The Power of Asset Allocation using the Lumen Global Value Compass

Lumen Global Investments

Summary

Despite its well-known benefits, the power of asset allocation as a successful investment process has become more apparent and popular only recently. Indeed, the poor performance of most active managers, particularly in the long-only world, has rekindled the need to seriously consider the various methods of asset allocation and its more mechanical aspect of portfolio construction as a process and venue to outperformance. Amongst these, the Black-Litterman model is the recognized groundbreaker methodology. Nonetheless, this brilliant construct does have shortcomings in that it relies on the CAPM and its thwarting assumptions to determine the market implied expected return, the starting neutral point in the B&L model. Lumen's methodology and modification of the B&L model successfully bypass and outwit the well-known shortcomings of the CAPM and their impact on the B&L, yielding much more intuitive and forward-looking asset allocation, with far higher attributes measured for example by a higher Sharpe Ratio relative to the original B&L model.

The Demise of Stock Picking

The much disputed and widespread underperformance of many active investment strategies, particularly in the long-only world, has triggered some heated debates on the capability of active money managers to consistently and repeatedly "beat" the market. At the same time, or possibly because of this generalized underperformance, there has been an unprecedent massive inflow of capital into passive strategies, thus further increasing the difficulty for active managers to keep up with the benchmarks. Furthermore, the success of ETFs – i.e. quintessential passive investment vehicles - has also reinforced the performance divergence between active and passive management.

The reason for this persistent underperformance however cannot be attributed to a sudden and generalized loss of cognitive capability for active managers. It may be instead the result of a structural and paradigm shift in the investment environment where stock picking or individual security selection seems to have lost its much-touted benefit.

