Jim Cramer's 'Mad Money' Charitable Trust Performance and Factor Attribution

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Abstract

This study analyzes the complete historical performance of Jim Cramer's Action Alerts PLUS portfolio from 2001 to 2016 which includes many of the stock recommendations made on Cramer's TV show "Mad Money." Both since inception of the portfolio and since the start of "Mad Money" in 2005 (when it was converted into a charitable trust), Cramer's portfolio has underperformed the S&P 500 total return index and a basket of S&P 500 stocks that does not reinvest dividends (both on an overall returns basis and in Sharpe ratio). These findings contrast with previous studies which analyzed Cramer's outperformance in short windows before the 2008 financial crisis. Using factor analysis, we find that Cramer's portfolio returns are primarily driven by underlevered exposure to market returns and in some specifications tilting toward small cap stocks, growth stocks and stocks with low quality of earnings. These results have broad implications for market efficiency, the usefulness of single name stock recommendations made on television, financial education, and the implementation of academic factors thematic in Crame's portfolio.

Keywords: Asset Pricing, Market Efficiency, Leverage, Size, Value, Momentum.

JEL Classification Numbers: G12, G14, G11, G23.

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1 Introduction

The usefulness of the financial advice from CNBC financial markets commentator Jim Cramer and other television finance personalities has historically been one of controversy. Cramer, unlike many other TV finance personalities, actually manages a stock portfolio that invests in many of his stock recommendations made on his television show Mad Money. Initially established in August 2001 with approximately $3 million (according to Cramer's Get Rich Carefully), TheStreet.com's Action Alerts PLUS (AAP) Portfolio has been the centerpiece of TheStreet.com's financial advice, giving subscribers access to each trade the portfolio makes ahead of time. In March 2005 at the launch of Cramer's CNBC TV show Mad Money, the Action Alerts PLUS Portfolio was converted into a charitable trust, and adopted the policy that any dividend or other cash distributions would be donated to charity. The portfolio has had relative stability in terms of its management over time, while Cramer lists himself as a "co-portfolio manager" of the Action Alerts PLUS Portfolio. Recently in February 2015, Stephanie Link, the other Action Alerts PLUS Portfolio "co-portfolio manager" left TheStreet.com to join TIAA- CREF, being replaced by Jack Mohr.

While previous papers have examined Cramer's pre-financial crisis portfolio returns (Bolster and Trahan (2009)) or the market impact of his stock recommendations made on TV (Engelberg and Parsons (2011)), this is the first paper to fully examine the entire history of Jim Cramer's Action Alerts PLUS portfolio returns before and after the financial crisis, adding seven years of post-financial crisis returns data from Cramer's Action Alerts PLUS portfolio. Further, this is the first paper to test for the potential presence of quality (QMJ) and betting against beta (BAB) factors in Cramer's portfolio, in addition to the traditional leverage (MKT-Rf), size (SMB), value (HML) and momentum (UMD) factors. We take the same approach as that of Frazzini, Kabiller and Pedersen (2012), who analyze the risk factors underlying Warren Buffett's entre portfolio return history at Berkshire Hathaway.

We find that Cramer's AAP has underperformed the S&P 500 total return index and a basket of S&P 500 stocks that does not reinvest dividends both since inception of the portfolio

and since the inception of Mad Money. In addition, Cramer's portfolio has a lower Sharpe ratio than both benchmarks over the same time period. We also find over the portfolio's entire history that Cramer's AAP portfolio exposures are primarily driven by underlevered exposure to market returns (MKT-Rf) in every specification, which has heavily contributed to underperforming the S&P 500 in post-financial crisis years. In other specifications, we find evidence of a tilt toward small cap stocks, growth stocks, and stocks with low quality of earnings. Also, when controlling for various factors in various specifications, the negative alpha (intercept) from the regression no longer becomes statistically significant. The paper proceeds as follows: Section 2 reviews the literature, Section 3 presents the data and our empirical strategy, Section 4 reviews the results and Section 5 concludes.

2 Literature

Several papers examine the short-term market impact of Jim Cramer's stock recommendations. Engelberg and Parsons (2011) and Engelberg et al. (2012) disentangle the causal impact of media reporting from the impact of the events being reported. The authors then find that average abnormal overnight returns following his recommendations are over 3% for their entire sample and over 6% for stocks in the smallest quintile. The authors also find that the price response is increasing in the number of wealthy viewers who watch the show but are unaffected by the number of low income households viewing the recommendations. The main thrust of this study, however, is in determining whether or not certain stock recommendations are more impactful than others, and whether or not the segment of the show in which the recommendation appears is priced. Results of this study can be used to make inferences regarding the efficiency by which information promoted via a popular television show may influence investor behavior (i.e. price discovery, market liquidity, market volatility and trading volume). Expanding on the findings of Neumann and Kenny (2007), Engelberg and Parsons (2011), and Engelberg et al. (2012), results from this study can be used to

determine if media endorsements of individual stocks lead to mispricing, and whether or not the retail investor is bearing that cost. The implications of this research have the potential to reposition prior research and to augment future thrusts in financial market research.

