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A Study of the U.S. and Finnish Bankruptcy Codes***

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Abstract

We use a sample of small firms to compare efficiency aspects of the creditor oriented old (pre-1993) Finnish bankruptcy code and the debtor oriented U.S. code. We find that although the same economic factors affect liquidations in both the U.S. and Finland, under the Finnish code firms are somewhat more likely to be liquidated piecemeal. We also find that the costs of going concern sales and of liquidations under the Finnish code tend to go towards the higher end of the range found in U.S. studies; and that payments to creditors in U.S. reorganizations are higher than the payoffs under the Finnish bankruptcy regime.

Introduction

This paper provides some insights into the relative efficiency of the two major types of bankruptcy law. The first is the reorganization, debtor-oriented American bankruptcy code; the second is the creditor-and liquidation-oriented legislation common in Europe. To do this we analyze a combined sample of small American and Finnish firms in financial distress. Although most European firms as well as a significant percentage of the firms in the U.S. are small or mid-sized, this class of firms has received little attention in the bankruptcy literature. Our paper contributes to filling this gap¹.

In recent years, the efficiency aspects of the bankruptcy process have received a great deal of interest in the literature (see John, 1993, and Senbet and Seward, 1995, for reviews). One of the broad questions addressed in such studies is whether chapter 11 results in too many inefficient firms being kept alive, or whether a code without Chapter 11 might result in too many liquidations.

Empirical evidence shows that many firms emerging from Chapter 11 are financially unstable. Hotchkiss (1995) is one of the recent papers showing that reorganized firms continue to experience difficulties later on. Gilson (1993) finds similar results.

Several theoretical models explain this tendency for inefficient firms to survive Chapter 11 proceedings. Bulow and Shoven (1978), White (1983), and most explicitly, Gertner and Scharfstein (1991) and Mooradian (1994) model inefficient firms selecting reorganization under Chapter 11.

Other studies document the incentive to continue operations of inefficient entities in which management is motivated by its advantageous position in Chapter 11 and by deviations from absolute priority (see Franks and Torous, 1989, Eberhart et al., 1990, and others).

If this line of reasoning is correct, the effective elimination of chapter 11 should provide more efficient bankruptcy proceedings. The opposing argument is that Chapter 11 allows economically viable firms to reorganize, rather than face the "common pool" problem, in which creditors rush to liquidate assets in order not to lose out (see Brown,

¹ In Finland and many other European countries, bankruptcies of large, publicly traded firms are rare events. In fact, between 1982 and 1991 only one publicly traded Finnish firm was liquidated in bankruptcy proceedings. During the 1991-92 recession six more firms went through bankruptcy filings. Comparable numbers for Sweden, for example, are three and 15, respectively.

1989, for a very good description of the process in question).

LoPucki & Whitford (1993a), White (1996) and others consider another facet of the bankruptcy code. They suggest that the lenient treatment of debtors in Chapter 11 proceedings provides incentives to file for bankruptcy in an earlier stage, while there is some value left in the firm.

Finally, several scholars have argued that a code that provides for sales of firms as going concerns (similar to the old Finnish code) would be more efficient than a reorganization-directed code. This view dates back to Baird (1986) who argues that the asset deployment decision would be more correct and the administrative expenses lower if auctions were used to allocate assets to the highest value user (See Haugen and Senbet, 1978, for the fundamental argument on this issue).

However, Shleifer and Vishny (1992) question the efficiency of auctioning distressed firms and suggest that, under some circumstances, assets might be sold below their fundamental value.

There has been scant, if any, empirical evidence comparing the outcomes of different bankruptcy codes. This is not just an academic issue, it is also a matter of importance for government and corporate policy. In the U.S., Chapter 11 is being continually questioned. In Europe and in Asia there is an ongoing policy debate as to whether a creditor-oriented or a debtor-oriented code is best. In some industrialized countries, such as Belgium or the Netherlands, reorganization is still not possible (see Kaiser and Kaiser, 1996). Italy has a provision that is somewhat similar to Chapter 11, but the number of distressed firms taking advantage of it is minuscule : in 1990, about 1% of the total number of bankrupt firms filed under this provision; in 1991, this proportion was even lower (see Barontini et al., 1997). Several other countries, notably France, Britain, and Sweden (as well as Finland, of course), have only recently added U.S. type reorganization to a creditor-oriented code.²

Berkovitch and Israel (1995) argue that bankruptcy codes should be different for economies with different information structures. In particular, countries where managers cannot predict the result of creditors' investigation into the prospects of

² For a detailed comparison of the old British and the U.S. codes see Franks and Torus (1994). Thorburn (1997) compares the outcome of the Swedish code, which is similar to the old Finnish code, to U.S. studies. However, most of the U.S. studies Thorburn (1997) considers are of publicly traded firms, whereas the Swedish sample is of small firms, similar to our sample.

potentially distressed firms with certainty (as is presumably the case in the U.S.), should have a creditor and a debtor chapter. In economies where managers and investors have closer ties (presumably similar to Finland), only a creditor chapter is necessary for the optimal implementation of investment and liquidation.

Our paper compares bankrupt firms under the Finnish and under the US code and provides evidence for the efficiency debate. The Finnish code which was in effect before 1993, when a new reorganization law was enacted, was almost the extreme opposite of the U.S. legislation. It can be described as very liquidation-oriented, it included only a few rarely used provisions related to compositions.³

We examine a sample of 72 small bankrupt firms of which 21 were sold as going concerns. We present evidence related to the administrative costs, the likelihood of liquidation, and the payoff to creditors under the Finnish code. These findings are compared with results reported in various U.S. studies. We also test the likelihood of liquidation using a combined U.S. and Finnish sample. In section I, we briefly compare and contrast the U.S. and the Finnish bankruptcy codes. Section II presents the Finnish data used. Section III compares the likelihood of liquidation under the two regimes. Section IV presents results related to the administrative costs of bankruptcy, and Section V focuses on the payoff to creditors. Section VI concludes.

