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The Behavior of Firms in Financial Distress: Discussion

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DISCUSSION

EDWARD I. ALTMAN*: Michelle White's paper on "Bankruptcy Costs and the New Code" is a relevant, provocative attempt to assess whether the changes under the new Bankruptcy Code (which went into effect in October 1979) have tended to raise or lower aggregate U.S. bankruptcy costs. She does this by first indicating why she would expect the new Code to be more "efficient" than the old Act and then by proposing a model to measure "upper bound expressions" on total bankruptcy costs. Finally, she presents some empirical results on her specifications of bankruptcy costs under the old Act and the new Code.

Any empirical comparison of the new Code vs. the old Act over the period of time that the Code has been in effect is extremely difficult. Over the past two years, and particularly in 1982, we have observed record post-depression levels and rates of business failures in the U.S. The expected failure rate per 10,000 firms in 1982 is 90 per 10,000 which is the highest since 1933 when the rate was 100 per 10,000. 1982 rates are about 50% above the previous year, and over 200% higher than the 1978 rate. A persistent and debilitating recession, coupled with record interest rate levels, increasing corporate debt ratios and dramatically lower interest coverage statistics have been the primary villains. There has been a dramatic increase of firm failures of all sizes. It is clear that no longer is the large firm invulnerable to financial distress. Indeed, in the last two years, one dozen firms with liabilities in excess of \$150 million have filed for protection and reorganization under the Code. Ironically, this avalanche of large, publicly traded firms provides a unique opportunity to examine the market dynamics of bankruptcy and the attendant bankruptcy costs.

One of White's central premises is that the bankruptcy reorganization process rewards inefficiency by prolonging the continuation of insolvent enterprises thereby "offsetting the beneficial effects of competition." She assumes that without the bankruptcy-reorganization alternative, most failing firms would be forced to liquidate. White argues that while the new Code preserves the reorganization option, it is more difficult to reorganize successfully thereby increasing the likelihood of unsuccessful reorganization and eventual liquidation. Hence, economic efficiency is enhanced and deadweight bankruptcy costs are reduced. Put differently, White feels that the new Code is "less bad" than the old Act.

I interpret White's approach as a basic rejection of the bankruptcy-reorganization process and the theory of moratorium and automatic stay. While I would agree that too many firms are permitted to reorganize when in fact they are worth more dead than alive, for those firms which are only temporarily insolvent, the reorganization process serves a very useful purpose.

I disagree with White's premise that the new Code makes reorganization more difficult. My conclusion, after analyzing the old Act and the new Code as well as taking an admittedly unscientific poll of a small number of bankruptcy lawyers, is that the difference is unclear—and on balance the new Code could even be less difficult and probably will be shown to be less costly. On this last point, White

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and I are in agreement. Certainly, if you compare the new Code with the old Chapter X reorganization, the latter was far more cumbersome, time consuming and costly. As for the comparison with the old Chapter XI arrangement, the more commonly used procedure, the pros and cons of the new vs. the old leave the conclusion unclear. In general, the new Code is easier to work with and compromise is much more likely than before. In several instances the new Code fosters, not hinders, reorganization, e.g., sale of leasehold rights providing needed capital to make a reorganization feasible.

White emphasizes the management efficiency related factors most. In particular, she assumes (without evidence) that managers attempt to raise the expected return to equity by increasing the firm's risk in order to avoid liquidation. In the event, however, of continued poor results there was always the Chapter XI possibility which, she claims, kept old management in control. Hence, managers were not motivated to take great risks.

The new code, however, also provides for a type of Chapter XI arrangement whereby the old management is retained. In actuality, however, old management is rarely retained in reorganization if mismanagement is evident and this was the case in the old Chapter XI as well. Creditors often force management changes by threatening an involuntary petition which was and still is possible. Hence, I do not believe there is that much difference now nor is the agency problem any worse now than before. I do agree with White in that if old management retains control, the firm's old problems will likely remain too.

