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This month marks our seventh anniversary of managing client money in the stock market. We will present our results, but first we'll look at some research results in "behavioral finance"- that show the psychological reasons for investors' decisions. This is especially relevant in the current market environment as it helps explain some of the things going on in the market and how our emotional reactions may make our strategy "feel awful".

Behavioral Finance Explanations of Investor Errors In academia it is popular to assume that investors are (fully) rational because it makes it easier to develop mathematical models of markets. In counterpoint to this incorrect simplification, the field of behavioral finance developed. Researchers in this field have identified a substantial number of typical investor "errors" that broadly fall into two categories: 1. Information Processing Errors and 2. Behavioral Biases. Error in this context means that a fully rational person with access to all the information and time to analyze it (or a computer) would make a different and better decision. In the real world we often cannot realistically obtain and properly analyze all information and so we use mental "short cuts" to make a lot of decisions. It turns out that these short cuts can frequently lead us astray. Most likely all of us have made these mistakes at one time or another. We'll cover just a few of them in this newsletter.

First up, in the category of Information Processing, is Forecasting Errors also known as Memory Bias. A series of experiments showed that people put too much weight on recent experience compared to earlier experiences. This can lead to extreme forecasts relative to historical norms. So for example, in the 5 months from September 2011 to February 2012 the U.S. oil price shot up 20%. Based on this people are likely to forecast double digit oil price gains – or at least gains. But if we look back to the 5 months ended in September 2011, the oil price dropped 22% over this period. When we see stocks going up or houses going up recently, people tend to extrapolate the current trend rather than taking the long view that prices swing within a range around the true value. We see the effect of this phenomenon in stock analyst talk that

stocks are cheap relative to current forecast earnings. Corporate profit margins are at all time highs. The flip side is that labor income as a share of national income is at a low. This imbalance is not likely to persist in the longer term. Yet people focus on the recent experience and "over weight" it to justify the values of stocks. When these profit margins come down to normal levels, it will reduce earnings compared to if margins remained at elevated levels. Using normal profits as in Professor Shiller's Cyclically Adjusted Price to Earnings ratio, highlights stock valuations at unusually high multiples of normalized earnings.

Another similar information processing error is called "Sample Size Neglect" whereby people infer patterns from a small sample and act as if it were representative of a larger population. An example would be a statement that the 1st year of a presidential term is generally worse than the 3rd or 4th year – based on elections since 1948. There have been only 16 such cycles. A sample of 16 is just not enough to distinguish any pattern from random fluctuations. People are naturally inclined to search for and find patterns quickly. This was likely an imperative for early humans, and it has carried over to modern man where it is not nearly so useful in making investments as in hunting wild animals.

Another current example is market participants who bet that each Federal Reserve announcement of more bond buying will bring a rise in the stock market. We are in uncharted territory here - with a sample size of 3 to infer a pattern from. As a prudent investor (and statistics expert), I won't bet my savings on it, or yours. When we use statistics to analyze data and come to conclusions, we generally need a sample size of more than 30 to separate out signal from noise. A lot more data is needed when the "noise" or randomness is greater – as it is in the markets.

I reviewed a recent statistical analysis that looked at key market conditions and related them to (average) subsequent returns over a very large sample period. The idea of this study is that we can use such data to evaluate how the average return for any set of conditions compares to all the other sets of market conditions and the corresponding returns. As of last week, the analysis showed that average returns corresponding to the conditions we see now were in the bottom 1% of all scenarios studied. Obviously, the larger sample size of this study is pointing in a very different direction than the sample of 3 (Fed quantitative easings and the "twist"). Perhaps the Fed's manipulations can push stocks ever higher into another bubble, but sooner or later, values will have to normalize. We could try to ride the bubble up and get off at the peak, but how do we know when it is here? If things are really different this time, it doesn't help us much because we have no way to judge when the fall will come.

In the Behavior Bias category is Regret Avoidance behavior. We all seek to avoid regrets. Studies have found that when decisions don't work out

well, people regret it more if the decision was unconventional. So if we make a bad decision, we regret it (i.e. blame ourselves) more if we went against the crowd than if we followed the crowd into a mistake. If everyone made the same mistake then we're not so dumb, right? This explains why we observe "herding behavior": we see that most mutual funds track their benchmark index fairly closely. The managers want to avoid the possibility of being wrong and being different from the crowd. The famous economist John Maynard Keynes said "It is better for the reputation to fail conventionally than to succeed unconventionally".

From our point of view the important consequence of Regret Avoidance behavior is that out of favor stocks and contrarian strategies tend to produce higher expected returns. This is because investors going against the crowd require higher returns to compensate for their courage in facing the possibility of larger regret. Conversely, the "herd" should make correspondingly less monetary returns (though such behavior may be more emotionally rewarding).

