



“H.M.S. Beagle”

Historically speaking, advancements within the field of science happen at a relatively slow pace. Slow, tedious progress will be made by numerous professionals toiling in obscurity, and then one professional will put it all together and turn a field such as biology, astronomy or physics upside down in a very short period: Charles Darwin was exactly this type of man.

Darwin was born into a wealthy, influential family in rural England. He began his studies at Edinburgh University in the field of medicine, but learned he was squeamish and hated the sight of blood. Consequently, he transferred to Cambridge University and began to study biology, which suited him much better. As a child, Darwin was constantly collecting insects and while at Cambridge he was highly respected for his collection of beetles. Upon graduation, Darwin kicked around for a bit and ultimately accepted a job as a naturalist on a very small ship named the H.M.S. Beagle that planned on sailing around the world.

Darwin's time on the Beagle lasted four years, not only changing his life, but forever changing the field of biology. It was during his four years as a young man, sailing in the tropics, that Darwin came up with the research and theory that ultimately led to the publication of one of the most famous books ever written: *The Origin of Species*.

Darwin's theory is simple: that a species, any species, located anywhere in the world, must evolve over time, or face a high risk of failure, or, as has happened frequently, become extinct. Furthermore, a key link to his theory of evolution, which shocked many at the time, is that the process of evolution likely plays out over very long periods of time, and may be imperceptible to the human eye. Thus, as species are presented with new challenges, they will either rise to the occasion and evolve, or they may very well cease to exist.

I've always admired Darwin and have spent much time studying his life and the concept of evolution, as the concept is simply fascinating. In fact, shortly after I founded Monticello Associates in 1992, a book was released entitled *The Beak of the Finch*. This book, written by a pair of evolutionary biologists, documented a stunning observance of evolution in action. As I remember, this husband and wife team decamped to the Galapagos Islands for a year or two to study evolution amongst a species of finches. They happened to be there during a severe drought season and observed that there were no new seeds (finches only eat seeds) available for consumption. Thus, the finches could only find seeds if they used their beaks to probe amongst the island rocks. Evolution occurred rapidly as only those finches with tougher and thicker beaks were able to attack the rocks and discover crucial new seeds to keep themselves alive. Predictably, the birds without thicker beaks perished, and soon only finches with thicker beaks populated the island. Once this group had offspring, their children had even thicker beaks. This is the theory of evolution in a nutshell -- as a species, when you are presented with a problem, it is crucial to evolve in some way or you risk biological termination.

Over the past few months, I've been inspired by Darwin to reflect upon advancements in asset allocation over the past three decades. One reason for this is that, as I approach my 30th year as a professional in asset management consulting, my career has paralleled that of the development of modern asset allocation theory.

A Brief History of Asset Allocation

Life was pretty simple when I began my career in investment consulting. Equities were viewed somewhat cynically; almost all

investors had very high allocations to fixed income. Portfolios generally consisted of balanced managers who allocated between stocks and bonds. There were few equity specialists and there was basically no such thing as small cap, foreign equities, high yield, absolute return, long/short equity, venture capital, private equity or real estate in the vast majority of portfolios. My job was very simple, as clients generally preferred one to three balanced managers, and many had just one. The typical asset allocation was 50% Large Cap U.S. Equity and 50% Fixed Income, which was mostly in U.S. Government debt. My first job as a consultant was to add a balanced manager to a client's \$3 million pension plan which, at the time in 1984, was 100% in fixed income – stunningly prosaic to say the least!

Ultimately, contemporary institutional asset allocation began to accelerate based upon the work of a University of Chicago graduate student named Harry Markowitz. In Markowitz's pioneering work, which was the first attempt in asset management to consider the challenges of managing a portfolio as opposed to picking stocks, the simple concepts of risk and return were introduced, in an effort to quantify how much risk a portfolio is willing to accept. Although somewhat pedestrian by today's standards, these ideas were the modern portfolio management versions of creating fire, or inventing the wheel. As famed investment strategist Peter Bernstein liked to say, "Prior to Markowitz's work, the only portfolio I was aware of was a leather binder filled with papers!" Markowitz simply revolutionized the field.