I am *not* persuaded that managers increase their risk-taking as bankruptcy approaches. Debts pile up but not voluntarily, and, if anything, conservative strategies may be adopted in order to perpetuate the business. It is usually the abnormal risks that are taken *long before bankruptcy is apparent* that are the fundamental causes of failure—not what occurs as the market perceives the bankruptcy risk more clearly. Creditor attempts to reduce their losses (as White correctly points out) will also likely discourage these risky managerial attempts and this is true under the new Code as well as under the old Act.

In addition to some basic premises which are open to debate, the paper also tends to make some rather sweeping generalizations about how the bankruptcy process works which are questionable at best and simply incorrect in some instances. For example, White 'observes' that "unsecured creditors receive little or no payoff in bankruptcy" and that "subordination agreements among unsecured creditors are usually ignored in bankruptcy in favor of treating all unsecured claims alike." The former is more likely in liquidation but not reorganization. And, in the recent reorganization of the once huge ITEL Corporation (bankrupt in 1981 and now (late 1982) involved in confirmation hearings on the proposed reorganization plan) the subordinated unsecured debtholder will receive significantly less than several classes of senior, unsecured creditors. My experience is that this is often the case.

Bankruptcy Costs

White's paper is important in that it centers on the bankruptcy cost issue. While her objective is not to comment on the capital structure implications of

these costs, she does consider the issue of *ex-ante* and *ex-post* bankruptcy costs. Most analysts would agree that certain deadweight costs do occur after the bankruptcy petition—what White calls *ex-post* transaction costs. Incidentally, one might expect *these* costs to be *reduced* under the new Code if the time in reorganization is reduced. The new Code attempts to specify certain deadlines in filing a plan, but extensions and appeals are possible. The verdict is still out on the time-in-bankruptcy reduction issue due to the limited evidence we have on completed cases under the new Code. Also, the size of the new Chapter 11 bankruptcies are so large and complex that meaningful comparisons are difficult.

White discusses and examines other than *ex-post* costs—what is usually referred to as direct costs of bankruptcy. She refers to those other relevant costs as *ex-ante*. Other researchers, e.g., Warner (1977) and myself in a recent paper (Altman 1982), are concerned with indirect costs as well. White restricts her definition of *ex-ante* costs to managerial inefficiencies (discussed earlier) and creditor attempts to reduce their losses. She is not explicitly concerned with a number of other influences such as supplier and customer behavior and related production—investment decisions as bankruptcy probabilities mount. Her model addresses upper-bound estimates but even these amounts underestimate, in my opinion, the potentially very significant additional costs, which I encompass in a measure of abnormal profits (losses). I find that average total bankruptcy costs were 12.4% of the total value of a sample of 18 industrial bankrupt firms at 3 years prior to failure and as much as 16.7% just prior to failure.

Bankruptcy Costs Estimates

White's empirical sample of bankrupt firms (186) which filed under the old Act vs. those filing under the new Code (121) is impressive and knowing the problems of extracting data from the Bankruptcy court records, I was impressed to see both the size and quality of the data. Some of the items that she observes are unique, such as the ratio of secured to unsecured liabilities. I believe this is the first study which compares results before and after the new Code was enacted. Still, the interpretation of the data is confusing in parts, subject to differences in opinion in others, and incomplete with respect to total bankruptcy cost estimates.

White's data illustrates that a greater percentage of bankrupt firms liquidate under the new Code ($88/121 = 73\%$) compared with the old Act ($90/186 = 48\%$). This is consistent with her story about reorganization being more difficult under the new Code. But, the problems in effecting a reorganization in the last two years are more than likely a direct result of the prolonged and debilitating recession whereby firms are worse off to start with and the prospect for a feasible rehabilitation is considerably lower than anytime in the last 50 years. Reorganization works best with the infusion of new capital; little if any new capital has been available in recent years.