I. A Brief Description of the Codes

When a firm filed for bankruptcy, the old Finnish code mandated a takeover of management by an appointed trustee.⁴ The principal task of the trustee was to either sell the firms as going concerns, or to liquidate them piecemeal. Proceeds would be distributed to creditors according to the priority of their claims. Although the code had originally been designed for liquidations, going-concern sales became increasingly common.

The old Finnish code was thus similar in concept to codes in many European countries, such as Belgium, Italy, the Netherlands and Switzerland, and to some

³ See the Government proposal for the reorganization law 1992/182.

⁴ This aspect of bankruptcy proceedings is common to many industrialized countries, with the notable exception of the U.S., and to some extent, France. (See Kaiser and Kaiser, (1996).

extent, Germany and Japan. Historically, these codes date back to France in 1807. The commercial code enacted then, which covered bankruptcy proceedings, essentially viewed the debtor as a criminal, and focused on payment to creditors (see Kaiser and Kaiser, 1996).

The U.S. code, on the other hand, represents a debtor-oriented framework. Typically, the parties attempt a workout (see, for example, Gilson, John, and Lang, 1990) before commencing formal bankruptcy proceeding. Chapter 11 filing follows if negotiations fail. In sharp contrast to the Finnish code, under Chapter 11, management stays in place. Equity holders are allowed to propose a reorganization plan (see Brown, 1989, and many others for detailed descriptions of the U.S. code). Chapter 11 can result either in liquidation or in reorganization. In Finland there is a strict adherence to absolute priority. In the U.S., absolute priority is routinely violated in favor of shareholders (see, for example, Franks and Torous, 1989, or Eberhart et al., 1990). Although Chapter 11 is oriented towards reorganization, many firms are also liquidated following a Chapter 11 filing (see Flynn, 1989, and Jensen-Conklin, 1992). Alternatively, cases may be converted to Chapter 7 liquidation.

Thus, if we assume economic efficiency, viable firms in the U.S. would most probably be reorganized, whereas in Finland such firms would be sold as going concerns. Finally, Chapter 11 filings generally last much longer than any proceedings in Finland.

II. Data

The Finnish sample for this study consists of 72 small firms that filed for bankruptcy between 1982 and 1992. Our primary source of information is the records of the taxation authorities in two administrative provinces, "Nyland's Län" and "Vasa Län". Nyland's Län includes Helsinki, the capital of Finland, and some other large cities. Table 1 shows that 30% - 35% of all filings in Finland typically take place in Nyland's Län and that about 8% of the filings take place in Vasa Län, located in the western part of the country.

We considered for our sample cases closed between the beginning of 1988 and the end of 1992. We excluded all cases that had not reached the stage of a bankruptcy judgement (see table 1). The firms in our sample are not publicly traded and are therefore comparable to small American firms. To better match the samples,

we also excluded firms with assets under about U.S.\$ 100,000 (FIM 0.5 million). We define assets as the sum of administrative expenses and total disbursements to creditors.

This sampling procedure yielded a primary sample of 207 joint-stock companies. To be included in the final sample, we required documentation, which had to include information on proceeds received when assets were sold, and data on administrative expenses. These criteria resulted in a reduced sample of 88 firms.

For our final sample, five additional firms were excluded, because balance sheets were not available from the records of the taxation authorities or received from courts after request.⁵ We omitted 11 cases because they had very few assets left (below 100,000 FIM or U.S. \$20,000) after the bankruptcy filing.

[Table 1]

III. The Likelihood of Liquidation

As we noted earlier, the issue of inefficient liquidations has generated considerable debate in recent years. The drafters of the Finnish Reorganization Law enacted in 1993 stated that a major purpose of the law was to provide a legal framework for the reorganization of economically viable firms and to avoid unnecessary liquidations. This view dates back to the enactment of Chapter 11, the U.S. reorganization law. Justice Blackmun, quoting a House Report wrote: "...Congress presumed that the assets of the debtor would be more valuable if used in a rehabilitated business than if sold for scrap" (see Jensen-Conklin, 1992, p. 301). However, neither the Finnish nor the U.S. legislators pointed out exactly why a reorganization law was needed to protect going-concern values.⁶

In this section we examine the likelihood of piecemeal liquidation under the U.S. and the Finnish bankruptcy codes. Since there was no such thing as reorganization in Finland prior to 1993, firms that were not liquidated were sold as going concerns. In the U.S. firms that were not liquidated tended to be reorganized

⁵ The documents reviewed included less information about smaller firms than about larger firms. Thus, the proportion of firms that would have been omitted because of missing data would have been higher if the size limit of 0.5 million FIM had been lower.

⁶Bradley & Rosenzweig (1992) point out that nowhere did the U.S. Congress precisely articulate what it meant by "economic efficiency", nor did they, to any extent, rely on empirical data.

under the provisions of Chapter 11. Senbet and Seward (1995) describe chapter 7 of the U.S. bankruptcy code as follows: (p.922) " the firm is shut down by a court appointed trustee, the firm's assets are sold, and the liquidation proceeds are distributed in accordance with the APR rule". While in theory firms can be sold as going concern under Chapter 7, Baird (1992, p. 14) notes that, "...As a practical matter, however, we never see going-concern liquidations." Franks, Nyborg and Torous (1994, p. 13) point out that in recent times there has only been one case (in California) in which a company was maintained as a going concern in Chapter 7. In this case the trustee was sued for wasting creditors' assets.

