditors are assigned to a specific class depending on their status

[18] The discussion relies among others on Altman (1993), Franks, Nyborg & Torous (1996), Kaiser (1996), and Moret, Ernst & Young (1996).

(secured, preferred, ordinary, or other). Furthermore, the plan must specify that creditors will receive at least an amount that is not less than the amount they would have received if the debtor would have been liquidated. The plan must also specify the means for its execution. The means may be cash, but may also be debt or equity securities, or a combination of these three, to be distributed among the participants. All creditor classes, including the equity class if the plan specifies that shareholders will receive some compensation, have to vote on the plan.[19] A plan is deemed to be accepted by a class of creditors if a qualified majority of the creditors in that class vote in favor of the plan. If a class votes against the plan, then the court may still confirm the plan if it is deemed fair and equitable ("cram down" provision).

3.2 Reorganization rates in different systems

In order to find out the fraction of firms that survive bankruptcy, data is needed to fill in figure 1. At least data is needed on the number of reorganizations in reorganization procedures and on the number of going concern sales in reorganization procedures and in liquidation procedures. I start by giving data on the reorganization procedure on four countries in table 1. Note that the choice of countries in table 1 is not entirely "free"; only for these countries are these data available. In table 1, the variables are defined as follows. The "reorganization rate" is defined as the ratio of the number of firms in a reorganization procedure to the total number of bankrupt firms, i.e. the number of firms in liquidation and reorganization procedures. The "confirmation rate" is defined as the ratio of the number of firms that have their reorganization plans confirmed by the court, or creditors, to the number of firms in the reorganization procedure.

[19] Although it should be noted that only impaired creditors may vote on the plan. A creditor is considered unimpaired if the plan, from a legal and equitable perspective, leaves its contractual claim intact.

Table 1 Reorganization in four countries

Country	US	UK	G	Fr
Reorganization rate	28%*	14%	0,2%#	20%
Confirmation rate	41%**	15%	64%##	13%

Legend: Data concerning the US see Bankruptcy Yearbook Almanac (*), ** see White (1984). Concerning UK: See SPI eighth survey (1999). Concerning Germany (G): # see Statistisches Bundesamt, ## see Kaiser (1996). Concerning France (Fr): see Kaiser.

For the reorganization rate in the US, I retrieved data from the website of the Bankruptcy Yearbook Almanac to estimate the average reorganization rate over the period 1980 – 1996. The number of Chapter 11 filings per year divided by the sum of Chapter 7, 11, and 13 filings, correcting for non-business bankruptcies, yielded an average reorganization rate of 28% (with standard deviation of 5,2%).[20] The confirmation rate as reported in table 1, comes from White (1984). Note that White reported that an additional 6% of her sample firms were awaiting confirmation of their plans. From Flynn (1989), Lopucki & Whitford (1993), Eisenberg & Sundgren (1997) and Ravid & Sundgren (1998) it follows that confirmation rates are related to firm size. If these studies are taken together then it seems that confirmation rates in the US for firms with a median size of $ 0,5 to $ 1 million, are in between the 13% to 30% range. The median size in the study by White was $ 1,7 million. The higher confirmation rate in her study may therefore be attributable to a size bias. Based upon these considerations, I take this figure as a higher bound for the confirmation rate in the US for smaller firms. It should be noted that these figures only incorporate the promised payments. Jensen-Conklin (1992) in her study of smaller firms in Chapter 11, finds that 42% of the firms cannot comply with their plans. Therefore, the

[20] Chapter 7 and 13 procedures contain mostly personal bankruptcies, but also some business bankruptcies, as is revealed by data of the American Bankruptcy Institute. No data were available to me on personal bankruptcies in Chapter 11.

confirmation rate of the plans that are successful could be lower than the confirmation rate reported in the table above.