Although Markowitz's initial paper was published in 1952, he kept hammering away at his portfolio management theories with additional papers and, in 1987, published "Mean Variance Analysis," to reflect his final thoughts on the subject. In 1990 he won the Nobel Prize in Economics for his groundbreaking work in the fields of asset allocation and overall portfolio management.

Markowitz's foundation rests upon the construction of an overall portfolio utilizing different asset classes, in an attempt to develop the most efficient blend - defining "efficient" as highest earning and least risky, and defining "volatility" as risk.

By 1987, most sophisticated asset allocation programs had adopted Markowitz's concepts of mean variance analysis and the efficient frontier. If investors could define a projected return stream, an expected level of volatility, and a covariance or correlation of the assets against each other, an overall portfolio could be constructed that allowed investors to select the appropriate risk and return level for their needs. **Importantly, perhaps the most salient feature of Markowitz's work is that it allowed institutional investors to quantify portfolio risk for the first time.**

By the early 1990's, Markowitz's mean variance analysis had accelerated the field of asset allocation. Coupled with the fact that formerly non-existent asset classes such as venture capital, private equity, absolute return, real estate and timber, now were developing a return history, investors were able to greatly expand the list of possible investment choices -- and expand they did.

Led by David Swensen at Yale, the leading endowments were the first institutional investors to actively embrace alternative investments, which were practically non-existent in portfolios prior to 1990. Many of these asset classes were originally what I call fringe asset classes or non-core, to say the least. Comparing the return history and return potential of alternative assets to stocks and bonds was a slam dunk -- there was little use for plain vanilla stocks and bonds.

As contemporary practitioners of asset allocation began to expand their roster of asset classes to include a healthy dosage of **illiquid** alternatives, their returns soared. After all, why would an investor remain invested in stocks and bonds when asset classes such as timber, private equity, venture capital and real estate had much higher returns? Throughout the past twenty years, leading institutional investors kept pushing the boundary on illiquidity. For many years, this was a very effective strategy as illiquid alternatives had robust returns that easily beat equities.

Additionally, investors began to establish concrete benchmarks such as investment policies, which created finite targets for the allocation of asset classes within an overall portfolio, and they established investment performance criteria based upon the alternative of investing in passive indices for asset classes and individual managers. Ultimately, this led to investors establishing target allocations for five to seven asset classes and then simply filling the buckets to reach a target weight.

Recently, in a brilliant white paper addressing the inadequacy of policy portfolios, GMO investment strategist James Montier outlined the numerous problems that policy benchmarks created for investors. Importantly, by establishing an asset class bucket and then seeking to fill that bucket to target levels, investors lost total focus on the ever-important concept of valuation. **Remember – Markowitz's pioneering advancement in asset allocation integrated the concepts of risk and return for the first time.**

There has always been something about modern asset allocation that has gnawed at me, and has not received much attention. The following graph shows the yield of the ten-year Treasury between 1980 and 2010.



Source: Federal Reserve

Importantly, in the fall of 1981, bond yields began plunging, providing aggressive investors with the greatest tailwind in history. As the ten-year Treasury began its substantial three-decade drop, this provided rocket fuel for many asset classes.

However, while substantially above-average investment returns were occurring, due to the long-term decline of interest rates, contemporary asset allocation strategies began to develop. In fact, almost all of the most sophisticated thoughts about asset allocation were developed during a period in which the ten-year Treasury bond dropped its yield by almost 14 percentage points. **In other words, everything we know about asset allocation was developed during a thirty-year period when interest rates massively declined.**

The reason that the massive run of declining interest rates is critical to understand is that most asset class valuation models are derived from the time value of money concept. This idea states that receiving a dollar today is worth more than receiving a dollar at some point in the future.

Since investors can earn interest in the form of T-bills or Treasury notes or bonds, this mathematical concept needs to be explicitly considered when evaluating potential investments. Many valuation models account for this fact by using an important investment concept known as the discount rate. While a discount rate may be derived in a number of ways, the risk-free rate or current interest on treasuries is always a critical determinant in reaching the appropriate discount rate.

