Excellence Revisited

Michelle Clayman

"Good" companies do not necessarily make good investments. A portfolio of "unexcellent" companies (chosen on the basis of financial ratios) outperformed the S&P 500 by 12% per year from 1981 to 1985, whereas a portfolio of "excellent" companies outperformed the index by only 1% per year.

Over the 1988–92 period, once again, the "good" companies' financial ratios deteriorated while the "poor" companies' ratios improved. As investment portfolios, however, the good companies outperformed the S&P 500 over the period, producing a monthly alpha of 0.38%. The poor companies underperformed, producing a monthly alpha of −0.07%.

There appears to be a tradeoff between growth and profitability versus valuation ratios. While good companies do not necessarily make good investments, the market appears to reward profitable companies selling at reasonable multiples.

In 1982, the best-seller *In Search of Excellence: Lessons from America's Best-Run Companies* by Thomas J. Peters and Robert H. Waterman Jr. identified companies as the best managed in the U.S. My article "In Search of Excellence: The Investor's Viewpoint" (*Financial Analysts Journal*, May/June 1987) examined the financial characteristics of 29 of those firms in the five years prior to the book's analysis (1976–80) and in the five years after (1981–85) and analyzed them as an investment portfolio from 1981 through 1985. The article also identified a group of 39 "unexcellent" companies (chosen for their financial characteristics) and analyzed them the same way. The study found two striking results. First, there was significant evidence of "reversion to the mean," in that the growth and profitability of the excellent companies slowed in the later period; the portfolio of these companies beat the S&P 500 by only 1% in this period. Second, the unexcellent companies as a portfolio outperformed the S&P 500 by 12% per year, largely because of a 58% average increase in their price-to-book ratios. This article extends the analysis to the 1981–92 period.

THE 1988–92 MARKET

The period of investment returns of the previous study (1981–85) was dominated by reversion to the mean in valuation ratios, particularly price-to-book (PB) and price/earnings (P/E) ratios. The dominance of price-to-book as a stock-selection tool has been well documented in the academic literature. The period from 1981 to 1985 can be characterized as a "value" market because of this. The value style, however, topped out in 1988. Although it resurfaced as the dominant strategy in 1992, the 1989–92 period overall can basically be described as a "growth" market. Table 1 shows the year-by-year and compound annual returns of the S&P 500, the Russell 1000, 2000 and 3000 indexes and the Russell Growth and Value indexes.

In the period, large-capitalization stocks (as measured by the S&P 500 and the Russell 1000) modestly outperformed smaller-capitalization stocks (the Russell 2000). A growth strategy over the entire period outperformed the broad market (as measured by the Russell 3000) by 1.3% per year. The Value index, by contrast, underperformed the Russell 3000 by 1.2% per year. Looking at individual years, 1988 and 1992 were clearly value years and 1989–91 were clearly growth years.

This period was also characterized by the large expansion in valuation ratios. The price-to-book ratio of the S&P 500, for instance, expanded by 50%, going from 1.8 to 2.7.

FINANCIAL CHARACTERISTICS

Peters and Waterman, in *In Search of Excellence*, originally looked at a list of companies considered to be innovative and excellent by an informed

Michelle Clayman is a General Partner of New Amsterdam Partners, New York.

Table 1. Market Annualized Compound Returns

	1988	1989	1990	1991	1992	1988–92
S&P 500	16.3%	31.8%	−3.1%	30.4%	7.6%	15.8%
Russell 1000	17.2	30.4	−4.2	33.0	9.0	16.2
Russell 2000	24.9	16.2	−19.5	46.1	18.4	15.1
Russell 3000	17.8	29.3	−5.1	33.7	9.7	16.2
Russell Growth	11.3	35.9	−0.3	41.2	5.0	17.5
Russell Value	23.2	25.2	−8.1	24.6	13.8	15.0

group of observers of the business scene—businessmen, consultants, members of the business press and academics. These companies were screened for six measures of long-term financial superiority:

1. compound asset growth from 1961 through 1980,
2. compound equity growth from 1961 through 1980,
3. average ratio of market value to book value,
4. average return on total capital (net income divided by total invested capital, where total invested capital consists of long-term debt, nonredeemable preferred stock, common equity and minority interests) from 1961 through 1980,
5. average return on equity, 1961 through 1980, and
6. average return on sales, 1961 through 1980.

The excellent companies in my earlier study ("In Search of Excellence: The Investor's Viewpoint") comprised the stocks identified by Peters and Waterman for which there were complete data from 1976 through 1985. The unexcellent companies were picked using the screening criteria outlined above for the 1976–80 period and were then tracked for the 1981–85 period.

Table 2 shows that, by 1986, the characteristics of the original portfolios had converged. Asset growth for 1981–86 was virtually identical. Growth of equity was also similar, although the excellent companies still had higher price-to-book and profitability ratios. The investment returns of the two groups became indistinguishable over the 1988–92 period.

