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CAPITAL IDEAS

May 2003

Do Great Small Companies Make Great Investments?

A fundamental economic principle is that profitability tends to revert to its mean. In a free-market, capitalist society, when profits grow “abnormally” high (far in excess of the average cost of capital), opportunists allocate more capital to that industry, product, or service. As a result, supply and competition increase, and eventually, profits revert to the mean (approach the average cost of capital). Conversely, when profits are below normal, capital moves away from the industry, supply and competition are reduced, and normal profitability is eventually restored.

Despite the logic, there is a growing body of evidence that suggests that stock market analysts and investors alike often ignore this basic principle. They do so at their peril. The latest in a long list of studies on this subject confirms prior studies’ findings: Abnormal profits do not persist for long, and the market overestimates the ability of companies to persistently achieve an above-average earnings growth rate. Because earnings estimates are crucial to all investment valuation models, this can be a major problem for investors. If they overestimate earnings growth rates, they also overestimate their expected returns.

A summer 2002 study published in *The Journal of Financial Research* examined 11 sets of the 100 “best” small companies selected by *Business Week* each year from 1985 through 1995.¹ Eligibility criteria included the following:

- s Sales of more than \$10 million but less than \$150 million
- s Equity of at least \$1 million
- s A stock price in excess of \$5 per share.
- s Relative excellence, as measured by totaling the company’s composite ranking for its return on capital, growth in profits, and growth in sales.

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In Business Week's focus on selected "hot growth companies," there is an implication that the success of companies exhibiting strong management and strong performance can be expected to persist in the future — and that good companies can thus be expected to make good investments. To test these assumptions, the authors studied the performance of Business Week's selected companies and their stocks in the three years prior to and following their selection.

Let's first examine the study's findings regarding returns for the pre-selection period. As expected, the companies in the pre-selection period had spectacular financial and investment results. The pre-selection portfolio achieved a mean monthly return of 4.08 percent. This return outperformed the 1.83 percent return for an equally weighted Center for Research in Security Prices (CRSP) all-stock portfolio, as well as the 1.32 percent return for the stocks of the CRSP tenth decile (containing microcap stocks, or the smallest of small company stocks). Total returns for the three years prior to selection were 146.83 percent for the Business Week stocks, 65.69 percent for the CRSP all-stock data, and 47.34 percent for the CRSP tenth decile data.

Investors who were lucky enough to own these "hot" small growth companies prior to their being featured in Business Week received at least a one-time handsome reward. But reasonable questions are, how could an investor identify the picks ahead of time, and did the reward persist? To answer these questions, we turn to The Journal of Financial Research analysis of the companies' performances during the post-selection period. Following selection, the monthly mean return fell from 4.08 percent in the pre-selection period to 0.89 percent post selection. The "excess" return became a negative 1.38 percent per month compared to the equally weighted CRSP all-stock portfolio, and a negative 0.46 percent compared to the CRSP tenth decile. The total return was 31.86 percent, underperforming the two benchmarks by 49.68 percent and 16.46 percent, respectively. As can be seen in the table below, the stock-performance reversal was accompanied by a reversal in their relative financial performance — the latter presumably leading to the former.

Financial Performance	Pre-selection	Post Selection
Sales growth	65.47%	22.21%
Profit (earnings) growth	237.86%	-147.02%
Return on investment	14.86%	4.79%

Because earnings growth is probably the financial factor that will influence stock prices the most, the fall in the earnings growth rate is particularly telling. The reversals in general demonstrate operating performance reversion to the mean.

The preceding study provides supporting evidence for earlier findings by professors Eugene F. Fama and Kenneth R. French, when they analyzed whether the theory of profitability reverting to the mean stood up to the historical data.² Fama and French examined the profits of an average of 2,304 firms per year for the period 1964-1995. Their conclusions (followed by my comments in parentheses) are as follows:

- s There is a strong tendency for profits to revert to the mean.
- s Reversion to the mean is strongest when profits are highest (when there is the greatest incentive for competition to enter) and lowest (when there is the greatest incentive to leave an industry and reallocate assets, thereby reducing competition and restoring profits).
- s Abnormally low earnings tend to revert even faster than abnormally high profits.
- s Reversion to the mean occurs at a rate of about 40 percent per annum.
- s Real-world forecasts tend to underestimate the speed at which reversion to the mean in profitability occurs.

We can conclude from both studies that investors who ignore one of the most powerful and basic principles of economics are too optimistic in their assumptions regarding persistently high growth rates. Once the media identified companies as being “hot,” the studies observed investors bidding up the companies’ stock prices to unrealistic levels, and then observed mean reversion occurring as prices corrected for the overly optimistic assumptions. The economic principle of reversion to the mean appears to remain alive and well.

¹ W. Scott Bauman, C. Mitchell Conover, and Don R. Cox, Are The Best Small Companies The Best Investments? The Journal of Financial Research, Summer 2002.

² Eugene F. Fama and Kenneth R. French, Forecasting Profitability and Earnings. Journal of Business, April 2000.

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