



Occam's Razor

March 2012

WHAT IS OCCAM'S RAZOR?

Occam's Razor is a principle attributed to William Occam, a 14th century philosopher. He stressed that explanations must not be multiplied beyond what is necessary. Thus, Occam's Razor is a term used to "shave off" or dismiss superfluous explanations for a given event. This concept is largely ignored within the investment management landscape. This newsletter will "shave off" popular investment misinformation and present what is important for achieving long-term investment success.

The Oscars, *Moneyball*, and a Measure of our Trading Advantage

Oscar season has come and gone. The Academy has revealed which movies their superior palate has deemed the best, and subtly let us know that disagreement is synonymous with a lack of enlightenment. After all, if you don't like silent foreign movies then you don't have any taste. The inter-office debates have begun and, not usually lacking for words, Occam's found himself unable to contribute to the discussion. In typical fashion, I'm playing catch-up with popular culture and have decided to top-load my Netflix queue with the top nominated movies to satisfy my need to opine around the proverbial water-cooler.

My wife and I have no doubt been entertained by several of the selections, however there has only been one movie that has left a lasting impression. And it didn't stick out because of its cinematic brilliance or acting, it was because I couldn't help but think about how this movie is a perfect analogy for one of the more complicated things we do within every portfolio we manage. 90% of an iceberg's mass is below the waterline and 95% of our clients never want to venture below the visible tip when discussing finances or investment science. This topic is well below the waterline, but if Brad Pitt can explain it to the masses in *Moneyball*, he should be able to help convey it to our clients and readers alike.

Moneyball was an inspiring true story of Billy Beane's personal perseverance and unwavering faith in science, with his livelihood and name on the line. Billy Beane, played by Brad Pitt, was and still is the General Manager (GM) of the Oakland Athletics, a small market

team with an equally small budget. His task, the same as every GM, is to assemble the players that give his coach the best ability to win a championship. His real challenge, however, is to achieve this using a paltry budget compared to large market teams who have unlimited budgets (remember, baseball doesn't have a salary cap to level the playing field like other major sports). In the A's 2001 American League Division Series vs. the Yankees, the combined annual salaries of both teams was \$154,180,457, roughly 75% of which belonged to the Yankees. As expected, the Yankees prevailed.

The A's scouting department had spent years making sure prospects had baseball bodies, were bigger-faster-stronger athletes, and when they swung the ball popped off their bat. Their talent evaluation methodology helped them develop a few stars; it was not a science, but it was what they knew. They even believed that if a player had an average looking girlfriend they lacked confidence. Following the series vs. the Yankees, the three most talented players for the A's were recruited away to play for major market teams. Johnny Damon, Jason Giambi, and Jason Istringhausen signed with the Red Sox, Yankees, and Cardinals respectively for a combined annual salary of \$30M a year, or 76% of the A's entire 25 player roster's salary in 2001. The A's were organ donors to the rich – they were gutted.

During the offseason, the A's scouting department got back to doing what they knew - looking for kids who could run, throw, bat, and field, attempting to replace

each player they lost and preparing to go toe-to-toe in the next round with Goliath. But in a free market, talent will naturally gravitate toward those who will compensate them the most. In this system, David could theoretically never compete on a meaningful basis with Goliath. The solution required thinking differently about the problem by applying science. An economist named Peter Brand (real name Paul DePodesta) was the answer, not a scout.

In baseball, like investing, there is an epidemic failure to understand what is really happening, and this leads GM's and money managers to misjudge their portfolios of players or stocks. As Brand, played by Jonah Hill, states in the movie, "People who run ball clubs think in terms of buying players; your goal shouldn't be to buy players but to buy wins. In order to buy wins, you have to buy runs. You're trying to replace Johnny Damon. The Boston Red Sox see Damon as a star who's worth \$7.5M a year. What I see in Damon...is an imperfect understanding of where runs come from." And to paraphrase, baseball thinking is medieval, and so is the Wall Street method of investing.

With this line of thinking players became numbers and their value wasn't measured by bat speed, throwing motion, age, appearance, or any other perceived bias. It was measured by on-base percentage and other meaningful statistics. The GM could now view players in aggregate, and instead of replacing Giambi they could use a few players who, when combined, would replace his production.

This is where we go below the waterline, with the above analogy serving as your dry-suit. In our last Occam's Razor "Plain English – How Novel," we explained how diversification is the only free lunch in investing. That is, for each additional unit of diversification your risk decreases and your expected return increases. The benefits of diversification are maximized at roughly 8,500 unique companies. If you were to add one more company to your portfolio, the benefit of that additional unit of diversification would be zero. All of our portfolios start with around 12,000 unique companies, but there are over 36,000 investable companies available to choose from. By removing the names of the companies and instead viewing them as numbers we become agnostic to pre-conceived biases and instead structure our portfolios based upon meaningful risk factors: size, market, and price. This means that for every company in our port-

folios there are roughly two replacement companies left in the marketplace. Any one of those three would serve the same purpose and would provide the exact same risk-return metrics within our portfolios – they are interchangeable, like which gas station or airline to choose.

Now how does this relate to the title of this article? If you pay attention to the financial media or even the nightly news there is always a segment on which stocks have peaked or sank. When a stock has momentum in either direction, buyers are either demanding to purchase a stock or eager to provide the supply to sell them. Our overall passive strategy - that is, not trying to beat the market through active trading - allows us to sit back and take advantage of the GM's who still measure their players by names, bat speed, or the eyeball test. We become the providers of liquidity within the marketplace.

When active traders demand a stock we own causing its price to spike, we are able to sell it to them and capture the premium that their demand caused. Since we have two interchangeable companies available on the sidelines, we can replace the company we sold with another without having to pay a premium. In other words, we maintain our portfolios' targeted on-base percentage. This relationship holds true on both purchases and sales and also provides substantial opportunities for tax efficiency, but we'll leave tax for another discussion.

Our ability to be a liquidity provider and to remain flexible in our trading has provided positive benefits to your portfolios. And our trading advantage can be quantified. From 2007 to 2009, all U.S. stock trades in aggregate added .80% for purchases and .73% for sales to the returns of the underlying mutual funds that make up your portfolios. As expected, the spread on large company trades was narrower (more liquid marketplace) and wider on small companies (less liquid marketplace). Our flexible trading strategy of being a liquidity provider adds additional return to your portfolio for no additional risk – another free lunch. Using basic math you can roughly quantify what this means for your individual portfolio by weighting the benefits vs. your exposure to bonds. Portfolios with higher exposures to stocks receive a greater benefit. Vanguard or other true index funds do not offer this advantage – again, a discussion for another time.

So what is your take away? Well, we live below the waterline and are constantly looking for ways to add value and ensure you meet your lifestyle and legacy goals. Our trading strategy in and of itself goes a long way toward covering the cost of our services. The Yankees and Wall Street will always be able to outspend the A's and us, but we will always produce more value relative to our overall cost. If you have enemies that invest with Wall Street firms, for your

benefit, encourage them to continue actively trading. But if you have loved ones or close friends who do, warn them, or better yet, introduce them to us. It would be our pleasure to explain to them how science always trumps the eyeball test.

Till next month,
Occam's

REFERENCES:

"Moneyball" – 2011, Sony, Columbia Pictures

Sunil Wahal – 2010, "A Measure of the Dimensional Trading Advantage"

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