

Voyager Capital Management, LLC

Understanding the *Passive Advantage*



Charting the Course

The purpose of this paper is two-fold:

First, we will analyze historical information to witness the disparity between Active Management vs. Passive Management performances. The data confirms that, **historically, Passive Management has had an unmistakable advantage over Active Management.** We will illustrate that Passive Management has not only outperformed Active Management, but has done so with less risk.

Second, we will explain why **Passive Management should continue to enjoy an edge over Active Management in the long run.** We will show that Passive Management has an inherent and sustainable advantage over Active Management.

At Voyager Capital Management, LLC, we believe that **markets work** and that security prices reflect all available information. We also believe that **asset allocation and portfolio structure**, not security selection or market timing, **explain performance.** And lastly, we believe that **diversification is key** and that **costs do matter.**

Investors have the right to a successful investing experience. Our mission at Voyager Capital Management, LLC is to deliver to investors what is rightfully theirs. However, most investors fall well short of even market rates of return. A lack of discipline and the absence of a sensible strategy are ostensibly to blame. The Voyager Capital Management, LLC team is committed to delivering discipline through a prudent approach.

Passive vs. Active Management Defined

Passive Management is the pursuit of investment returns commensurate with market indices through asset allocation via low cost, low turnover Index Funds, Exchange Traded Funds (ETFs) and other securities that aim to match market performance.

Active Management attempts to achieve investment returns higher than those of market indices through asset allocation via market timing, trading schemes, stock picking, manager picking, etc.

Understanding these definitions, while important, is rudimentary. After all, by definition alone most would find Active Management more appealing. But, do not be seduced by the lure of Active Management. Let us take a look at the structure of these two strategies and further develop the definitions.

Investors can take either of two paths. The Passive Management path has fewer and smaller costs associated with it than the Active Management path. Second, the Passive Management path is more efficient in so far as it involves fewer “guesses” along the way.

Efficiency (ef-fi-cien-cy, n).The production of a desired result with minimum waste of time, energy, or resources.

This concept is at the core of why Passive Management enjoys an edge over Active Management.



Passive vs. Active Management

Dissected

Before we start, a word about our research methodology is in order. Passive Management for our purposes here is represented by several broad based market indices (see appendix, “comparative indices”). Active Management is represented by aggregate mutual fund data (excluding index funds). Note that neither of these hypothetical strategies is actually “investable”. One cannot invest directly in an index, nor can they invest in 100’s of mutual funds simultaneously. Even so, we believe that our study is fair and meaningful. If Active Management seeks to beat indices, then indices are what we shall judge them against. Scores of academic studies have reached similar conclusions to ours and the data is simply too compelling to ignore.

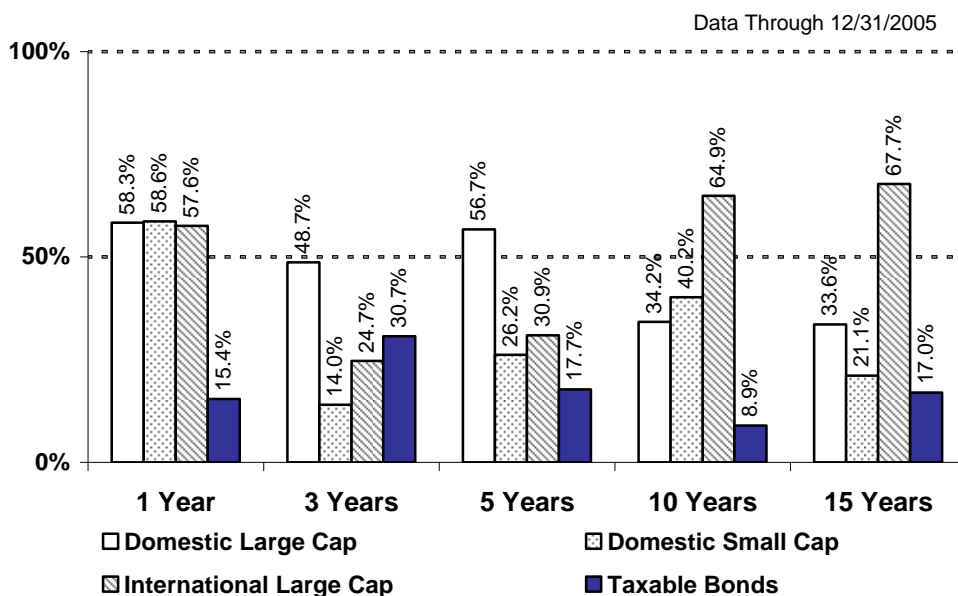
Figure 1 shows the percentage of actively managed mutual funds that have outperformed comparative indices over 1, 3, 5, 10, and 15 year periods. As the data shows, the probability that an investor selected a mutual fund that outperformed an index varies essentially from a coin toss to odds that would make a casino blush. To ensure that we are making an apples-to-apples comparison, we have evaluated domestic large cap mutual funds vis-à-vis a domestic large cap index, domestic small cap mutual funds vis-à-vis a domestic small cap index and so forth (see appendix, “comparative indices”).

