Buffett or Lynch?

We frequently quote both and had originally planned on sharing an edited version of the referenced AQR analysis when Alpha Architects posted the following, the unedited version of which is on their website under BLOG: http://www.alphaarchitect.com/

GREATEST STOCK PICKER OF ALL TIME: BUFFETT OR LYNCH?

February 8, 2017 Dan Grioli

Who is the greatest stock picker of all time?

Many investors knee-jerk reaction is Warren Buffett.

Understandable response, but is that the answer? Maybe not…

So who is the greatest investor of all time?

A few years ago, I asked this question of a mentor and friend. His answer surprised me. Without a moment's hesitation, he replied that it was Peter Lynch. Our conversation went something like this…

Me: Lynch, what about Buffett? Surely his results over such a long period of time speak for themselves?

Friend: Buffett isn't a stock picker, his success is largely due to factor bets such as value and quality. Lynch, on the other hand, was a genuine stock picker.

Me: What makes you say that?

Friend: He performed well, even when experiencing outflows. Buffett never had to manage outflows. Also, the magnitude of his out-performance was so large that it's statistically unlikely that his performance was due to luck.

Buffett versus Lynch: Some Background

I've thought about Buffett vs. Lynch question several times over the years. So it was with great enthusiasm that I read a recent AQR paper: Superstar Investors. Dan Villalon and Jordan Brooks compare the performance of 4 super investors:

- Warren Buffett
- Bill Gross
- George Soros
- Peter Lynch

We will consider the results of AQR's paper shortly. But first, it might be helpful to learn a little more about Peter Lynch and how his investment approach differed from that of Warren Buffett.

One thing that stood out about Lynch was his flexibility**. Lynch wasn't value, he wasn't growth, he wasn't size and he wasn't quality. Instead, he was all of those things at the same time**. For example, in his book, One Up on Wall Street, Lynch describes the way he categorizes stocks into different kinds of opportunities:

- **Slow Growers** – aging companies growing slightly faster than GDP. Usually bought for their dividends and buybacks.
- **Stalwarts** – large quality companies that are profitable and are growing slightly faster than slow growers.
- **Cyclicals** – A company whose sales and profits rise and fall in a regular if not completely predictable fashion.
- **Fast Growers** – Small, aggressive new enterprises growing at 20-25% per year.
- **Turnarounds** – Battered bruised and possibly in or facing bankruptcy. The performance of these stocks is largely uncorrelated with the broad market.
- **Asset Plays** –A company that's sitting on something valuable that the market has overlooked, for example real estate.

This was very unusual. I can confidently say – as a professional portfolio manager that has invested with hundreds of fund managers – **that almost nobody invests like this**. Fund managers usually stick to a style (e.g. large cap growth), a particular valuation methodology ... or a type of company .... In other words, each manager has one philosophy/opportunity/method that they stick with.

But a rigid process is not a panacea: this approach might create blind spots and/or constrain their ability to identify the best investments. A strong philosophical bent helps on the fundraising front because most clients and consultants want managers to avoid "style drift." Lynch was different. Lynch was often labeled a growth manager, and yet, only 3 of the 6 categories above have anything to do with revenue or earnings growth.

Not only was Lynch unique among fund managers, his eclectic approach was quite different to Buffett's. The Oracle of Omaha has focused primarily on opportunities within his "circle of competence." The outline of this "circle" can be roughly drawn around the following sectors:

- Banking
- Insurance
- Media
- Consumer non-durables

Buffett also holds relatively few, concentrated positions. This is in stark contrast to Lynch, who owned approximately 1,400 stocks at the time he wrote One Up on Wall Street!

Lynch was a true all-rounder, comfortable investing in all sorts of opportunities. Meanwhile, Buffett's investment process has gradually migrated over time through 3 stages:

- **Early** – Graham and Dodd net-nets, deep value ("cigar butts") and merger arbitrage.
- **Middle** – great companies (i.e. an enduring "moat ") at reasonable prices (the influence of Charlie Munger).
- **Late** – Private investments, special one-off deals and securities.

The Buffett style migration appears to have been driven by 4 factors:

- **Changes in market conditions**. By the 1970s, there were fewer net-nets available in the market.
- **The influence of Charlie Munger**. Munger helped Buffett to appreciate that, "time is the friend of a wonderful business."

- **Size**. Managing increasing amounts of money meant that Buffett had to shift his investment process away from "cigar butts" and merger arbitrage and focus instead on companies with a "moat" and buying whole companies.
- **Reputation**. Buffett's reputation ensures that he has access to opportunities that few can match.