For the United Kingdom, the situation differs in some respects from the United States as well as from several European countries. I used the data as published in the eighth survey of the Society of Practitioners of Insolvency (SPI) as base material for estimating the ratios defined above, covering the period July 1997 to June 1998.[21] According to the Society, this latest survey is a better approximation of the characteristics of the population of formal insolvencies than earlier surveys. Especially the number of sampled CVA's (company voluntary arrangement) differs from the earlier surveys. The reorganization rate is calculated by adding up the administrations, CVA's and receiverships and dividing by the total number of insolvency proceedings.[22] One could argue that only administrations and CVA's are really aimed at the reorganization of the company, but here I follow the official interpretation in estimating the reorganization rate.[23] The confirmation rate can only indirectly be derived from the SPI-data. Based on SPI-sample data I calculated the confirmation rate at 15%.[24]

A remarkable finding is the reorganization rate in Germany (0,2%).[25] Note that this figure concerns the period before the new reorganization procedure took effect in Germany. This percentage is absurdly low; it implies that reorganization procedures are nearly never started in Germany. This same finding can also be observed in other European countries. For instance, in Sweden only very few firms attempt to use the reorganization procedure. According to Thorburn (2000) the percentage is about 1%.

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21 See their website: http://www.r3.org.uk

22 This ratio is based on the population of insolvency proceedings in the UK.

23 If one leaves receiverships out, then the ratio is 5%, instead of 14%.

24 I calculated the number of *company* preservations for CVA's (63% of 30 cases) and added the number of administration preservations (41% of 22 cases) and divided that by the number of reorganizations (administrations, CVA's and receiverships) in the sample. This yields the confirmation rate of 15%. Note that the number of administration preservations might also include going concern sales, but this can not be derived from the data in the eighth survey.

25 Calculated as the average fraction of court compositions to total insolvencies over the years 1992-1998.

Finally, as a last example, the reorganization rate in the Netherlands is very low, about 2,8%.[26] However, these figures cannot really be compared with the other (three) countries in table 1. In neither of these systems exists a well-developed reorganization procedure. Consequently, the number of "officially" reorganized firms is very low, depressing the ratio.

The further remarkable finding is the high confirmation rate in Germany (64%).[27] It might be explained by the argument that the few firms that ultimately get into the reorganization procedure have probably a good chance of reorganizing successfully.

The reorganization rate in France (20%) is based on the number of "Redressement Judiciaires" as published in Kaiser (1996, table 5, p. 80).[28] I took the optimistic view that firms that were not immediately liquidated in principle had the chance of reorganizing under the procedure. Calculating the reorganization rate then amounts to adding up the "eventual liquidations", "terminations via a sale of assets" and "terminations via a reorganization" in Kaiser's table 5. Dividing this number by total proceedings then gives the reorganization rate. The confirmation rate (13%) is calculated as the fraction of the "terminations via a reorganization" to this sum.

The figures of table 1 can be used to estimate the percentage of firms that successfully reorganize and continue the activities. Multiplying the reorganization rate with the confirmation rate gives the success rate, i.e. the ratio of the number of firms that reorganize successfully to the total number of bankrupt firms. For the US this would mean a success rate of, approximately, 12% of total bankruptcy cases commenced. One should note, however, that I used the figures from White (1984), which might have a size bias. Correcting for size, the success rate would be lower. Flynn (1989) found for a sample of smaller firms a normalized confirmation rate of 25%. Of these

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[26] See Couwenberg (1997) for this percentage. For those familiar with the Dutch system, this figure includes the reorganization plans reached in the bankruptcy procedure as well as those reached under the postponement of payments procedure ("surseance van betaling").

[27] Calculated as the average fraction of completed compositions to opened compositions ("Vergleichsverfahren"). See the tables 6 and 7 in Kaiser (1996). These tables cover three datapoints (1960, 1970, 1980) and the period 1985-1991.

confirmed plans, 20% to 30% were going concern sales in disguise instead of a restructuring of liabilities, implying a "real" confirmation rate of 20%.[29] If I take this latter estimate as a sort of lower bound, then it would imply a success rate of 6%. For the UK the success rate would be 2%, for Germany 0,13%, for France 3%. All in all this means that from the total number of firms that commence bankruptcy proceedings, i.e. either a liquidation or a reorganization procedure, only 2% (discarding the German figure) to 6% (or 12% based on White) see their reorganization attempts on the basis of a judicial reorganization procedure proceed successfully. These are indeed astonishingly low figures.