Not surprisingly, as the interest rate on the risk-free instrument rises, the discount rate used in almost all valuation models will rise as well. Due to the fact that there is an inverse relationship between the discount rate and the value of an asset, an increase in the risk-free rate will lead to a decline in an asset's valuation.

On the other hand, a decrease in the discount rate will lead to appreciation, and, a thirty-year decline in the discount rate ultimately led to an environment where the vast majority of asset classes produced substantially above-average returns, as there was no penalty for the use of leverage or illiquidity. In fact, this is somewhat rational as if you knew that interest rates were going to decline virtually every year for three decades, you'd go all-in, levering yourself along the way.

This, of course, is exactly what many institutional investors did between 1982 and the current financial crisis that began in September of 2008 with the bankruptcy of Lehman Brothers. Moreover, as the dust began to clear in early 2009, the degree to which many institutional investors embraced illiquid alternatives was stunning. Many of the top returning investors for the previous decade revealed they had 40% - 50% of their overall portfolios in illiquid alternatives, and a handful had an additional 50% or more of their fund's total market value additionally committed to unfunded, private investments which had yet to drawdown capital.

Each and every year, the thought leaders in asset allocation pushed more and more into illiquid alternatives, principally because they had the highest returns. Unfortunately, as returns soared, so did capital flows, and investors destroyed the return potential of many asset classes by swamping them with cash flows, regardless of valuation. The previously discussed policy portfolios had a great deal to do with the abundance of cash committed, at record high valuation levels, to illiquid alternatives, due to the fact that if investors had a target allocation, they kept committing funds. Private equity, timber, and real estate are all currently suffering from the effects of too much cash flow between the years of 2000 - 2007.

But, I think venture capital provides the best example of institutional investors flooding an asset class and destroying the reasons they invested in it in the first place - inefficiency and outsized investment returns.

In the following table, you will notice the returns from the greatest period of venture capital investing in the history of the U.S. Capital markets.

Venture Capital Median Returns 1993 - 1997	
1993	12.5%
1994	15.6%
1995	20.3%
1996	28.3%
1997	20.0%

Source: Thomson Reuters

Predictably, as returns soared, investors responded by pouring cash into what was formerly a tiny asset class. Moreover, the returns for the next five years plunged.

Venture Capital Median Returns 1998 - 2002	
1998	1.4%
1999	-6.0%
2000	-2.7%
2001	-0.8%
2002	0.0%

Source: Thomson Reuters

The investment returns are only a part of the story. By dumping money into an illiquid asset class at peak valuation levels, investors dramatically underestimated the effect of illiquidity and record valuations – the venture capital industry is still suffering from the deluge of cash. Importantly, this is not an insight that would be generated in advance from quantitative asset allocation modeling, which ignores liquidity, relative valuations across asset classes, cash flows, and top manager availability.

The reason I like to analyze venture capital is the fact that as investment returns peaked almost fifteen years ago, its recent history provides a road map for the possible future of the private equity, real estate, and timber sectors. Unfortunately, once illiquid alternatives peak, in terms of valuations in combination with record level cash flows, it takes many years to right the situation. Remember that venture capital, after peaking in 1997, is nowhere near where it needs to be in terms of valuation to cash flows – in fact, there is still far too much committed to venture, due to the uniqueness of illiquid return flows and drawdowns.

For instance, during the second quarter of 2000, investors committed \$33 billion to venture capital, which was an all-time record. Additionally, during the full year, 749 funds were created. Thus, institutional investors, after helping to create a vibrant venture capital industry with robust returns, ensured its free-fall by destroying future returns with excess capital allocations. In fact, as of today this downsizing is still occurring as venture capitalists, after almost fifteen years of not demonstrating returns for their limited partners, are departing the industry in droves. Last year, only 170 funds raised capital, a decline of more than 80% from the high of 2000, and, only \$1.9 billion was raised during the second quarter of 2010.