Although liquidations seem to be similar in both countries, there are some differences between going-concern sales in Finland, and reorganization under Chapter 11 in the U.S. In Chapter 11, incumbent management is in control of the firm; in going concern sales a trustee is in charge. Also, there can be differences in markets for real-asset sales that could partially explain the prevalence of going-concern sales in Finland. We try to capture these differences in the bankruptcy code variable we introduce in the empirical specification for the combined sample.

We consider a Finnish firm as liquidated if operations were terminated and assets were sold piecemeal. If operations continue under a different management, we consider this a going concern sale. For the firms classified as going-concern sales in Finland, 80% of the assets on average (in half the cases over 90%) were sold to a single successor.⁷ Firms sold as going concerns engaged in a wide variety of businesses, including two leisure boat manufacturers, two producers of plastic products, three cloth manufacturers, two hotels and restaurants, one bakery, two sawmills, a producer of veneer, a discotheque, a producer of trailers, two manufacturers of metal products, one firm providing marketing services, and three firms from the retail or wholesale sector. Most of these were small or mid-sized companies, likely to have specialized facilities and equipment that would have little

⁷ In fact, U.S. Chapter 7 liquidations can also include some remaining operating assets, and asset sales are common in Chapter 11, and also outside of Chapter 11. Therefore, classifications of cases as liquidations or continuing operations, either in the U.S. or in Finland-or in any other country-must be a matter of degree (for a good discussion of the issue of asset sales by bankrupt and non-bankrupt firms see Maksimovic and Phillips, 1997). We use classification methods comparable to U.S. studies, but also report results of statistical tests based upon a somewhat different classification of firms.

value in other uses.

On average, as noted, successors received 80% of total assets by value. In four cases, the buyer of most of the operating assets ended up with less than 50% of total assets, but the assets not included in the sale—such as apartments owned by the bankrupt firm—had no economic significance for continued operations. The four cases in question included a sawmill, a restaurant, a printing company, and a small textile firm. Except for the sawmill, the assets not sold to a successor were apartments owned by the companies. All operating assets, on the other hand, were sold to a single successor. In the case of the sawmill, inventories were sold to other buyers, but the sawmill itself was sold to a party which continued operations.⁸

In other cases, assets that were sold to others typically included receivables, which were collected by the trustee but not transferred to the successor. Some minor assets might have been sold to other parties, and inventories were sold if operations continued after the bankruptcy filing.⁹

Although we do not always know the exact identity of the buyer, we know that in several cases, managers purchased the bankrupt company, and that in other cases, other firms in the same line of business were the buyers. There could in principle be cases in which the assets were sold to a party, who subsequently liquidated the firm, but this is rare. From the description in the previous paragraphs (see also footnote 7) it is clear that in all going concern sales business continued. Assets that were not sold to the successor typically included real estate or other non-business-related assets.

Using this logic, we first compare the percentage of firms in our Finnish sample that were liquidated with several American studies of small firms. Then, using the information in LoPucki (1983) and Kerkman (1987), we construct a combined sample of U.S. and Finnish firms and use logit regressions to test whether the bankruptcy code affects the liquidation decision.

We found 21 cases of going-concern sales, comprising 29% of the firms in the sample. Note that the rate could be much lower for the entire population of bankrupt

⁸ We show later that tightening the going concern sales criterion will not qualitatively change our results.

⁹ Some operations continued also in nine of the cases classified as liquidations. However, in those cases, significant parts of the operating assets were sold to parties other than the successor, and the prices received represented only 18.5% of total proceeds.

firms, because we focused on the upper (size) decile of cases handled during the sampling period.

Table 2 presents some comparable U.S. evidence. LoPucki (1983) analyzed firms that filed for Chapter 11 during 1979-1980 in the Western District of Missouri. LoPucki defined a reorganization as successful if the debtor obtained confirmation of a plan and continued in business until the date of the survey. According to this criterion, 11 of the 41 cases (26%) resulted in a successful reorganization, which is about the same as the proportion of going-concern sales in Finland.

Kerkman (1987) roughly replicated LoPucki's (1983) study. His data included 48 firms that filed for Chapter 11 in the Eastern District of Wisconsin during 1982. Using LoPucki's definition for a successful reorganization, Kerkman found that 27% of the firms emerged with a confirmed plan and stayed in business. Table 2 shows that both LoPucki's and Kerkman's studies include firms of sizes similar to those in our Finnish sample. Therefore we use these two studies for our combined sample.¹⁰

Flynn (1989) describes a study by Ernst & Young of 2,395 bankruptcy cases with confirmed reorganization plans in 15 districts in the U.S. The sampling period was 1978 to 1987. The cases with confirmed plans made up 17% of all filings. However, Flynn estimates that the confirmation rate for cases filed after 1986 would be in the 25% to 30% range. About 20% - 30% of these cases had liquidation plans rather than reorganization plans. Thus, about 12% to 20% of the cases in the sample effectively re-organized, which is a considerably lower rate than that of going concern sales in our study. However, Flynn's sample included family farms, which had a very low confirmation rate under chapter 11.

