First Quarter, 2010

BACK TO BASICS: WHAT'S NEXT?

An Analysis of the Recent Recession and Quantitative Investment Manager Performance

Abstract

The market extremes experienced over the last couple of years provided a challenging environment for investors. This paper reviews the economic and market environment since 2007, analyzes from a bottom up factor viewpoint what was rewarded during this time, and presents research from similar historical time periods. This research shows that late recession stock market rallies driven by low-priced stocks (like the rally of 2009) are followed by periods in which the market rewards a broad base of fundamental metrics. These periods have historically proven to be an ideal environment for broad-based, quantitatively driven portfolios to outperform benchmarks.

CHICAGO EQUITY PARTNERS

180 North LaSalle Street • Suite 3800 • Chicago, IL 60601 • PH 312.629.8200

INTRODUCTION

Keeping a rational perspective about the investment markets can be a daunting task even for the most tenured and grounded investment professional. The market dislocations during 2008 and early 2009 provided perhaps the best challenge in recent memory for this skill set. The successes and failures during these turbulent times have been well documented.

The ensuing market recovery – which saw the S&P 500 roar back 67% from its March 9 bottom through the end of 2009 – was a welcome relief for many. This time period offered unique challenges, though, as many quantitative investment products lagged their respective benchmarks even as they provided substantial absolute returns. Below we review the economic and market environment of the last couple of years, analyze from a bottom up factor viewpoint what was rewarded during this time, and discuss what we think happens next.

ECONOMIC ENVIRONMENT

The recession that began in December 2007 likely will be one of the longest and most severe in history, second perhaps to the Great Depression. Small problems began to surface in the summer of 2007, when balance sheet and repayment issues in the subprime credit areas of the mortgage market emerged at Countrywide Financial and other lenders. While the overall economy continued to grow, the foundation began to crack.

In 2008, the economy experienced the grips of a global recession, constricting credit markets and triggering increasing market volatility. Consumer confidence plunged during the year, bottoming at an all-time low of 27.3 in February 2009. The contraction in fourth-quarter U.S. Gross Domestic Product (GDP) of -5.4% represented the largest decline since 1982. 2009 began where 2008 left off, with a continued global recession, declining capital markets and rising unemployment. GDP in the first quarter of 2009 declined a staggering 6.3% on a year-over-year basis. Unemployment continued its march upward into double digits.

As 2009 closed, some economic metrics suggested the recession was over. On a GDP basis, the economy transitioned from contraction to recovery, as third-quarter GDP advanced 2.2%, the highest reading since the second quarter of 2007. Nevertheless, GDP remained below historical trends, and employment and income growth were weak. The stock market began its recovery earlier than the overall economy, launching a spectacular rally on March 10. From a historical standpoint, this behavior is traditional. The stock market leads the overall economy into recovery, and while the depth and breadth of this recessionary period has been extreme, it is not unlike the troughs of 1973 / 1974.

MARKET ENVIRONMENT AND BEHAVIOR

The summer of 2007 began a period of increasing volatility and an unprecedented increase in the correlation of quantitative investment portfolios. Investors will remember late July and August of 2007 for the extreme pattern of stock returns. While the significant day-to-day market movements seemed extreme at the time, they did not foreshadow the environment to come. When the S&P 500 index returned 5.5% in 2007, many investors thought the wild ride was the nadir of that environment; yet, the worst was still to come.

In the month of January 2008, the S&P 500 posted a return of –6.0%, one of the worst one-month returns in the 84-year history of the index. The index posted seven more monthly declines in 2008, and for the entire year, the S&P 500 returned -37%, the single-worst one-year return since 1931. October 2008 witnessed the stinging collapse of Lehman Brothers and the U.S. Federal Reserve's unprecedented intervention in the capital markets to stop calamity. October's -16.8% slide is a testament to the pain experienced during the month, in spite of several individual days that were among the best in history.