Buffett Versus Lynch: The Evidence

Let's return to the AQR Superstar Investors paper. The focus of the paper is to examine the investment performance of 4 superstar investors to see how much of their performance can be explained by to systematic exposure to one or more factors.

Warren Buffett Factor Analysis

Warren Buffett's investment performance during his tenure at Berkshire Hathaway is nothing short of legendary, beating the market by over 10% per year from January 1977 through to May 2016. Risk-adjusted returns are also impressive with a Sharpe ratio of 0.74 and an information ratio of 0.49.

1/1977-5/2016[6]	Average Return	Volatility	Sharpe Ratio	Annual Outperformance	Information Ratio
Berkshire Hathaway	17.6%	23.6%	0.74	10.6%	0.49
U.S. Equities[7]	6.9%	15.5%	0.45	-	-

Source: AQR, CRSP (for BRK data), Kenneth French Data Library (for Equities, which are CRSP cap-weighted returns; and risk-free rate, which is 1-month Treasuries). For consistency, we've chosen the CRSP cap-weighted index to represent U.S. Equities throughout this article. Returns are excess of cash throughout this article. Past performance is not a guarantee of future performance; please read important disclosures at the end of this presentation.

But it seems that the majority of Buffett's phenomenal performance can be explained by exposures to several factors.

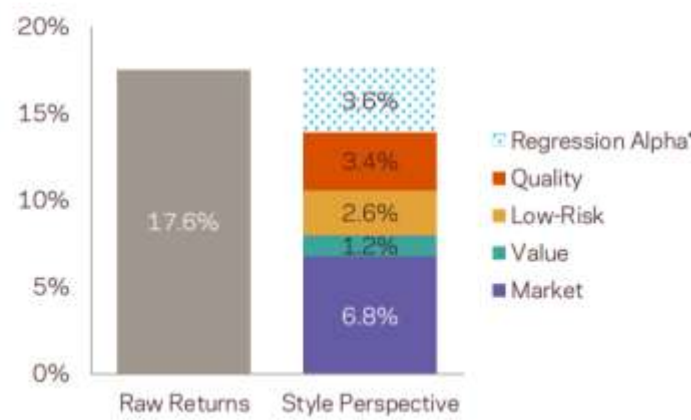
AQR explains:

We find that this alpha becomes statistically insignificant when controlling for some of the investment styles Buffett describes in his writings.

The "Buffett Factors" can be described below:

- **Market:** the U.S. equity market factor from Kenneth French's data library
- **Value:** the HML factor from Kenneth French's data library
- **Low-Risk:** the "Betting-Against-Beta" (BAB) factor10 from AQR's data library
- **Quality:** the "Quality-Minus-Junk" (QMJ) factor11 from AQR's data library

Of the 10.6% out-performance achieved by Buffett, 7% can be explained by the factors listed above, leaving an "alpha" of 3.6%. Furthermore, the t-statistic for this alpha is not statistically significant.



*Not statistically significant (i.e., t-stat less than 2).
Contributions shown above are the product of the coefficients in the table and the average premium for each factor over the period January 1977 - May 2016.

Buffett's portfolio reflects a cheap-stock portfolio with quality and low-beta characteristics.[6]

Does this mean that Buffett has no skill? Far from it! As the executive summary to the AQR paper points out:

Though our results may seem compelling, we have the clear benefit of hindsight. Any "alpha" that comes out of our analysis is thus understated. These great investors "figured it out" first, had the ability to stick to their philosophies, and rightly deserve their reputations.

It's also worth pointing out that a large part of Buffett's performance can be explained by the use of leverage. AQR explains:

One of the ways that Berkshire Hathaway was able to add so much return above that of the market is Berkshire's access to cheap leverage via its insurance business, allowing it to harvest greater amounts of these style exposures than most traditional investors could.

And just how much leverage was used? AQR again:

To get an idea of magnitude, for every dollar invested in BRK from 1977 through May 2016, investors on average got about $1 exposure to the stock market (the market beta) and an additional $1.3 dollars exposure to the other factor premia shown in Exhibit 1 (the sum of the betas to the value, low-risk and quality factors from the regression).

Peter Lynch Factor Analysis

Lynch's record is also extraordinary, annual out-performance of 13.7% per year, not to mention a Sharpe ratio of 0.98 and an information ratio of 1.78. These sorts of figures are virtually unheard of in traditional long-only asset management.

5/1977-5/1990	Average Return	Volatility	Sharpe Ratio	Annual Outperformance	Information Ratio
Magellan	20.8%	21.2%	0.98	13.7%	1.78
U.S. Equities	7.1%	16.4%	0.43	-	-

Source: AQR, CRSP, Morningstar. Risk-free rate is 1-month Treasuries. For consistency, we've chosen the CRSP cap-weighted index to represent U.S. Equities throughout this article. Past performance is not a guarantee of future performance; please read important disclosures at the end of this presentation.