[Table 2]

White (1984) studied a sample of 64 firms that filed for bankruptcy under Chapter 11 in the Bankruptcy Court for the Southern District of New York in Manhattan during the period 1980 to 1982. Of the 64 firms, 41% adopted reorganization plans and another 6% had reorganization plans that were pending when the study was conducted. Thus,

¹⁰ We note that most U.S. firms included in the two samples did not have publicly traded securities and data on workouts were not available. As in the case of the Finnish firms, we can assume that workouts were attempted prior to bankruptcy filings.

between 41% and 47% adopted reorganization plans. White (1984) also found that in another 23% of the cases, managers and creditors could not agree on a reorganization plan, but the firm continued operating and was sold as a going-concern under Chapter 11. This would mean that as many as 70% of the firms were preserved as going concerns. This is considerably more than the rate reported in other studies.¹¹ Jensen-Conklin (1992) examined all Chapter 11 cases filed in the Southern District of New York in Poughkeepsie during the 1980 to 1989 period. A total of 260 cases were identified. Of these, 45 Chapter 11 cases, or 17%, were confirmed. However, in the final count, only 6.5% of the firms in the study that had filed for Chapter 11 had a reorganization plan acceptable to creditors, continued in business, and paid their creditors as stipulated.

Our comparison thus shows that the rate of Finnish firms sold as going concerns is lower than the rate reported in White's (1984) study, comparable with the rate in LoPucki's (1983) and Kerkman's studies, but is higher than the rates reported by Flynn (1989) and Jensen-Conklin (1992). This suggests that the concern for excess liquidation in the Finnish system could be unfounded. However, because the firms in the Finnish sub-sample may differ in other aspects, we provide a regression analysis.

Manufacturing firms generally have more firm-specific assets than do other types of businesses. LoPucki (1983) finds that the probability of a successful Chapter 11 reorganization is higher for manufacturers than for other types of businesses. Size also seems to affect the probability of liquidation. Weiss (1990), who studies publicly traded U.S. corporations, finds that 86% of the firms in his sample were successfully reorganized. This is a much higher rate than the rates for the smaller, privately held firms cited in Table 2.

Table 3 investigates directly the impact of the bankruptcy code on the likelihood of liquidation, controlling for the effect of size and the proportion of manufacturing

¹¹ We note that Flynn (1989) points out that cases in the Manhattan district are different from other districts. In his own study of several districts, he found that cases in Manhattan usually involved debtors with more assets and debts than average. Flynn (1989) further reports that the cases in that district were more than twice as likely to result in confirmation as cases in other districts.

firms.¹² To account for possible industry impact on the proportion of firms that are liquidated, we also include additional dummy variables for industry classification. We derive our data for U.S. firms from LoPucki (1983), who studies Chapter 11 cases during the first year after the effective date of Chapter 11, i.e., from October 1979 to September 1980, and from Kerkman (1987), who examines Chapter 11 cases in 1982. We identified a total of 96 filings. Of these cases, forty-one continued in business as they filed for bankruptcy.

To better match the U.S. firms with the Finnish firms, we omit family farms and firms with assets below US\$ 85,000. Seventy-seven U.S. firms and 72 Finnish firms remain in the sample.

Table 3 presents our Logit regression results. The dependent variable in the regressions takes the value of one if a firm is not liquidated. A positive sign on a coefficient thus implies that higher values of the variable increase the probability that a firm will remain in business.¹³

The bankruptcy code variable takes the value of one if the firm is Finnish and zero if the firm is American.

Results reported in regression 1, Table 3, control for industry and size. We introduce dummy variables for manufacturing, construction, and retail industries. (The retail industry is the reference group). Although the coefficients have different signs, only the manufacturing dummy is significant. This is similar to other studies which did not consider other industry dummies. In other words, manufacturing firms are more likely to stay in business.

Similarly, we find that larger firms are less likely to be liquidated. Regression 2

¹² The firms in both samples are small, and thus additional firm characteristics are generally not available.

¹³ White (1994) pointed out in her review of the LoPucki(1983) study that the firms that did not adopt a reorganization plan were shut down. Therefore we are fairly confident that we have a correct comparison of liquidated firms between our sample and Lopucki's sample. While we believe this classification holds for Kerkman's (1987) study as well, we do not have explicit information as to what happened to firms in his sample that were not re-organized. Thus, we repeated the regressions using a combined sample of LoPucki's firms and our Finnish firms only. The results were very similar. Only the manufacturing dummy and the log of assets were statistically significant. The bankruptcy code dummy had the expected sign, but again, was not statistically significant.

controls further for firm solvency. Firm solvency, which approximates "quality", is defined as shareholders' equity in relation to total assets. Since the sample includes cases with extreme values, a square root transformation is used.¹⁴

We provide separate regressions that include or exclude the solvency ratio, since it may be endogenous. The U.S. code, where shareholders often receive some distributions (see Franks and Torous, 1989, or Eberhart et al., 1990) provides incentives to file early, when there is still some value in the firm. The Finnish code enforces absolute priority, so shareholders risk nothing by running a bankrupt firm into the ground. The solvency ratio has the expected sign, but it is insignificant.

The bankruptcy code variable has a negative sign both in regressions 1 and 2, but it is not significant. We cannot establish that the bankruptcy code matters, but the direction is as predicted.

Our finding that manufacturing firms and larger firms are more successful in reorganizing is similar to the results obtained in other studies. In addition to papers already cited, Gilson, John and Lang (1990) also found that firms with more intangible assets tended to restructure privately rather than go through a costly Chapter 11 proceedings. Since our sample comprises small firms, it is very difficult to obtain information about out-of-court settlements. However, the thrust of our argument is consistent.

