Ultimate Moneyball - How You Can Capture Excess Returns

In *Moneyball: The Art of Winning an Unfair Game*, Michael Lewis shows how smart use of statistics and probability replaced conventional wisdom and gut feelings to transform our national sport through improved strategy. By emphasizing the factors that actually drive victory, performances can be dramatically improved.

In baseball, nobody gets on base every time at bat. But, some players consistently get on base more often than average. Those are the guys you want on your team. If they strike out a couple times in a game, or series, you don't fire them immediately. Buried within any player's on base average is a certain amount of randomness that must be endured.

Investing is very much the same. But, before we get too carried away with the analogy, let's admit up front that baseball depends on raw physical talent to a great extent. Investing presents a far more level playing field where talent is extraordinary rare. So, strategy and execution are proportionally much more important in determining investment results.

Even the best equity strategy doesn't pay off every time period with extra juicy returns. There is always an element of investment risk that will never go away. There is no magic here. Returns will be variable. But, we can improve the outcomes.

The trick is to find strategies that win more often than they lose, win bigger than they lose, and cumulatively outperform by a reasonable magnitude. It helps if these strategies are driven by strong economic theory, outperform in all traded markets, and persist across multiple time frames.

Traditional asset management doesn't meet any of these goals. When managers attempt to time markets or pick individual securities across the board, the results are a spectacular failure. Of course, there are a few winners, but the average returns are well below the market returns.

Diversification goes a long way to reducing the variability of returns. And, beyond a reasonable doubt passive strategies and low cost will trump active strategies that attempt to time the market or select individual stocks.

Market returns, sometimes called "beta", are pretty darn good. And they are easy to capture. Just buy the whole market. Market wide index funds and ETFs allow you to execute effectively, economically.

For instance, If you had bought your share of the stocks in the entire US market back in 1926 and held them through thick and thin, you would have had a very nice return. This is an excellent strategy, low risk for an equity portfolio, and tax efficient.

Just being in the stock market will pay off over fixed income 69% of the time on a yearly basis, 77% over 5 years, 85% over 10 years, and 95% over 15 years. Based on past results, the longer you are in the market, the higher the probability that you will outperform fixed income.

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Market exposure will be the biggest driver of investment returns. In baseball terms, this is a pretty good game plan to be in the equity market. You will never win unless you show up to play.

But, human nature being what it is, investors may wish to do better than market returns. And, by examining past statistics and probabilities it's possible to expect an incremental return over the broad market over time.

There are reasonable strategies that over the longer horizon can be expected to outperform the total market. It's pretty well known that some parts of the market outperform the total market over the long haul. Capturing that extra return requires patience and discipline.

There are at least three other factors that contribute incrementally to portfolio performance over the long haul:

1. Small companies have higher returns than larger companies.
2. Cheap stocks (value) have higher returns than expensive stocks (growth).
3. Highly profitable firms outperform less profitable firms.

Each of these performance factors can be captured by simply overweighting your market portfolio. Again, you can execute this using index funds or ETFs.

Here is a summary of probabilities that various factors of performance paid off historically over various time periods:

Historical Performance of Premiums over Rolling Periods
US Markets

Overlapping Periods: July 1926–December 2016

MARKET beat T-BILLS

15-Year	95% of the time
10-Year	85% of the time
5-Year	77% of the time
1-Year	69% of the time

Market is Fama/French Total US Market Research Index.
T-Bills is One-Month US Treasury Bills.
There are 907 overlapping 15-year periods, 967 overlapping 10-year periods, 1,027 overlapping 5-year periods, and 1,075 overlapping 1-year periods.

Overlapping Periods: July 1926–December 2016

VALUE beat GROWTH

15-Year	95% of the time
10-Year	85% of the time
5-Year	75% of the time
1-Year	61% of the time
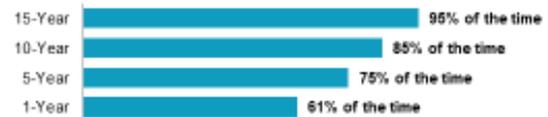
Value is Fama/French US Value Research Index.
Growth is Fama/French US Growth Research Index.
There are 907 overlapping 15-year periods, 967 overlapping 10-year periods, 1,027 overlapping 5-year periods, and 1,075 overlapping 1-year periods.

Overlapping Periods: June 1927–December 2016

SMALL beat LARGE

15-Year	82% of the time
10-Year	72% of the time
5-Year	64% of the time
1-Year	57% of the time

Small is Dimensional US Small Cap Index.
Large is S&P 500 Index.
There are 896 overlapping 15-year periods, 956 overlapping 10-year periods, 1,016 overlapping 5-year periods, and 1,064 overlapping 1-year periods.

Overlapping Periods: July 1963–December 2016

HIGH PROFITABILITY[1] beat LOW PROFITABILITY

15-Year	100% of the time
10-Year	99% of the time
5-Year	93% of the time
1-Year	69% of the time

High is Dimensional US High Profitability Index.
Low is Dimensional US Low Profitability Index.
There are 463 overlapping 15-year periods, 523 overlapping 10-year periods, 583 overlapping 5-year periods, and 631 overlapping 1-year periods.

Information provided by Dimensional Fund Advisors LP.
Indices are not available for direct investment. Past performance is not a guarantee of future results.
1. Profitability is a measure of current profitability, based on information from individual companies' income statements.
In US dollars. Based on rolling annualized returns using monthly data. Rolling multiyear periods overlap and are not independent. This statistical dependence must be considered when assessing the reliability of long-horizon return differences. "One-Month Treasury Bills" is the IA SBBI US 30 Day TBill TR USD, provided by Ibbotson Associates via Morningstar Direct. Dimensional Index data compiled by Dimensional. Fama/French data provided by Fama/French. The S&P data is provided by Standard & Poor's Index Services Group. Eugene Fama and Ken French are members of the Board of Directors for and provide consulting services to Dimensional Fund Advisors LP. Index descriptions available upon request. 29

The odds are overwhelmingly favorable. But, each one of these factors are independent random variables. Each may be either positive or negative in any given time period, and there is no telling when they might show up. In other words, the odds tilt in your favor, but sometimes you are going to strike out. For instance, in a year where market returns were great, small, value and profitably might all underperform causing the total portfolio to underperform the market. And you might underperform for extended periods of time. That's when the need for discipline and long term outlook kick in. Random means random. Winning or losing last year has little to do with next year's results.

Unfortunately, many investors that claim to be investing for the long haul, or those who should have a long term horizon actually measure their progress on a day by day basis. In particular, they really hate to fall below the widely published indexes. That's not helpful if you want to beat the market. At its dysfunctional worst, in baseball terms, it leads to abandoning a good game plan and adopting a new strategy every inning. That's not the way you win the series.

Each investor must decide how much if at all she would like to tilt her investment portfolio in order to capture incremental long term gains. It may simply come down to how much she can stand to underperform the wider market during periods when the factors don't show up. Once

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she makes that decision she should stay the course.

There is no substitute for a good strategy, discipline, and effective economical execution. In the investment arena it's what separates the winners from the losers, and provides the best opportunity to meet your goals.