I've outlined venture capital as an example, but the story is eerily similar for almost all of the illiquid alternative asset classes. It comes as no surprise that the record years for private equity fundraising were 2007 and 2008. Unfortunately, in 2007,

valuations and leverage levels, utilized on a deal-by-deal basis, were also at, or close to, record levels.

The point of this discussion on illiquid alternatives is *not* to debate the merits of what is now called the “endowment model,” as returns were outstanding for almost two decades. Nor is it to call into question the existence or performance of illiquid alternatives. The primary purpose is to focus on the fact that, due to the secular decline in interest rates, which produced outstanding returns, many institutional investors separated the critical Markowitz concepts of overall portfolio risk and return, and primarily focused on return.

I think I've spent enough time discussing the past, and now it's time to conclude with the future environment.

The Future of Asset Allocation

Today, the investment climate is in a much different place than it has been for the past thirty years. In fact, it's totally dissimilar to any environment that the vast majority of investors practicing their craft today, have ever seen, or even imagined they would encounter.

The western world is in a systematic de-leveraging, on both the government and consumer levels. As esteemed Harvard Professor Kenneth Rogoff has stated, economic recoveries that are tied to a financial crisis, or banking crisis, are generally much more muted. Additionally, another fundamental Rogoff maxim is that governments, in this case, western governments, which have accumulated substantial deficits, and reach a cumulative debt-to-GDP ratio in excess of 90%, are likely to see their GDP growth decline by at least one percent per annum, as spending contracts and taxes increase, in an effort to reduce overall deficit spending.

Thus, the highest probability scenario is that U.S. investors are faced with slow economic growth for many years, while we recover from the substantial debt accumulation of the past ten years. Additionally, interest rates are at close to a fifty-year low, and at some point will begin to drift upward beginning a normalization process that will ultimately affect valuations.

Consequently, investors may have to evolve in their thought processes, because this environment is in a great contrast to the recent historical investing climate. Investors who fail to do so, may run the Darwinian-equivalent risk of hopping around an island in the Galapagos, with a thin beak, looking for seeds during a severe drought.

Obviously, properly evaluating risk levels in an asset class, or underlying investments, will be critical to success. At Monticello Associates, we are very comfortable with this concept, as this is how we've operated for the past eighteen years. However, I'm somewhat cynical that many institutional investors will make this evolutionary step, as their entire careers have been spent in a completely different investment environment.

Let me spend a moment on this concept – in fact, while I won't go so far as to say that everything we've learned about asset allocation is incorrect, I will say that many of the cardinal rules established over the recent past may fail to work because the economic environment investors encounter today is likely to be dramatically different. This fact should provoke conversations and thought regarding asset allocation, simply because, in a secular declining-rate environment, almost everything works, but, in a slow-growth environment, dominated by the twin towers of deflationary forces and systematic de-leveraging, a much more select group of asset classes may work.

Let's look at a few concepts from the recent past, and see how they may fare in the environment we may face for the foreseeable future. Between 1987 – 2008, it became quite common to say that developing a global macro view was market timing, and there was no need to focus on economic trends. The great Fidelity fund manager, Peter Lynch, was a vocal proponent of this view. I believe he used to say, something to the effect that, if you spent ten minutes focusing on the economy, you were spending nine minutes too long!

However accurate Lynch's opinion was, in an environment where interest rates plunged, communism failed, and there were few geo-global political events to worry about, is it reasonable to be agnostic about macroeconomic and political forces in the current environment? Today, in a low-growth environment, with substantial deflationary forces, the world is in a parallel opposite. Moreover, at some point, interest rates will begin to move off their fifty-year low, and begin to rise – this normalization will have substantial ramifications for investors.

There are so many issues that keen investors should address in this environment. For instance, in a deflationary, lower growth environment, income is king, and will be a primary determinant for investment returns over the next five years. Again, this is in direct contrast to the recent experiences of most investors, where asset inflation, or capital appreciation, were the primary drivers of returns.

