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Where from Here?

Long-Term Opportunities Amidst the Fear

Michael J. Mauboussin



mmauboussin@lmcm.com

Mr. Buffett on the Stock Market November 22, 1999

If I had to pick a most probable return . . . that's 4% in real terms. And if 4% is wrong, I believe the percentage is just as likely to be less as more.

Buy American. I Am.

October 17, 2008

What is likely, however, is that the market will move higher, perhaps substantially so, well before either sentiment or the economy turns up. So if you wait for the robins, spring will be over.

Source: iStockphoto; "Mr. Buffett on the Stock Market," *Fortune*, November 22, 1999; and "Buy American. I Am." *The New York Times*, October 17, 2008.

- **We are in the midst of a collateral-based financial crisis.**
- **The conditions are getting set for attractive long-term returns in a number of asset classes, including equities.**
- **We draw reassurance from Warren Buffett's recent comments. Buffett rarely makes unsolicited calls on the market, and tends to be prescient when he does.**

This short essay covers three topics. First is a little perspective on recent events. Second are some thoughts on where we might go from here. And finally, a comment on the behavioral finance issues around what we are going through, with an emphasis on why it's so hard to act in this type of an environment.

It's important to open with a disclaimer that you should be circumspect about what we, or anyone else, have to say about the past, present or future. We humans tend to suffer from hindsight bias—we think we had more foresight than we did—and our predictions are frequently off the mark. So the goal here is not to make any predictions, but rather to point out salient features of what is going on and what those features might mean for the market.

To summarize, we believe this will prove to be a good time—and maybe even a great time—to invest for people with time horizons beyond a year or two. While there's no way to know where the market will be in the short term, many conditions are in place for better performance. More directly, we believe the market at these levels represents substantial value for long-term investors.

Let's start at the top with a brief take on recent events. Clearly, there's been no lack of commentary on what's happened over the last 15 months or so. The way we would characterize it, in the mid 2000s the world enjoyed a strong growth phase led by global expansion, simultaneous with relatively low volatility. The low volatility and higher asset prices encouraged investors (including financial institutions) and consumers to get comfortable with greater leverage. Increasing leverage in a low-volatility environment makes sense on some levels—for example, it helps boost returns for investors and increases affordability for consumers. The problem comes when the system overreaches, which started happening in 2006 and for sure in 2007. This overreaching was most pronounced with the U.S. housing market.

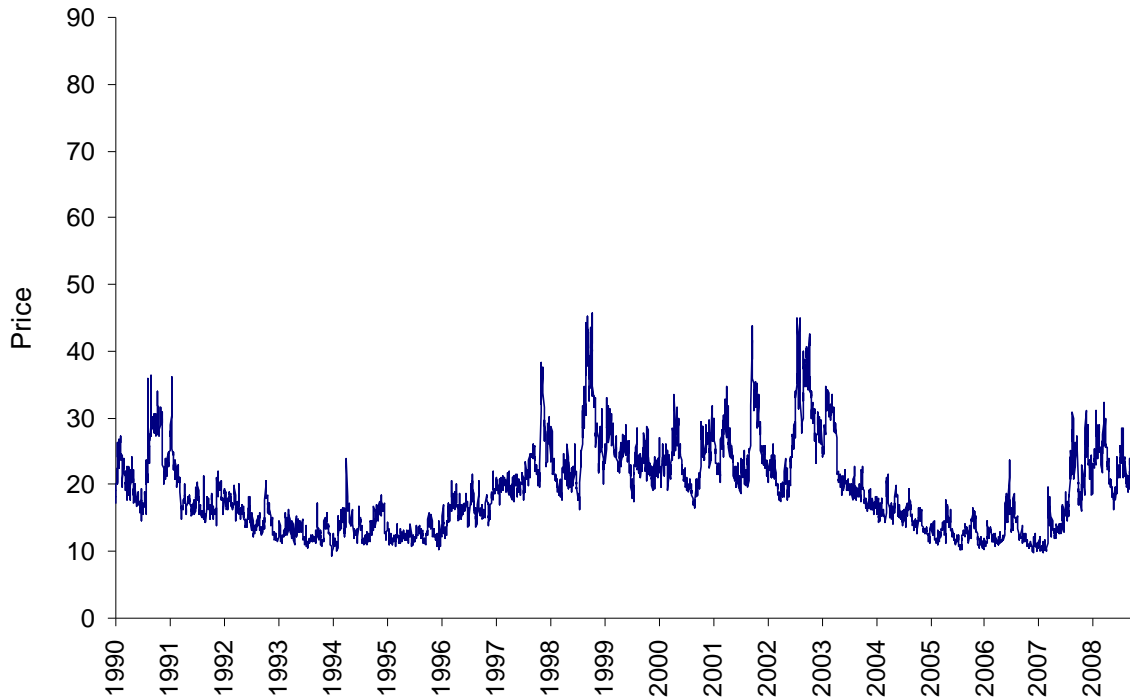
So we are now in a substantial unwinding process. And this unwinding process means we have a collateral-based, not a liquidity-based, crisis. Specifically, a collateral-based crisis is marked by a very devastating positive feedback loop: an asset price drops, leading to a margin call, leading to asset sales, leading to a further drop, leading to another margin call, and so on. What's key is governments can solve liquidity-based crises with injections of liquidity, as we saw in 1987 and 1998. Collateral crises, in contrast, require more action.¹