Nonetheless, the scope for outperforming is far from "done" or "exhausted" and its demise is very much exaggerated. Indeed, and in our view, active management has simply shifted from "stock picking" to the old and venerable art of asset allocation, together with its mechanical aspect of portfolio construction. Indeed, "pundits" tend to forget that successful money management is first and foremost about building efficient portfolios - hence the label "Portfolio Managers" - and not just picking the best investment!
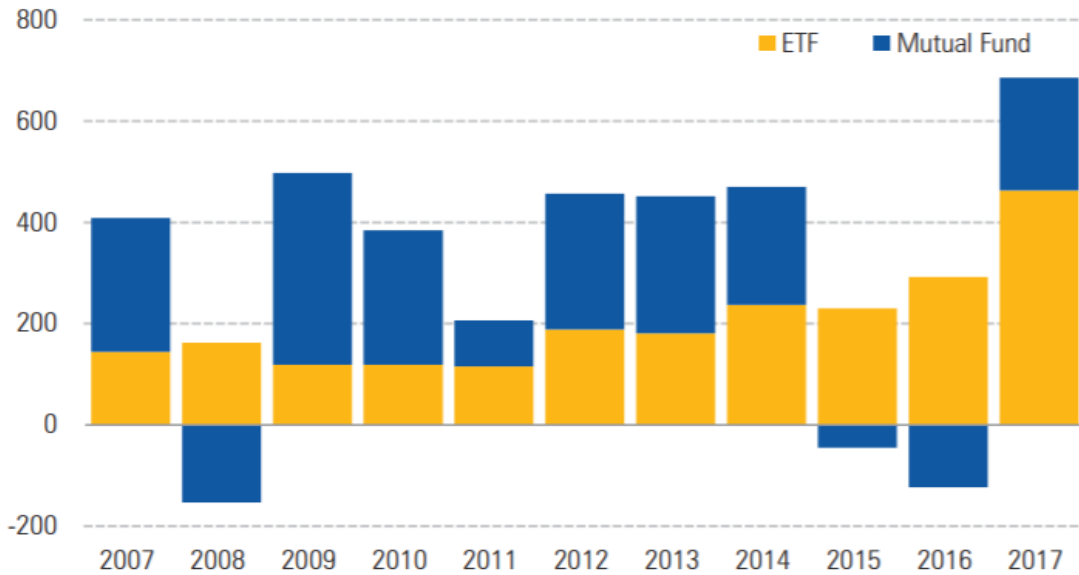
Active vs. Passive U.S. Equity Flows ($ Billion)
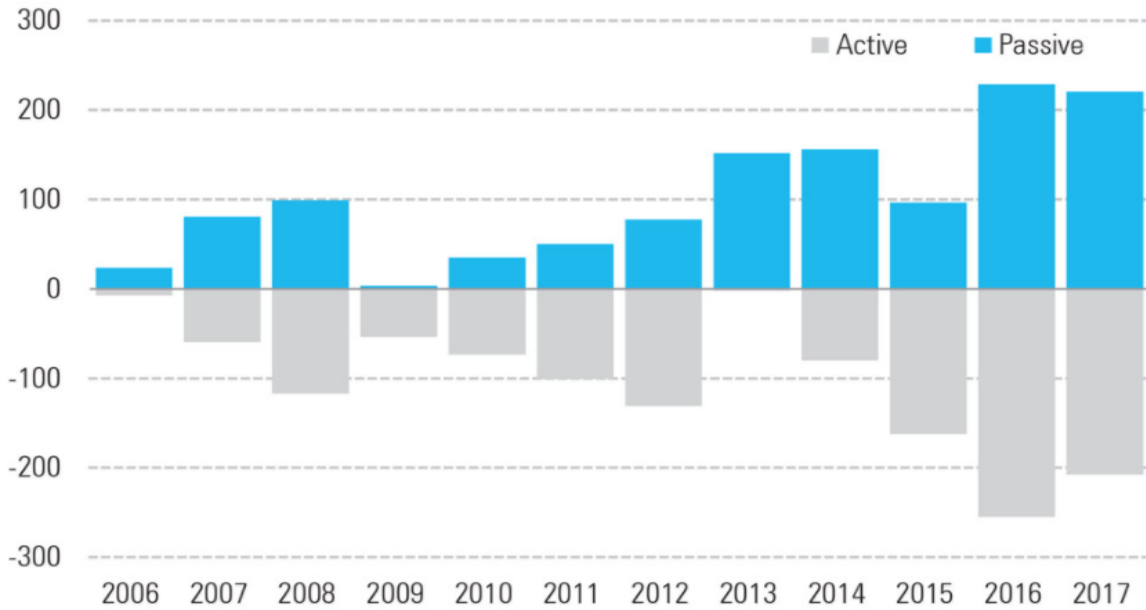
- Exchange-traded funds are becoming more and more popular.

Exhibit 9 ETF and Open-End Fund Flows **($ Billion)**

To start with, outperformance of individual securities listed in public markets is now mostly event-driven, i.e. selecting individual securities – a.k.a. stock picking – is quickly becoming a futile and nostalgic activity of limited repeatable success, left to surprise or randomness. Indeed, the advent and convergence of fast and global connectivity, big data, and statistical learning (a.k.a. machine learning, a.k.a. artificial intelligence) has made the dissemination, evaluation and application of relevant information on specific names widely available and actionable for anyone that cares, i.e. there is little to no information advantage left at least on publicly traded securities. In addition, there is now literally an army of analysts whose job is understanding in detail all there is to know about a few names each – i.e., there is an army of analysts whose primary or only job is "covering" Apple! Accordingly, the outperformance of any specific stock or security is increasingly driven by surprises or events, or surprising events: surprise in earnings, announcements of an innovation, changes in business model, M&A announcements, buybacks, etc. In the worlds of many academics, the market is quickly reaching *micro efficiency*.

Concurrently and partly facilitated by the same technological progress mentioned earlier, the proliferation of Exchange Traded Funds (ETFs) covering specific corners of the global investment universe is providing instant access and exposure to specific sectors, industries, sub-industries, or even investment styles, thus reducing the need to assess value and "pick" a specific name to gain exposure in a specific space or theme - not to mention the benefit of reducing hidden idiosyncratic risk when investing in single names to express an exposure to a whole sector. This has inevitably resulted in an increase of correlation across individual names within the same sub-sector and has resulted in a flattening of performance amongst the constituents of the same sub-sector, ETF, or benchmark.

