

Asset Returns

May 31, 2007	YTD	2006	2005	10 Year	20 Year
Domestic stocks					
Large	8.7	15.7	4.8	8.4	11.8
Large Value	8.5	22.0	6.9	11.0	12.8
Large Growth	10.0	8.9	5.1	5.4	10.3
Small	8.1	18.2	4.5	9.4	10.9
Small Value	5.6	23.2	4.4	13.3	13.5
Small Growth	10.2	13.1	4.0	4.9	7.8
Micro Cap	6.4	16.2	5.7	13.5	13.2
International stocks					
Large	10.7	26.0	13.3	8.1	8.4
Large Value	9.0	30.0	14.4	10.6	11.0
Large Growth	11.4	21.9	13.6	5.3	5.9
Small	14.0	24.9	22.0	8.6	-
Small Value	14.4	28.4	23.2	10.2	-
Emerg. Mkts.	10.9	30.7	32.6	8.5	-
EM Small	24.7	37.3	25.8	10.5	-
EM Value	24.8	37.9	30.8	13.0	-
Sectors					
U.S. REITs	3.5	35.5	13.1	15.2	11.7
Energy	16.9	18.4	40.2	11.5	12.0
Bonds					
Short Term	2.2	4.8	2.3	4.3	4.6
Five Year	1.9	3.9	1.7	6.2	7.5
Long Bond	-0.2	1.7	6.6	7.9	10.3
Total Market	1.2	4.3	2.4	6.2	8.0
Other					
Inflation	-	3.2	3.4	2.6	3.1
Comm. RE	-	16.6	20.4	12.7	8.4
Residential RE	-	7.7	13.4	7.8	5.1
Hedge Funds	-	13.0	2.7	8.7	-
Commodities	-	-2.9	18.9	3.2	5.2

SOURCES:

Large Cap data is based on S&P 500 returns.
 Large Value and Growth returns are based on Russell 1000 Value and Growth data.
 Small Cap, Small Value & Small Growth are based on Russell 2000, R2000 Value and R2000 Growth data.
 Micro Cap returns are based on the CRSP 9-10 index of the smallest publicly traded stocks.
 Int'l Large, Large Value and Large Growth are based on MSCI's EAFE Indexes.
 International Small & Small Value returns are based on small company data in developed markets from DFA.
 Emerging Markets data is from MSCI's Emerging Market.
 Emerging Market Value and Small Cap data is based on Indexes maintained by DFA.
 REITs are based on the Wilshire REIT index.
 Energy data is from S&P's energy index.
 Short term bonds are represented by Lehman's index.
 Five year bonds are five year treasury returns and long term bonds are 20 year treasuries.
 Total Bond market is the Lehman Aggregate Index.
 Other data comes from the Federal Reserve, National Association of Realtors, HFRI & the CRB.

PAST PERFORMANCE IS NOT A GUARANTEE OF FUTURE RESULTS. INVESTMENT OBJECTIVES, RISKS, CHARGES, EXPENSES AND OTHER IMPORTANT INFORMATION ABOUT A FUND ARE CONTAINED IN THE PROSPECTUS; READ AND CONSIDER IT CAREFULLY BEFORE INVESTING. PROSPECTUSES ARE AVAILABLE ON COMPANY WEBSITES OR FROM TSI.

Thornhill Securities, Inc.
 336 South Congress, Suite 200
 Austin, TX 78704

Editor: Gabe Thornhill, CFA
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Behavioral Finance

Behavioral Finance is an effort to understand the psychology of financial decision making. Unlike classical economic theory that is based on individuals making discrete rational decisions in their financial affairs, behavioral studies seek to uncover the causes of economic behavior that is clearly irrational (i.e. market bubbles, lottery participation, or unequal sensitivity to losses vs. gains.) Although the field of study has been around for over 30 years, and one of its founders (Daniel Kahneman) won the Nobel Prize for Economics in 2002, the financial press and daily business reporting pay it very little notice. However, the insights it has generated can be applied to investment management and daily financial decisions for both individuals and institutions. In this month's newsletter, I will look at several of the most interesting findings from the field and touch on their implications.

Herding

This is the most obvious example of irrational behavior and is still fresh in our minds given the 2000 market melt-down. People display herding tendencies in everything from clothing, to music, to investments. There is a comfort factor to be gained from moving with the crowd. When things are going well, you are going with the flow. If things turn down, misery loves company. Outside of the financial markets, the results can seem funny in retrospect, i.e. pet rocks, Milli Vanilli, black lights, turtle neck shirts, or streaking. The only lasting problems from these fads are the disposal of a pet rock in a fancy wooden box or a really tacky shirt. In investing, the results of herding are often more problematic, examples include the internet bubble, tulip mania, California real estate in the early 90s (maybe again) or the conglomerates in the late 60s. The common mentality shepherding these herd moves is, "It's going to be different this time."