There does appear to be an anomaly in the data for 10 and 15 year returns for international large cap funds. The data shows that approximately 2/3 of the time the mutual funds outperformed a broad based market index, in this case the MSCI EAFE. We believe there are several factors contributing to this phenomenon, all of which would have biased the data upward.

First is the notion of survivorship bias. Investopedia.com defines this as (in the context of mutual funds) “the tendency for poor performers to drop out while strong performers continue to exist”. This results in an overestimation of past returns. One study cited by Dimensional Fund Advisors (DFA) suggests that survivorship bias can inflate returns by 2% per year or more. Note that survivorship bias would also apply to domestic large/small cap and taxable bonds.

Second is the Japan factor. William J. Bernstein of Efficient Frontier Advisors notes that Japanese stocks would have dominated two-thirds of an international index in 1989/1990. The dismal performance of the Japanese stock market in the 1990s weighed heavily on indexes like the MSCI EAFE, skewing results for the index downward. Lastly, this comparison does not consider after tax returns. As we already know, investors in actively managed mutual funds can suffer from tax inefficiencies. Note that tax implications would also affect domestic large/small cap and taxable bond funds.

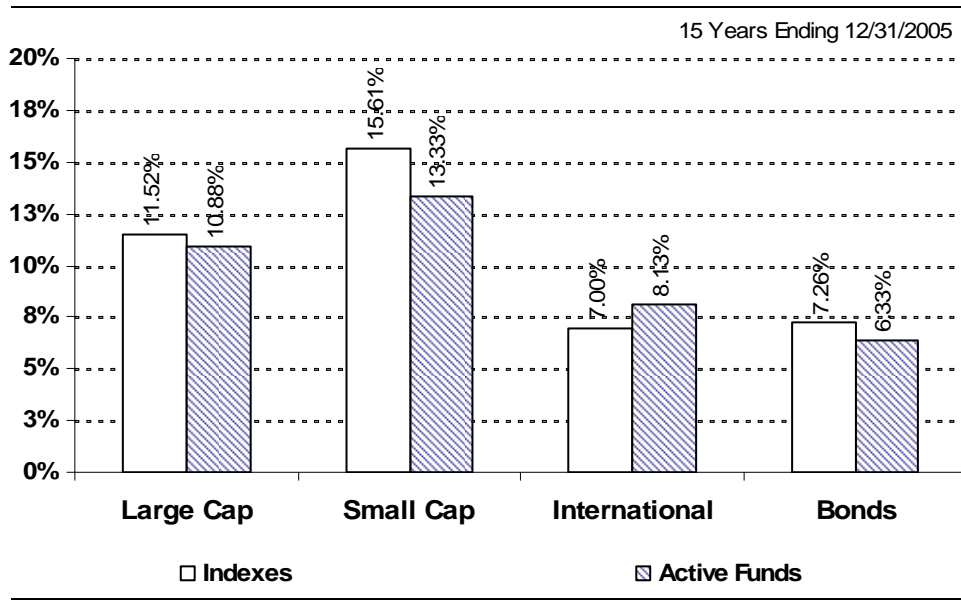
FIGURE 1: PERCENTAGE OF MUTUAL FUNDS THAT BEAT THE INDEXES



Source: Morningstar Principia & Voyager Capital Management, LLC

Figure 2 shows average annual returns for the same four asset classes discussed above. For the 15 years ending December 31, 2005, actively managed mutual funds trailed the indices, save for the international large cap category (explained above), on average by 0.68% per year in this period. Although sixty eight basis points may not sound like much, the effects of compounded interest over long periods of time can have dramatic effects. Next, we'll put historical returns in perspective by translating them into dollars and cents.