Investors exited 2008 battered and scared. But, on the heels of 2008's -37% return for the S&P 500, an historically oriented investor would have been encouraged by the significant rebounds that followed past periods of negative returns. Nevertheless, the S&P 500 continued its plunge, falling an additional 25% between January 1 and March 9, 2009. By that date, the S&P 500 had plunged a staggering 56.8% from its October 9, 2007, high of 1,565. Where was the rebound? Chart 1 below details the past S&P500 declines and the subsequent rebounds.

Chart 1 shows:
Historically, after a significant decline, the S&P500 posts very strong returns one year after hitting the bottom.

Chart 1

Peak	Trough	Duration (days)	Decline (%)	One Yr Later (%)
7/10/57	10/22/57	104	21	35
12/12/61	6/26/62	196	28	37
2/9/66	10/7/66	240	22	37
11/29/68	5/26/70	343	36	48
1/11/73	10/3/74	630	48	44
11/28/80	8/12/82	622	27	65
8/25/87	12/4/87	101	34	26
7/16/90	10/11/90	87	20	33
3/24/00	10/9/02	929	49	36
10/9/07	3/9/09	518	57	??

Source: Standard and Poor's, Bloomberg.

In retrospect, the March 9 level of 676.53 marked the S&P 500 bottom. Between March 9 and March 31, the S&P 500 returned 18.1%, a gain driven by many of the most impaired stocks of the previous 14 months. Notably, Bank of America and Citigroup were up 81.9% and 141.0%, respectively, in this time period. Similar to past market bottoms, March 9, 2009, came with little warning or prediction. This rebound continued largely unabated throughout the year and marked the beginning of a recovery of more than 67% through December 31, 2009. For all of 2009, the S&P 500 returned 26.5%.

Low-priced, beaten-down, high-beta stocks, which suffered the most during the trailing 14 months, led the market rally. The top-performing stocks in the S&P 500 exhibited the following characteristics:

- They had an average price of approximately $6 on March 9 (versus more than $24 for the entire S&P 500);
- They had an average market capitalization of $2.1 billion (versus $12 billion for the entire S&P 500);
- Their average beta was 1.56 (indicating that the group was 56% more volatile than the index as a whole); and
- Each showed weaker near-term earnings (this group had an average one-month decrease of 78% for fiscal year estimates).

In fact, the top ten performing stocks in the S&P 500 from March 9 through December 31 posted huge returns after being some of the worst performing names during the prior fifteen months.

Chart 2 shows:
The top 10 stocks in the S&P 500 during the 2009 rally were some of the worst performing names in the prior 15 month period.

Chart 2

Top Ten Performing Stocks in the S&P 500 from March 9, 2009, to December 31, 2009		
Stock	Return: 3/9/2009 to 12/31/2009	Return: 1/1/2008 to 3/6/2009
Genworth Financial	+1,147.25%	-96.70%
Office Depot	+993.22%	-95.11%
Gannet	+661.54%	-94.36%
Fifth Third Bancorp	+601.44%	-94.87%
Wyndham Worldwide	+550.65%	-87.61%
International Paper	+508.64%	-87.37%
Tenet Healthcare	+498.89%	-81.89%
Ford	+474.71%	-74.74%
XL Capital	+471.03%	-94.14%
Hartford Financial Services	+467.32%	-95.85%

Source: Standard and Poor's, Bloomberg.

The comparison was just as extreme when examining industry and sector peers. Most quantitative investment managers use models that seek to identify stocks with a combination of attractive momentum and valuation qualities. This made stock selection extremely challenging in this environment, which provided the perfect background for many quantitative strategies to under perform.

PERFORMANCE REVIEW

We addressed the long-term successes of quantitative investment managers in our 2007 paper (The Case for Structured Equity, by David C. Coughenour, CFA, and Todd A. Davis). We found that the median quantitatively based large-capitalization core product provided an excess return of 105 basis points in the 14-year period ending September 30, 2007, the longest such period of significant data available from the eVestment Alliance database. This contrasts to 34 basis points and 35 basis points of excess return for the median fundamental and combined (strategies that use some level of quantitative screening followed by an element of fundamental management) products.