[Table 3]

In conclusion, it appears that the same factors affect the prospects of firms going through liquidation procedures in both the U.S. and in Finland, and that these factors, size and the type of business, are similar to factors found in other U.S. studies. We

¹⁴ The solvency measure is based on book values of debts and assets. The book value of assets can exceed the book value of debts when firms file for Chapter 11. However, the reason for extreme values is that some firms had virtually no assets at all and were totally insolvent. This holds for both the Finnish and the U.S. samples. The transformation of the solvency ratio was as follows:

$$\text{SOLVtran} = \begin{cases} +\sqrt{\text{SOLV}} & \text{if SOLV} > 0 \\ -\sqrt{-\text{SOLV}} & \text{if SOLV} < 0 \end{cases}$$

studies. We can only find very weak support for the view that a liquidation-oriented code might induce more liquidations¹⁵¹⁶.

There can be another interesting interpretation of our results. If one interprets the findings as supporting the view that the bankruptcy code does not change the probability of liquidation, and if liquidations are indeed efficient in both countries, then only economic variables, such as assets and SIC classification or "quality" should matter. This interpretation is consistent with the theory in Berkovitch and Israel (1995), which implies that different countries have different optimal bankruptcy codes.

IV. The Direct Costs of Bankruptcy

An important remaining question is which of the procedures, the Finnish code or Chapter 11, is cheaper. This section compares the bankruptcy costs under the two codes.

[Table 4]

Panel A, Table 4, compares the costs of a going-concern sale with reorganization costs. As noted, firms that do not liquidate reorganize in the U.S. In Finland they are sold as going concerns. However, the two methods have important differences in the administration of the procedure (trustee vs. management). Also, the asset markets in the two countries may be different. We report two measures of costs under the Finnish Code. The first is total administrative expenses as percentage of assets. Total administrative costs are defined as fees paid to trustees, lawyers, and accountants, as well as other expenses, which may include costs for advertisements, meetings of

¹⁵ A casual look at Table 2 reveals that we are combining studies with very similar proportions of liquidated firms. Therefore, the fact that the coefficient is consistently negative (but insignificant) may be somewhat more encouraging than it seems.

¹⁶ As discussed earlier, while we believe that our classification is possibly the best, we re-ran the logit regressions reported in Table 3, using a more stringent criterion, i.e., we classified a procedure as a going-concern-sale only if the majority of the operating assets **as well as** at least 50% of all assets were sold to one successor. Three additional firms were then classified as liquidations. Results were similar to the previous analysis with somewhat higher t-values. The coefficients of the code variable (t-values in parentheses) were: -0.44 (-1.02) in regression 1 and in regression 2, -0.31 (-0.69).

creditors, or auctions.¹⁷ We define available assets as the sum of the payments to creditors and the administrative costs we have calculated. This represents the market value of the firm's assets.

The second measure we use is legal and other professional fees in relation to assets. This definition excludes the costs defined above as other administrative expenses. The mean (median) costs of a going concern sale are 14.15% (14.7%) according to the first definition, and 12.35% (11.37%) if the latter computation is adopted¹⁸. The latter definition of costs is closer to the definition used in U.S. studies, e.g. Ang, Chua and McConnell (1982).

In the foregoing analysis assets were defined using ex-post values (payment data). If asset markets are illiquid (see Senbet and Seward, 1995, p. 940) we have a small number in the denominator of our cost ratios, possibly creating some bias in our computations. Therefore, we also normalize the costs, using book values of assets. As expected, the ratios (see Table 4) are indeed smaller, indicating that some value is lost in the process of either going-concern sales or liquidations. However, book value is of course not indicative of market value, so we cannot draw a definite conclusion.

The qualitative ranking vis-a-vis U.S. studies, however, does not change with either definition.

There are many measures of direct bankruptcy costs in the U.S., starting with Warner (1977), who found that the direct costs of bankruptcy in railroads were 5.3% of the value prior to filing. Altman (1984) found average direct bankruptcy costs of 6.2% for his sample of 18 cases. Altman estimated that the indirect costs of bankruptcy were much higher - 10.5% of firm value a year prior to bankruptcy, or 17.5% according to

¹⁷ Some expenses, which are unrelated to the bankruptcy process, such as wages, material purchases, rents, insurance, and energy costs are deducted from the prices received when the assets are sold.

¹⁸ If we tighten the definition of the going-concern sales and include the four cases discussed earlier as liquidations rather than as going-concern sales, the cost of reorganization appears somewhat higher (a mean of 13.08% and a median of 11.43% for fees over total assets; total costs over assets are 14.92% and 15.08% respectively). The cost of liquidations appears somewhat lower (12.94% and 12.06% respectively for fees/assets; 16.36% and 14.76% for total costs/assets, respectively).

another method.¹⁹ However, both these studies and several others focus on large publicly traded firms. White (1984), who analyzes a sample of small firms, reports that the cost of reorganization averaged 3.4 % of value. White reports average assets of U.S.\$1.4 million, (inflated to current levels, this amount would be higher) while the average assets of the firms in our sample reach U.S.\$1.7 million (FIM 6.7 million).²⁰²¹

We further note that many reorganized US firms re-enter Chapter 11. Eberhart et al. (1990), Hotchkiss (1995), Gilson (1993), and LoPucki and Whitford (1993b), all examined publicly traded firms, and found a considerable incidence of subsequent financial difficulties. Jensen-Conklin (1992) examined small firms and found that 42% of cases with a confirmed plan were either liquidated or were dismissed from the bankruptcy court because of the debtors' inability to comply with the plan.