Overall, reorganization rates, confirmation rates, or success rates can hardly be called impressive in the four countries. The overwhelming majority of the insolvency proceedings concerns liquidations. This picture is especially bleak if one considers that bankruptcy is a small firm problem. Although the data do not reveal very much about the size of firms in bankruptcy proceedings and the way in which these proceedings end, the available empirical evidence shows that small firms predominantly end in liquidation proceedings.[30] Presumably, the larger the firm the bigger the chance that reorganization proceedings are started and eventually succeed. However, on the positive side, it should be noted that the SPI surveys (UK) make clear that CVA's seem especially effective for small firms. Nevertheless, the number of firms using this procedure is very low, especially when compared to total proceedings.

Although a direct comparison of these rates is difficult given the diverse bankruptcy systems, the data do point in the same direction. A minority of firms applies for the reorganization procedures, and a small minority succeeds in reorganizing the liabilities.

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28 This table covers the period 1986-1993.
29 Jensen-Conklin (1992) finds a similar percentage for her sample.
30 See the studies cited above.

4 Reorganizing assets or liabilities

Table 1 gives some evidence of the success of a procedure in reorganizing firms. Nevertheless, as figure 1 makes clear it is far from complete. Table 2 gives an overview of the way in which firms continue or end their productive activities in reorganization procedures. The abbreviation "GCS" in the table stands for "going concern sale", which means that (all or part of) the assets are sold to a third party who continues the activities of the bankrupt (selling) firm. The "going concern rate" is defined as the ratio of the number of firms - which sold the assets in a going concern sale - to the number of firms in the reorganization procedure. The "liquidation rate in reorganizations" is defined as the ratio of the number of firms that are liquidated to the total number of firms in the reorganization procedure. The term "liquidated" implies that the assets are not sold in a going concern asset sale.

Table 2 The way in which reorganization procedures end

Country	US*	UK+	G#	Fr^
Reorganization rate	28%	14%	0,2%	20%
Confirmation rate of reorganization plans	41%	15%	64%	13%
GCS in reorganization	23%	39%	-	15%
Liquidations in reorganization	30%	46%	-	72%

Legend: basis for this table are the same studies as reported in table 1. Remarks: * see White (1984), except "reorganization rate" (see Bankruptcy Yearbook Almanac); + see SPI eighth survey; # see Statistisches Bundesamt; ^ see Kaiser. The lower three rows in the column "US" do not count to 100%. The remaining 6% are the firms waiting on confirmation of their plans.

Table 2 and figure 1 are related to each other in the following way. The confirmation rate of reorganization plans is associated with the box "really reorganization plans" in

figure 1, the GCS in reorganization with the box “really asset sale plans” and liquidations in reorganizations with the box “really liquidation plans”. Table 2 shows that for the US 28% of the bankrupt firms enter Chapter 11. Of these firms 41% see their reorganization plans confirmed (an additional 6% still wait for confirmation), 23% sell the assets in a going concern asset sale, 30% liquidate the assets.[31] These percentages add up to 100%. Although it is in Chapter 11 that firms are offered the possibility to restructure their liabilities, the table shows that the asset sale has an important place in Chapter 11. For the UK, the eighth SPI survey provides the data to calculate the going concern asset sales; assets are sold in a going concern sale in 39% of the cases.[32] In France this occurs in only 15% of the cases (based upon the “terminations via a sale of assets”). The French liquidation rate is fairly high (72%) when compared to either the UK (46%), or US (30%).

5 Firm survival in bankruptcy systems

In order to find out whether the success rate can be corrected upward via a reorganizing asset sale, one must add the going concern sales in reorganization *and* liquidation procedures. Table 3 documents these data. Before discussing this table, I introduce two additional terms. Firstly, the term “GCS in liquidation” is defined as the ratio of the number of firms that sell their assets via a going concern sale on the total number of firms in a liquidation procedure. Secondly, the term “firm survival rate” is defined as the ratio of the number of firms that in liquidation or reorganization continues the activities, either by restructuring liabilities or by selling assets in a going concern sale, to the total number of firms in a bankruptcy procedure. In table 3, I omitted the German figures. Given the fact that so many German firms end up in the liquidation procedure, or are simply discarded from the procedure because of lack of

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31 Note that these figures are only valid for as much the figures as found by White (1984) are a good approximation of the ways in which bankruptcies end. Further note that Jensen-Conklin (1992) found that in her sample 20% of the confirmed plans really were liquidation plans.