All of the above is rapidly contributing to a paradigm shift in the investment environment for long-only "mutual-fund-type" of managers, with traditional active performance based on name selection alone (or stock-picking) suffering markedly and publicly. By contrast, asset allocation, sector selection, and portfolio construction are all becoming paramount and primary functions in the process of pursuing successful capital and wealth management…possibly because of the simple fact that investors have finally realized that portfolio management is first and foremost about risk management – otherwise why have a portfolio at all – and therefore is about asset allocation. To quote the same academics, while the market is moving towards *micro efficiency*, *macro inefficiency* is here to stay and can hardly and quickly be arbitraged away!

Asset Allocation & Portfolio Construction

To be sure, the crucial role of asset allocation and its more mechanical aspect of portfolio construction is nothing new. The trouble with it is that the mainstream (theoretical) methodology, famously pioneered by Nobel laureate Harry Markowitz with his Modern Portfolio Theory (MPT), has not produced the desired results of diversified, intuitive, and forward-looking risk-adjusted portfolios. The problem in our view is that the MPT approach has been wrongly framed as not only it starts from risk instead of the more logical, albeit more challenging value aspect, but it also confuses risk with volatility. Indeed, in Markowitz work/world, risk is "precisely" measured and forecast by the Standard Deviation (STD) of past historical return on an asset -- assuming in turn normal distribution, thus assuming that returns are symmetrical around an historical average, and that future results will always trend or mean revert toward that average. Despite its robust quantitative & statistical attribute, the Standard Deviation of past returns very simply means…*driving by looking at the rearview* mirror a strategy that normally works until it doesn't and sets previous gains back to zero. In addition, the STD measures a symmetrical deviation around the average,

i.e. up or down, i.e. not down only! That is, STD measures "good" and "bad" volatility. Accordingly, the astute investor would "only" stomach "bad" volatility/risk and wait until the "good" volatility/risk shows up to take profit…many wish it were that easy. To be sure, volatility does have a crucial role in investment decision in that it attempts to quantify the uncertainty of an event happening or a target being reached in light of well-established yet not-exclusive past relationships (growth, margins, inflation), e.g. a stock price being up a certain percent, or down the same percent. But that is different from financial risk.

Indeed, in its simplest yet most powerful definition, **financial risk is the likelihood and possibility of a permanent loss of capital, i.e. the necessity to crystalize losses**. Accordingly, the most effective estimation and management of risk is to always pair it with value, i.e. risk and value are both sides of the same coin! Indeed, risk is at 100% when value is at ZERO % and vice versa; that is, risk is conceptually symmetrical to value…cannot one estimated without considering the other. As shown in details in our B&L Compass presentation, Lumen's Compass follows this simple yet powerful axiom: calculate value to estimate and manage financial risk.

Irrespective of the definition of risk (or possibly because of it), Markowitz's approach, while conceptually sound and methodologically elegant, is nonetheless impractical, generating often concentrated and counter-intuitive portfolios. In addition, value in MPT only enters as an exogenous factor and is not dealt with formally…possibly the main reason behind questionable (corner) solutions and backward-looking portfolios. In fact, and paradoxically, despite the formal dealing of risk, it turns out that Markowitz's results are a lot more sensitive to value than risk…actually volatility!

Indeed, recognizing this, in a seminal study published in 1992 Fisher Black and Robert Litterman (B&L) of Goldman Sachs sought to address the shortcomings of the Markowitz model by in fact approaching the problem from value first. The brilliance of the B&L model is to allow for the totally subjective determination of expected returns (subjective views) but firmly anchoring these views in the market implied expected returns. This "tweaked" set of expected returns is then put through the same Markowitz optimization process to determine an efficient asset allocation. The resulting portfolios are much more intuitive as, for one thing, they correctly reflect the view of the investor, albeit properly constrained by reality, or constrained by the market implied expected returns, a.k.a. value! Given the conceptual rigor plus the appealing result and the practicality, the B&L model has quickly been widely adopted and is still the standard amongst sophisticated intuitional investors engaged in rigorous asset allocation.