Table 2. Comparison of Original Excellent vs. Unexcellent Portfolios

	Asset Growth	Equity Growth	Price-to-Book	Return on Capital	Return on Equity	Return on Sales
Financial Characteristics, 1981–86						
Excellent	9.8%	7.4%	2.4	13.0%	13.2%	7.1%
Unexcellent	9.4	5.0	1.4	6.1	8.3	4.0
Annual Investment Performance						
	1988	1989	1990	1991	1992	1988–92
Excellent	6.6%	22.2%	−5.8%	40.7%	8.2%	13.3%
Unexcellent	31.8	11.5	−15.5	36.2	9.7	13.2

UPDATING THE PORTFOLIOS

The current study screens on the same financial characteristics as the original study, but uses data updated to the 1981–92 period. The S&P 500 was selected as the starting universe. Four hundred of the companies had consistently available data for the whole period. The companies were ranked on each financial characteristic and grouped in deciles. The company's decile rankings were then summed, and these scores were then ranked to produce 40 stock deciles based on all the criteria, equally weighted. The top and bottom deciles—the best companies, labeled "good," and the worst companies, labeled "poor"—were then analyzed in more detail.

The good companies grew faster in the 1981–86 period, were much more profitable than the poor companies, and had higher price-to-book ratios. In the 1987–92 period, they continued to be "better" companies (see Table 3 and Figures A and B).

Table 3. Comparison of Good vs. Poor Companies, 1981–86 and 1987–92

	Asset Growth	Equity Growth	Price-to-Book	Return on Capital	Return on Equity	Return on Sales
1981–86						
Good	30.3%	34.1%	4.4	20.4%	23.5%	12.1%
Poor	−0.2	−4.8	1.1	0.8	−3.5	−2.1
1987–92						
Good	16.5	13.9	3.8	17.2	20.1	10.5
Poor	2.4	−1.1	1.6	2.6	5.5	1.9

Reversion to the Mean

There is a phenomenon in nature called reversion to the mean, which asserts that, over time, the properties of the members of a group tend to converge to the average value for the group as a whole. This concept is widely applicable in situations where economic forces tend to move things toward equilibrium. One of the striking features of the earlier study was the evidence of reversion to the mean in the financial characteristics of the stocks examined. The same holds true in this instance (see Table 4 and Figures C and D). The

Figure A. Good vs. Poor Company Ratios, 1981–86

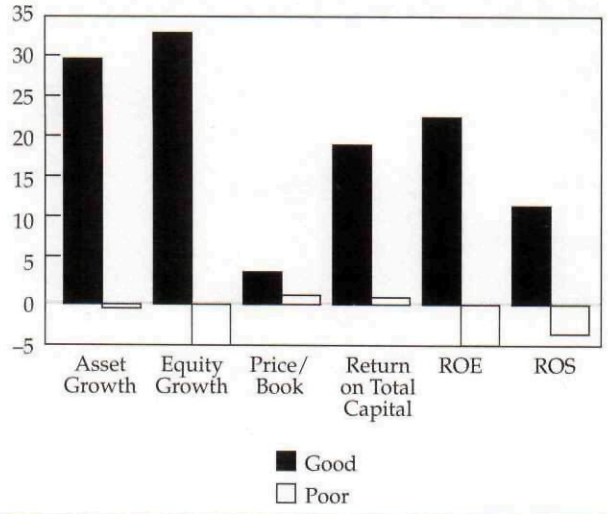
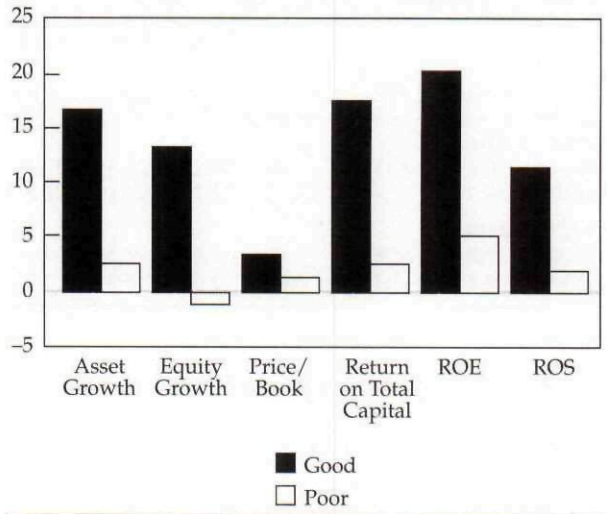


Figure B. Good vs. Poor Company Ratios, 1987–92



good companies' growth rates and profitability ratios dropped, as did the average price-to-book ratio. The poor companies' six ratios increased, on average.