32 Calculation based on the business preservation rate of 54% in a sample of 189 cases

assets,[33] it seems paramount to have some data about the way in which these procedures end. However, I am unaware of any data concerning the liquidation procedure in Germany. For the US, I am unaware of any systematic research concerning the going concern sales in Chapter 7. Therefore, the definite firm survival rate cannot be calculated for the US.

Table 3 Reorganizations, going concern sales and firm survival rates

Panel A Reorganizations and liquidations					
Country	US	UK	Fr	Sw	Fin
Reorganization rate	28%	14%	20%	-	-
Confirmation rate	41%	15%	13%	-	-
GCS in reorganization	23%	39%	15%	-	-
Liquidations in reorganization	30%	46%	72%	-	-
Liquidation rate	72%	86%	80%	100%	100%
GCS in liquidation	n.a.	10%	n.a.	75%	29%
Panel B Firm survival rate					
Firm survival rate	18%	20%	6%	75%	29%

Legend: In this table I added the countries Sweden (Sw), figures based on Thorburn (2000) and Finland (Fin), figures based on Ravid & Sundgren (1998). For these countries data are available concerning their liquidation procedures. The Finnish data concern the situation before a reorganization procedure was added to the bankruptcy code in 1993. Note that the survival rate for the UK cannot be directly calculated from the percentages in Panel A. In this case, the rate can only be calculated based on the actual numbers as provided in the eighth SPI-survey.

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minus the company preservations in CVA's and administrations.

[33] See Eger (2001) for this observation.

Table 3 recapitulates some of the data in table 2, but adds some extra elements from figure 1.[34] From this figure it should be clear that the liquidation rate and the reorganization rate add up to 100%. The GCS in liquidation is associated with the box "going concern asset sale" under the liquidation route in figure 1. The box "piecemeal liquidation" is left out; it is the difference between the liquidation rate and the GCS in liquidation. The firm survival rate in Panel B is associated with the box "survived firms" in figure 1 and thus concerns all firms that survived bankruptcy, either via reorganization or via liquidation.

A bleak picture emerges when one calculates the firm survival rates, without taking into account the going concern sales in liquidation procedures. Based on findings of White for the confirmation rates in Chapter 11, the table shows a firm survival rate of 18% for the US (20% if the firms waiting on confirmation are included). If I would base it on the confirmation rate as found by Flynn, the survival rate would be 14%. For the UK, the eighth survey of SPI reveals that 10% of the Compulsory Liquidations and CVL's (Company Voluntary Liquidations) involve a (partial) going concern asset sale. Together with the reorganized firms in Panel A (confirmed plans and going concern sales), the firm survival rate in the UK is 20%.[35] In France, the firm survival rate is the lowest of the five countries, 6%. Joossen (1998) and Kaiser (1996) discuss the French rules regarding the sale of assets in bankruptcy. These rules seem to make going concern sales in the liquidation procedure difficult. Therefore, in the French case it is not possible to tell whether or not an upward correction based on unknown going concern sales in the liquidation procedure seems likely. Based upon the research by Thorburn (2000), the Swedish bankruptcy system is the odd man out. Although she studies liquidations only, she finds that in 75% of the cases the assets are sold as going concern, i.e. a 75% firm survival rate. This firm survival rate is probably distorted by a size bias, given the fact that Thorburn studies firms with at least 20 employees. The Finnish system delivers less fantastic results as the Swedish

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[34] In interpreting this table, please take note that the confirmation rate in table 3 concerns the confirmation rate of reorganization plans.