However, and irrespective of the brilliant construct, the solidity and the attraction of the B&L rest on its formal determination of the starting point, i.e. the market implied expected returns. Indeed, very often the B&L model is "mistaken" for a model of determination of market implied expected returns when in fact these implied returns are derived by referring entirely to the famous Capital Asset Pricing Model (CAPM). This model in turn, while widely popular, relies on several rigid & strict assumptions, among which: a) markets are in general equilibrium, b) all investors have access to all available information (Market efficiency Hypothesis), c) they all have the same views on expected return, and d) all investors hold exactly what they want. Given these assumptions, the neutral and optimal portfolio is obviously and by construction the market portfolio. B&L then argue that having the weights of the optimal portfolio (i.e. the market cap of the global investment universe!), they can derive the implied returns by reverse engineering a utility function, estimating further a Risk Aversion Coefficient based purely on historical market returns…a somewhat circular argument.

The trouble is that, as widely known, the assumptions at the base of the CAPM – and the crucial starting point of the B&L - clearly constrain and seriously impair the end results. In addition to the CAPM shortcomings, the B&L model also has another major practical limitation in that the model requires the prior knowledge of the composition and weights of the entire global market capitalization (not just an arbitrary subset), an impractical and in large part unattainable task. For example, as pointed out by many critics, the ultimate asset mix of most investors also included "non-marketable" assets such as housing dwelling; excluding them from the "optimal market portfolio" obviously distorts the results.

To be sure, B&L seemed intent to bias the system much more towards the subjective views, thus possibly and purposely overlooking the well-known CAPM limitations. In addition, the authors did assume General Equilibrium, meaning that every subset of the global market is also assumed to be in equilibrium. To that end, the construct of the model remains brilliant, thus justifying and explaining its widespread use, which means that successfully relaxing the CAPM assumptions or bypassing them altogether to determine a "better" market-implied expected return could provide excellent results.

Lumen's "Modified" B&L

Indeed, Lumen has successfully bypassed and outwit all the hampering CAPM assumptions imposed in the B&L for this model to determine the market-implied expected returns. Indeed, independently from the B&L and exactly for the purpose of overcoming the debilitating CAPM assumptions during its investment activity, Lumen already decades ago successfully applied a proprietary algorithm to determine the market-implied expected return without the use of flawed theories, restricting assumptions, forecasts, etc.

The Lumen Global Value Compass generates a market-implied value metric which is unbiased and directly comparable across asset classes (bonds, equities, real estate, and literally any other form of investment) and across regions, countries and sectors. This metric is based on the most basic yet powerful law of finance: *the monetary value of any investment is equal to its future cash flow discounted back to present value.* The proprietary algorithm at the base of the Global Value Compass utilizes live market data (no history), a three-stage Discounted Cash Flow construct and reverse engineering to generate the value metric…without being distorted or influenced by over-confident forecast, assumption, biases, etc.…. just what the market is implying, right or wrong.

Applying this methodology to the B&L to determine the implied expected returns or the starting neutral point in the B&L construct yielded excellent results:

1. Given the lack of restrictive and ultimately distorting assumptions, the implied returns are much more intuitive and reflect forward-looking market conditions (i.e. value) – as opposed to history as explicit in the CAPM construct (i.e. past volatility), meaning that in the absence of subjective views, the B&L model tweaked by the Compass will yield much more intuitive and forward-looking asset allocation and optimized portfolios…as opposed to suggesting a passive allocation to the market portfolio.
2. Furthermore, the optimized portfolios invariably yield much better attributes; the Sharpe ratio is invariably higher than the original B&L, and in many cases doubled, even if stress-tested by outsized subjective views and across widely different and arbitrary investment universe.

3. Finally, Lumen's methodology can be applied to any asset mix or arbitrary subset of the global investment universe without damaging the rigor of the analysis or the integrity of the results; i.e. the methodology does not need to define the "equilibrium" global portfolio to infer the expected returns. This apparently simple yet powerful amendment greatly increases the practicality of the model not to mention its flexibility particularly for investors that need to carve out a specific investment universe.

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For further information and clarification, please don't hesitate to contact us:

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