FIGURE 2: AVERAGE ANNUAL RETURNS OF INDEXES VS. ACTIVE FUNDS



Source: Morningstar Principia & Voyager Capital Management, LLC

category (explained above), on average by 0.68% per year in this period. Although sixty eight basis points may not sound like much, the effects of compounded interest over long periods of time can have dramatic effects. Next, we'll put historical returns in perspective by translating them into dollars and cents.

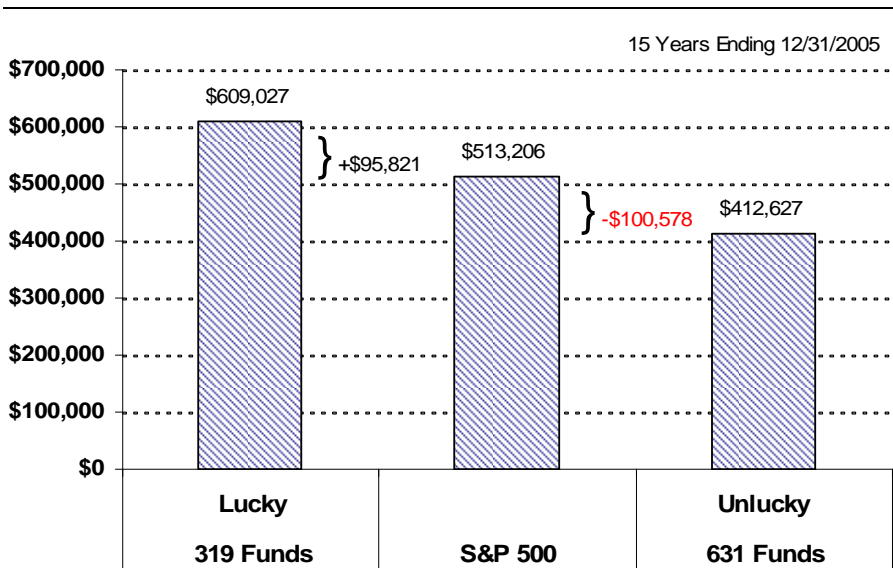
Figure 3 shows the growth of three, \$100,000 hypothetical portfolios of large cap domestic stocks. The "lucky" portfolio is constructed using the average annual return (+12.80%) of the 319 funds that beat the S&P 500 for the 15 years ended December 31, 2005. The

"unlucky" portfolio is constructed using the average annual return (+9.91%) of the 631 funds that failed to beat the S&P 500 for the 15 years ended December 31, 2005. The Index is the S&P 500 (average annual return of 11.52%).

The data yields an interesting occurrence. There was a one-in-three chance that investors beat the index. Their reward was \$95,821 in excess returns. Alternatively, there was a two-in-three chance that investors didn't beat the market. Their penalty was a \$100,578 shortfall vs. the index. Our conclusion is that attempting to beat the market is an unworthy activity. The risk/reward trade off is clearly asymmetrical. The results are similar for small cap domestic stocks, international large cap stocks and taxable bonds.

Figures 4, 5, and 6 (see appendix) replicate Figure 3's analysis for the other three asset classes we are examining. Take note, again, of the risk/reward trade off between picking the outperforming mutual funds and picking the underperforming mutual funds.

