Beaten To A Pulp

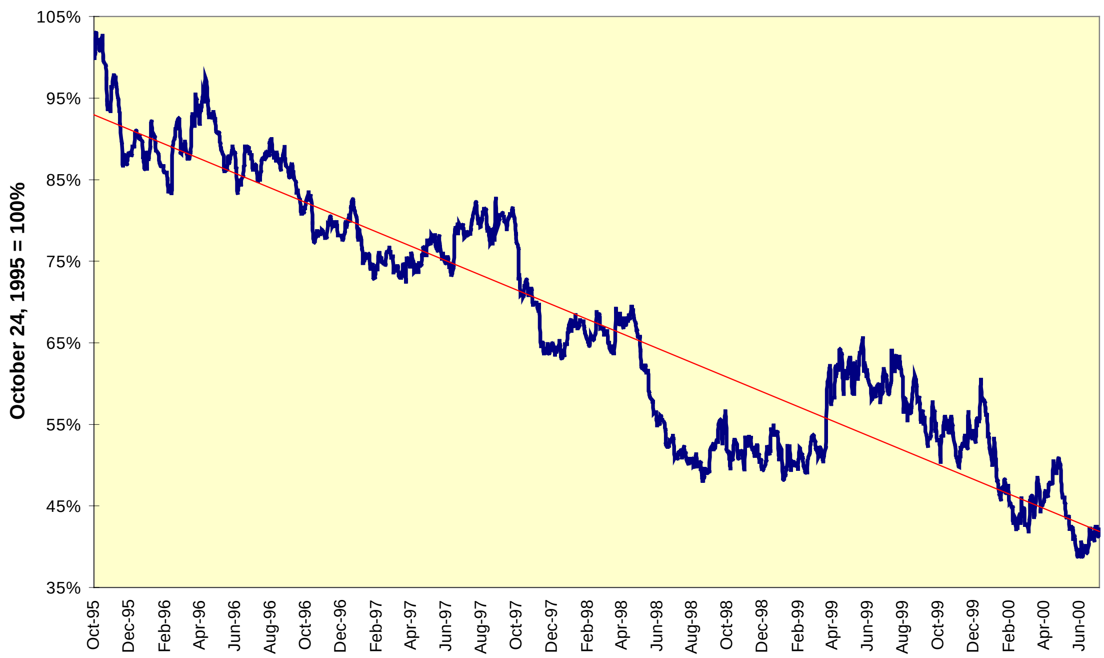
The business landscape is littered with the detritus of consultants' idiot-speak. We all remember such gems as empowerment, Theory Z, mission statements, and the current rage, six sigma. Others fall more quickly and deservedly into the memory hole, including the term "paperless office." Modern office technology simply inhales paper, and the office will become paperless when the you-know-what becomes paperless.

Paper and forest products should be one of the greatest businesses in the world. The basic products are consumed or recycled into lower grades, consumption levels rise with global economic activity, research and development expenses are lower than those for most other industries, and technological obsolescence is not a problem for cardboard containers and 2x4 construction studs. So, why have these stocks been such non-participants in the bull market of the past five years?

If A Tree Falls In A Forest, Can You Make A Buck?

Let's take a look at the Philadelphia Stock Exchanges 13-member Forest & Paper Products (FPP) index. The exchange was thoughtful enough to provide index options on the FPP; these are thinly traded and have volatilities in excess of 40%, nearly twice those of the S&P 500. The FPP is price-weighted like the Dow Jones averages, not capitalization-weighted like the S&P 500, so firms such as Weyerhauser and Bowater, trading in the mid-$40s, will have a greater impact on the index than will Smurfit-Stone, trading at just over $11. The difference in weighting schemes cannot, however, account for the nearly continuous decline in relative performance of the FPP to the S&P 500.