[35] The firm survival rate in the seventh survey is 30%. This is due to different sampling procedures and a 5% point higher business preservation rate among the administrations, CVA's and receiverships when compared to the eighth survey.

one. Ravid & Sundgren (1998) find a firm survival rate of 29%. Ravid & Sundgren argue that a bias towards over-liquidation exists in the system, but placing their findings between the other four countries suggest that this system delivers acceptable results.

As I pointed out above, a comparison of these studies can at most give an indication of similarities or differences between systems. Two additional issues need to be addressed. The first issue to note is that none of the studies cited, probably apart from the eighth SPI-survey data on the UK, can be considered as giving a good representation of the population of bankrupt firms in each of the countries. However, they point in the direction that much of the outcomes of bankruptcy systems are related to firm size. Given the SPI-data for the UK, liquidation seems to be the predominant way in which the very small firms end bankruptcy proceedings. The studies on smaller firms in Chapter 11 give credence to the idea that confirmation rates for these firms are steeply lower than those for firms with a median size above $1 million, i.e. the difference in confirmation rates as found by White (1984, 41%) and, e.g., Jensen-Conklin (1992, 17%) or Flynn (1989, 25%). The difference in the survival rates as found by Thorburn (median size $1.3 million) and Ravid & Sundgren (median size $0,7 million) is probably attributable to differences in size. In this respect the study by Thorburn resembles the study by White much more than the others. As Thorburn notes the survival rate in her sample matches the survival rate of firms only in Chapter 11 (confirmed plus going concern sales, i.e. 70%) in White's sample. While Thorburn's study is drawn from the total population of bankrupt firms, White's study is drawn only from the population of firms in Chapter 11. In what way similar sized firms in Chapter 7 differ from those in Chapter 11 is not known. Consequently, it is not clear whether the performance of Chapter 11 is overstated in comparison with the performance of the Swedish system.

The second issue concerns debt recovery rates in these systems. This issue is addressed in the section below.

6 Separating reorganization from liquidation and the influence on debt recovery rates

Apart from survival rates, empirical evidence is available concerning total debt recovery rates in some of the countries discussed above.[36] It is especially interesting to compare the recovery rates of liquidation-based systems with those of reorganization-based systems and discuss the problems associated with this comparison. I start by discussing these recovery rates and then focus attention on the problems in comparing these rates.

For the US, I took the total debt recovery rate as reported by White (1984), namely 40%. This percentage can be taken as a higher bound for the relatively smaller firms (the percentage concerns only Chapter 11 procedures). For the UK, I took the percentage as reported in Franks, Nyborg & Torous (1996) concerning the reorganization procedures, 44%.[37] Thorburn finds a debt recovery rate of 35% for her total sample of 263 small to medium sized firms, and a 40% recovery rate for the cases in which the assets are sold going concern. This is comparable to the recovery rates found for the US and the UK, for firms in the same or larger size category. Only Flynn finds slightly higher recovery rates, although in varying degrees depending on bankruptcy districts. Ravid & Sundgren (1998) study the old Finnish Code and find a debt recovery rate of 34%. Sundgren (1998) studies the new Finnish Code and finds a recovery rate of 39% for firms in the reorganization procedure. One major problem in comparing recovery rates is the effect company size has on these rates. With size recovery rates go up. The cited studies have in common that they study companies of more or less the same size. However, this still need not be enough to make for a valid comparison. In a system that separates reorganization from liquidation (a separating system) a different signal concerning a firm's viability may emanate given the route

[36] The "total debt recovery" is defined as the ratio of the total disbursements to all creditors (secured, (super-)preferred and unsecured) of the firm to the total outstanding nominal debts of the firm.

[37] I do not use the SPI data here, because the recovery rates as found in the eighth survey seem to be primarily determined by very small firms.

taken to solve distress, compared to the signal that emanates from a liquidating system (a non-separating system). This difference in the two signals on firm viability influences sample recovery rates also via the way in which researchers select the cases to be studied. Firstly, I discuss the viability signals and, secondly, I discuss two biases that may arise in studying recovery rates in different systems.

