Sudden Bankruptcies of Listed Companies—Surprises Reappear in 2002

by Masahiro Shidachi
Financial Research Group
shidachi@nli-research.co.jp

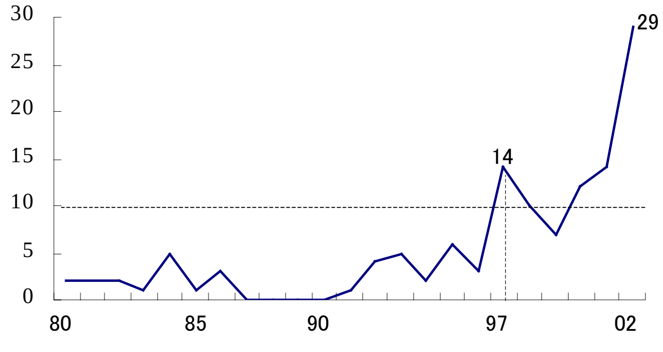
1. Increase in Bankruptcies of Listed Companies

The number of bankruptcies among listed companies (including exchanges and over-the-counter markets), after rising to a new plateau in 1997, spiked in 2002 to 29 cases (Figure 1).

Bankruptcies can be devastating to shareholders because not only do their shares become worthless, but their claim on company assets is subordinated to that of creditors. To avert the risk of bankruptcy, shareholders must be able to accurately predict bankruptcies and liquidate their positions at the first sign of trouble, even if it means foregoing potential profit opportunities.

Below we examine how the increase in bankruptcies of listed companies is affecting the perception of bankruptcy risk among investors.

Figure 1 Bankruptcies of Listed Companies



Source: Compiled from Teikoku Databank, *Bankruptcy Reports*.

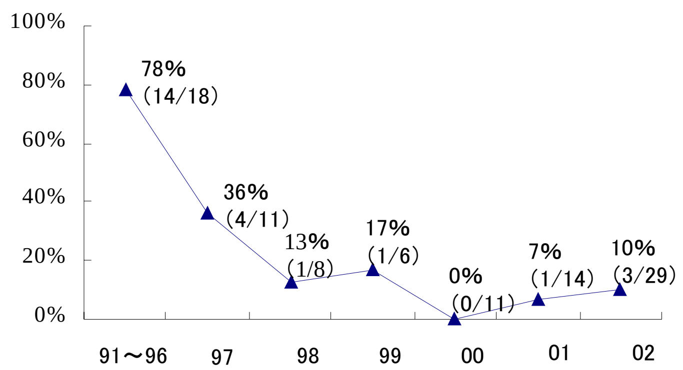
2. Sudden Bankruptcies Decline as Investors Heed Bankruptcy Risk

If investors are indeed becoming more sensitive to bankruptcy risk, we should see a drop in the frequency of sudden bankruptcies, in which share prices show no signs of trouble up to the day before bankruptcy.[1] Below we examine whether this statement is true using price-to-book ratio (PBR) and share price data of companies on the day before bankruptcy.

The PBR is an indicator used by investors to judge whether shares are fairly valued. To calculate it, market valuation is divided by shareholders' equity. Stated differently, the PBR expresses the current price a company can be acquired at (market valuation) as a multiple of its net assets (Shareholders equity = Assets – Outstanding debt). A PBR above 1 means that in addition to the company's net asset value, the market has factored into the share price expected future earnings as well. In other words, the market expects the company to remain in existence. Thus a PBR above 1 on the day before bankruptcy can be construed as a sudden bankruptcy— one that investors failed to predict.

However, PBR by itself is an insufficient criterion for judgment. This is because a company with significant debt will have very low net assets in the denominator, such that even a very low share price produces a high PBR. For example, one case had a high PBR of 18 and low share price of ¥7. Clearly, the low share price suggests that investors were aware of the company's bankruptcy risk. Thus we use two criteria to define sudden bankruptcy: a PBR above 1, and a share price above ¥100. For each year, we applied these criteria to calculate the proportion of bankruptcies that investors failed to predict.[2]

Figure 2 Proportion of Sudden Bankruptcies of Listed Companies



Notes: Data for 1991-1996 is aggregated due to small annual numbers. See footnote for definitions.
Parentheses show number of sudden bankruptcies to total bankruptcies.

As Figure 2 shows, the proportion of sudden bankruptcies plunged in 1997, and has declined even lower since then. Stock investors thus appear to have become increasingly sensitive to bankruptcy risk in recent years.

---

[1] We use the definition of bankruptcy proposed by Teikoku Databank. See http://www.tdb.co.jp/

[2] The proportion of sudden bankruptcies is calculated as follows: Share prices one day before bankruptcy are used. Shares already being monitored for bankruptcy risk are excluded. Share prices have been converted into¥50 face value according to the former Commercial Code guidelines. Since PBR cannot be calculated for companies with excessive liabilities, we used a share price criterion of above ¥100.

3. Very Sudden Bankruptcies Reappear

However, an interesting phenomenon reappears in 2002—very sudden bankruptcies. For the sudden bankruptcies that occurred between 1997 and 2002, Figure 3 shows the share price on the horizontal axis, and PBR on the vertical axis, both of which are taken the day before bankruptcy. Two of the sudden bankruptcies in 2002 significantly exceed both of our suddenness criteria (share price above¥200 and PBR above 1), and might be described as being very sudden in that investors were caught completely off guard. The last time such cases had occurred was in 1997, when two cases were found. Indeed, from 1998, the proportion of sudden bankruptcies and their degree of suddenness had been decreasing, suggesting that investors were growing more aware of bankruptcy risk. Thus the two very sudden bankruptcies of 2002 are all the more perplexing because they seem to run counter to this trend.

One clue may lie in the fact that the surge in bankruptcies among listed companies in 2002 occurred against the backdrop of a severe credit squeeze by banks, who themselves suffered huge asset losses. If the very sudden bankruptcies of 2002 were not a transitory phenomenon, but instead caused by this type of ongoing condition, investors will need to rethink their approach to bankruptcy risk, and adjust their prediction methods and diversification strategies accordingly.

Figure 3 Very Sudden Bankruptcies of Listed Companies 1997-2002