Lawless, Ferris, Jayaraman & Makhija (1994), who also focus on small firms, report higher costs of Chapter 11.²² Their mean (median) reported costs are 26.19% (13.72%) of disbursement to non-secured creditors and 14.49% of all disbursements. Thus, the mean cost of a reorganization of a small firm in the U.S. seems to be slightly higher than the cost of selling a firm as a going concern in Finland. However, we cannot draw a definite conclusion as to whether going-concern sales are more or less expensive than reorganization proceedings because of the different sampling procedures. The skewness evident in Lawless et al (1994) suggests outliers, whereas

¹⁹ Altman's computations of direct costs were based on the files of bankrupt companies. The indirect costs, always very difficult to measure, were based upon estimates of potential lost earnings. Senbet and Seward (1995) argue that these latter estimates may include a forecasting error and may also reflect indirect liquidation costs, for example, as a result of a competitor introducing a dominant product.

²⁰ The exchange rate used is FIM/US\$ = 5.222, which was the prevailing rate in the end of the sampling period in 1992.

²¹ Betcker (1997), who studies larger firms, finds costs similar in magnitude to those reported in White(1984). Betcker (1997) finds that the direct costs of chapter 11 restructuring are on average 3.93% of pre-restructuring assets, or 6.3% of post-restructuring asset value. Most firms in his sample, however, are publicly traded with assets exceeding half a billion dollars.

²² Comparisons to Lawless et al.(1994) are difficult because their sample includes mainly tiny firms - their mean unencumbered assets are \$27,797 (median \$13,483). Since lawyers and other professionals have minimum charges, such small firms will, almost by definition, have high cost to asset ratios.

it seems that the Finnish proceedings generate costs that are more evenly distributed.

Panel B, table 4, compares the costs of liquidation. The table shows that the mean (median) administrative expense for our sample is 16.9% (14.7%) of assets. The variation of costs reported in different studies makes a comparison difficult. However, our costs tend to be towards the lower end of the range reported in U.S. studies - they are somewhat higher than costs reported by Ang et al. (1982), but significantly lower than costs reported by Stanley and Girth (1971) and Lawless et al. (1994). We also note again the apparent skewness of costs in the U.S. compared to the more even distribution in Finland. Finally, when comparing total administrative costs of liquidating firms, we might take into account the fact that many firms that eventually liquidate first try to reorganize in Chapter 11. Thus, cumulative expenses of liquidating firms in the U.S. may in fact be even higher.

V. A Comparison of the Payoff to Creditors.

A final issue is the incentive structure of the two bankruptcy codes. One can argue that the U.S. code, because it is debtor- oriented, can induce firms to file earlier. Many theoretical and empirical papers such as Brown (1989), Gilson, John, and Lang (1990), Berkovich and Israel (1995), and starting as early as Haugen and Senbet (1978), have considered the incentive structure of Chapter 11. White (1993), LoPucki and Whitford (1993) and others also point out that equity deviations can provide managers (acting in the interest of equity holders) with incentives to file for bankruptcy in an earlier phase.

Under the old Finnish code, on the other hand, typically, the first action a trustee would take, is firing incumbent management. Thus, management seems to have no good reason to file for bankruptcy until there is no value left in the firm. We might then expect that firms that enter Chapter 11 would be "better" than firms that file under the Finnish code. This section finds tentative support for this view.

We compare the payoff to creditors in Finland with the promised payoff according to Chapter 11 plans. We draw our U.S. data from Flynn (1989), who discusses a study by Ernst & Young that covered 2,395 cases with confirmed reorganization plans in 15 districts. We calculate payoff ratios as actual payments to creditors for the Finnish firms and as promised payments in the reorganization plan for the U.S. firms, in relation to total liabilities.

The estimates of payments in the Flynn study are not based on present value. He suggests that since reorganization plans include payments well into the future, proposed payments would have been 10% to 20 % lower if the study had discounted future payments to determine true present value.

While no exact breakdown of payments by creditor classes was available, we note that in Finland, general creditors rarely receive anything. A government study (reported in the Regeringnes Proposition, 1992) found that general creditors received nothing in 98% of all liquidations. There is no comparable figure for the U.S. studies.²³ Further, banks tend to have floating charges, i.e., they have a right to receive up to 100% of remaining proceeds after secured creditors, wages, taxes, and court and legal charges are paid. Such payments make breakdowns of payments to creditors even more difficult to determine.

[Table 5]

Table 5 shows that the median payoff ratio for the Finnish firms is 33.3%, as compared to 45.2% for the U.S. district with the lowest payoff ratio, and 56.4% for the district with the median payoff ratio. Investigating the patterns of the ratios, we note that in about 20% of the cases, U.S. firms have plans calling for payoffs approximately equal to their outstanding debt (without present-value adjustments). On the other hand, very few Finnish firms come close to repaying their liabilities in full. Only one fifth of the Finnish firms paid their creditors more than 48.8% of the amounts owed. For one fifth of the Finnish firms, the payoff ratio is below 16.5%. On the other hand, the firms that represent the lowest two deciles of the U.S. firms paid at most 22% for the median U.S. district and 13% for the district with the lowest payoff ratio. The table further shows that the median payoff ratio is 33.5% in piecemeal liquidations, whereas it is slightly lower, at 28.4%, for firms sold as a single entity.