But how much of Lynch's performance can be explained by systematic factor exposures? This is where Lynch's flexible approach to considering all sorts of investments makes the analysis challenging.

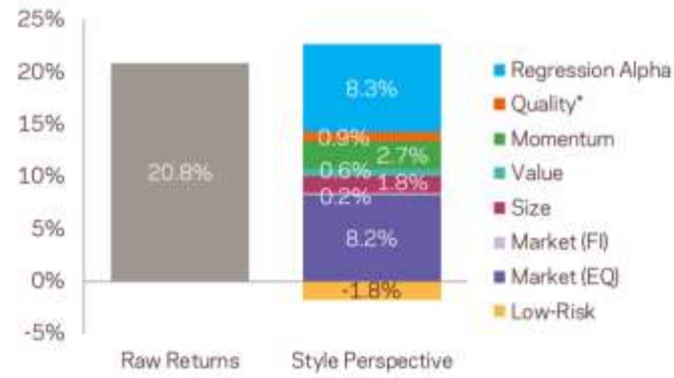
AQR explains:

Like other superstars covered here, Lynch was public about his investment philosophy, having authored multiple books on the topic. Yet, Lynch's philosophy was arguably less parsimonious than that of the other superstars: he had various checklists for various categories of companies, making the task of evaluating Magellan's track record via broad factors more difficult (and maybe less relevant)

Unable to pinpoint exactly what drove Lynch's performance based on public record, the authors chose to go with a cadre of the most-used factors from academic research. The "Lynch Factors" include the following:

- Market: both the U.S. equity market factor from Kenneth French's data library and the Barclays U.S. Aggregate Bond Index

- Size: the SMB factor from Kenneth French's data library
- Value: the HML factor from Kenneth French's data library
- Momentum: the UMD factor from Kenneth French's data library
- Quality: the QMJ factor from AQR's data library
- Low-Risk: the BAB factor from AQR's data library



Of the 13.7% out-performance achieved by Lynch, 5.4% can be explained by the factors listed above, leaving a whopping "alpha" of 8.3%. Also important, the t-statistic for this alpha is highly statistically significant.

Lynch Wins the Factor Horse Race

Roughly 66% of Warren Buffett's out-performance can be explained by systematic exposure to various factors over time, leaving 34% of the out-performance unexplained. Presumably this is alpha or stock-picking skill. On the other hand, approximately 40% of Peter Lynch's Buffett's out-performance can be explained by systematic exposure to various factors over time, leaving 60% of the out-performance unexplained. Thus we can conclude that the majority of Lynch's performance was due either to stock picking skill or dumb luck (highly unlikely as we'll discover later on in this article).

This is the main reason why my friend believed that Lynch was a better stock picker than Buffett. But perhaps there is more to the story? ...

To answer these questions, I came up with a list of 11 criteria, based on academic research and experience, that could reasonably be used to award the title of the world's greatest investor. ...

- **Factor Correlation**. Higher factor correlations suggest that systematic factor exposures are primary driver of performance. The lower the better.
- **Alpha**. High alpha coefficients suggest that performance is driven by stock-picking skill (as opposed to factor exposures).The higher, the better.
- **Risk-adjusted performance**. Sharpe ratio (absolute risk) and Information ratio (relative risk). The higher, the better.
- **Investment vehicle**. Open vehicles are subject to flows from investors and consequently require a minimum-level of liquidity. Investor flows tend to rise (fall) after a period of strong (weak) performance. Investors in closed vehicles have greater freedom to invest as they are not subject to the whims of investors.
- **Capacity**. All other things being equal, the larger the sum of money managed, the harder it is to consistently out-perform the market.
- **Leverage**. Leverage boosts returns both on the upside and on the downside. All other things being equal, a levered equity portfolio is expected to out-perform an unlevered equity portfolio over the long-term, although the reverse is true during a bear market.
- **Unlisted investments**. Unlisted investments are expected to offer higher returns due to the illiquidity premium (assuming that they were bought at sensible valuations).
- **Longevity**. The longer the period of out-performance the better.

- **Calendar-year out-performance.** A simple measure of performance consistency. In other words, was the out-performance due to a single spectacular year or several years? I examined the period from 1977-1990 during which Peter Lynch ran the Magellan Fund.
- **Time spent in a bear market**. The number of years was the S&P 500 in a bear market (as defined by Ned Davis Research) during each investor's career. The assumption is that it's tougher to beat the market during a bear market, particularly if the investment vehicle is also open as the likelihood of suffering redemptions increases.
- **Probability of out-performance due to luck**. A mathematical calculation of the chances that the level of out-performance was simply due to luck.