6.1 Firm viability signals in bankruptcy procedures

In the section above, I compare the debt recovery rates of the Swedish and (old) Finnish system with the recovery rates in the US and the UK. The recovery rates of the liquidation-based systems seem to be somewhat lower than those attained in reorganization-based systems. Although this difference might be partly explained by differences in size, industry types, procedural costs, or debt structure, sample "selection" criteria may also cause this difference to arise. Consider the following. In a separating system as the US-system, Chapter 11 has consequences beyond the firms opting for Chapter 11. Firms that do not succeed in reorganizing in Chapter 11 send out a powerful signal to outsiders that the firm presumably is not worth continuing.[38] However, it need not be the case that every Chapter 11 "drop out" is to be liquidated for sure. Managerial failures and re-contracting failures might be instrumental to the drop out. These firms end up in the liquidation procedure, i.e. Chapter 7, and are (presumably) inefficiently liquidated. Revenues are depressed, because of the wrong use of assets, resulting in a downward bias in the recovery rates of Chapter 7. The size of this effect depends on the pervasiveness of re-contracting and managerial failures for the smaller firms in Chapter 11, and the possibility of selling assets going concern in Chapter 7. The anecdotal evidence as found in the literature is that Chapter 7 ends primarily in piecemeal liquidations. As table 3 shows this would imply that more than 70% of the firms entering bankruptcy would be liquidated. Whether this figure is correct or not, it makes clear that we are seriously unaware of much of the

38 Obviously, the firms that do succeed in reorganizing send out the opposite signal. These firms are included in any study on Chapter 11, whereas the other firms are not.

workings of Chapter 7, even to such an extent that it is nearly impossible to gauge the efficiency of the *entire* system.

In a system in which this separation between reorganization and liquidation does not exist, this signal about a firm's continuing value is messy. In liquidation procedures all firms are "liquidated". Outsiders (creditors) observe only a sale of assets, which can be a going concern or a liquidating sale. However, no clear signal comes from the procedure whether the firm is worth more dead than alive. This makes it possible for a trustee in such liquidation-based systems to find out whether or not a going concern sale is a possibility for *every* company that enters the procedure. This possibility may not exist for the trustee in a system that separates liquidation from reorganization.

6.2 Recovery rates in separating versus non-separating systems

The difference in signals concerning the viability of firms in these two types of systems may lead to a bias in recovery rates in a separating system. The average recovery rate in a non-separating system contains going concern sales (presumably with higher recovery rates) and liquidations (with lower recovery rates).[39] In a separating system the reorganization-based rule contains reorganizations and the liquidation-based rule "forced" liquidations. The firms that are inefficiently continued via the reorganization procedure, but later have to re-file again, then presumably end up in the liquidation procedure.[40] These firms re-filing for Chapter 7 stay out of any sampling procedure aimed at finding reorganization cases. This means that, in researching Chapter 11, the recovery rates of these firms are based on promised payments that imply to high a valuation of such firms. This has evidently an upward bias in the recovery rates in the reorganization studies. Furthermore, these firms might have reached higher recovery rates if they would have been liquidated (even via a going concern asset sale) at an earlier phase in their "reorganization" process.

[39] As already mentioned Thorburn (2000) found for the going concern sales a 40% recovery rate and a for liquidations a 35% recovery rate.

[40] Note that a firm may re-file a second or even third time for Chapter 11, but ultimately these inefficient firms will end up in the liquidation procedure.

This might result in a downward bias in the recovery rates in liquidation procedures (in separating systems). The correct way to compare the different systems is to match samples on the survival routes as suggested in figure 1. Going concern asset sales in liquidation-based systems should then be compared to the "really asset sale plans" and "really reorganization plans" in the reorganization procedure[41]. Furthermore, these reorganization cases should be complemented with the going concern sales in the liquidation procedure of separating systems. Excluding these latter cases in samples leads to an additional bias, discussed below.

