Is it time for investors to rethink their commitment to many of the better-known anomalies? The other side of the argument.

A Fresh Look at Some Old Anomalies: Are They Still Successful?

By Mark Hulbert

Intelligent investors for years have been trying to exploit the well-known exceptions to the Efficient Market Hypothesis. Their rationale was impeccable. These exceptions (or "anomalies") enjoyed an academic seal of approval as being statistically significant ways in which the otherwise unbeatable market could be beaten. Why waste time pursuing Wall Street's latest fad when it's possible to exploit the best of academia's statistical research?

There has been just one problem, however: Many of these strategies haven't worked in the real world. Almost from the time that these anomalies became well-known on Wall Street, many have lagged the market averages.

A few heretics are beginning to question whether the original academic work was all that it was cracked up to be. I believe that it's time for investors to rethink their commitment to many of the better-known anomalies. [For a different view, see James Cloonan's "A Matter of Opinion" column starting on page 12 in this issue.]

Doubts

One anomaly whose very existence is being re-examined is the small-cap effect. This is the tendency of stocks of small-capitalization companies to outperform larger-cap stocks even after adjusting for risk. The research behind this anomaly is voluminous, but data from Ibbotson Associates are perhaps the best known. According to them, a 1925 dollar invested in small-cap stocks would have grown to $4,496 by the end of last year, in contrast to $1,371 for a large-company portfolio.

Several other anomalies fall under the broad category of "value" investing. Value stocks are those that are out-of-favor on Wall Street, in contrast to growth stocks, which are very popular. The definition of "value" that perhaps has received the most academic scrutiny is the price-to-book-value ratio; another popular definition of "value" is the price-earnings ratio. A stock that is trading at a low price-to-book-value ratio or price-earnings ratio is considered to be undervalued.

Doubts about these anomalies' existence have come from several sources. The first is the performance ratings for investment newsletters. Table 1 reports the top five newsletters for risk-adjusted performance over the last 15 years in the Hulbert Financial Digest rankings, along with their median market capitalization and price-earnings ratio.

Notice that these top performers for the most part can be characterized as larger-capitalization and growth-oriented. By no stretch of the imagination can they be characterized as either small-cap or value.

Mutual fund rankings also paint a similar picture. The ranks of the top performers, at least in recent years, are not dominated by value funds. Indeed, their returns are not materially different from that of growth funds. According to one study, between 1982 and 1991, growth-oriented funds produced an average annual return of 15.81%, in contrast to 15.97% for value-oriented funds ["Returns from investing in equity mutual funds 1971 to 1991," by Burton G. Malkiel, Journal of Finance, Volume 50: 549-572 (1995).]

Another straw in the wind that calls these anomalies into question comes from Wharton School Professor Jeremy Siegel, who points to the performance of the nifty-fifty stocks from the early 1970s. It's hard to imagine any group of stocks less favored by these anomalies than these large-cap glamour stocks with sky-high price-earnings and price-to-book-value ratios. And yet, according to Prof. Siegel, "the nifty-fifty were worth the price paid by investors at the bull market peak of the early 1970s." [This was reported in"The Nifty-Fifty Revisited—Do Growth Stocks Ultimately Justify Their Price?" Journal of Portfolio Management, Summer 1995] In fact, Prof. Siegel calculates, a portfolio that bought all 50 stocks at the December 1972 market peak and held them until today would actually be ahead of the market itself. [By the way, Prof. Siegel's nifty-fifty list does not include Wal-Mart, whose

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Table 1.
The Top 5 Newsletters Over the Last 15 Years Based on Risk-Adjusted Performance

	15-Year Return (annualized) (%)	Median Price-Earnings Ratio (X)	Median Market Capitalization ($ billion)
The Chartist	17.8		
a. Actual Cash Account		27.9	36.4
b. Traders Portfolio		25.2	30.5
Investor's World	15.2	16.8	5.0
The Value Line Investment Survey	16.9	24.9	2.2
No-Load Fund*X	14.4	n/a	n/a
Growth Stock Outlook	10.9	16.8	1.7

Note: Performance calculated through 1/31/97.

15,000+% gain since December 1972 seriously skews the performance of other nifty-fifty lists of that era.]

Large-Cap Value vs. Growth

Several researchers have begun to re-examine the original academic work that discovered the anomalies. Let's first look at the research into value vs. growth. The most comprehensive study in this regard was conducted by Eugene Fama and Kenneth French of the University of Chicago [reported in "The cross-section of expected stocks return," Journal of Finance, Volume 47: 427-465 (1992).] This study found that value outperformed growth during the 1963-1990 period by an average of around 6% to 7% per year. It's less well known, however, that this result is highly dependent on the smallest-cap stocks. Indeed, according to Fama and French, value beats growth by only about 2% per year for the 20% of companies with the largest market caps. That 20% comprises 74% of the value of all U.S. equities.