Collateral crises are much more damaging and prolonged than liquidity crises, and require substantial natural deleveraging and government action to encourage lending again. The good news is that governments around the world are on the case. And while there have been missteps, and there will be unintended consequences we have yet to recognize, the global government mobilizations suggest this downturn will be more akin to the early 1970s, early 1980s, or early 1990s than to the Great Depression.

To put this all in perspective, the decline in asset values in the past year or so has been huge. According to the Federal Reserve, following 2008's second quarter the U.S. consumer's net worth declined the most in real terms in any year since World War II. Specifically, year-over-year consumer net worth declined by \$2 trillion—a combination of lower equity and housing values. The third-quarter numbers are likely to set another record, and may show a decline in excess of \$7 trillion with the swoon in equity prices. While consumer net worth is still \$53 trillion, the arrow is pointing in the wrong direction, and that will likely have a material negative wealth effect. A rising savings rate for the U.S. consumer coupled with the negative wealth effect will likely dampen consumer spending for some time—important for an economy that is roughly 70 percent consumer-driven.²

One of the offshoots of this crisis has been a sharp rise in volatility. We know from empirical finance that volatility comes in clusters—low-volatility regimes alternate with high-volatility regimes.³ We have transitioned from one of the lowest-volatility periods in the mid-2000s to one of the highest today. To give you some sense of the numbers, during the weeks of October 13 and 20, 2008, the VIX (Chicago Board Options Exchange Volatility Index, a proxy for the annual standard deviation of S&P 500 returns) hit an intraday level of nearly 90, implying *monthly* volatility of over 25 percent. In the past 80 years or so, the *annual* volatility has averaged about 20 percent. (See Exhibit 1.) We last saw monthly volatility readings this high for a very brief period in 1987 and again in the 1930s. (See Exhibit 2.) People keep talking about how unusual this period is, and they are right. And you should expect volatility to remain elevated for the near term.

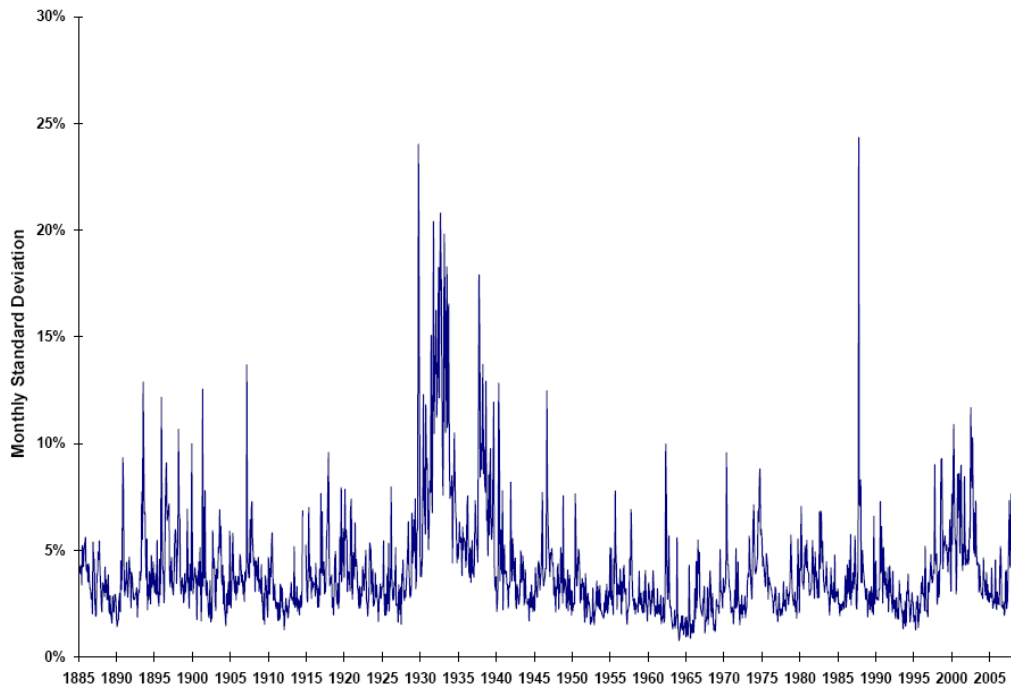
Exhibit 1: Chicago Board Options Exchange Volatility Index (1990 – 2008 YTD)