And the Winner is?

The title of World's Greatest Investor goes to Peter Lynch with a score of **9/11**:

Category	Buffett	Lynch	Winner
Factor Correlation [8]	High	Low	Lynch
Alpha [9]	Low	High	Lynch
Risk-Adjusted Performance (Sharpe and Information Ratios)	0.74 & 0.49	0.98 & 1.78	Lynch
Investment Vehicle	Private (closed)	Public (open)	Lynch
Capacity	$5.3 billion [10]	$14 billion	Lynch
Leverage	Yes	No	Lynch
Unlisted Investments	Yes	No	Lynch
Longevity	50+ Years	13 Years	Buffett
Calendar Year Outperformance	12/13	13 years	Buffett
Time Spent in a Bear Market [11]	31.37%	46.15%	Lynch
Probability of Outperformance due to Luck	Approximately 1 in 51,500 [12]	Approximately 1 in 500,000 [13]	Lynch

Lynch ran an open investment vehicle and was subject to the vagaries of retail investors. On the other had Buffett, as the controlling shareholder of Berkshire Hathaway, was largely free to operate as he saw fit.

Buffet was free to use leverage and to invest in private investments, while Lynch was not. The size of the stock portfolio managed by Lynch in 1990 dwarfed the size of the Berkshire Hathaway's investment portfolio at the time. The fact that Lynch was able to defy gravity and still outperform despite managing so much money really singles him out as unique in my mind.

Buffett's returns were more consistent and the longevity of his record easily eclipses that of Lynch, who unusually for a fund manager, decided to retire while he was ahead. Buffett's returns were also slightly more consistent than Lynch's, which isn't surprising considering that Lynch ran a higher risk (i.e. more volatile) portfolio.

Lynch spent a greater percentage of his career investing in bear markets, which would have tested his skills as a fund manager. It also proves that his phenomenal performance wasn't just a "fair weather" record earned during a calm market environment.

It is highly unlikely that the performance records of both investors were due to luck. That said, the probability that Lynch's results were due to luck is far, far smaller than the probability that Buffett's results were due to luck.

Conclusions

So what should we make of all of this? Both Buffett and Lynch are incredible investors but their performance edge came from two very different sources.

In Buffett's case, the edge came from creating an environment that allows him to invest for the long-term, free from the constraints that apply to most institutional investment managers. He used this freedom to consistently apply a disciplined process designed to exploit factors (although Buffett may not have described it this way back in 1966 when he took control of Berkshire Hathaway) and to let it compound over time.

For Lynch, the edge came from developing a way of looking at markets that a) allowed him to see opportunities in many different places and b) was flexible enough to take advantage of them all. He developed the skill of categorizing companies by their story – the "two minute drill" –following the narrative that he created over time. He liked to own lots of different stories. In contrast, most fund managers look for the same type of story over and over again, making it difficult for them to out-perform when their particular approach is out of favor with the market. ...

Our thoughts

The unedited version of AQR's Fourth Quarter 2016 issue of Alternative Thinking is available here: http://marketing.aqr.com/acton/attachment/12398/f-0818/1/-/-/-/-/AQR%20Alternative%20Thinking%20-%204Q2016.pdf?sid=TV2:pCmancmKl The edited Conclusion from their analysis:

Conclusion: Learning from the Masters

What can investors take away from this analysis? First, for many great investors success is not luck or chance, but reward for long-term exposure to styles (Factors) that have historically produced excess returns. Second, the styles we analyzed have been successful in many contexts — from fixed income portfolios to global macro hedge funds. This has clear implications for manager selection, regardless of whether the manager is fundamental or quantitative, traditional or alternative: investors should understand which (if any) styles are part of a manager's process, and decide whether there are positive expected returns associated with those styles. Third, styles alone aren't sufficient for success; they also require patience, ability and a long-horizon to stick with them.

So what about "alpha"? As Lynch shows, the onslaught of common (and some less common) factors still can't explain all of his outperformance — even with the benefit of hindsight. We are forced to conclude — at least for now — that part of Magellan's success was more than just compensation for style exposure. Namely, a meaningful portion of those excess returns was, and probably still is, "alpha." ...

Bigger picture, regardless of whether outperformance comes from alpha or style “betas”, investors today face low expected returns across traditional asset classes. Given these headwinds, any additional non-market sources of returns may be especially valuable. While historically the main way to outperform was via alpha or simply taking more risk, investors now have access to a suite of other style premia; potentially allowing for multiple paths to long-term success.