Within the long-term data, there were several distinct periods in which quant products underperformed their peers. A similar period existed in 2003, when the S&P 500 began recovering from its 42% decline from its then-high of March 24, 2000. In 2003, the S&P 500 returned 28.7% for the year, followed by positive performance in 2004, 2005, 2006 and 2007.

Similar to their experience in 2009, quantitative strategies pursuing an intersection of growth and valuation characteristics underperformed their peers in 2003. During this period, the most impaired names offered some of the most significant reward in this environment. For example, the stocks of companies rated C and D by Standard and Poor's returned 80.9% for the year, versus 26.3%, 27.4% and 28.2% for stocks rated A+, A and A-, respectively. This contrasts to a return of 28.7% for the S&P 500 in 2003. Furthermore, the C and D category stocks also had estimate price-to-earnings ratios of 56.0 times, versus 20.8 times for the S&P. Simply put, the lower-quality stocks performed the best in 2003, and they had less attractive valuations.

As the initial "pop" of the 2003 recovery wore off, the market reverted to its long-term behavior and rewarded a more balanced portfolio. This trend continued largely unabated through the ensuing bull market and even through the 2008 market decline. Between 2004 and 2008, the median quantitative investment manager outperformed its fundamental and combined peers by 104 basis points and 100 basis points, respectively, in this methodical, albeit volatile, market environment.

The current environment has given us an opportunity to revisit such information, in light of the extremes witnessed in 2009. We further narrowed our research to focus on eVestment Alliance's Enhanced S&P 500 Index Equity universe.

From 1993 through December 31, 2008, the median quantitative product produced an excess return of 85 basis points relative to the S&P 500, surpassing the return of fundamentally based strategies (+52 basis points) and those that use a combined approach (+47 basis points). In analyzing the data on a calendar year basis, a trend appears. Throughout the 10 calendar years ended in 2008, the median quantitative manager led in six of these years. In periods when the excess return (relative to the S&P 500) of the median quantitative manager ranked below that of the median fundamental and combined approach manager, the median quantitative manager significantly outperforms in four of the next five calendar years, as market reward broadened. This included substantial differences in 2005, 2006 and 2008.

FACTOR PERFORMANCE

While there are numerous approaches to quantitative investing, managers who focus on multi-factor alpha models typically include factors from two broad areas: value and momentum. The Chicago Equity Partners equity alpha model divides our factors into four fundamental groups: value, quality, momentum and growth. Over the long term, all four sets of factors have provided positive excess returns. The rally of 2009, though, was driven by low-priced, risky companies with the weakest fundamentals. This means a very narrow set of alpha factors worked in 2009. In fact, only the value factors showed positive performance. This behavior is typical when risk appetite increases in anticipation of an economic recovery (late-recession periods), and investors seek the cheapest stocks without regard to other fundamental metrics. During these brief periods, investor focus shifts to long-term expectations, and stocks with the cheapest valuations on a price-to-book basis lead the rally.

During the last 20 years, the U.S. has endured only three recessions, as determined by the National Bureau of Economic Research (NBER): July 1990-March 1991; March 2001-November 2001; and the current recession that began in December 2007. In examining these recessions, value factors worked well, while the momentum factors did not. This is especially true in the last three months of a recession, when the market begins to anticipate a recovery. It is important to note the factor behavior in the longer time periods of economic expansion following a recession. While value continues to be relevant, price-to-book is less effective, and the price-to-earnings ratio becomes the most powerful value factor in the six and 12 months post recession, as investors resume their focus on near-term expectations. Likewise, all momentum factors work in the post-recession period, particularly price momentum and earnings revisions, because earnings matter again. Chart 3 below highlights the value and momentum factor performance during and after recessions.