Source: Bloomberg, LCM analysis.

Exhibit 2: Historical Monthly Volatility

Standard Deviation of Monthly Stock Returns
from Daily Returns in the Month, 1885-2008



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Source: G. William Schwert, University of Rochester. Used with permission.

Along similar lines, we looked at the distribution of stock market returns since 1926. In that time, the arithmetic mean return has been a shade under 12 percent and the standard deviation about 20 percent. So if the market finished 2008 at current levels, it'll be well over a two standard deviation event—something you'd expect once every 40 or 50 years. Indeed, the year-to-date 2008 returns rank it among the worst in the past 85 years, behind only 1931.

And just to put a finer point on this volatility, October 13 and October 15 represented two of the five largest absolute changes in the market since World War II. In other words, of the prior 17,000 trading sessions, two of the biggest five days happened within three days during the week of October 13, 2008. It would not be unreasonable to expect more large moves, akin to earthquakes aftershocks.

So on to part two—where might we go from here? The first thing to recognize is the stock market is a discounting mechanism. In times of extremes, it is important to carefully distinguish between fundamentals—which will be challenging for the foreseeable future—and the expectations built into asset prices. Dwelling solely on fundamentals, a natural tendency, encourages investors to overlook the way to make money: finding gaps between price and value.

The probability of a painful downturn in economic activity is extremely high and is not lost on the market. The question is one of degree. The International Monetary Fund (IMF) recently put out a very useful paper called “Financial Stress and Economic Downturns.”⁴ There, the IMF takes a look at past periods of financial stress and quantified their impact on GDP growth. The upshot is the kind of stress we have experienced is associated with sharp slowdowns, pretty much what everyone has been talking about. The main question for us is what this means for earnings, multiples, and hence the value of the S&P 500.

In reviewing the current earnings estimates, the gap between the bottom-up and top-down estimates is yawning. Of course, the bottom-up estimates are always more optimistic, but the disparity is currently huge. Here are the figures:

Bottom-up

<u>Year</u>	<u>Earnings</u>	<u>Price-earnings</u>
2008	\$75.34	11.6
2009	\$97.32	9.0

Top-down

<u>Year</u>	<u>Earnings (operating)</u>	<u>Price-earnings</u>
2008	\$65.62	13.4
2009	\$62.40	14.1

