McLEAN ASSET MANAGEMENT CORPORATION

Occam's Razor

January 2015

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.

Does a Diversified Portfolio Still Make Sense?

There are three market-driven occasions when we receive more client inquiries than others. In no particular order, the first occurs when the markets are in an extended downswing. The second occurs when there is a sharp and sudden swing in the markets (think of October this year on the heels of Ebola fears). And the third occurs when the S&P 500 (or another general market proxy) is one of the leading asset class performers for the year.

The first two can be addressed by putting into proper context the current events causing the market volatility within the framework of longer-term market returns and other historically similar scenarios. This provides valuable insight into the "this time it's different" concern.

2014, however, represented the year in which the S&P 500 was a leading asset class. And toward the end of the year when it became apparent that the S&P 500 would lead all major indices, we began receiving inquiries regarding the wisdom of diversifying across multiple asset classes. Why deviate from a Domestic Large Cap (i.e., S&P 500) equity portfolio?

This Occam's will discuss our approach to the benefits of diversification by addressing:

- the sequence of returns for all asset classes within a multiple asset class portfolio
- the expectation of a sensible time frame for when financial theory should play itself out
- the reasoning behind our International exposure

As a quick review, 2014 represented a mixed bag of returns for the overall Domestic and International equity markets. Simply put, if you invested in the US, you did well, and if you concentrated on larger companies, you did even better. And if you put everything in real estate, you got lucky.

2014 Return	1 Year
US Large	13.7%
US Large Value	13.5%
US Small	4.9%
US Small Value	4.2%
INTL Large Value	-5.4%
INTL Large	-4.9%
INTL Small	-5.0%
INTL Small Value	-5.3%
Emerging Markets	-2.2%
Real Estate (REIT)	32.0%

Although clients may believe in the benefits of diversification, the mathematical reality will conclude that a well-diversified portfolio consisting of various asset classes will not be able to outperform the top ones for that given year. When the S&P 500 is the top performer, that belief may be more readily questioned because we tend to succumb to emotional shortcomings when it comes to investing.

The recency effect and a tracking error bias are two such shortcomings. In the recency effect, we tend to extrapolate current events and expect them to continue well into the future. Our tracking error bias causes us to view our investments as being tied to our regional location. When the S&P 500 is outperforming other global indices, every morning read of the previous day's market returns is a daily hammering of these biases into our investment thinking. But basing an investment decision on historical daily, quarterly, even yearly returns tied to a specific region is not wise. Our portfolios are designed to achieve a specific personal financial objective within an appropriate level of risk and not to beat an arbitrary collection of stocks (i.e., an index). We do this most effectively within a multiple asset class portfolio.

Periodic Tables of Asset Classes

In the chart below, we have isolated the S&P 500 and an Equally Weighted Equity Portfolio of the asset classes indicated in the chart with an additional 40% bond allocation. By isolating the S&P 500 ("US Large Cap" in light green) and a basic 60/40 Equity-Fixed Income portfolio (Orange), we can see that there will be significant stretches where a diversified portfolio underperforms the S&P 500. This expectation is simply par for the course.

	2000	2001	2002	2003	2004	2005	2006	2007
US Large Cap	18.8%	25.6%	16.0%	10.4%	48.8%	34.4%	35.5%	45.0%
US Small Cap	14.3%	11.2%	8.6%	6.7%	33.4%	34.1%	28.3%	27.1%
Bond	12.6%	0.6%	1.6%	5.4%	33.1%	20.5%	26.9%	26.1%
REIT	9.6%	-0.7%	1.1%	3.7%	32.0%	14.6%	22.0%	20.6%
Emerging Markets	9.2%	-13.5%	-0.5%	2.2%	27.2%	14.6%	14.6%	17.2%
INTL Large	7.2%	-14.8%	-8.6%	0.3%	19.9%	9.4%	13.1%	16.4%
INTL Small	5.2%	-23.8%	-9.4%	-1.6%	19.1%	6.8%	8.6%	11.7%
60/40 Portfolio	4.6%	-26.0%	-18.0%	-5.6%	0.3%	6.3%	-0.8%	6.1%

	2008	2009	2010	2011	2012	2013	2014
US Large Cap	7.1%	6.0%	55.7%	37.4%	13.3%	24.2%	29.5%
US Small Cap	4.6%	-13.8%	23.2%	37.0%	7.5%	20.6%	24.6%
Bond	-3.7%	-25.0%	21.5%	34.9%	5.4%	17.8%	23.8%
REIT	-8.8%	-26.2%	18.0%	30.7%	0.1%	17.1%	23.6%
Emerging Markets	-13.1%	-28.1%	15.7%	30.3%	-2.1%	8.7%	15.2%
INTL Large	-15.3%	-29.6%	14.4%	27.8%	-14.1%	7.7%	14.3%
INTL Small	-16.2%	-31.6%	9.5%	20.6%	-15.7%	2.9%	13.3%
60/40 Portfolio	-17.4%	-45.3%	7.0%	3.9%	-16.0%	-0.7%	4.4%

Data Series from 7/1999-6/2014

If someone would have become a client in 6/2011, they would be looking at 4 consecutive years where the S&P 500 had outperformed a 60/40 portfolio. More concentrated equity portfolios with exposures to International equities would have suffered a similar fate. Does this mean the end for the diversification investment thesis? Not at all. We fully expect all asset classes to have their day in the sun. It is a pure random occurrence, however, to know when that sunshine will arrive.