Instead, this paper seeks to examine the long-term performance of Cramer's stock recommendations, in particular the performance of Cramer's Action Alerts PLUS portfolio, commonly referred to as his charitable trust, which invests in the recommendations that he makes on Mad Money. This paper builds on Bolster, Trahan and Venkateswaran (2012) and Bolster and Trahan (2009), adding seven years of post-financial crisis returns data from Cramer's Action Alerts PLUS portfolio. In addition, we test for the presence of other factors such as the Betting Against Beta (BAB) factor of Frazzini and Pedersen (2014) and the Quality Minus Junk (QMJ) quality factor of Asness, Frazzini and Pedersen (2013). No studies to our knowledge analyze the performance of Jim Cramers charitable trust (Action Alerts PLUS portfolio) since its inception through the post-Great Recession crisis period. Bolster, Trahan and Venkateswaran (2012) analyzing Cramers Mad Money buy and sell recommendations between July 28, 2005 (the beginning of Cramers show Mad Money) and December 31, 2008, find that the recommendations can impact the share prices of companies that he mentions. Their factor analysis suggests his returns are driven by beta exposure, smaller stocks, growth-oriented stocks and momentum effects. Their analysis is limited to 3.5 years from 2005 to 2008 and does not observe returns during a full recession period. In addition, they do not regress on any BAB or quality factors.

3 Data and Empirical Strategy

3.1 Action Alerts PLUS Portfolio (Mad Money 'Charitable Trust') Returns Data

Returns data from the Action Alerts Portfolio PLUS are provided by TheStreet.com which are also made available to the public (See Table 1, Figure 1). Subscribers are also

given access to portfolio holdings data which we use to confirm some the findings of our risk factor analysis.

3.2 CRSP Mutual Fund Data

We also compare Cramer's returns to the active equity mutual fund universe. To do so, we obtained the returns from the CRSP Mutual Fund database for all active equity mutual funds that were active during some period between August 2001 and December 2015 (see Figure 2).

3.3 Factor Data and Analysis

In our factor analysis of Cramer's Action Alerts PLUS Portfolio excess returns ($R_{p,t}R_{f,t}$), we run several specifications using popular academic factors. We also run the regressions over two key time periods. First, we run regressions from the inception of the Action Alerts PLUS Portfolio in August 2001 to March 2016. We also we run regressions from the beginning of Mad Money in March 2005 (the same time the portfolio was converted into a charitable trust) to March 2016.

This includes the CAPM (Equation 1) regressing Cramer's excess returns on a leverage factor (MKTRf) defined by the S&P 500 minus the risk-free 3-month T-bill rate:

$$(R_{p,t} - R_{f,t}) = \alpha + \beta\,(R_{m,t} - R_{f,t}) + \epsilon_t \tag{1}$$

Our analysis also includes a Fama-French (1993) Three Factor Model (Equation 2) that regresses Cramer's excess returns on a leverage factor (MKTRf) in addition to size (SMB) and value (HML) factors obtained from the Ken French data library:

$$(R_{p,t} - R_{f,t}) = \alpha + \beta_{\text{MKT}}\,(R_{m,t} - R_{f,t}) + \beta_{\text{SMB}}\text{SMB}_t + \beta_{\text{HML}}\text{HML}_t + \epsilon_t \tag{2}$$

We run another specification using the Carhart (1997) Four Factor Model (Equation 3) that

includes a momentum factor (UMD), also obtained from the Ken French data library:

$$(R_{p,t} - R_{f,t}) = \alpha + \beta_{\text{MKT}} (R_{m,t} - R_{f,t}) + \beta_{\text{SMB}} \text{SMB}_t + \beta_{\text{HML}} \text{HML}_t + \beta_{\text{UMD}} \text{UMD}_t + \epsilon_t \quad (3)$$

In separate specifications, we also regress Cramers excess returns on the Frazzini and Pedersen (2014) Betting-Against-Beta factor and the Asness, Frazzini and Pedersen (2013) Quality Minus Junk (QMJ) factor.

4 Results

4.1 Factor Attribution

The results of the regressions are reported in Table 3. Analyzing the entire history of the portfolio, our CAPM specification finds a CAPM Beta of approximately 0.95 (statistically significant at the 1% level) and a negative alpha of -2.38% that is statistically significant (at the 10% level). Being underleveraged (underinvesting in the market portfolio) in part may be a result of the portfolios policy of not reinvesting cash dividends. Across almost all of our specifications, the results demonstrate that underleverage explains most of the portfolios relative underperformance given the S&P 500's positive absolute performance over the period. This is also confirmed by the portfolio holdings data which indicates that the AAP portfolio often holds a significant cash position, largely to make its annual cash distribution in March to make charitable contributions.