White further observes that firms liquidating tend to have higher levels of secured liabilities relative to assets than firms reorganizing and this was true both before and after the new Code went into effect. She concludes, therefore, that the amount of secured debt remains an important *determinant* of whether

liquidation or reorganization will take place. This strong cause and effect implication is not discussed in the empirical section and is, in my opinion, inconsistent with White's earlier story of the evolution of firms and managerial behavior. It is not necessarily the change in status of the debt which determines liquidation or reorganization, but rather the fact that firms have postponed the filing of the bankruptcy petition beyond a reasonable point in time when rehabilitation is feasible and this accounts for the larger percentages of liquidations. These *ex-ante* agency-type costs would then have been prevalent under the old Act as well as the new Code. It does not appear that the old Act had "solved" the agency problem in bankruptcy.

White's aggregate measure of *ex-post* bankruptcy costs uses Dun & Bradstreet's *Failure Record* data on total liabilities of failing firms as a base. The Dun & Bradstreet totals underestimate liabilities substantially since it does not include publicly held debt and other long term debts. This is a systematic bias in the data which can be quite large in certain years. For example, outstanding publicly held debt that defaulted in 1980, 1981 and 1982 (10 months) was \$45.2, \$175.5 and over \$500 million respectively (Altman, 1983).

White's conclusion about the comparison of *ex-post* bankruptcy costs before and after the Code is probably correct and I agree with her assessment that *ex-ante* (or indirect) costs are far greater than *ex-post* costs. My reasons for coming to similar conclusions and my measures of these bankruptcy costs are quite different, however. I find that White's arguments are unconvincing and her assignment of so many arbitrary factors to a model which itself is subject to considerable debate makes her conclusions less persuasive than I would like to have found.

Clark and Weinstein's Study

Clark and Weinstein (C & W) present an interesting, descriptive analysis of the behavior of share prices of bankrupt companies. They observe the daily and monthly price movements and returns of firms petitioning to reorganize from 1938–1979 in order to assess the so-called "Bankruptcy Announcement Effect" around the date of filing. They also observe the trend in returns leading up to the petition date. Although I feel that their results are convincing, I did not find anything new in them. I too have analyzed these phenomena as much as 13 years ago (Altman, 1969) calling the phenomenon the "Bankruptcy Information Effect".

C & W's results confirm what I and others have been saying for years; namely that the bankruptcy announcement is coincident with significant share price deterioration signalling changes in the probability of future share values and possibly changes in market risk characteristics. The latter point, while mentioned in C & W's introduction, is never really analyzed directly. They also find evidence of mounting losses to owners of shares of firms which eventually go bankrupt. It might be noted that Altman & Brenner (1981) found significant market adjusted losses for samples of firms which had characteristics of past bankrupt firms but did not declare bankruptcy.

The reader of the C & W paper must be careful not to be too impressed by the

text-reported size of their sample. they state that their monthly return sample consists of 50 bankrupt stocks for the 1938–79 period and 148 companies with daily returns data covering the period 1962–1979 (with 36 overlapping firms). While the results show a rather continuous deterioration in share values as bankruptcy approaches and a precipitous drop from the day before to the day of and to the day after the bankruptcy (or the month before to the month of and the month after) the sample size also decreases noticeably over this period. In fact, only 19 monthly data firms are observed in the bankruptcy month and only 12 on the bankruptcy day! This is both disappointing and *not* surprising. One of the reasons I originally observed monthly data rather than daily returns is the lack of trading around the bankruptcy date. Since C & W were only concerned with the old Bankruptcy Act which ended in 1979, they have not observed the increasing number of large recent bankruptcies and their share price movement.

C & W also try to assess the impact of a Chapter XI vs. Chapter X filing on share prices. They argue that we might expect share prices to fall more in the costly and cumbersome Chapter X proceeding where absolute priority rules usually prevail and a new Trustee is brought in to run the company and work-up a plan of reorganization. Since their empirical findings in this analysis are not conclusive and their sample sizes are quite small, C & W conclude that only limited support is shown for the Chapter X petition being “worse” news than a Chapter XI filing. While the Chapter X vs. XI distinction was important up to 1979, the new Code eliminates this distinction and the results, even if conclusive, would only have historical relevance and interest.