Chart 3

Quintile Spread Analysis	RECESSION		POST RECESSION	
Q5(best) minus Q1(worst)	Entire Recession	Last 3 Months of Recession	6 Months After	12 Months After
VALUE FACTORS				
Price to Book	16.21%	52.64%	9.90%	16.97%
Price to Earnings	18.65%	35.46%	26.08%	19.05%
Cash Yield	0.43%	12.75%	5.23%	3.19%
MOMENTUM FACTORS				
Price Momentum	-1.85%	-51.89%	20.26%	8.53%
Upward Estimate Revisions	-0.84%	-15.85%	8.13%	5.35%
Downward Estimate Revisions	-3.65%	-25.50%	11.91%	1.50%
Earnings Momentum	-2.19%	-25.32%	10.84%	2.78%

**Numbers are average monthly total return(annualized) for the SP1500 universe.*

**3 time periods examined: NBER Recession periods of: July 1990-Mar 1991, Mar 2001-Nov 2001 and Dec 2007-?*

**Source: Compustat*

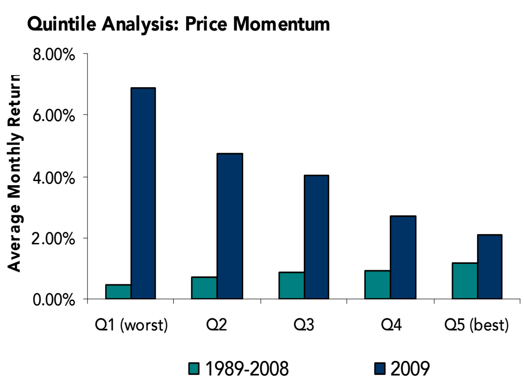
Chart 3 shows:

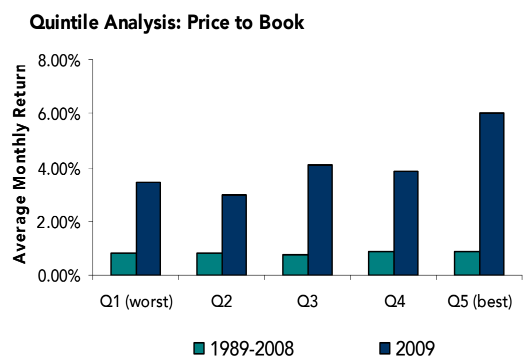
During recessions, *Value works, Momentum does not work.*

Post recessions, *Value & Momentum work, and earnings are very important.*

The factor environment in 2009 was similar to other periods of market recovery in that value performed well and momentum failed. What differentiates 2009 from other periods is the extreme magnitude of factor returns. In April 2009, when the market rally took hold, the price-to-book factor posted its most positive monthly return, while the price momentum factor posted its most negative monthly return in the past twenty one years. While it is expected for these two factors to be lowly correlated, the magnitude with which their returns differed in April was not seen before. Again, these returns highlight the market behavior in 2009 that rewarded valuation while simultaneously punishing momentum. Not only were the returns to price-to-book and price momentum very different from each other, they also varied greatly from their long term performance. Historically, the price-to-book factor provides a small quintile spread return differential, while the top quintile of price momentum performs much better than the bottom quintile. In other words, the price-to-book factor is rather weak, while the price momentum factor is one of the best performing factors over the last two decades. Chart 4 below highlights the extreme differences in factor returns for price-to-book and price momentum in 2009 compared to the prior 20 years of data.

Chart 4





Price Momentum Q5-Q1 Spreads	
Last 20 years	8.25%
2009	-57.75%

Price to Book Q5-Q1 Spreads	
Last 20 years	0.65%
2009	30.87%

**Numbers are annualized*

**Source: Compustat*

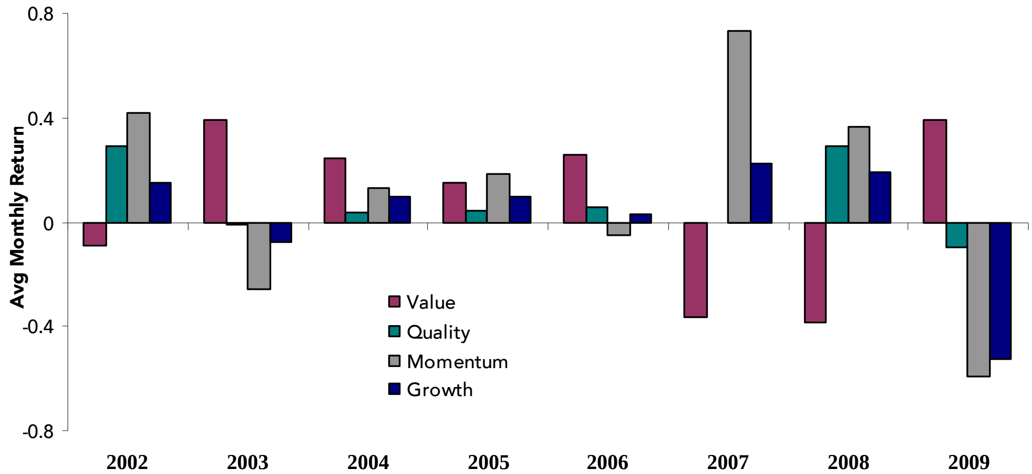
Chart 4 shows: *Extremely inverse behavior in 2009 compared to the last twenty years.*