When each group is examined at the individual company level, reversion to the mean becomes very apparent. Among the good companies,

- 32 (i.e., 80%) experienced declines in asset growth rates;
- 39 (97.5%) had declines in equity growth rates;
- 26 (65%) showed a drop in price-to-book ratios;
- 29 (72.5%) had lower average returns on total capital;
- 30 (75%) had lower average returns on equity; and
- 28 (70%) had lower average returns on sales.

Among the poor companies,

- 22 (55%) experienced increases in asset growth rates;
- 25 (62.5%) had increases in equity growth rate;
- 36 (90%) showed a rise in price-to-book ratios;

Figure C. Comparison of Good Companies' Key Variables between Periods

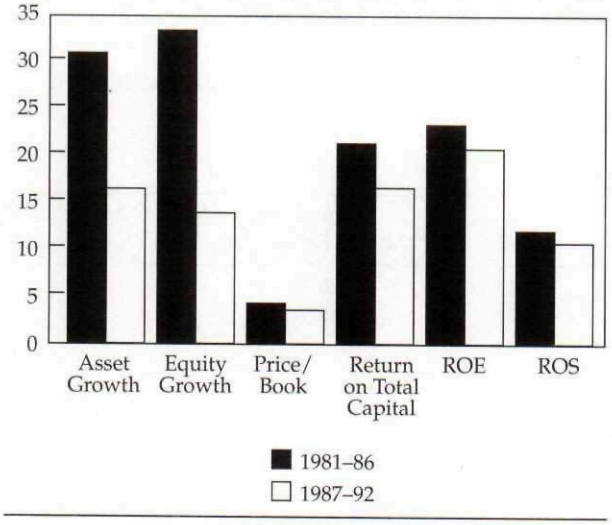


Figure D. Comparison of Poor Companies' Key Variables between Periods

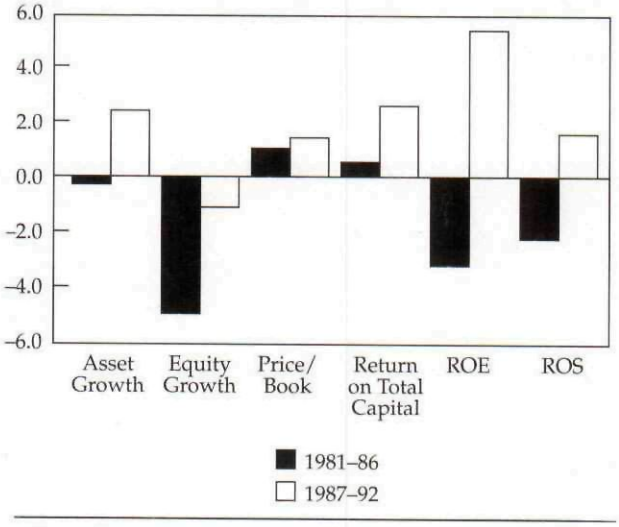


Table 4. Comparison of Companies between Periods

	Asset Growth	Equity Growth	Price-to-Book	Return on Capital	Return on Equity	Return on Sales
Good Companies						
1981–86	30.3%	34.1%	4.4	20.4%	23.5%	12.1%
1987–92	16.5	13.9	3.8	17.2	20.1	10.5
Poor Companies						
1981–86	0.2	−4.8	1.1	0.8	−3.5	−2.1
1987–92	2.4	−1.1	1.6	2.6	5.5	1.9

- 23 (57.5%) had higher average returns on total capital;
- 27 (67.5%) had higher average returns on equity; and
- 27 (67.5%) had higher average returns on sales.

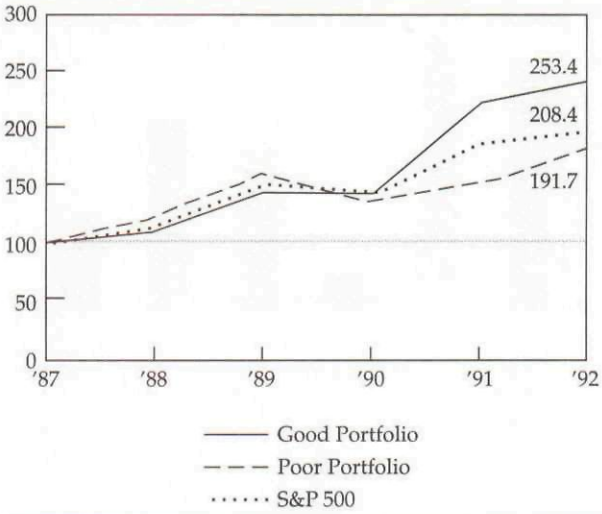
Thus, almost across the board, the good companies got worse and the poor companies improved.