Also, if the western world is trapped in a systematic de-leveraging, and is likely to grow at one percent for the foreseeable future, is it reasonable for the developing world, which is likely to continue to grow at 6% or greater, to continue

to have relatively small weightings within overall portfolios? It seems that, in an investment environment starved for growth, there should be a premium for that growth, but as I write, the price earnings multiple, or valuation level, of emerging markets continues to be at, or below, that of the developed world.

Finally, what about U.S. or European large cap equities? Many institutional investors have continually cut their allocation to plain old stocks, to the point where, in many of the portfolios, they are less than a 10% overall allocation. Again, when you look at the likely environment we will face for many of the upcoming years, quality U.S. large capitalization companies are extremely attractive. They combine low debt-to-equity ratios (very important in a systematic de-leveraging), sustainable and relatively high earnings growth, high dividend yields, very high overseas sales, and the potential to preserve capital in a negative market environment. Additionally, in what may be a lower overall total return environment, they have much lower fees, which may be important to the overall return of an asset class.

On the other hand, what about indexing equities? While indexing offers lower fees, would you really want to own 500, or 1,000 or 2,000 companies that have been picked somewhat indiscriminately? I would think just the opposite would work – **in a very slow growth environment you will want to concentrate your efforts, because there will be fewer winners.** Again, this is in direct contrast to the past thirty years, where almost everything worked, and a robust economy and easy credit flattered marginal companies.

Finally, in previous decades it became fashionable to criticize the existence of any cash in a portfolio – after all, as rates declined, cash was worth less every year, especially when compared to the asset inflation that existed at the time. In a deflationary or lower-growth period, cash does not harm investors nearly as much, and therefore may not be the liability that many have come to fear.

In conclusion, I am driving hard at the re-integration of risk and return as the primary drivers of asset allocation. Ironically, much of what may work in the current environment, is relatively conservative, and will likely be driven by low debt levels and high cash flow, or income – a direct contrast to recent experiences. In some ways, this may be easier for investors, as emotions and scars from 2008 are still very prevalent.

Darwin's theory of evolution is an apt analogy. To be successful as an investor, you may have to think very differently, and this thought process is evolutionary in nature.

B. Grady

On behalf of Monticello Associates, I am delighted to announce the following professionals have joined the firm during 2010:

Karen Proc, JD, was named Vice President – General Counsel. Karen joined us from Old Mutual, a \$250 billion money management firm, where she was a Vice President and Associate General Counsel. Karen oversees our legal and compliance departments, and has direct interface with the money management community regarding offering memorandums, terms, amendments and ongoing legal developments. Karen graduated from the University of Illinois with a degree in Finance (Magna Cum Laude). She received her JD from the University of Denver, receiving an Award for scholastic excellence in Estate and Gift taxation. Karen is an avid sports fan and the mother of Braden and Sabrina.

John Jares, CFA, joined the firm as a Vice President in consulting and research. Most recently, John was a Vice President and Senior Portfolio Manager at The Boston Company, managing large cap growth stocks. Prior to that, John was a Vice President and Senior Portfolio Manager at Delaware Investments. John has spent fifteen years managing money and has been a Morningstar top-ranked manager in both the balanced fund and growth equity mandates. John has brought tremendous knowledge and experience to our capital markets research team. John has a B.S. in Finance from Colorado State University and a Masters in Finance from the University of Colorado. John lives in Highlands Ranch, Colorado with his wife Linda and his children Anne and Jack.

Jennifer Kilpela, CFA, has recently relocated from Washington, D.C. to join Monticello as a Senior Investment Analyst in consulting and research. Most recently, Jennifer worked in the investment office of George Washington University as a Senior Investment Analyst covering existing investment managers and investigating possible new investments. Prior to that, she worked in the investment office at the University of Texas (UTIMCO) focusing on marketable alternatives. Jennifer graduated from the University of Texas (Magna Cum Laude) with a degree in Finance. Additionally, she received an MBA from the University of Virginia, Darden Graduate School of Business Administration and was the recipient of a Faculty Award for Academic Excellence. Jennifer is a passionate fan of the Texas Longhorns and lives in Denver with her husband Jason.



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