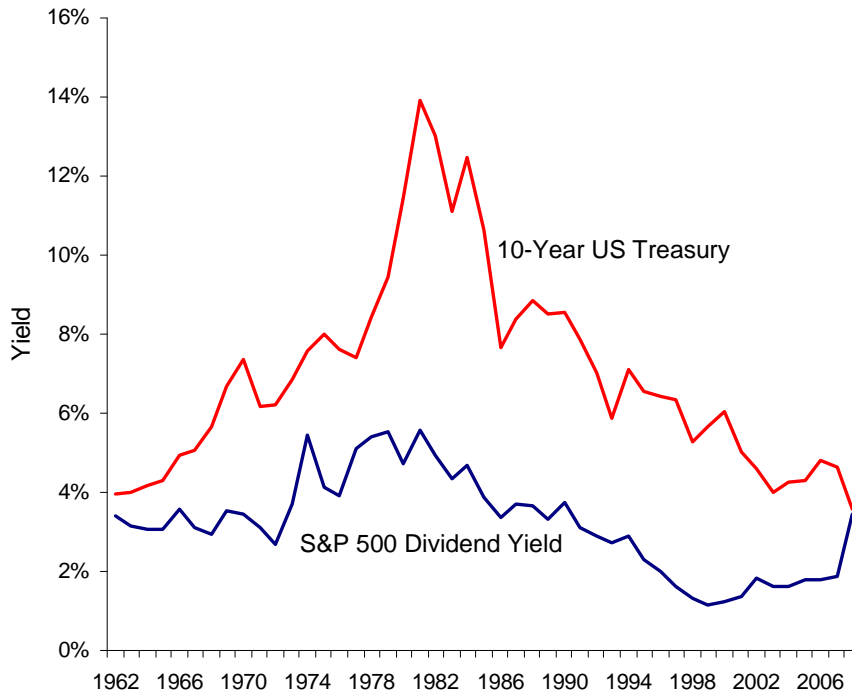
Multiples based on October 24, 2008 S&P 500 close of 876.77.

Source: Standard & Poor's. See <http://www2.standardandpoors.com/spf/xls/index/SP500EPSEST.XLS>.

We can add a couple of points. First, the 55 percent difference between the 2009 top-down and bottom-up estimates is remarkable. Our guess is the final number will settle somewhere between the two, while the trough earnings run-rate may be as low as the mid-\$50s. Second, given current interest rates and a normalized equity risk premium, our models indicate a fair price-earnings multiple slightly above 17.⁵ So we show upside to the market even if the 2009 top-down view is valid.

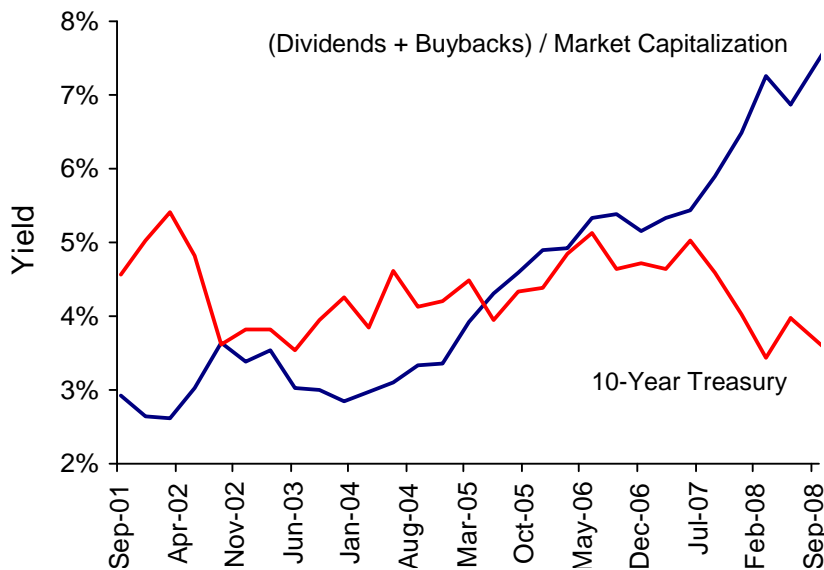
Finally, you can make a decent case for the market based on dividends alone. The current dividend yield on the S&P 500 is only about 25 basis points below the yield on the 10-year Treasury note (see Exhibit 3). You have to go back to the early 1960s to find a similar relationship.⁶ If you add in share buybacks, the yield is about 400 basis points *above* the 10-year note yield, and that's with buybacks down sharply this year (see Exhibit 4). And excluding the financial sector—and that's a big exclusion—corporate balance sheets remain in decent shape.

Exhibit 3: The Difference Between the S&P 500 Yield and the 10-Year Treasury Note



Source: Standard & Poor's; http://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/spearn.htm; <http://research.stlouisfed.org/fred2/data/GS10.txt>.