In our Fama-French (1993) three factor specification, we do find that the portfolio has some exposure to small caps given that the SMB factor is statistically significant at the 10% level, something confirmed by the portfolio holdings data. We do not find such a statistical significance when only looking at the entire history of Mad Money from 2005. Also, when controlling for momentum factors in our Carhart (1997) four factor specification, statistical

significance of the size factor also disappears nor do we find evidence of statistically significant exposure to momentum stocks. However, we do find that when analyzing the March 2005 to March 2016 time period, when adding the extra size, value and momentum factors in the Fama-French (1993) and Carhart (1997) four factor regressions that the statistical significance of the negative alpha of -3.06%, found in the CAPM for the same period, disappears. When we include the Frazzini and Pedersen (2014) Betting-Against-Beta factor and the Asness, Frazzini and Pedersen (2013) Quality Minus Junk (QMJ) factor, we find some evidence that Cramer tilts toward growth stocks and away from stocks with high quality of earnings.

4.2 Factor Replication

Using the factor analysis results obtained above, we also construct a "robo-Cramer portfolio that uses the same factor loadings as estimated from the regressions (Figure 3). The systematic Cramer-style portfolio is constructed from the same regressions of monthly excess returns in 3.2, namely the Carhart Four Factor regression using data over the entire time period (August 2001 to March 2016). The portfolio is rebalanced annually at year-end to keep constant weights. The explanatory variables are the monthly returns of the standard size, value, and momentum factors. Note that such a synthetic portfolio outperforms Cramer's actual cumulative returns for the entire period.

4.3 Financial Education and Portfolio Diversity

There is an important question of how many viewers have used Cramer's financial advice in their own portfolio decisions. Ratings from Nielsen (Figure 4) indicate the number of Mad Money viewers has waned in recent years. Analyzing TheStreet.com's public financial disclosures also provides some insight into the number of subscribers potentially taking Jim Cramer's stock advice provided through this Action Alerts PLUS Portfolio, which sends daily stock pick updates to viewers. TheStreet.com (TST) held its IPO at the height of the

tech bubble in 1999 and while remaining a public company, stock price has fallen as well (Figure 5). However, revenue for subscriptions to TheStreet.com's subscriptions has steadily risen (Figure **MISSING FIG**), indicating that consumers may not be responding to waning performance relative to the S&P 500. Cramer's Get Rich Carefully suggests that the number of subscribers (who pay roughly $15 a month or more) is in the millions.

While our study shows what viewers' portfolios would have returned should they perfectly follow Cramer's Action Alerts Plus Portfolio, we also need to consider the possibility that viewers or subscribers do not diversify their portfolio, adding idiosyncratic risk. In fairness, Cramer has consistently advocated for diversification both on Mad Money and in other forms, more specifically advising that anyone with less than $10,000 in liquid assets should buy a mutual fund, index fund or ETF. Financial literacy research on diversification in recent years has asked respondents the question: "Do you think that the following statement is true or false: 'Buying a single company stock usually provides a safer return than a stock mutual fund.'" Lusardi and Mitchell (2012) examining older respondents aged 50-69 in the Health and Retirement Study of 2004 find 52.3% answered correctly, 13.2% incorrectly and 34.6% said they didn't know or refused. Lusard, Mitchell and Curto (2011) examining younger respondents aged 23-28 in the National Longitudinal Survey of Youth in 2007-2008 find 46.8% answered correctly, 15.8% incorrectly and 37.3% said they did not know or refused.

CNBC has responded to concerns about consumer protection by placing extensive disclosures at the introduction of each episode of Mad Money and during commercial breaks. Indeed, CNBC at present requires Cramer to not trade any stock picks he recommends on his show for 5 days after in 2005 he was temporarily banned from the network for "talking his book." While some have advocated banning various forms of televised investment advice to protect individuals with little knowledge, education or information, this question along with others about consumer protection outside the scope of this paper.

5 Conclusion

This paper is the first study to analyze Jim Cramer's Action Alerts PLUS Portfolio returns over its entire history with data from post-financial crisis years. Previous studies have only analyzed various periods of out-performance leading up to the financial crisis. We find that the portfolio's overall under-performance relative to the S&P 500 is primarily driven by being underlevered to the market portfolio. Such underleverage has allowed the portfolio to miss out on substantial upside in post-crisis years. In various specifications, we also find some evidence of exposures to small cap stocks, growth stocks and stocks with low quality of earnings. Since unlike previous papers which find out performance in pre-crisis years, adding post-crisis years we find that Cramer has under-performed the S&P 500 since the inception of his portfolio and the inception of Mad Money even when controlling for leverage and other academic factors, this arguably has certain implications for star performance and market efficiency theory. These results also have several implication TV stock advice disclosure policy and financial education, which is outside the scope of this paper.