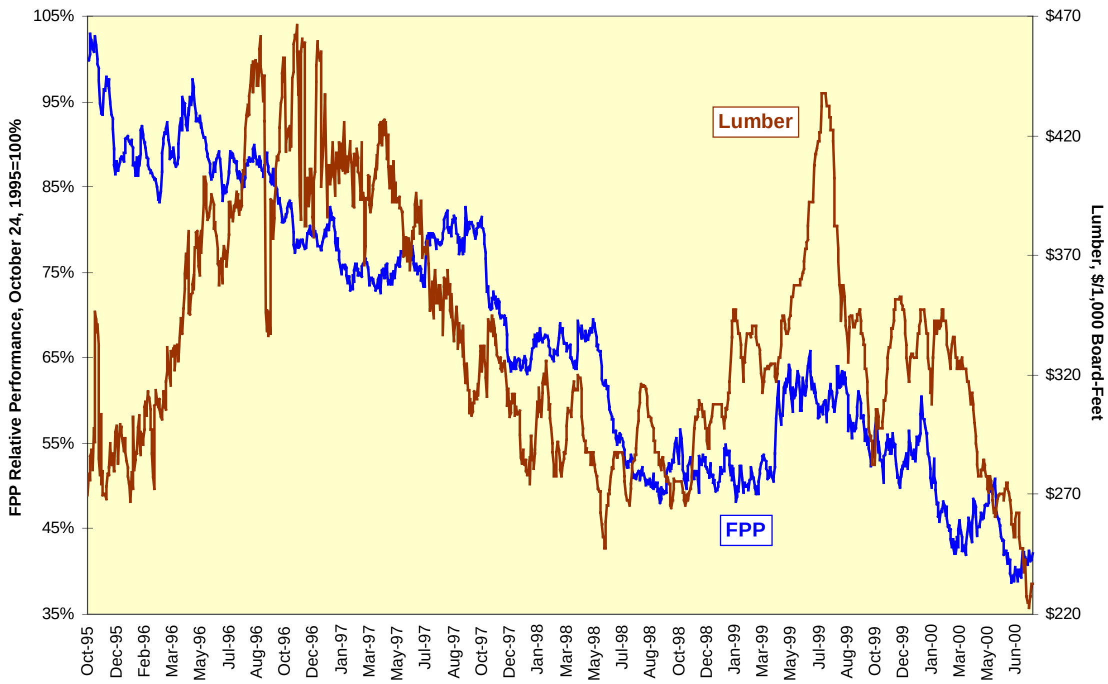
Relative Performance:
Forest & Paper Products Index Vs. S&P 500



The FPP's performance since the start of the year has been awful by any measure: Only two members, Consolidated Paper and Fort James, have a positive return, and the group as a whole has lost 27%. Four members, including Dow Jones Industrial Average component International Paper, have lost more than 40%. And yet FPP member firms are expected to earn $1.92 per share this year and pay a 2.58% dividend. So much for those who deride investing in earnings- and dividend-less high tech stocks.

When, if ever, will the FPP start to outperform the S&P 500? The graph above provides some clues for how we should go about the task of modeling this group. First, the large drops in relative performance occur during periods of declining interest rates in late 1995, mid-1997, mid-1998, and the winter of 1999-2000. Second, the FPP appears to be quite sensitive to the strength of the dollar; this cannot be surprising given the importance of exports to these firms. The correlation between the FPP and the trade-weighted dollar index is a highly significant -.83. Finally, the brief periods when the FPP rallies relative to the S&P 500 appear to coincide with spurts in economic growth. Since construction activity picks up during periods of economic growth, we should expect to see a strong relationship between the FPP's relative performance and the price of 2x4 stud lumber, the basis for the Chicago Mercantile Exchange's lumber futures contract.

FPP Relative Performance As A Function Of Stud Lumber Prices



This last relationship is not as strong as we might expect, and even seems to be negative in late 1995 and early 1996. Lumber prices have swung wildly over the past decade in response to environmental restrictions on logging and on tariffs on Canadian imports. Moreover, construction studs are but one part of the forest product mix; the larger paper and pulp business might be a better indicator, but it lacks a central price discovery mechanism due to grade differentials.

A simple two-factor model for the FPP's relative performance, one using just ten year note rates and the dollar index, explains over 80% of the index' variance. While this model could be improved by adding seasonal factors and other statistical corrections, we might as well pause here for one very important reason. Over time, the dollar's strength tends to be a function of interest rate movements. As the economy strengthens, demand for forest products and interest rates rise -- the two have a correlation of .48 -- and the dollar starts to strengthen as well. This strengthening of the dollar appears, more than any other factor, to weaken the relative performance of the FPP. A weak dollar accompanying a period of slow economic growth and sluggish demand doesn't do the stocks much good, either.

This trap explains the straight-line decline of the FPP's relative performance. Periods of combined dollar weakness and strong economic are too few and far between for us to wait. Forest products may be a great business and a source of dependable dividend income and low volatility, but they're just not the basis for great stocks.