Overconfidence

Are you a good driver? I certainly think I am. Imagine we ask another 100 people to rank their driving on a scale from 1 to 100, worst to best. How many would be below average? According to researchers, very few people think they are below average drivers. Statistically though, we can't all be above average, unless we live in Lake Wobegon.

It's the same with investing. Ever met an investment manager that was below average or an economist that didn't predict most of the major interest rate moves of the last 20 years? As a specific example, I'd like to highlight a major conference I attended for several years as a tech analyst. The conference brought together hundreds of company CEOs and CFOs with hundreds or thousands of analysts and portfolio managers. There were presentations, break-out sessions, dinners and opportunities for lots of one-on-one time between investors and company management. The quality of the company representatives and investment people was universally high. Often, senior management had built their company from nothing and had years of experience.

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The investment professionals were from the finest schools and the most respected money management complexes in the world. Was anyone “below average” when it came to doing their job or executing on their business plan? I seriously doubt you would get one affirmative “yes” from the 1,500 to 2,000 participants in the conference. Statistically though, half the crowd was “below average.”

Prospect Theory

Prospect Theory relates to the asymmetry of feelings between gains and losses. We are more willing to gamble with losses than with gains, because we are interested in avoiding losses and locking in incremental gains. This is a result of feeling the pain associated with a loss more acutely than the pleasure associated with a gain of equal magnitude. Traditional economic theory holds that people evaluate the probabilities and make a rational decision. In reality, a 20% gain might only feel good enough to offset a 10% loss. In the daily news, a 100 point drop in the Dow Jones Industrials makes much more impact than a 100 point gain.

The desire to avoid losses can lead to suboptimal decision making. Since investment volatility is directly related to time frame, a focus on short term results will invariably lead to investors seeing more losses. Research has shown that investors will make very different decisions if their data uses different time frames, i.e. monthly vs. annual returns. Additionally, Prospect Theory considers behavior associated with the prospect of a huge gain. In this case, people are much less conservative. They will gladly incur an expense if the prospect is for a huge gain. Consequently, lotteries are very popular, and there is always a market for the next hot penny stock, despite the minimal odds of success.

Complicated Decisions

We are inherently bad at dealing with large quantities of information when it comes to decision making. In fact, more data may actually lead to worse decisions, but with a higher degree of confidence in those bad decisions. As a result, we often make decisions based on “Rules of Thumb” or on limited data, which typically supports our existing biases. Moreover, having more choices often makes for more stress, as compared to having fewer choices. Investment decisions are some of our most complicated decisions, incorporating factors such as retirement goals, projected income levels, future savings, cash flow needs, projected market returns, historic returns, asset class analysis, analyst estimates, valuation levels, historic market growth rates, international growth projections, and many others.

The combination of multiple options and a large amount of data can lead to decision paralysis or “Status Quo Bias.” There is a strong tendency to avoid a decision and continue on the same path of action. For example, when two states (NJ & PA) changed their auto insurance programs to offer a low cost “no sue” option as an

alternative to the traditional policy, the states saw 70-75% enrollment in the default option. This was despite the fact that the default was “no sue” in one state and traditional insurance in the other. Additionally, the “no sue” was significantly cheaper than the traditional policy.

Mental Accounting

People tend to put their money into mental “buckets” and treat those buckets differently. The most obvious example is credit card spending. One study, conducted by MIT professors, showed that customers will pay two times the price for basketball tickets when they are using credit cards versus using cash. Another example is “found money.” If someone wins a small amount in a casino or lottery, they are very likely to spend the money immediately. However, if they come into a large amount, they are more likely to save the money. How many people have you seen taking a \$5 lottery winner and putting the money back into five quick-picks? Conversely, can you imagine anyone putting money from a \$5 million winner back into the lottery?

Another area of mental accounting is investment gains or losses. Investors often hide losses from themselves by combining the losses into mental “accounts” with larger losses. Alternatively, investment gains stand out from other holdings and are more likely to be realized.

Anchoring

Anchoring is the tendency to cling to facts or figures that have no bearing on the current decision. Holding onto a losing stock is the best example of this behavior. Investors often focus on a previous high price or the price they purchased the stock, expecting a return to those levels. They are mentally “anchored” to a number that has no bearing on the future performance of the investment. Classical financial theory holds that investors make rational decisions that objectively incorporate the currently available data. There is no consideration of inherent biases or feelings.

Conclusion

Behavioral Finance is a field of study that has many implications for investors and investment managers. The central conclusion is that we are not purely rational decision makers, even when it comes to money and investing. Classical economic theory and most financial research assume individuals are rational free market participants. By understanding the inherent irrationality in many of our feelings, we can hopefully make better long term decisions.

Gabe Thornhill

Resources

“*Why Smart People Make Big Money Mistakes and How to Correct Them: Lessons from The New Science of Behavioral Economics*”, Gary Belsky
“*The Winner’s Curse*”, Richard Thaler
“*Winning the Loser’s Game*”, Charles Ellis