Appendix

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Year	Jim Cramer Action Alerts PLUS	S&P 500 (Without Reinvesting Dividends	S&P 500 Total Returns
2001	-2.67%	-5.21%	-4.64%
2002	-21.93%	-27.35%	-25.59%
2003	4.97%	-8.19%	-4.49%
2004	10.48%	0.07%	5.77%
2005	16.22%	3.07%	10.88%
2006	24.41%	17.1%	28.19%
2007	36.24%	21.24%	35.22%
2008	-15.08%	-25.43%	-14.2%
2009	11.36%	-7.94%	8.05%
2010	27.28%	3.83%	24.06%
2011	15.08%	3.83%	26.67%
2012	34.27%	17.75%	46.79%
2013	68.88%	52.6%	93.83%
2014	71.13%	69.99%	120.03%
2015	67.14%	68.74%	123.04%
2016	64.53%	70.04%	126.06%

Table 1: Cramer's Returns over the period ... 01/20016)

	Jim Cramer Action Alerts PLUS	S&P 500 (Without Reinvesting Dividends	S&P 500 Total Returns
Cumulative Returns (8/1/2001-3/31/2016)	64.45%	70.04%	126.06%
Ann. Return	3.38%	3.60%	5.59%
Standard Deviation	18.78%	17.75%	17.92%
Sharpe Ratio	0.11	0.13	0.24
Active Return (vs. S&P 500 Total Returns)	-2.21%		
Active Return (vs. S&P 500 Without Reinvesting Dividends)	-0.23%		
Tracking Error (vs. S&P 500 Total Return)	5.64%		
Tracking Error (vs. S&P 500 Without Reinvesting Dividends)	5.60%%		
Information Ratio (vs. S&P 500 Total Return)	-0.39 %		
Information Ratio (vs. S&P 500 Without Reinvesting Dividends)	-0.04		

Table 2: The Action Alerts PLUS Portfolio returns data was obtained from TheStreet.com. The returns can be accessed publicly at