The chart below details the yearly return sequence for each asset class. And although we may be tempted to see patterns in the data set, statistically there is none. What we want to do as investors is to make sure we capture the available market returns across the different asset classes that have long-term expected returns while mitigating the variance (e.g., risk) of those returns. A quick perusal of the yearly return chart below indicates that the 60/40 portfolio had a smoother year-to-year trajectory than any other asset class except bonds.

	2000	2001	2002	2003	2004	2005	2006	2007
US Large Cap	18.8%	25.6%	16.0%	10.4%	48.8%	34.4%	35.5%	45.0%
US Small Cap	14.3%	11.2%	8.6%	6.7%	33.4%	34.1%	28.3%	27.1%
Bond	12.6%	0.6%	1.6%	5.4%	33.1%	20.5%	26.9%	26.1%
REIT	9.6%	-0.7%	1.1%	3.7%	32.0%	14.6%	22.0%	20.6%
Emerging Markets	9.2%	-13.5%	-0.5%	2.2%	27.2%	14.6%	14.6%	17.2%
INTL Large	7.2%	-14.8%	-8.6%	0.3%	19.9%	9.4%	13.1%	16.4%
INTL Small	5.2%	-23.8%	-9.4%	-1.6%	19.1%	6.8%	8.6%	11.7%
60/40 Portfolio	4.6%	-26.0%	-18.0%	-5.6%	0.3%	6.3%	-0.8%	6.1%

	2008	2009	2010	2011	2012	2013	2014
US Large Cap	7.1%	6.0%	55.7%	37.4%	13.3%	24.2%	29.5%
US Small Cap	4.6%	-13.8%	23.2%	37.0%	7.5%	20.6%	24.6%
Bond	-3.7%	-25.0%	21.5%	34.9%	5.4%	17.8%	23.8%
REIT	-8.8%	-26.2%	18.0%	30.7%	0.1%	17.1%	23.6%
Emerging Markets	-13.1%	-28.1%	15.7%	30.3%	-2.1%	8.7%	15.2%
INTL Large	-15.3%	-29.6%	14.4%	27.8%	-14.1%	7.7%	14.3%
INTL Small	-16.2%	-31.6%	9.5%	20.6%	-15.7%	2.9%	13.3%
60/40 Portfolio	-17.4%	-45.3%	7.0%	3.9%	-16.0%	-0.7%	4.4%

By systematically capturing these market returns over the long term, we can truly enjoy the benefits of diversification or as we like to call it – investment theory's only free lunch. As the chart below indicates, for the 15-year period from 7/1999 – 6/2014 the 60/40 portfolio outperformed the S&P 500 by over 3 percentage points per year and with over 55% less risk as measured by standard deviation!

Asset Class	Annualized Return (%)	Standard Deviation (%)
REIT	11.28	23.25
Emerging Markets	8.88	22.49
INTL Small	8.52	22.56
US Small Cap	8.01	17.97
60/40 Portfolio	**7.94**	**10.01**
Bond	5.60	3.79
INTL Large	4.88	20.90
US Large Cap	**4.35**	**17.07**

It is important to note that the risk return profile for the 60/40 investment portfolio above could be improved by further capturing risk premiums within other asset classes such as value oriented stocks both domestic and international.

Method to the Madness of Diversification

Another comment that arises as a result of the significant outperformance of the S&P 500 is the selection process of the other asset classes that make up the investment portfolio and the vehicles we use to capture those returns. The main tenets of our approach to our portfolio construction process is that over the long term:

- Stocks will out-perform fixed income
- Value stocks will outperform safer market-oriented and growth stocks
- Small cap stocks will outperform Larger safer stocks

For the equity portion of the portfolio, these tenets represent the foundation of our investment thesis. Interestingly enough, Eugene Fama, who led the academic charge to bring these concepts of market equilibrium into practical application, was awarded the Nobel Prize this year. To steal a paragraph from Cliff Asness, a giant in the academic and investment world:

"Financial theory has taken a lot of abuse recently, specifically some of the basic tenets of modern portfolio theory. But a fair chunk of the abuse comes from our industry's collective tendency to judge ideas over relatively short periods, even if — or precisely because — short periods often feel like long periods. Thus, it's important to occasionally step back and note that when examined properly, the very basics hold up better than many think or sometimes casually assert."

To explore this concept further, we perform a simple analysis to assess on a short term basis if financial theory held true and juxtapose those results with a more normalized long-term investment horizon.