In other words, for three-fourths of the U.S. stock market, value has, at most, a 2% annual advantage over growth. That wouldn't be anything to sneeze at, by any means, but it turns out that even among this quintile there's less than meets the eye. Upon investigating value and growth among this quintile of stocks, University of Iowa professor Tim Loughran discovered that it is not very robust. [This was reported in "Is There a Book-to-Market Effect?," a University of Iowa working paper.] For example, value outperformed growth in just 15 of the 28 years covered by the Fama-French paper—in other words, not materially different than just half the years.

In fact, value's 2% annual advantage is highly dependent on just three of those years, without which Fama and French would have reported that large growth stocks on average outperform large value stocks by more than 1% per year.

What this means is that investors pursuing value strategies among the largest stocks are betting on a historical pattern that wouldn't exist but for three of the 28 years covered by the Fama-French study. The lesson: At a minimum, you need to be a buy-and-hold investor to capitalize on large-cap value stocks.

Small-Cap Value vs. Growth

To be sure, if the only defect of value strategies is that they don't work so well with larger-cap stocks, then that defect would be a problem only for the larger institutional investors who are confined to the largest stocks. It wouldn't pose much of a problem for the rest of us, since there is no reason why we can't focus our investing on the 20% of companies with the smallest market capitalizations.

But even among these smaller companies there are reasons to suspect that the reported advantage of value over growth is artificially large. One reason for doubts: Small-cap value companies typically are relatively illiquid and low-priced, with relatively large bid-asked spreads. Strategies involving such companies may look good on paper, but look no better than mediocre when followed in the real world.

Researchers have used several different methods to correct for this. One was pursued by Profs. Ball, Kothari and Shanken of the University of Rochester ["Problems in measuring portfolio performance: An application to contrarian investment strategies," Journal of Financial Economics, Volume 38: 79-107 (1995).] They used the identical methodology to construct hypothetical value and growth portfolios, but changed the date on which the portfolios were constructed. First they constructed them using December 31 data, and again using June 30 data.

The result: when using December 31 data to differentiate value and growth, value slightly outperformed growth. When June 30 data were used, in contrast, value significantly underperformed growth.

The fact that a simple change from December 31 to June 30 can have such a huge impact is a dead giveaway that something is fishy. Why is December 31 so different than June 30? Wharton School's Professor Donald Keim has shown that bid-asked spreads exhibit strange behavior around the turn of the year. [This was reported in "Trading Patterns, Bid-Asked Spreads, and Estimated Returns: The Case of Common Stocks at Calendar Turning Points," Journal of Financial Economics, Volume 25, 1989.] It turns out that a disproportionate number of December's last trades are at the bid, while an equally disproportionate number of January's first trades are at the asked price. Any strategy that assumes stocks can be bought at December 31's last price thus will report a gain that is to a large extent the movement from bid to asked.

Is There a Small-Cap Effect?

Regardless of the debate between value and growth, what about the small-cap effect itself?

Some research has begun to call it into question, too. The problem with many studies of small-cap stocks is that they fail to take transaction costs fully into account. This is a fatal error because these costs often are much bigger for small caps than large caps. Any study that fails to take them into account thus will be heavily biased in favor of a supposed small-cap effect.

Most previous studies of the small-cap effect also erroneously assumed that there was unlimited liquidity among the smallest-cap stocks. This is an unrealistic assumption, as any investor in the smallest-cap stocks can attest: any attempt to purchase more than a couple hundred shares can cause the already wide bid-asked to widen even more.

To illustrate how unrealistic many small-cap studies have been, Iowa Professor Tim Loughran closely examined the database that virtually all academics in the country use for their studies. [This was reported in "A Spline Analysis of the Small Cap Effect: Does Size Really Matter?," a University of Iowa working paper by Profs. Joel Horowitz, Tim Loughran, and N. E. Savin.] Prof. Loughran, et. al., extracted from the database the 25 companies allegedly having the largest percentage gain during the last 30 Januarys.

He came up with 25 very low-priced stocks that are skewing many studies with artificial gains in the hundreds, if not thousands, of percent. Here is an example: OCG Technology, which according to the database reports went from 4.7 cents on December 31, 1991, to $1.17 on January 31, 1992, producing a 2,400% gain.

To correct for this, Loughran and his colleagues tested for the small-cap effect after eliminating companies with $10 million or less market capitalization. These are the tiniest and most illiquid of companies, such as OCG Technology.

The result: the small-cap effect disappeared.

Conclusion

The bottom line: The devil is in the details.

Some of the original studies that discovered anomalies in the Efficient Market Hypothesis were flawed. We should have known something was wrong by the fact that investment newsletters and mutual funds pursuing these anomalies weren't consistently beating the market. But now, with new academic work calling the original studies into question, there is even more reason not to bet everything on these anomalies.

There is no substitute for real-world tests.

And in the real world, large-cap and growth strategies are holding their own against small-cap and value.

This discussion by no means implies that you should avoid small-cap or value approaches. It just means you should pick the strategies on the basis of real-world performance. If a strategy has proved itself in real-time tests—the only jury that really counts—then by all means consider it.