6.3 Going concern sales and reorganizations compared

Another bias may exist when going concern sales in non-separating systems are compared to only Chapter 11 outcomes. The reorganization outcomes of going concern sales in Chapter 7 procedures should be included when recovery rates of all reorganized firms in a non-separating system are to be compared to all reorganized firms in a separating system. A priori, it is not clear whether the recovery rates of going concern sales in Chapter 7 will differ much from those attained in going concern sales in a non-separating system. Inasmuch Chapter 7 going concern sales are also adversely affected by a firm viability signal, it seems likely that these recovery rates are lower than the recovery rates on going concern sales in a non-separating system. Leaving these going concern sales in Chapter 7 out of the analysis, then results in an upward bias in the recovery rates of the only Chapter 11 cases compared to the going concern sales in non-separating procedure.

It seems that this bias as well as the continuation bias discussed in the section above, work in the same direction when comparing going concern sales with reorganization cases. Some evidence on this conjecture is available through the work by Sundgren (1998). He compares recovery rates under the old Finnish Code with rates achieved under the new Finnish Code. He finds a statistically significant higher recovery rate of 9% for reorganization cases (new Code) over going concern sales under the old

[41] These samples should approximately have the same proportion of "re-filers".

Code.[42] The question is whether this surplus is caused by firms filing in an earlier stage of their financial problems for reorganization than they do for liquidation (which enhances the economic efficiency), and/or whether it might be due to illiquid asset markets (which makes going concern sales less attractive), and/or whether the comparison is biased by not taking into account the going concern asset sales in the liquidation procedure and by the continuation bias in the reorganization procedure. Although it is difficult to correct for these biases, it is at least necessary to find out the recovery rates of going concern sales achieved in liquidation procedures in separating systems. It is unclear whether the difference in recovery rates in going concern sales versus reorganizations is large enough to conclude that a separating system achieves a higher level of efficiency compared to the non-separating system. With these biases in mind, the recovery rates as found by Thorburn (2000), Ravid & Sundgren (1998) and Sundgren (1998) for Sweden and Finland, respectively, do not seem to differ that much from the US or UK to draw firm conclusion concerning the inefficiency of any of these systems. For this much more should be found out about Chapter 7 procedures (or, for the UK, compulsory liquidations and CVL's), the effect size has on the way bankruptcy proceedings end and the associated recovery rates.

7 Conclusions

The discussion above cannot lead to the definitive proof of the failure of reorganization rules, or the success of liquidation rules, or vice versa. Too much about what is going on in liquidation procedures in separating systems is unknown. For instance, a going concern sale rate in Chapter 7 of 30% would instantly add 21% to the survival rate of the US-system in total. It also makes clear that the going concern asset sale is, or could be, an important instrument in resolving financial distress in any bankruptcy system. Restricting the use of this instrument in any, or part of a, procedure is surely to adversely affect total system efficiency. Furthermore,

[42] His sample shows the strange finding that under the old Code the going concern asset sales has a lower median recovery rate compared to the median recovery rate of piecemeal liquidations.

a system that tries to separate reorganization and liquidation cases may affect firm viability prospects in the liquidation procedure. This may diminish the chances of a firm to survive by way of a going concern sale in the liquidation-based procedure.

Part of the studies discussed above also reveal that size has an important effect on survival and recovery rates, at least as is known from studies on Chapter 11 cases. Reorganization rules seem to be much more an economic necessity for larger firms, than for smaller firms, especially in terms of (direct) costs and debt recovery rates. Although one should note that we do not know the results if these Chapter 11 cases would have been sold as going concerns in a liquidation procedure.

One of the more obvious implications from the analysis is that the figure and tables discussed above are far from perfect and that more data is needed on bankrupt firms in different procedures and in different size classes. At least such data should make it possible to solve (part of) the puzzle of differences in recovery rates over bankruptcy systems. It should also provide some evidence to what extent the going concern asset sale is inhibited by asset illiquidity, compared to the re-contracting and managerial failures in reorganization procedures. Another implication follows from the survival rates among countries, or more specific the differences in these rates. It leads me to suspect that other rules and regulations concerning firms in financial distress, not part of the bankruptcy codes, are, at least partially, driving these results. This is an area where a comparative study of bankruptcy law and especially parts of corporation and labor law could prove to be very insightful in the way liquidation rules "force" firms to liquidate their businesses, either via a going concern asset sale or a piecemeal liquidation.

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