The chart below details the annualized return **differences** between both Large and Small Domestic Stock Indices across Value and Size dimensions. We also include an Intermediate fixed income index for bonds. We analyze the returns across consecutive three year holding periods starting in 1980. Based on financial theory, Small Stocks should outperform Large Stocks. Value Stocks should outperform the Market Oriented Stocks in both Large and Small Stock categories. In addition, Stocks should outperform Bonds.

Annualized Return Differences Between the Categories

The chart below indicates that if we were to judge financial theory based on three year time horizons, Eugene Fama would have to give back his Nobel Prize!

3-Year Period ending in	Large Stocks beat Bonds	Large Value beat Large Market	Small Value beat Small Market	Small Stocks beat Large Stocks
Dec-83	-2.30%	4.72%	8.9%	5.78%
Dec-86	3.40%	1.00%	4.2%	-9.79%
Dec-89	9.86%	-2.03%	0.8%	-7.54%
Dec-92	0.65%	-1.29%	1.1%	0.85%
Dec-95	8.59%	1.49%	0.9%	-0.88%
Dec-98	21.50%	-5.23%	2.8%	-16.64%
Dec-01	-7.41%	4.32%	4.9%	7.45%
Dec-04	-1.11%	5.56%	5.0%	7.89%
Dec-07	4.00%	0.34%	-1.5%	-1.82%
Dec-10	-7.79%	-1.05%	0.0%	5.08%
Dec-13	14.04%	-0.25%	-1.2%	-0.51%

During the three year intervals:

- Large Stocks outperformed Bonds only 64% of the time
- Large Value beat Large Market 55% of the time
- Small Value beat Small Market 82% of the time
- Small stocks beat Large Stocks 45% of the time

Over a 25 year time horizon, however, the results appear as expected. The chart below indicates that Stocks (across all equity asset classes) outperformed Bonds. Large Value beat Large Market (1,026% v 893%); Small Value beat Small Market (1,295% v 923%); and Small Stocks beat Large Stocks (923% v 893%).

Data Series (1990-2014)	Total Return (%)
Large	893.52
Large Value	1026.06
Small	923.05
Small Value	1295.30
Bonds	294.81

These results convey various concepts within the framework of this discussion.

- Although it may seem long, as we are living through it, three years is not really a long time and the market can see crazy things during that time period.
- The long haul is really long. Many portfolios will need to accumulate assets and provide income for significantly longer than the 25 year "long-term" results we presented.
- Theory is far from perfect and does not accommodate nor care for our short to intermediate time horizons, but if we stick with it long enough we can all benefit from market equilibrium.

Why International?

We would like to conclude this newsletter by tackling one more part of the allocation question as it relates to our exposure to International stocks. This is especially relevant in a year when the US market has significantly outperformed International stocks. We add International stocks to our portfolios because they provide a buffer to the return sequences of our domestic equity counterparts. We do not invest in International stocks because we feel they have a better expected return than Domestic stocks. The value and size return premiums across developed Domestic and International stocks are not significantly different from zero (formal language to say they are the same!).

The chart below provides the annualized returns **differences** between the Large Domestic and Large International stocks since 1975 in 5 year intervals.

5-Year Period ending in	Domestic beat International
Dec-79	-2.93%
Dec-84	1.24%
Dec-89	-4.45%
Dec-94	-3.15%
Dec-99	11.20%
Dec-04	6.46%
Dec-09	-2.12%
Dec-14	3.24%

As one can surmise from the chart above, over consecutive 5-year periods dating back to 1975, Large Domestic stocks outperformed International Stocks half the time. And although Domestic stocks do have an edge over the entire time period, the exposure to International securities merits inclusion in the portfolio in order to smooth out a portfolio's return sequence.

Furthermore, while Large Domestic Stocks outperformed Large International stocks since 2010 by an annualized return of around 9 percent, International Stocks happened to deliver about the same outperformance in reverse from 2002 –2007. Clearly, the tables can turn abruptly and destructively for an undiversified investor.

Conclusion

There remains decades of resounding evidence that one year – or even several years – does not a strategy make. That's why, come what may, we remain as convinced as ever that individualized diversification is the right policy every year. Maintaining a globally diversified portfolio according to your personal goals and risk tolerances does not guarantee that you will outperform other lucky scores you might have made instead. But it continues to offer the most rational approach to reaching your desired destination while managing the rocky risks along the way.

As always, we welcome the opportunity to explore your particular goals and investments in light of this and any other market climate. Contact us any time, if we haven't contacted you first.

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Note to Readers:

Data Source - In US dollars. US Large Cap is the S&P 500 Index, provided by Standard & Poor's Index Services Group. US Small Cap is the Russell 2000 Index. Russell data © Russell Investment Group 1997–2014, all rights reserved. Bond is Barclays US aggregated Bond Index, provided by Barclays Bank PLC. REIT is the Dow Jones US Select REIT Index, provided by Dow Jones Indexes. Emerging Markets is the MSCI Emerging Markets Index (net div). INTL Large is the MSCI World ex USA Index (net div.). INTL Small is the MSCI World ex USA Small Cap Index (net div.), © MSCI 2014, all rights reserved. All indices returns are provided by Dimensional Fund Advisors.

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