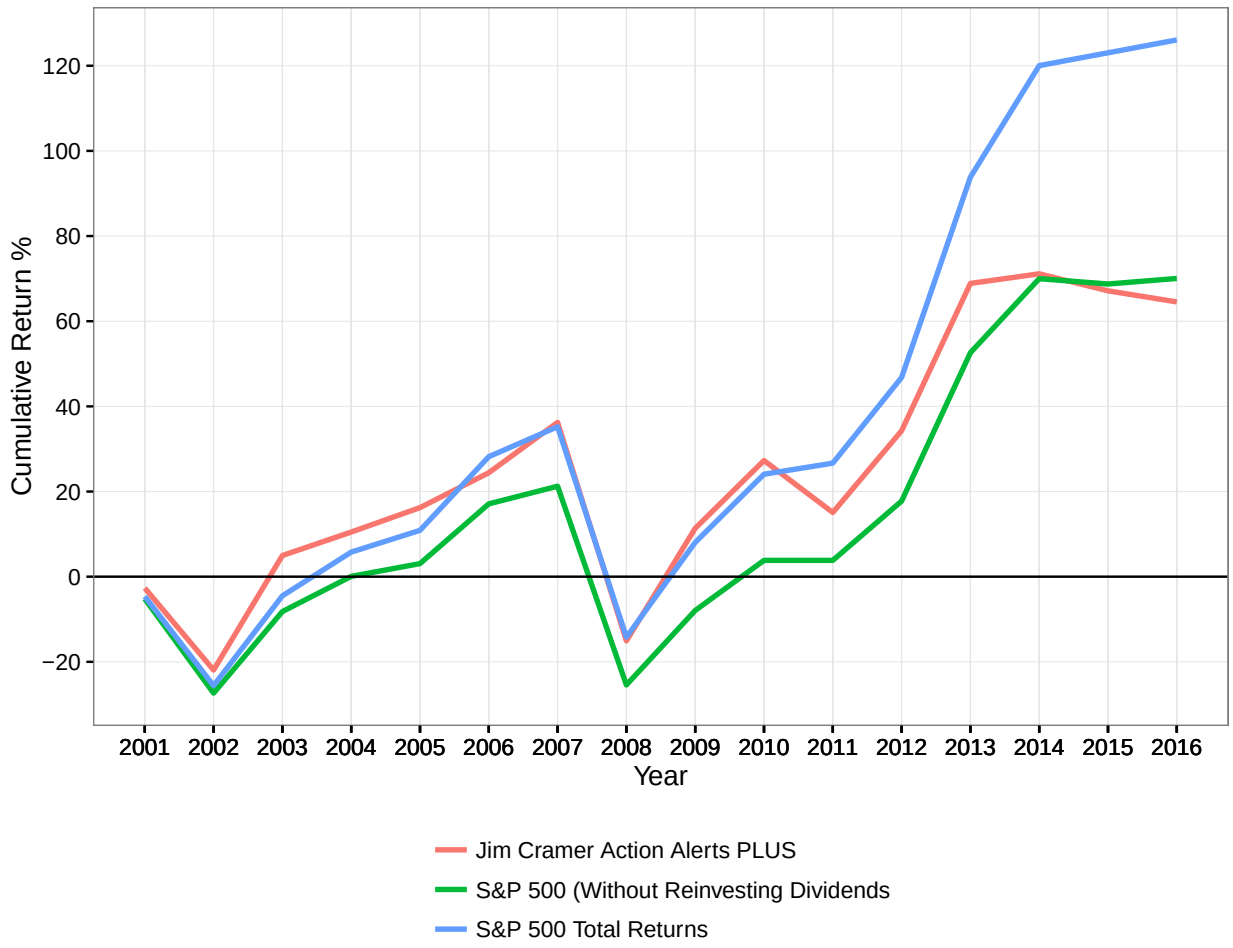

Figure 1: This figure displays the cumulative annual returns of Jim Cramer's Action Alerts PLUS portfolio against the S&P 500 Total Return Index and the S&P 500 without reinvesting dividends.

	CAPM	Fama-French (1993)	Carhart (1997)	Frazzini-Pedersen (2014)	Asness-Frazzini-Pedersen (2013)
Since Action Alerts PLUS Portfolio Inception (Sept 2001- March 2016)					
Alpha	**-2.38%***	**-2.70%***	**-2.43%***	-2.55%	2.15%
	(0.013)	(0.013)	(0.013)	(0.015)	(0.020)
MKT-Rf	**0.955*****	**0.901*****	**0.872*****	**0.854*****	**0.531*****
	(0.068)	(0.071)	(0.079)	(0.104)	(0.139)
SMB		**0.275***	0.237	0.249	0.125
		(0.150)	(0.158)	(0.170)	(0.137)
HML		-0.139	-0.127	-0.151	**-0.305***
		(0.159)	(0.161)	(0.188)	(0.153)
UMD			-0.051	-0.055	-0.019
			(0.059)	(0.064)	(0.050)
BAB				0.030	0.043
				(0.100)	(0.077)
QMJ					**-0.559****
					(0.197)
Since *Mad Money* Began (March 2005 - March 2016)					
Alpha	**-3.06%***	-3.02%	-2.80%	-2.87%	2.11%
	(0.016)	(0.017)	(0.018)	(0.019)	(0.025)
MKT-Rf	**0.950*****	**0.930*****	**0.900*****	**0.960****	**0.697****
	(0.084)	(0.096)	(0.104)	(0.275)	(0.229)
SMB		0.165	0.095	0.042	-0.098
		(0.260)	(0.277)	(0.371)	(0.279)
HML		-0.127	-0.122	-0.106	-0.276
		(0.206)	(0.201)	(0.235)	(0.186)
UMD			-0.060	-0.055	-0.010
			(0.071)	(0.079)	(0.061)
BAB				-0.066	-0.142
				(0.278)	(0.207)
QMJ					**-0.592***
					(0.241)

Table 3: These tables display regressions modelling Cramer's Action Alerts PLUS Portfolio returns as a function of various academically studied factors, namely MKT-Rf (leverage), SMB (size), HML (value), and UMD (momentum). Separate regressions were run using BAB (betting against beta) and QMJ (quality) factors, however neither were found to be statistically significant in additional specifications. The SMB, HML, and UMD factors were obtained from the Fama-French Data Library. The BAB and QMJ factors were obtained from Andrea Frazzini's website data library. ***Indicates statistically significant at the 1% level, **Indicates statistically significant at the 5% level, *Indicates statistically significant at the 10% level