The authors also assess the proportion of bankrupt petitions resulting in 100% shareholder loss (before taxes, ed. note). The results for their sample of 162 firms show that 51% retained value, 41% became worthless, with 8% uncertain. My own results showed that 55% became worthless and 45% retained value after the firm went through liquidation or reorganization. The C & W results are quite useful in a descriptive sense; a number of practitioners and researchers have wondered about the likelihood of shareholders being wiped out completely in a bankruptcy. The real trick is to know whether or not a bankruptcy petition will result in a successful reorganization. This prospective analysis is of obvious concern to bondholders (old or potential ones) and to the common stockholders. It is possible, however, for a firm to reorganize successfully with the old stockholders completely eliminated from participation in the “new” firm.

Another interesting research subject which is related to C & W’s work is the correlation between the bankruptcy announcement effect and the prior probabilities of bankruptcy declaration. If, as C & W find, bankruptcies are partially, but not completely, anticipated by the market, then the fall in price when bankruptcy is actually announced should be a function of how well the market was anticipating the event. One would expect that the greater the surprise, i.e., the lower the probability of failure, the larger the share price drop from just prior to just after declaration.

Despite the small sample problem and the somewhat irrelevant Chapter X vs. Chapter XI comparison, I expect that the findings by C & W will be useful to researchers and practitioners. The conclusion that bankruptcy filing conveys

important unanticipated information is not surprising especially if one considers that the expected value of bankruptcy costs impacts shareholder returns significantly. The bankruptcy declaration changes the probability of bankruptcy from some finite number between zero and one to unity.

REFERENCES

- Altman, E. I., "Bankrupt Firms' Equity Securities As An Investment Alternative", *Financial Analysts Journal*, July–August, 1969.
- , "A Further Empirical Investigation of the Bankruptcy Cost Question", *NYU Working Paper*, December, 1982.
- , *Corporate Financial Distress*, John Wiley & Sons, N.Y., 1983.
- and M. Brenner, "Information Effects and Stock Market Response to Signs of Firm Deterioration", *JFQA*, March 1981.
- Warner, J. B., "Bankruptcy Costs: Some Estimates", *Journal of Finance*, May 1977.

DISCUSSION

W. M. TAYLOR*: The financial distress event is complex. It involves resolution or renegotiation of the contracts of the various claimants of the firm. This recontracting game exhibits coalitions and *ex ante* a random number of rounds at random times and with a random completion date. During this period, the market repeatedly adjusts to new information concerning the recontracting and the probability that me-first rules will be violated, as well as about the expected profitability of the firm.

Event studies are usually based on a sample of matched firms. Aharony, Jones and Swary [1] provides a recent example of the use of market data in which control firms were matched with each bankrupt firm to control for possible industry and size effects. Professors Baldwin and Mason have chosen a single case of financial distress and a single reference firm (John Deere). The advantage of focusing on a single case lies in the intensive analysis that it permits. But, a disadvantage lies in the questionable generalizability of any inferences drawn from a single observation of a complex event. The broad results of the Massey-Ferguson case do, however, appear to be consistent with the results of previous studies of samples of bankrupt firms. Overall, the standard deviation of returns increased while the beta declined in the recontracting period.

But, the authors have gone farther than a risk-return analysis. They also address the question of deadweight costs of financial distress by examining Massey-Ferguson's market share over the period of recontracting. A weakness of empirical studies which attempt to measure such deadweight costs is that they are confounded with the effects of factors other than the recontracting among the various classes of claimants. The authors have acknowledged the limitations of their approach and have noted throughout the paper the general confounding of the negative effects of other factors with the effects of the recontracting. For example, the regressions used to test the hypothesis that financial distress affected Massey's marketshare relative to Deere suggest a loss of sales during the

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