FIGURE 3: GROWTH OF \$10,000, DOMESTIC LARGE CAP FUNDS VS. S&P 500



Source: Morningstar Principia & Voyager Capital Management, LLC

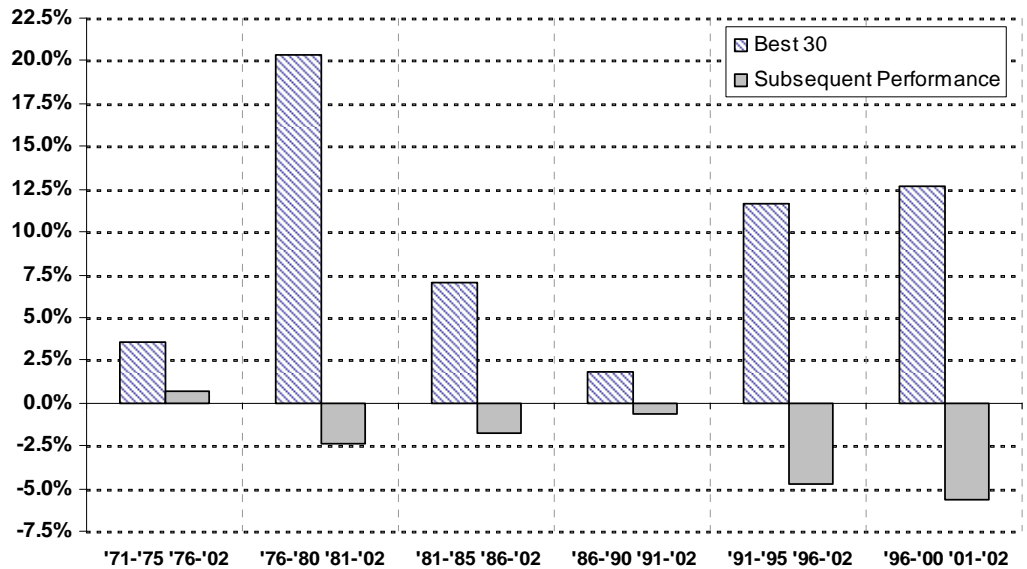
Past Performance Is Not Indicative of Future Results

The question that should be on everyone's mind now is, "Does good performance persist?" That is, can investors pick "good" managers that are "good" stock pickers and expect to outperform the market going forward? Dimensional Fund Advisors (DFA) studied top performing mutual funds and their subsequent performance from 1971 to 2002 and found that the answer is decisively "no". Chasing yesterday's winners is a losing proposition.

Figure 7 illustrates this point. It shows that mutual funds that had terrific results failed to repeat their performances in subsequent periods.

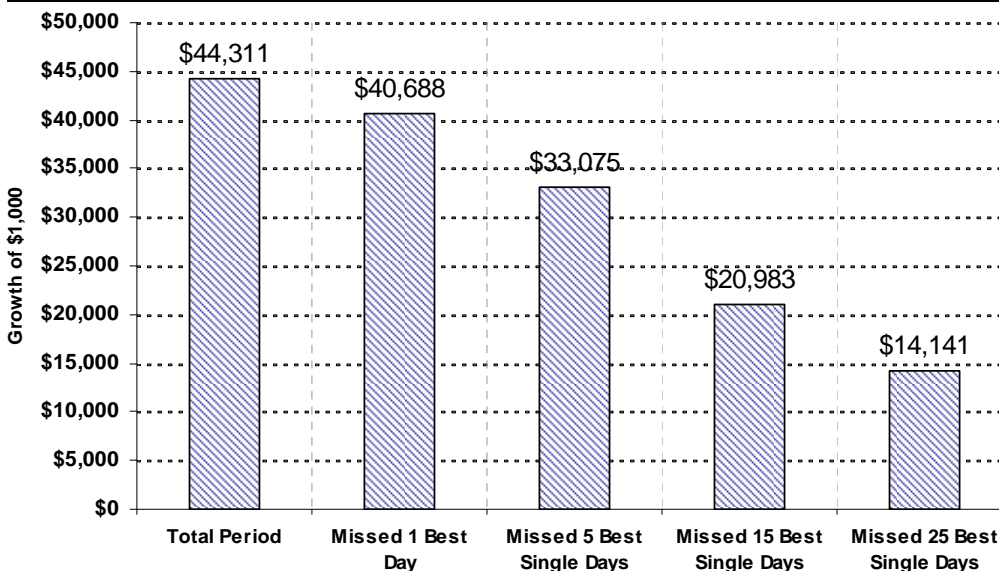
Another concept worth examining is that of market timing, a close cousin to performance chasing. Our core belief is that the markets are "efficient", meaning prices reflect the knowledge and expectations of all investors. Though prices are not always correct, markets are so competitive that it is unlikely that any single investor can routinely profit at the expense of all other investors. Thus, attempts to profit from market timing are risky.