The last time the market rewarded only value factors was during the previously discussed junk rally of 2003, a period of underperformance for quantitative equity managers. Comparing 2003 with the environment of 2009, we see many similarities, albeit more extreme in 2009. In 2002, before the rally started, a broad set of fundamental factors worked well, and quantitative managers outperformed. Then, in 2003, the market endured a junk rally when only the value factors worked, and quantitative managers suffered. This period narrow factor performance and portfolio underperformance was short lived, though, and from 2004 to 2006 a broad set of alpha factors again provided information, and quantitative investing was strongly rewarded.

Chart 5

Factor Performance and Excess Returns

Chart 5 shows:
Following the last Value only year (2003), a broad set of factors were rewarded, and quant did very well.



**Factor performance represents 1-month average coefficient returns for large cap universe*
**Source: Compustat, I/B/E/S*

Excess Returns Median Quant Manager	1.51%	0.14%	0.98%	2.02%	1.12%	0.16%	0.63%	-1.60%

In summary, the charts above demonstrate that stocks with the weakest near-term fundamentals tend to lead stock market rallies that occur during the end of an economic recession. In particular, the longer-term factor of price-to-book performs extremely well in these time periods, at the expense of other factors that consider near-term company information, such as earnings and balance sheet quality. This behavior, though, is short lived. Following a value-led rally, as economic expansion sets in, consideration for near-term company metrics and earnings returns. From a factor viewpoint, we expect the value-only environment of 2009 to be followed by a period of broad factor performance when quantitative managers do best.

CONCLUSION

The market extremes experienced in 2008 and 2009 provided a challenging environment for investors. From the bottom of the deepest market plunge since the Great Depression to the running of the bull that eventually followed, this time period exhibited great extremes. The 67% recovery in the S&P 500 from March 9 through the end of 2009 was a welcome relief. This period offered its own challenges for active management and, in particular, for quantitative investment managers employing a discipline that utilize momentum and valuation metrics.

Our research shows that late recession stock market rallies that are driven by low priced, beaten down stocks are followed by periods in which the market rewards a broad base of fundamental metrics. It is during these extended periods of economic expansion when near-term company information like earnings and quality are rewarded in the market and quantitative investment managers out perform. Therefore, the current environment is an ideal time to consider hiring or re-allocating to these managers.

ABOUT CHICAGO EQUITY PARTNERS, LLC

Chicago Equity Partners, LLC is a premier, mid-sized investment management firm. Chicago Equity Partners manages approximately $8 billion in assets invested in a full range of domestic equity and fixed income strategies for more than 100 clients. The firm's clients include public funds, Taft-Hartley plans, corporations, foundations and endowments, individuals and sub-advisory relationships located throughout the country and around the world.

Our founding team started managing institutional assets in 1989, using the same sound, proven fundamental principles we continue to use today. For more than 20 years, 100% of our resources have been focused on managing institutional investment portfolios. We continually enhance our research, fine-tune our quantitative models and advance our technology, data sources and trading platforms.

We are confident our philosophy will continue to be successful in the future, given our time-tested and proven process of stock selection and risk control.

For more information, please contact:

Patrick C. Lynch, CFA
President
312-629-8570
plynch@chicagoequity.com

CHICAGO EQUITY PARTNERS