For comparison purposes we also added figures from a study of Swedish bankruptcies by Thorburn (1997). The Swedish code is similar to the old Finnish code, and Swedish payoff ratios are indeed very similar to ours, which strengthens our conclusion that Finnish firms file for bankruptcy "later", when there is less value left

²³ For large chapter 11 cases a breakdown of payments must be reported. However, such data is not available for the small firms included in our sample.

in the firm.

Again, a few words of caution are necessary. As we have pointed out, many firms that emerge from Chapter 11 restart bankruptcy proceedings within a few years. In other words, the U.S. payoff ratios might be somewhat overestimated. Also, the payoffs reported in Finland are more accurate because the U.S. payoffs are reported in the final plan, which can change somewhat upon implementation. Moreover, differences in payoff ratios may be due to differences in the composition of the samples, such as differences in the proportion of firms' secured assets (White 1983), or to the differences in administrative expenses of bankruptcy. Another possibility is that asset markets in Finland are less liquid and hence creditors receive less in going concern sales (see Shleifer and Vishny, 1992). However, our results do seem to provide support for the view that U.S. firms tend to file for bankruptcy early, while there is still some value left in the company.²⁴

VI. Conclusion

The Finnish bankruptcy code prior to 1993, when a reorganization law was enacted, was a creditor-oriented code under which bankrupt firms were either sold as going concerns or were liquidated piecemeal. Our study provides some evidence concerning the efficiency of liquidation and preservation of business under this code and compares our findings to American studies.

We collected a sample of 72 small Finnish firms that filed for bankruptcy during the 1982-1992 period and compared the liquidation rate under the Finnish code with the rate of liquidation reported in several American studies. The percentage of liquidated firms falls between rates reported in several American studies, and thus we cannot support the view that a European code will lead to more liquidations.

The likelihood of liquidation might also depend on firm characteristics. To control for such factors, we ran a logit regression on a sample consisting of the 72

²⁴ Our study and the comparable American studies cited so far examine small firms. However, it might be interesting to compare our results to Eberhart et al. (1990), who study large bankruptcies. Some calculations based on their sample yield a mean payoff ratio to creditors of 76% of outstanding obligations. The range is between 10.5% and 100%. However, only four companies paid 46% of debts outstanding or less. Six companies paid their obligations in full.

Finnish firms and a comparable number of U.S. firms included in LoPucki's (1983) and Kerkman's (1987) studies. The code coefficient had the predicted sign, but the effect was not significant statistically. Firm size and the type of business, however, were significant determinants of the likelihood of liquidation for the combined sample. This evidence may be consistent with the theory of Berkovitch and Israel (1995), who suggest that different codes may be optimal for different economies.

Our study also compares the administrative costs of selling firms as going concerns with costs of reorganization. We find no evidence to support the view that going-concern sales are cheaper, as Baird (1986) suggests.

The final empirical part of this paper focuses on the payoff to creditors. The comparison reveals that creditors of U.S. firms receive considerably more than Finnish creditors. It is possible that the market for assets of distressed firms is less liquid in Finland. However, the results also seem to support White's (1996) view that the harsh treatment of managers under procedures similar to the old Finnish bankruptcy code might have led them to delay filing for bankruptcy.

Table 1

TIMES SERIES OF THE TOTAL NUMBER OF BANKRUPTCY FILINGS AND THE NUMBER OF CASES THAT HAVE REACHED THE STAGE OF "BANKRUPTCY JUDGEMENT"

A bankruptcy judgement is given only if the assets of the debtor are large enough to cover the administrative expenses of the case. Information is reported for the whole country and the administrative provinces for which data was collected for this study, i.e., "Vasa Län" and "Nyland's Län".

Year	Number of Bankruptcy Filings			Number of Bankruptcy Judgements		
	Finland	Nyland	Vasa Län	Finland	Nyland	Vasa Län
1982	1447	-	-	530	-	-
1983	1322	-	-	569	-	-
1984	1704	-	-	584	-	-
1985	2122	-	-	-	-	-
1986	2463	778	195	622	162	42
1987	2816	942	231	(234	63
1988	2547	775	213	741	167	54
1989	2717	818	210	678	167	40
1990	3588	1239	306	909	231	57
1991	6252	2144	494	1807	601	145
1992	7355	2623	585	2803	732	202
1993	6765	2209	534	3136	792	189

Table 2**THE PERCENTAGE OF FIRMS NOT LIQUIDATED IN THE U.S. AND IN FINLAND.**

Study	Percentage of Firms Adopting a Chapter 11 Plan or of a Going-Concern Sale.	Mean or Median Assets of Firms in U.S.\$
Current study	29%	Mean: 1.3 Million Median: 0.71 Million
LoPucki (1983)	26%	Mean: 1.70 Million Median: 0.5 Million
White (1984)	41-47% (70%)a)	Mean: 1.67 Million
Kerkman (1987)	27%	Mean: 2.3 Million Median: 0.75 Million
Flynn (1989)	17% (12-14%)b)	Mean: 5.44 Million Median: 0.80 Million
Jensen-Conklin (1992)	17% (12.8%)b) 6.5%c)	Median: 0.57 Million

Notes:

a) Including firms that were sold as going-concerns in Chapter 11.

b) Excluding liquidation plans.

c) Percentage of cases that received a confirmed reorganization plan, continued in business and paid according to the reorganization plan.

Table 3

LOGIT REGRESSIONS RELATING THE LIKELIHOOD OF FIRMS NOT LIQUIDATED TO THE BANKRUPTCY CODE, SOLVENCY, THE TYPE OF BUSINESS AND THE SIZE OF THE FIRM.

The sample consists of 72 Finnish firms and 77 US firms. In total, 44 of the firms in the sample were preserved and 105 liquidated. t-values are in parentheses.