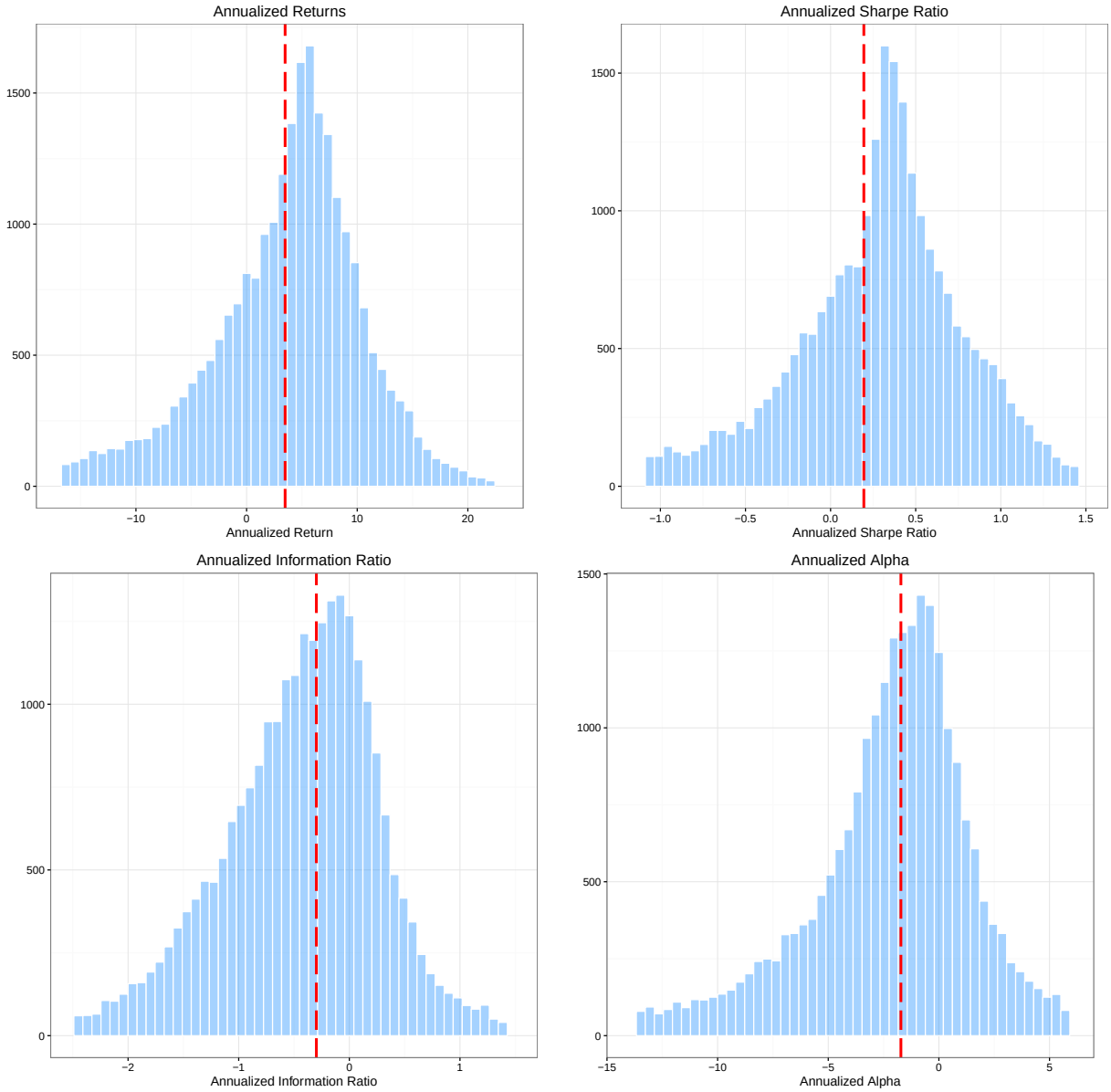

Figure 2: These figures show where Cramer's portfolio (vertical red dashed line) stacks up against the distribution of annualized Returns, Sharpe Ratios, Alphas, Information Ratios of all actively managed equity funds on the CRSP mutual fund database with at least 15 years of return history (since the inception of Cramer's Action Alerts Plus Portfolio). Annualized returns are defined as annualized cumulative return from August 1, 2001 (the inception of Cramer's Action Alerts Plus Portfolio) to December 31, 2015. Sharpe Ratio, a measure of risk-adjusted return, is defined as the annualized cumulative return of each fund minus the annualized cumulative return of the risk-free rate as measured by the rolling 3-month T-bill rate, divided by the standard deviation of portfolio returns. Alpha is defined as the intercept in a regression of monthly excess returns. Information ratio is defined as the intercept in the same regression of monthly excess returns divided by the standard deviation of the residuals.