We know from experience that the market often gets things wrong, and that over the long run we can earn better returns by avoiding markets with low returns per unit of risk. Managing our investments in such a contrarian way, however, leads to high "tracking error". This is the investment industry's term for the difference between a manager's return and his benchmark index's return. If your investments are performing much better than the benchmark, there is no regret, only joy. But underperforming is painful. If you are one of my clients, then you are feeling the "tracking error" regret by now. I have already heard from a few people who are feeling uncomfortable about holding to a low risk defensive position while the market has soared over the last 6 months. This tracking error (gains foregone), and the resulting discomfort, is the price we are paying (emotionally) to avoid the risk of principal loss that goes with riding a speculative wave in the market that is unsupported by long term fundamentals.

These behavioral issues are real risks to investors' portfolios. It is difficult to recognize when you are making such mistakes and hard to control even when you know these biases exist. A big part of my job is helping clients overcome these psychological risks so they can successfully stick with strategies that will earn higher returns with lower risks over the long run. Although the media will never tell you the story, there is plenty of data out there to show how much value is added by an advisor that is able to get you to stick to a strategy through thick and thin.

For example, a well known hedge fund manager set up a quantitative strategy that has done significantly better than the market – *over long periods.* He offered two versions of this strategy to clients – one where his firm did all the trades for the client automatically and one where the clients were told what trades to do but the client decided when or if to actually trade. I.e. the clients "filtered" the strategy with their own research/emotions in the second case.

After two years, the manager analyzed the returns of the "automatic" clients versus the "filtered" clients. The automatic clients outperformed the filtered clients by 25% over two years. Here's a list of what they did wrong:

1. **Filtered clients didn't buy many of the biggest winners.** Companies are usually cheap for well known reasons and if individuals have heard of the problems they face in the short term, they just eliminate them from consideration, but many of these companies turn out to be the biggest future winners. We see both forecasting errors and regret avoidance here.

2. Filtered clients quit following the strategy after it underperformed for some time.

Many investors got discouraged after the strategy underperformed the market for a period of time and so they sold stocks without replacing them, held more cash, and/or stopped doing new trades to follow the strategy. They experienced negative tracking error and inferred from a small sample of time that the strategy wouldn't work. It's hard to stick with a strategy that's not working. The best mutual fund for the decade of the 2000's produced returns of over 18% per year for a decade. However, because investors bought after gains and bailed out during periods after the fund had underperformed for awhile, the average investor (weighted by dollars invested) actually turned the fund's annual gain into an 11% loss per year during the same 10 year period.

3. Many filtered clients quit the strategy after the market and their self-managed portfolio declined (even if the self-managed strategy was outperforming a declining market).

This is similar to #2 above. Investors don't like to lose money – even for a little while. Beating the market by losing less isn't enough. These investors sold stocks without replacing them, held more cash, and/or stopped doing new trades to follow the strategy.

4. Many filtered clients bought more after good periods of **performance.** Most investors sell right after bad performance and buy right after good performance. Buying high and selling low is obviously a proven way to lower long term returns.

It's not that these people were dumb. It just comes down to behavior issues embedded in human nature that can cost you multiples of the fees you pay for professional help. Warren Buffet said:

"Investing is not a game where the guy with the 160 IQ beats the guy with the 130 IQ...Once you have ordinary intelligence, what you need is the temperament to control the urges that get other people into trouble in investing."

He also gave two rules for investing:

- 1. Don't lose money
- 2. Don't forget rule number 1.

The two rules don't say anything about tracking error – but it is uncomfortable.

Performance Review for 7 Years Ended 3/17/12 (Since Inception)

At Berkeley Investment Advisors, we implement our investment strategies in a number of different risk portfolios – into which we allocate client money according to their risk tolerance. Our primary equity portfolios are called Long-term Value (which hit its 7 year anniversary in March 2012) and the Special Situations portfolio which came just a bit later. Since January 2008 we've used a "Hedge" portfolio to reduce the risks of the first two strategies under adverse market conditions. We've also had a substantial allocation of client monies to both long-term and short-term bonds.

The chart below plots the cumulative returns for the overall blended portfolio recommendation (for the average of the first 4 clients) over the 7 years ended March 17, 2012 as compared to the S&P 500 index.



These 1^{st} four clients earned an average cumulative return of <u>25.3%</u> <u>compared to 32.9%</u> for the S&P 500 over the same time. The following table breaks down returns by calendar year.