The bankruptcy-code dummy-variable takes the value one for Finnish firms and zero for U.S. firms.

Other industries include transportation, real estate and services. The retail sector is used as the reference group.

Thus, a positive sign on an industry dummy variable implies that this type of firm has a higher likelihood of being preserved as a going concern than does a retail firm.

Assets of the Finnish firms are from the schedule of the debtor's assets and liabilities, prepared by the trustee. Assets of U.S. firms are those filed in bankruptcy court by the debtor. The dollar amounts of assets are deflated with the U.S. production price level index to reflect the price level of 1992 and converted to FIM using the exchange rate at the end of 1992.

We calculate solvency as shareholders' equity to total assets. To reduce the impact of extreme values, we use a square-root transformation. The original sign of the ratio is restored.

Explanatory Variables	Regression 1	Regression 2
Intercept	-5.431	-5.007 (3.72)**
	(4.33)**	
Bankruptcy code (dummy)	-0.121 (0.29)	-0.041 (0.10)
Manufacturing (dummy)	1.033 (2.04)*	1.005 (1.97)*
Construction (dummy)	-1.531 (1.27)	-1.614 (1.34)
Other industries (dummy)	0.449 (0.70)	0.429 (0.67)
Book solvency	-	0.221 (0.80)
Natural logarithm of assets	0.602 (3.52)**	0.554 (3.10)**
Model p-value	0.0001	0.0001
Pseudo R ²	0.1466	0.1503

**Significantly different from zero at the 1% level in a two-tailed test.

*Significantly different from zero at the 5% level in a two-tailed test.

Table 4

THE ADMINISTRATIVE COSTS UNDER THE FINNISH CODE COMPARED WITH COSTS UNDER THE U.S. CODE. Panel A compares the costs of selling firms as going-concern with the cost of reorganization. Panel B compares the cost of liquidating firms under the Finnish and U.S. codes.

Study	Mean	Median	Number of Firms	Time Period
<i>Panel A - Reorganization / Sale as a Going-Concern</i>				
Current study (sale as a going concern)				
Fees ^a /available assets	12.35 %	11.37 %	21	1982-1992
Total costs ^b /available assets ^c	14.15 %	14.70 %	21	1982-1992
Fees/ book value of assets ^d	6.98 %	6.11 %	21	1982-1992
Total costs / book value of assets	7.03 %	6.15 %	21	1982-1992
U.S. studies (reorganizations)				
White (1984) ^e	3.4 %	n.a.	64	1980-1982
Lawless et al.(1994) ^f	26.19 %	13.72 %	n.a.	1981-1991
<i>Panel B - Liquidations</i>				
Current study-liquidations				
Fee /available assets	13.23 %	12.37 %	51	1982-1992
Total cost /available assets	16.79 %	15.08 %	51	1982-1992
Fees /book value of assets	7.03 %	6.15 %	51	1982-1992
Total costs/book value of assets	8.93 %	7.48 %	51	1982-1992
U.S. studies				
Stanley & Girth (1971) ^g	24.9 %	n.a.	90	1964
Ang et al. (1982) ^h	7.50 %	1.70 %	55	1963-1978
White (1984) Chapter 7	21 %	n.a.	n.a.	1980-1982
White (1984) Chapter 11	10 %	n.a.	64d	1980-1982
Lawless et al. (1994)	69.08 %	98.75 %	30	1981-1991

Notes:

- a. Fees = Trustees and other legal and accounting fees associated with the bankruptcy filing.
- b. Total costs = Fees and other administrative expenses associated with the bankruptcy filing.

- c. Available assets = The sum of payments to creditors, fees to trustees, and other administrative expenses.
- d. Book value of assets is taken from the trustee's schedule of assets and liabilities
- e. White (1984) and Lawless, Ferris, Jayaraman & Makhija (1994) report the administrative costs in relation to total amount paid to unsecured creditors.
- f. Includes both the firms that were liquidated and reorganized in Chapter 11.
- g. Stanley & Girth (1971) reports the administrative expenses in relation to total assets (book value) from the last financial statement filed prior to bankruptcy.
- h. Ang, Chua & McConnell (1982) report the administrative fees in relation to the sum of the administrative fees and payments to creditors.

Table 5
THE PAYOFF RATIO TO CREDITORS COMPARED TO U.S. REORGANIZATIONS.

The payoff ratio is defined as total payments to creditors divided by total debts. The reported U.S. findings are from Flynn, 1989, who conducted a nationwide study of 2,395 cases in 12 districts. Evidence is presented for the districts with the highest, lowest, and middle ratios. The sample of Finnish firms consists of 22 firms that were sold as going concerns and 61 firms that were liquidated piecemeal. The Swedish sample is taken from Thorburn (1997). Pre-packaged bankruptcies are going-concern sales where the outcome is negotiated prior to the filing.

The payoff ratio to creditors (%)	Median ratio	Mean ratio	20% above	20% below
The Finnish code				
All firms	33.5%	35.1%	53.5%	16.6%
Going concern sales	30.4%	33.6%	51.2%	14.0%
Piecemeal liquidations	33.7%	35.6%	53.6%	16.3%
The U.S. code				
District with high ratio	75.9%	-	102%	44.4%
District with low ratio	45.2%	-	81.8%	13.1%
District with mid ratio	56.4%	-	97.6%	22.1%
The Swedish Code				
Pre-packaged Bankruptcies	31.6%	31.3%		
Other Bankruptcies	34.9%	33.1%		

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