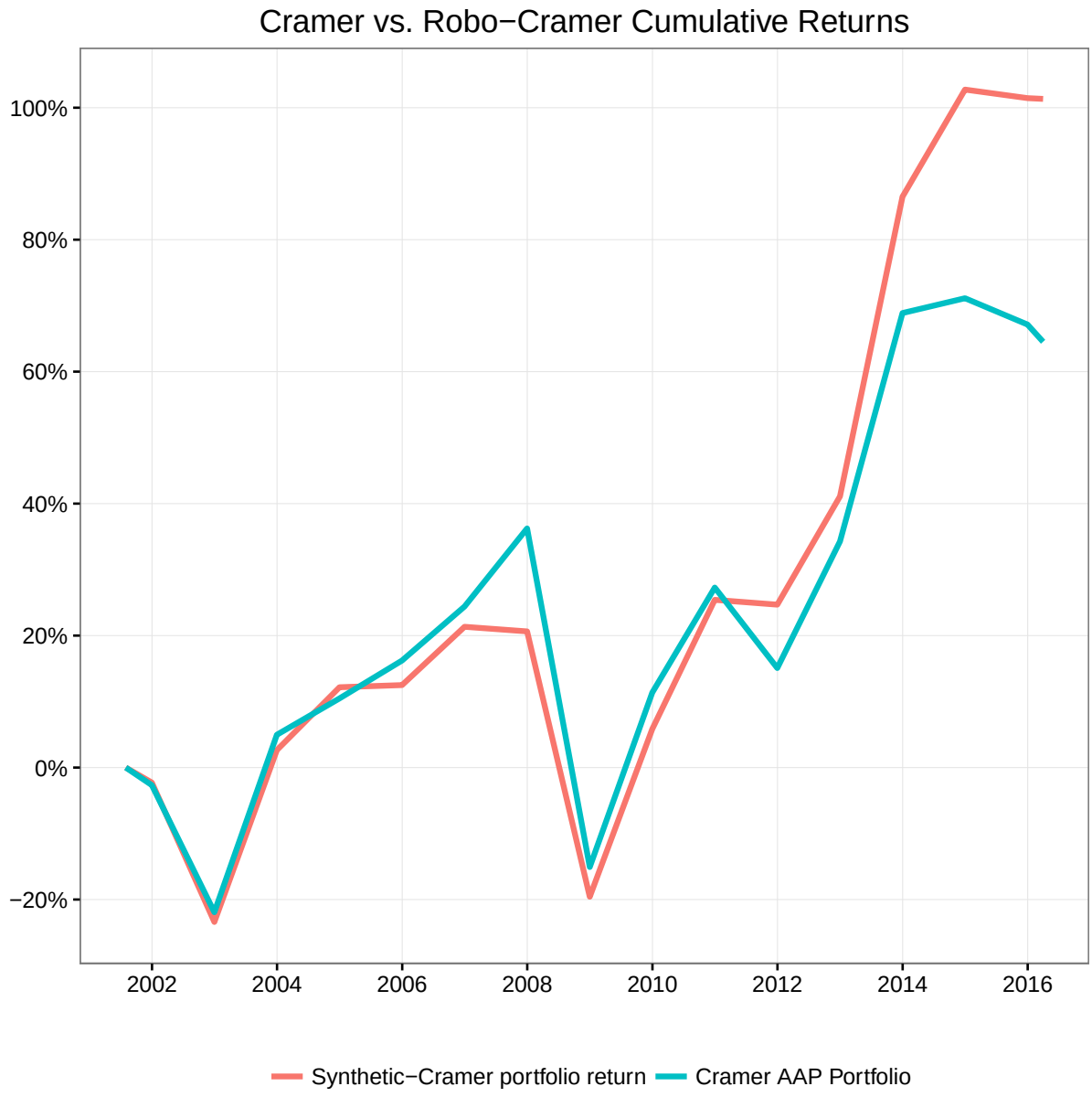

Figure 3: This table shows calendar-time portfolio returns. We report the statistics for a systematic mimicking portfolio of Cramer's Action Alerts PLUS portfolio strategy. The systematic Cramer-style portfolio is constructed from a regression of monthly excess returns. The portfolio is rebalanced annually to keep constant weights. The explanatory variables are the monthly returns of the standard size, value, and momentum factors.