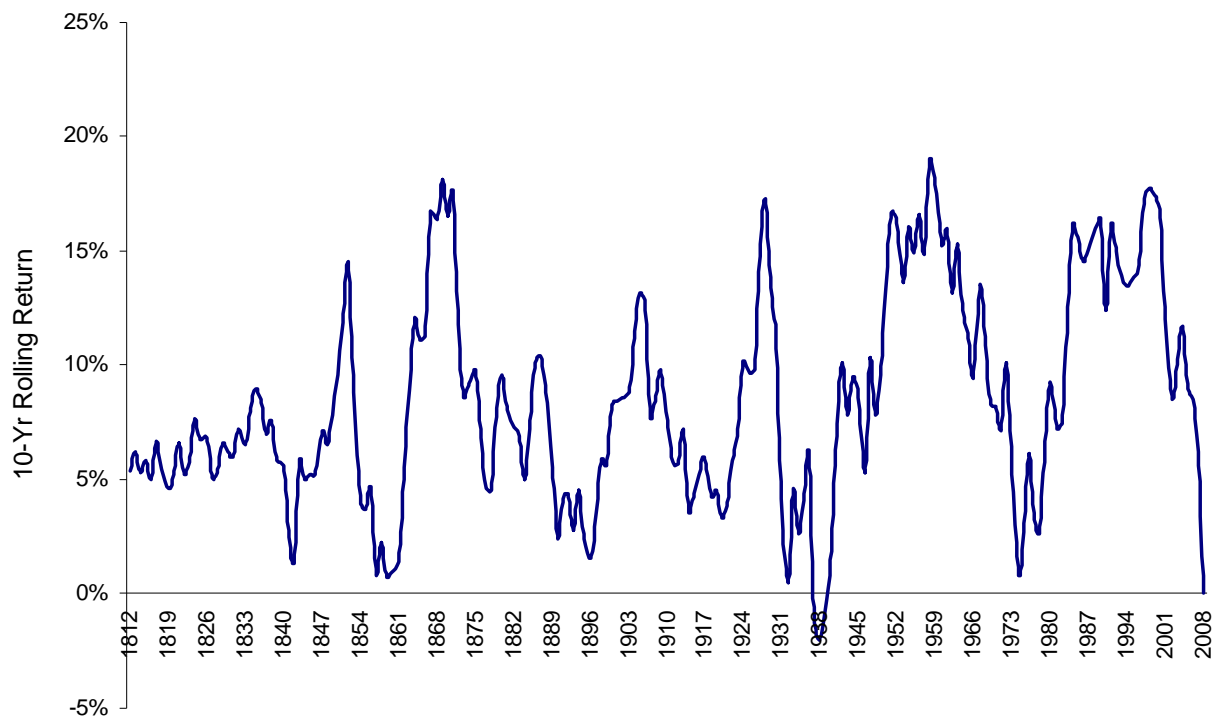
Exhibit 4: The Yield from Dividends and Buybacks Is Well Above the 10-Year Treasury Note



Source: Standard & Poor's; FactSet.

One of the ways to think about environments like today is to step back and take a normalized view of things. Exhibit 5 shows the rolling 10-year returns for large-capitalization stocks. Over the past century-plus, the market has tended to bottom out around zero percent rolling ten-year returns. That happened in the 1930s and 1970s, and that is where we are today. The rolling 10-year figure is worth examining for psychological reasons, too. If the average investor is in a mutual fund, they have lost money after taking fees into consideration. Further, most investors lose an additional 200 basis points due to bad timing.⁷ So the bottom line is on a dollar-weighted basis, the average investor has been down substantially in the U.S. stock market in the past decade. That is very psychologically damaging.

Exhibit 5: Rolling 10-Year Returns from Large-Capitalization Stocks



Source: Jeremy Siegel; Bloomberg; LCMCM estimates.