FIGURE 7: TOP 30 FUNDS AND THEIR SUBSEQUENT PERFORMANCE RELATIVE RETURNS TO THE S&P 500



Source: Dimensional Fund Advisors & Voyager Capital Management, LLC

FIGURE 8: PERFORMANCE OF THE S&P 500, 1970 - 2005



Source: Dimensional Fund Advisors & Voyager Capital Management, LLC

To illustrate this point, consider the data presented in **Figure 8**. By missing only a few of the best days in the market, investors are severely penalized. Longer market absences magnify the penalty. Professional and individual investors sometimes say "we're waiting to get back in the market when things improve." This type of behavior might prove hazardous to your wealth.

Explaining the Performance Gap

Expense ratios explain most of the shortfall

Costs do matter: Higher expenses (a mutual fund's expense ratio) create an inherent disadvantage for actively managed funds. Portfolio managers of actively managed mutual funds are among the highest compensated individuals in any profession. Given the body of research against active management, these lofty salaries hardly seem justified. All else equal, Active Funds must have underlying performance nearly 1% (see table, below) greater than Index Funds just to stay even.

High turnover explains a lot more, but...

As Warren Buffett once said, "Activity doesn't necessarily equate to progress." Turnover is the hidden cost of mutual fund investing. The expense isn't explicitly explained to investors; instead, trading costs chip away at your returns and are reflected daily in the share price. We estimate that 100% turnover translates into 1% of these "hidden costs". This ratio is ostensibly higher for small cap stocks, foreign stocks, and emerging market stocks.

	Active Funds	Index Funds	VCM, LLC
Average: Expense Ratio	1.68%	0.79%	0.39%
Turnover Ratio	95%	45%	15%
Total Cost*	2.63%	1.24%	0.54%

...don't forget about Uncle Sam

Higher turnover frequently results in higher capital gain distributions. For taxable investors, particularly ones in high tax brackets, this can greatly reduce after-tax returns.

Our Conclusion: Passive Management should continue to enjoy an edge over Active Management

At Voyager Capital Management, LLC, we believe Passive Management is the proper and most sensible strategy for our clients. Employees of Voyager Capital Management, LLC also believe in eating our own cooking – all of our personal portfolios are invested in the same manner as our client's portfolios.

* Total cost excludes advisory management fees

Comparative Indices:

S&P 500 (Standard & Poor's 500 representing Domestic Large Cap): A representative sample of 500 leading companies in leading industries of the U.S. economy.

CRSP 6-10 (Center for Research in Security Prices 6-10 representing Domestic Small Cap): Represents deciles 6 through 10 by market capitalization of the U.S. stock market. Deciles 1-2, for example, would represent large cap stocks.

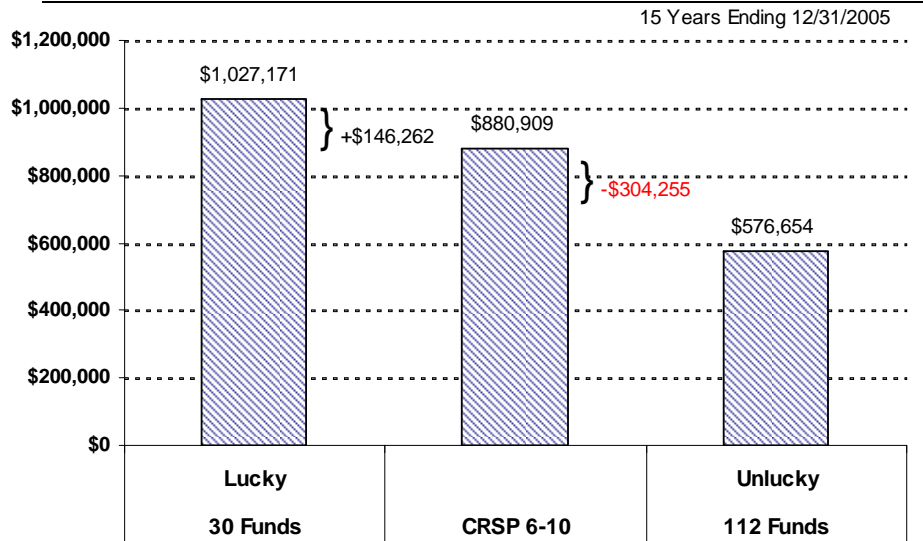
MSCI EAFE (Morgan Stanley Capital International Europe, Australia, and the Far East representing International Large Cap): An index that measures developed market equity performance, excluding the US & Canada, of 21 developed market countries.

