



Jim Cramer Exposed: Does He Generate Alpha?

By Adam Apt
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I turned on the television in my hotel room and flipped the channels. My jaw dropped as I saw a hyperactive Jim Cramer with his sleeves rolled up pressing buttons, conjuring up sound effects, and spouting buy and sell recommendations seemingly on the spur of the moment.

My profession turned was into a carnival sideshow. It was late 2005 and my first exposure to the television program *Mad Money*.

The show, begun in July 2005, has gone on to become the most-watched show on CNBC, with about 380,000 viewers. Web sites are devoted to following Cramer's recommendations. And, inevitably, there are questions about the quality of Cramer's advice. Among the reviews have been two highly critical articles on Barron's that concluded that the stocks he recommended subsequently fared poorly. Those articles, in turn, stirred up Cramer's devoted followers, who wrote letters arguing that he is an entertainer and an educator—Cramer's own self-description—and that he offers valuable insights.

Paul Bolster and Emery Trahan, professors of finance at Northeastern University, were curious about all this, and applied the full force of their analytical powers to a study of Cramer's advice. They published their analysis earlier this year,¹ and on August 18, Professor Bolster presented their work, with a preliminary update through 2008, to a small audience of quantitative analysts in Boston.

Their approach addressed five questions:

1. What was Cramer's cumulative result versus an appropriate benchmark?
2. What was the market reaction to Cramer's recommendations?
3. Did Cramer generate an alpha? That is, what was Cramer's risk-adjusted return within the framework of the Capital Asset Pricing Model (CAPM)?
4. What was Cramer's risk-adjusted return within the framework of the Fama-French three-factor model, which includes not just the market but also factors for size and value/growth?
5. What is Cramer's investment style?

Thanks to one of Cramer's devoted followers, a Web site compiles all his buy and sell recommendations, which provided the basic data for this study. These amounted to

¹ Paul J. Bolster and Emery A. Trahan, "Investing in Mad Money: Price and Style Effects," *Financial Services Review*, Vol. 18 (2009), pp. 69–86.



about 1340 buys and 534 sells, from late July 2005 through the end of 2007.² Bolster and Trahan combined these with returns data from CRSP (the Center for Research into Security Prices).

Cramer in his show is a stock-picker, not a portfolio manager, and Professors Bolster and Trahan therefore had to make assumptions in order to aggregate Cramer's advice and to make it amenable to analysis. For example, they had to assume when stocks were bought, what the holding periods were, and how the investment money was allocated. They chose assumptions that approximated what an investor might realistically be able to do. So, for their first pass at analysis, they assumed that Cramer (or someone following him) would act on his recommendations using the closing price on the day following the day that the show was broadcast, and that he would hold the stocks until Cramer recommended selling them. They also assumed that the same amount of money (say, \$1) is invested in every buy recommendation.

Over the entire period from July 2005 to the end of 2007, Cramer's advice (on these assumptions) would have produced a cumulative return of 31.75%, or an annualized return of 12.09%, versus a cumulative 18.72% or 7.35% annualized for the S&P 500. Subtracting an assumed transaction cost of 1%, which may or may not be reasonable but should reflect the cost of trading what in many cases are small-capitalization stocks, would have reduced Cramer's cumulative return to 22.42%, still well ahead of the S&P 500, but slightly behind the Russell 1000 Growth and Value indices, and nearly matching the Russell 2000 Growth index. It was probably the first result that prompted Cramer to say on his show, according to Professor Bolster, that "These two guys from Northeastern got it right."

That suggests that he hadn't read the rest of their paper.³

Using a standard methodology from financial economics for "event studies," they looked for the impact on prices of Cramer's recommendations. They found that in the first day after he recommended a buy, the price rose, but that this little return was then given up over the remainder of a thirty-day interval. Not quite symmetrically, after he recommended a sell, the price declined over the next day, and then continued to decline over the thirty days following his recommendation. On the whole, these results were statistically significant. So Cramer's advice does move stock prices by a small amount. One wag in the audience at Professor Bolster's presentation pointed out that this suggested that an investor should wait a day after Cramer makes his recommendations, and then short both his buys and his sells.