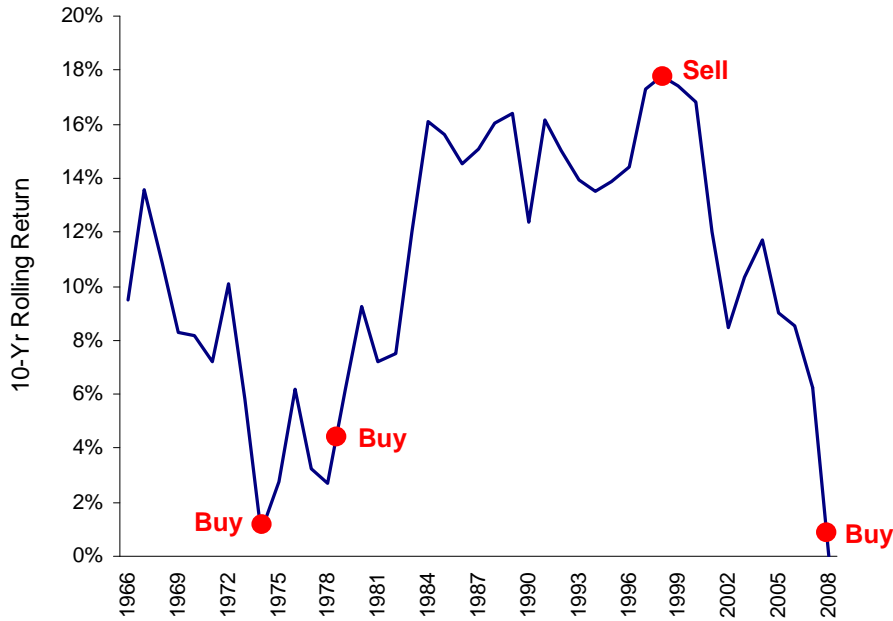
We also place significance on Warren Buffett's actions and comments. First, of course, it's worth noting his recent purchases of Goldman Sachs and General Electric. While meaningful, they were both sweetheart deals that the average investor cannot access. Second is Buffett's comment that he would like to take one percent of the government's bailout deal if he could buy mortgage-backed securities at current market prices, suggesting he sees mid-teens returns from prevailing levels.⁸

Finally, what appears most significant is the juxtaposition of his November 22, 1999, *Fortune* article and his October 17, 2008, *New York Times* commentary. Buffett very rarely takes the initiative to comment on the overall market, but he did so in these articles.⁹

In the 1999 article, within four months of the market's top, he suggested that real returns from the market going forward were likely to be about four percent, and if he was wrong, he thought his number was likely too high. In the past decade, we've been very close to a zero real return.

In October 2008, he wrote that "the market will move higher, perhaps substantially so, well before either economic sentiment or the economy turns up." He also added that he's buying U.S. stocks in his personal account. His partner, Charlie Munger, echoed these thoughts separately. Exhibit 6 plots Buffett's market calls on the rolling 10-year returns. He has proven to be reliably prescient.

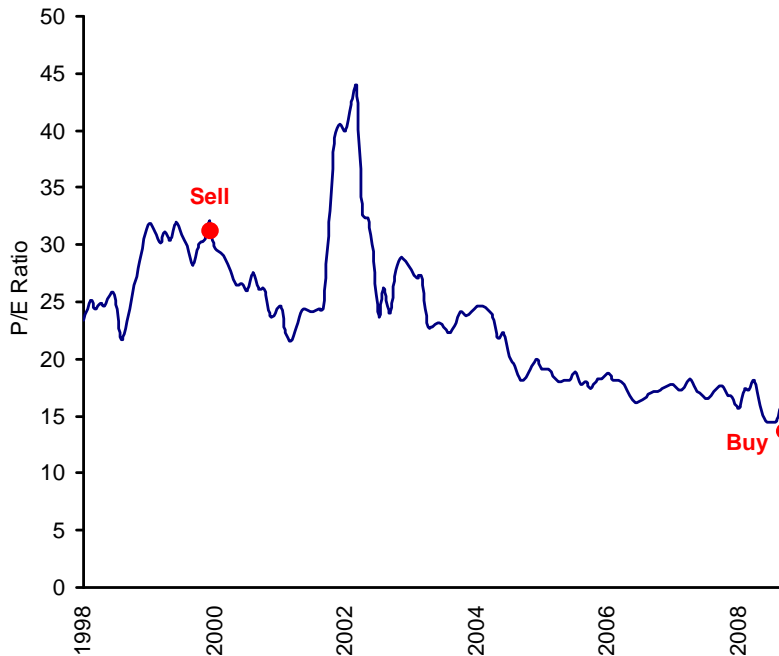
Exhibit 6: Buffett Rarely Talks about the Market, but Heed Him When He Does



Source: Jeremy Siegel; Bloomberg; LCMCM estimates.