INVESTMENT RESULTS

I constructed equally weighted portfolios of the good and poor company stocks and tracked them over the 1987–92 period. Returns were calculated two ways—by rebalancing at the beginning of each year and by tracking an equally weighted portfolio based on beginning values. Table 5 and Figure E show the results.

These results are in marked contrast to those of the earlier study. The good companies considerably outperformed the poor companies. The good companies outpaced the broad market and the poor companies lagged. The individual stock data show that 23 of the 40 good companies outperformed the market and 25 of the 40 poor companies underperformed the market. The pattern of annual returns shows the good portfolio was clearly a growth portfolio and the poor portfolio was clearly a value portfolio. Given the performance of the Russell Growth and Value indexes during the period, the relative results are not surprising, but the absolute difference in returns, 6% per year, merits further investigation.

Figure E. Portfolio Returns



Analysis of Price-to-Book Ratio

The price-to-book ratio has received much attention as a potential discriminator between growth and value stocks and as a tool for picking cheap stocks. Table 6 shows the results of an examination of the top and bottom deciles based on price-to-book solely. The high price-to-book decile had lower growth rates and profitability ratios (except ROE) in both periods than the 40 good companies examined earlier. Using all six financial characteristics yielded a "better" group of companies. But the high price/book included a much faster growing and more profitable group of companies than the low price/book decile over the entire period.

The high price/book companies exhibited re-

Table 5. Investment Returns of Good vs. Poor Companies

	1988	1989	1990	1991	1992	Annualized, Annual Rebalancing	Annualized, Initial Values
Good	13.2%	30.5%	0.0%	56.8%	9.4%	20.4%	17.0%
Poor	25.0	32.5	−15.2	13.1	20.7	13.9	11.2

Regression of Monthly Portfolio Returns vs. S&P 500

	R-Squared	Beta	Monthly Alpha	Annual Standard Deviation
Good	0.83	1.18	0.38	17.2
Poor	0.71	1.04	−0.07	16.5

Table 6. Characteristics of High and Low Price-to-Book Deciles

	Asset Growth	Equity Growth	Price-to-Book	Return on Capital	Return on Equity	Return on Sales	End-of-Period Market Value (billions)
1981–86							
High	25.5%	26.5%	4.9	20.0%	24.3%	11.7%	$3.4
Low	4.1	3.6	0.8	2.4	3.7	1.2	3.5
1987–92							
High	13.7	13.1	5.2	4.0	22.2	9.5	7.8
Low	2.5	−1.8	1.2	0.4	4.5	3.1	6.6

version to the mean between time periods on all characteristics except price-to-book, which rose 6% (from 4.9 to 5.2). It is important to bear in mind, however, that the S&P 500's price/book rose 50% in the same period. For the low price/book companies, three characteristics improved and three deteriorated. These clearly were not "glamour" stocks. Price-to-book, however, expanded 50%, in line with the S&P 500.

The spread of returns between the two deciles (Table 7) was not large, and the returns themselves are not very different from those of the broader market averages. The high price/book portfolio returns clearly resemble the returns of the growth index and the low price/book portfolio returns resemble those of the value index (although both portfolios are closer to the market). What is striking, though, is that the strategy of using all six financial characteristics produced a much wider difference in results than price/book alone did.

A RICHER MODEL

There a number of reasons why the six characteristics produced superior results. The first, clearly, is that the 1988–92 period, overall, was slightly more favorable to growth than to value. Second, even though the average price-to-book ratio of the good companies fell between the two periods, the faster growth of equity (book value) meant that price performance was not impaired. Third, the superior profitability of the good companies generated higher cash flows. Finally, companies with high profitability ratios and a high "franchise factor" (the ability to *maintain* above-average profitability) should and do merit higher valuation ratios.

A one-variable model, such as price-to-book alone, does not appear to be the best approach. Companies with low price-to-book ratios may represent genuinely cheap investment opportunities, but they may also represent companies with lower-than-average profitability and financial strength. At the same time, high price-to-book may signal companies where future growth and return on equity have been overestimated and declines in valuation ratios are likely.

There appears to be a tradeoff between growth and profitability on one side and valuation ratios on the other. Even though good companies do not necessarily make good investments, the market appears to reward profitable companies selling at reasonable multiples.

Table 7. Returns of High and Low Price-to-Book Decile Stocks

	1988	1989	1990	1991	1992	Annualized, Annual Rebalancing	Annualized, Initial Values
High	6.6%	28.1%	5.2%	43.8%	3.0%	16.3%	14.3%
Low	23.9	23.5	−13.3	29.8	20.3	15.7	12.6

Regression of Monthly Portfolio Returns vs. S&P 500

	R-Squared	Beta	Monthly Alpha	Annual Standard Deviation
High	0.85	1.09	0.18	15.9
Low	0.80	1.02	−0.01	15.2