First 4 Clients Average Returns Over 1st 7 Years

From Mar 17		Returns Comparison					to Mar 17th		Cumulative Since
Year	2005	2006	2007	2008	2009	2010	2011	2012	Inception
Avg. of Client Returns	21.8%	16.1%	-2.4%	-24.6%	14.2%	4.2%	0.2%	1.0%	25.3%
S&P 500 Return	6.2%	15.8%	5.1%	-39.0%	26.4%	14.6%	1.9%	14.2%	32.9%
Difference	15.6%	0.3%	-7.5%	14.4%	-12.2%	-10.4%	-1.7%	-13.2%	-7.5%

As shown above and on the previous page, client portfolios had outstanding performance from inception in March 2005 up to October 31, 2007 when cumulative returns peaked at 56%. In January 2008 we put on hedges against further expected market declines. Consequently we did not lose money for the first 6 months of 2008. After that, the rapid drop in oil prices and very high volatility rendered our hedging instruments less effective than expected. Still, we were able to break even in October 2008 when the market

was crashing and our portfolio was also close to break even in the early 2009 market drop.

After the market bottomed in March 2009, we remained defensive throughout the subsequent rally because we were more concerned with protecting against principal losses than speculating on a favorable market response to quantitative easing (QE) and a "less bad" economy. Although we have performed well over the full 7 years, we have significantly underperformed the market in the last 3 years as it has rebounded from the lows. We have remained defensive – first because of economic risks and later because the market became over-valued, over-bullish, and therefore overrisky.

The last six months have been particularly frustrating. As of September 2011 these clients were 20.6% ahead of the S&P 500. Over the next 6 months the S&P 500 outperformed our clients 27.5% versus .4% and in March finally broke ahead of our accounts for the first time ever. This has been extremely painful to experience which deserves further comment.

In late September the Federal Reserve commenced operation "Twist" in which they are selling short term treasury bills and buying long term treasury bonds. (This is exactly opposite of what needs to happen to reduce the risks of excessive government debt). As with the first two rounds of quantitative easing (QE1 & QE2), the goal of this policy is to force investors to take more risk by shifting the money to stocks and riskier bonds. As before, the intervention had a strong psychological effect on the market by reassuring the market that the Fed would bring on as much quantitative easing as needed to keep asset prices high, and create a positive mood to encourage speculation and consumption. As mentioned in the first part of this newsletter, the market seems to be extrapolating from the recent experience to make extreme forecasts for stocks based on permanent Fed support for high valuations and low returns. Looking at longer historical samples we can see this is not a safe bet - hence our refusal to violate Buffet's rule #2 by speculating on an unsustainable rally.

Client returns data includes reinvestment of dividends after netting out fees and expenses. Note that our client portfolios are much less diversified than the S&P 500 index and therefore may exhibit higher short run volatility. Our view is that short run volatility is not an appropriate measure of risk of loss for long-term investors. Still, we have used hedging to reduce volatility over the last 4 years so as to avoid large unrealized losses which might cause clients to sell at the worst time. As a result the monthly volatility of returns for our portfolio over 7 years is lower than the S&P 500 (12.4% vs. 16.7%).

In summary, we are holding to our risk reduction strategy. Although cumulative returns to date are somewhat unimpressive on an absolute basis, we expect market opportunities to improve as the Fed reduces its market interference.

Current Market Environment

As expected, Greece finally defaulted on its debts; private bond holders lost about three quarters of their money. European banks took large losses and regulators announced that the banks would be forced to raise new capital by June. In the meantime, the European Central Bank's (ECB) own version of quantitative easing provided unlimited three year loans to any bank that asked. Virtually every bank in Europe took large loans from the ECB to replace private sector borrowing that would have been difficult to replace given the solvency concerns in Europe. This has, at least temporarily, calmed the markets and eliminated the possibility of a full blown credit crisis in the short term. Europe will still get a recession, but it won't be as severe as it could have been. We will see a repeat of these problems, most likely within the next 2 years.

In recent weeks, long term Treasury yields have risen by about .3%. This is a significant move – especially in the face of a slowing economy. It's also surprising given that the Fed is still actively buying these securities to push yields down. Rising rates pushed gold prices down. Yields will have to rise at least another 1% - to above the inflation rate - to threaten the long term rally in gold. Generally, in a rising rate environment where stock valuations are high and bullish sentiment is high, we get sharp losses in stocks. Gold and stocks moving in opposite directions here is somewhat unusual. One possible explanation comes from India. Indian consumers are a major source of demand for gold. The government there recently instituted a 4% tax on gold. Gold merchants have gone on strike – virtually cutting off Indian gold demand. This is probably a temporary situation but it bears watching if you're invested in gold.

The continuing boom in U.S. natural gas production has driven prices to 10 year lows. It appears that storage capacity will be completely filled before next heating season. The price may go to 0 at that point. This is not good for our domestic oil and gas holdings, but its great news for the U.S. chemical and steel industries (and a few others that use gas as an input). This is going to attract industrial investment to the U.S. which should provide some good investment opportunities.

We are in a very complex market environment - with even more uncertainty than usual. This brings both risk and opportunity. If you are not already working with us, please consider hiring Berkeley Investment Advisors to help you navigate the markets and achieve your financial goals.

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