The numbers bear out his perspective. When he wrote the *Fortune* piece in 1999, the S&P 500 traded at a price-earnings ratio of about 30 (the ratio got a little higher in the early 2000s due to recession). Today, the ratio is in the 10-15 range, given the prevailing estimates (see Exhibit 7). Normalized earnings appear to be around \$75, placing the market's price-earnings ratio under 12. The market has atoned for its 1990s excesses and then some.

Exhibit 7: Buffett to Investors: Buy Low, Sell High



Source: Standard & Poor's.

To finish, here are a couple of observations from behavioral finance. The first relates to a great piece of research that is very relevant today. In this study, normal people were pitted against people with brain damage in a contest. The brain damage had nothing to do with mathematical or logical abilities, but dealt with the emotional seat—ability to feel fear, greed, anxiety and so forth.⁹

The contest was simple. Each participant was given 20 dollars, and for 20 rounds had a choice to do one of two things: they could either keep their dollar or hand the dollar to the researcher who then flipped a coin and paid \$2.50 for a win and zero for a loss. So the expected value of handing over the dollar was \$1.25.

The bottom line is the brain-damaged participants ended up with 13 percent more money than the normal players. The reason is how frequently people were willing to gamble. Everyone understood that playing made sense, and almost all players started off handing over their dollars. But when the normal people lost a round or two, they often chose to hold on to their dollars in the next round. In other words, *normal people forgo explicitly net present value positive bets after they have lost.*

This is very akin to today's environment: most people recognize there is value in the market, but they would rather hold their cash than risk losing again. To state the obvious, the way to end up with the most money is to participate in net present value positive investments, even when your emotions tell you not to.

The second behavioral observation deals with stress. The whole story of how humans deal with stress is really interesting, but there's one facet worth emphasizing.¹⁰ When people get stressed, they tend to dramatically shorten their time horizons. If you're a zebra being pursued by a lion, turning off systems for digestion, reproduction, immunity, and growth makes all the sense in the world because the chase will be done, or you will be done, in short order. But humans, who have many of the same physiological responses, are not dealing with a short-term threat, but rather a long-term system called the stock market. So taking a long-term view is absolutely crucial, although really hard.

In summary, we are in the midst of a massive deleveraging process, but governments are acting proactively, even if clumsily, to mitigate the impact. Equities, after suffering a tough period, look attractive for the long haul. But psychology tells us that stepping up in these types of market environments is really tough.

Endnotes

- ¹ John Geanakoplos, "Liquidity, Default, and Crashes," *Cowles Foundation Paper No. 1074*, 2003.
- ² Federal Reserve. See <http://www.federalreserve.gov/releases/z1/Current/z1.pdf>.
- ³ Benoit Mandelbrot and Richard L. Hudson, *The (Mis)Behavior of Markets* (New York: Basic Books, 2004).
- ⁴ See <http://www.imf.org/external/pubs/ft/weo/2008/02/pdf/c4.pdf>.
- ⁵ Michael L. Goldstein and Laura Dix, "Portfolio Strategy: October 2008," *Empirical Research Partners*, October 23, 2008; David E. Nelson, "Legg Mason Capital Management Month-end Commentary," September 2008.
- ⁶ For commentary along the same lines, see Peter L. Bernstein, "Two Little-Noted Features of the Market and the Economy," *Economics and Portfolio Strategy*, October 15, 2008.
- ⁷ Michael Mauboussin, "Where Fools Rush In," *Time*, October 29, 2006.
- ⁸ Warren Buffett interview on *CNBC*, October 1, 2008.
- ⁹ Warren Buffett, "Look at All Those Beautiful, Scantly Clad Girls Out There!" *Forbes*, November 1, 1974; "You Pay a Very High Price in the Stock Market for a Cheery Consensus," *Forbes*, August 6, 1979; "Mr. Buffett on the Stock Market," *Fortune*, November 22, 1999; and "Buy American. I Am." *The New York Times*, October 17, 2008.
- ¹⁰ Baba Shiv, George Loewenstein, Antoine Bechara, Hanna Damasio, and Antonio R. Damasio, "Investment Behavior and the Negative Side of Emotion," *Psychological Science*, Vol. 16, 6, 2005.
- ¹¹ Robert M. Sapolsky, *Why Zebras Don't Get Ulcers: An Updated Guide to Stress, Stress-Related Disease, and Coping* (New York: W.H. Freeman and Company, 1994).

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