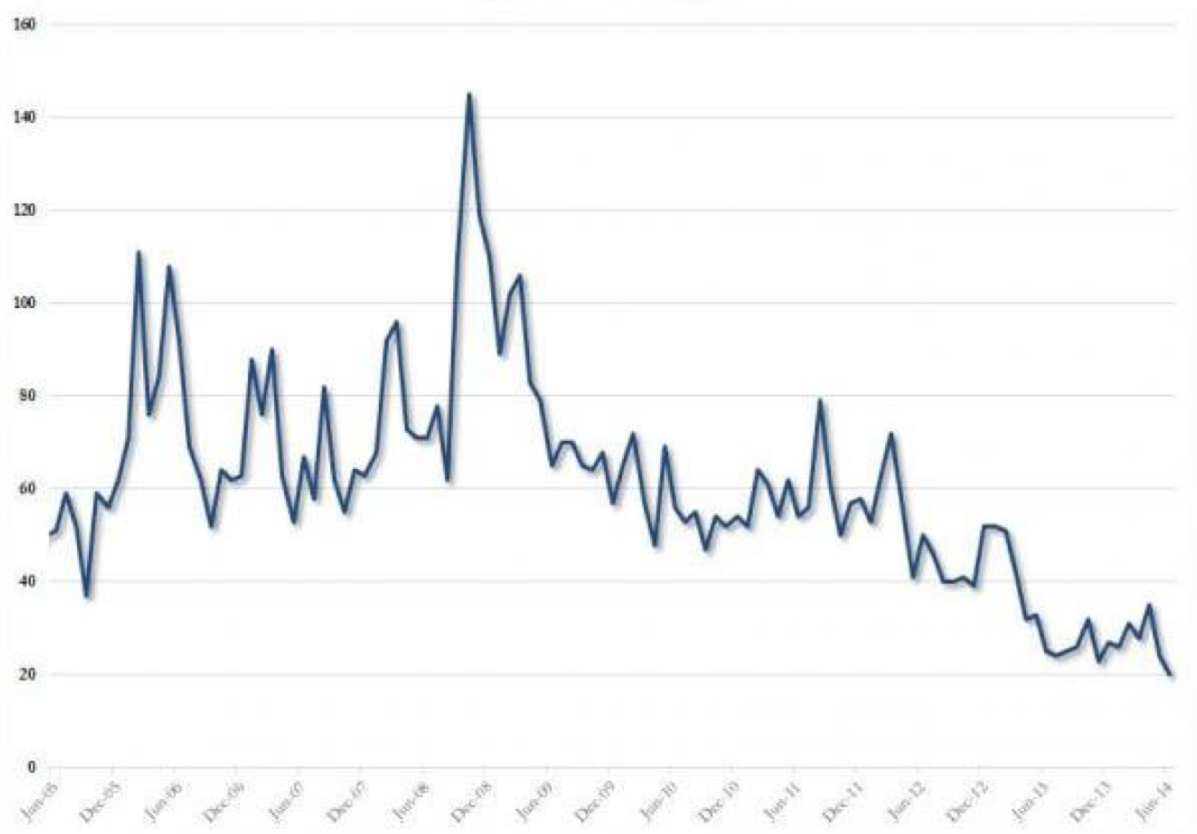

Figure 4: Jim Cramers 'Mad Money Nielsen Television Ratings (25-54 Demographic). Ratings data Nielsen Media Research. Note that CNBC stopped using ratings from Neilson as of January 2015:

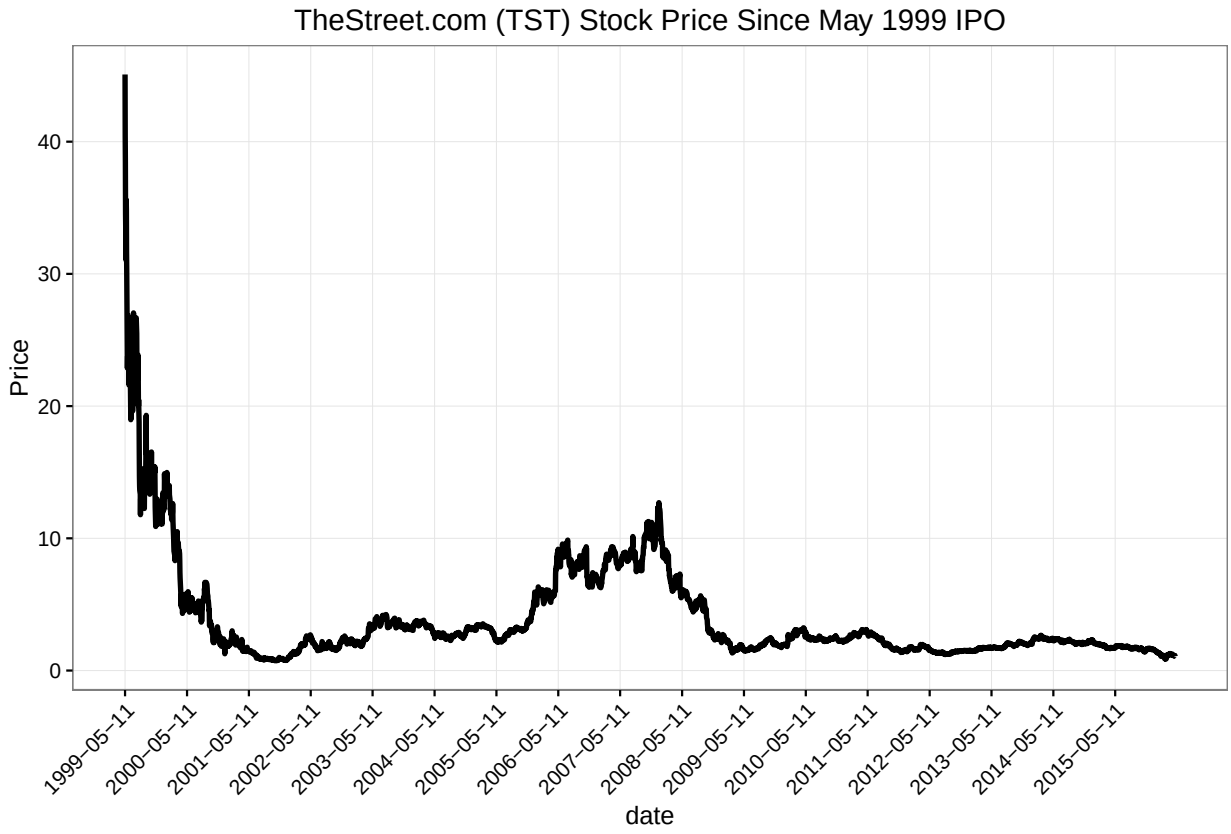

Figure 5: TheStreet.com (TST) Stock Price Since May 1999 IPO.