WHEN the downturn came a couple of years ago, Intel stood firm. It would grow its way through the recession.

"Intel has been through many downturns since its founding in 1968," Andy D. Bryant, the company's chief financial officer, told analysts in January 2001. "Through each downturn, the company ensured its success by continuing to invest in technology." He vowed that Intel would increase its capital spending in 2001, to $7.5 billion from a record $6.7 billion the previous year.

That determination to hang in there enthused traders. Intel's shares, which had fallen to $30.50 just five months after topping $75, rallied to $37 within a few days. Now they sell for $14.23.

It was a bad decision. "They were throwing money, wasting money, in new facilities that were not needed," said Fred Hickey, the editor of the High-Tech Strategist, a newsletter.

Last week, Bryant conceded that if demand did not pick up, Intel would have to consider closing some older plants, bringing hundreds of millions of dollars in write-offs.

So was the spending a mistake? "If I had realized the recession in our industry was going to last two years and be as bad as this, I would have urged Craig to slow down," Bryant told me, referring to Craig R. Barrett, Intel's chief executive. But, he added, "If Craig were here, he'd say it was not a mistake."

The argument for the spending was that Intel would be that much better positioned when the recovery arrived, and it would be able to seize market share. It has gained some market share, but that hasn't done anything for profits.

Consider how Intel looked only four years ago. In 1996, it had revenues of $26.3 billion and profits of 86 cents a share. This year revenues will be about the same, but profits will be far lower.

The difference is spending. Intel has been cutting back on its payroll, but it needs to do more unless business quickly recovers. Its research and development spending in 1998 was $2.7 billion.

This year it will be much higher, about $4 billion.

"They are starting to take the tough discretionary steps they have to take to bring this back into balance," said Jonathan Joseph, a Salomon Smith Barney analyst, who nonetheless removed his buy rating last week. "I think they have to take tougher ones."

One area to watch is capital spending. The 2001 level wound up at $7.3 billion, and this year's costs will be down to $4.7 billion, as the company scales back on facilities for which the demand is clearly weak. Next year's level has yet to be announced.

A fundamental reality of technology spending is that it is cyclical. Companies that are doing well are more inclined to spend money on new computers, and when profits decline, they decide that such expenses can be deferred. That used to be taken for granted, but in the late 1990s many became persuaded that such spending could only grow.

They were wrong. But the industry has been slow to realize just how wrong they were. Too many companies are waiting for a revival in demand that is not likely to come.

It was just two years ago that Silicon Valley thought it was immune to economic factors. Now it closely watches what Alan Greenspan, the Federal Reserve chairman, is doing.

"The risk is if consumers give up before companies get comfortable, then not only us but a whole lot of companies have a lot of trouble," Bryant said. "That is what Greenspan's nightmare should be."

Intel's dominant market position and financial strength have made it possible for it to keep investing longer than it should have. Now it is starting to deal with the need to cut costs, which is a good sign for investors. But it needs to do more.