Lehman Brother's Aggregate Bond Index (representing Total Bond Market): Composed of securities from Lehman Brothers Government/Corporate Bond Index, Mortgage-Backed Securities Index, and the Asset-Backed Securities Index. The index measures total return consisting of prices appreciation / depreciation and income.

Sources:

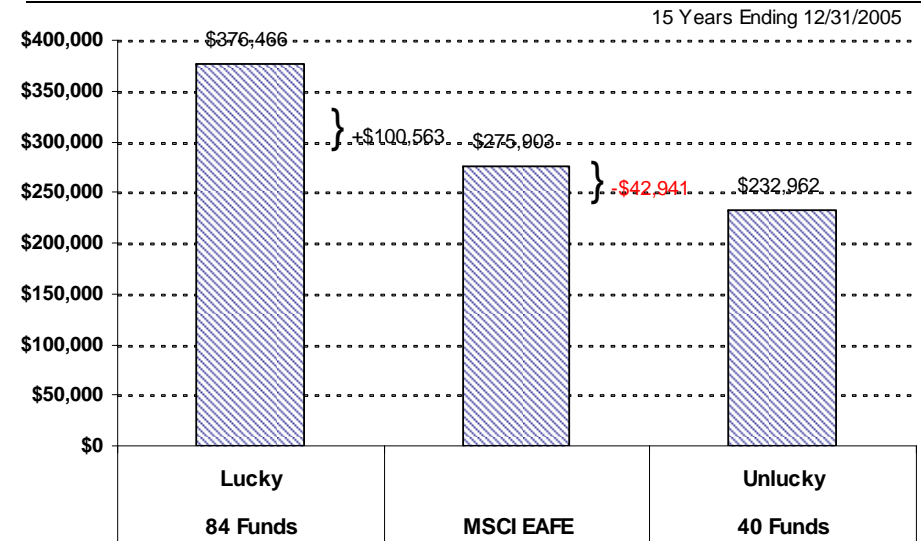
Dimensional Fund Advisors
Efficientfrontier.com
Investopedia.com
Morningstar Principia

**FIGURE 4: GROWTH OF \$100,000,
DOMESTIC SMALL CAP FUNDS VS. CRSP 6-10**



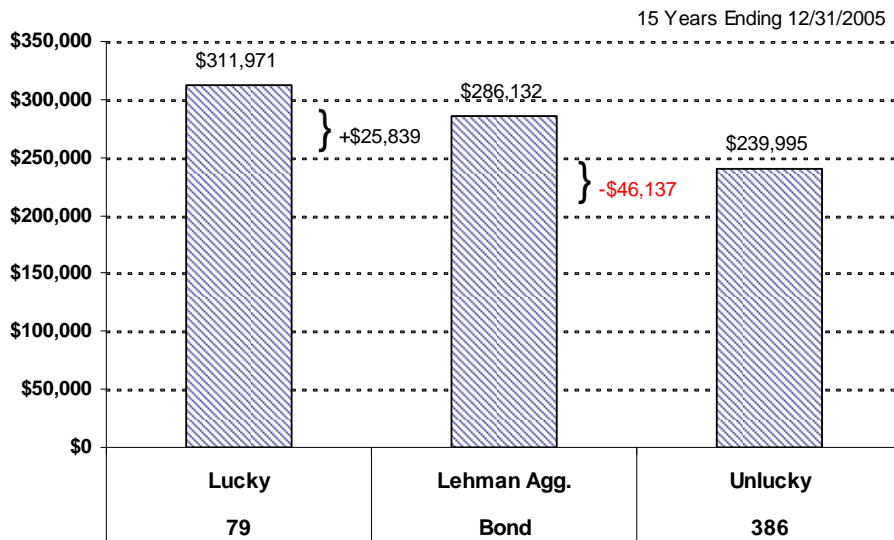
Source: Morningstar Principia & Voyager Capital Management, LLC

**FIGURE 5: GROWTH OF \$100,000,
INTERNATIONAL LARGE CAP FUNDS VS. MSCI EAFE**



Source: Morningstar Principia & Voyager Capital Management, LLC

**FIGURE 6: GROWTH OF \$100,000,
TAXABLE BOND FUNDS VS. LEHMAN AGGREGATE BOND INDEX**



Source: Morningstar Principia & Voyager Capital Management, LLC