² I write "about," because there were slightly different numbers for the different kinds of analysis. Cramer's sells concern only stocks that he has previously recommended; he does not recommend shorting stocks.

³ Professor Bolster, in answer to a question, said that this reference was their sole contact with Jim Cramer. They did not speak to or correspond with him.



But the event study and the cumulative return analysis did not take risk into account. Did Cramer generate an alpha? That is, after allowing for risk, did his recommendation produce any additional return?

Using the Capital Asset Pricing Model (CAPM) to estimate risk, they found that Cramer's recommendations had a beta of around 1.2 and an alpha of 0. This means that the extra return that Cramer's recommendations produced came simply from their having more market risk than the universe of stocks. This helps to explain why his stocks outperformed the S&P 500 during the period of the study, even though, over the thirty days following his recommendations, there was no excess return from his buy recommendations.

The CAPM has its faults, and it's not the only way to estimate risk, so Bolster and Trahan used the Fama-French three-factor model, too. And again, they found an alpha of 0 overall, but looking year by year, they found that Cramer had a negative alpha that was statistically significant in 2006, but positive and statistically significant in 2007. Because the other factors in this model, besides the market factor, represent size and price/book, they found that Cramer was tilting toward small-capitalization and value stocks.

But they suspected that something else was afoot. So they added a momentum factor to the three-factor model, and sure enough, there was strong statistical evidence that Cramer's buys were, on the whole, stocks that had been going up in the preceding thirty days, and his sells were stocks that had been heading down. (The momentum bias had already been spotted by Cramer's less rigorous critics.)

Bolster and Trahan made yet another pass at the data. They used William Sharpe's method of style analysis to uncover Cramer's investment style. In this approach (a constrained regression analysis), the result is a set of weights on a series of factors, representing management styles, where the weights must sum to 100%. For the factors, they used the Russell indices, and determined that the volatility of Cramer's results during the measurement period could be fairly closely reproduced by a combination of 18% Russell 1000 Growth, 29% Russell 1000 Value, and 53% Russell 2000 Growth. This seems to conflict with the previous analysis, which showed a reliance on a combination of small-cap and value stocks, but as one member of the audience pointed out, there can be a lot of uncertainty in the weights derived from a Sharpe style analysis, and Bolster and Trahan had not estimated the statistical confidence intervals.

To push their analysis further, Bolster and Trahan repeated the style analysis year by year. This revealed that, while the emphasis on growth was continuous, there was a shift from large-cap value into large-cap growth from 2005 to 2007.

But even this analysis was predicated on the original assumption that Cramer held his buys until he issued a sell recommendation. So Bolster and Trahan repeated their style



analysis, but assumed a 60-day holding period for the buys, after which the stocks were sold. Now they found both that Cramer relied even more heavily on growth than they had first estimated, and that there was a more pronounced shift from value to growth from 2006 to 2007. Because growth hugely outperformed value in 2007, Cramer's shift to growth explains the change from a negative alpha in 2006 to a positive alpha in 2007.

And what about 2008? Bolster and Trahan's results have not yet been published, but their preliminary report is that Cramer's portfolio returned -41.5%, versus the S&P 500 return of -38.49%.⁴ His beta decreased to 1.06, but he had a slightly negative alpha. And his style emphasized a combination of large-cap. growth and small-cap. growth.

The foregoing analysis may resemble the application of a sledgehammer to a walnut, but sledgehammers come in different sizes, and members of the audience on Tuesday evening suggested alternative assumptions for constructing portfolios from Cramer's advice. We have not heard the last word on Cramer's stock-picking skills.

So are those professionals who deride Jim Cramer's stock-picking correct? Professor Bolster stated his overall conclusion: "He has an alpha of 0; he could do worse. He's harmless."

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⁴ This was the Bolster and Trahan figure. The official result reported by Standard & Poor's was -37.00%.