Demystifying the Oracle's Value-Added

This month we participated in The Wharton School, University of Pennsylvania's first Private Wealth Management course held in Miami. One of BigSur's cornerstones is education: educating our clients on themes most relative to them, and also continually educating ourselves. One of our objectives in attending Wharton's PWM course was to learn about the latest advancements in financial analysis and try to be at the cutting edge of investment techniques and manager performance evaluation.

From a strictly practical standpoint, one of the most interesting and extremely relevant parts of the course was the discussion on the performance of one of our core equity investments: Berkshire Hathaway (refer to Thinking Man # 7 and #9). Finance Professors from the Wharton School of Business, Chris Geczy and Craig MacKinlay, discussed a new and very in-depth working paper from the National Bureau of Economic Research (by Andrea Frazzini, David Kabiller and Lasse H. Pedersen), which dissects the great historic performance attribution of the Maestro, Warren Buffet. In this month's Thinking Man, we discuss the key takeaways from this paper.

First Look: Typical Risk Measures

Let's review a couple of basic risk measures for manager evaluation:

- Total Risk (Standard Deviation of Return) = Market Risk (or BETA) + Non-Market Risk (or Tracking Error)

This formula can be applied with any benchmark or market. While the "market risk" is non-diversifiable, the "Non-Market Risk" can be diversified away.

- Sharpe Ratio = ratio that provides a measure of return per unit of risk = Fund's excess return (over T-Bills) divided by Fund's Standard Deviation
- Alpha = Fund Return minus the Expected Return (given Beta). Warning – alpha in reports is often not calculated with a Beta adjustment.
- Information Ratio = Alpha divided by the Tracking Error (or the volatility of that Alpha).

Buffett's track record is clearly outstanding. A dollar invested in Berkshire Hathaway in November 1976 (when our data sample starts) would have been worth more than $1500 at the end of 2011. Over this time period, Berkshire realized an average annual return of 19.0% in excess of the T-Bill rate, significantly outperforming the general stock market's average excess return of 6.1%.[1]

The Thinking Man's Approach

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Ignacio Pakciarz | CEO

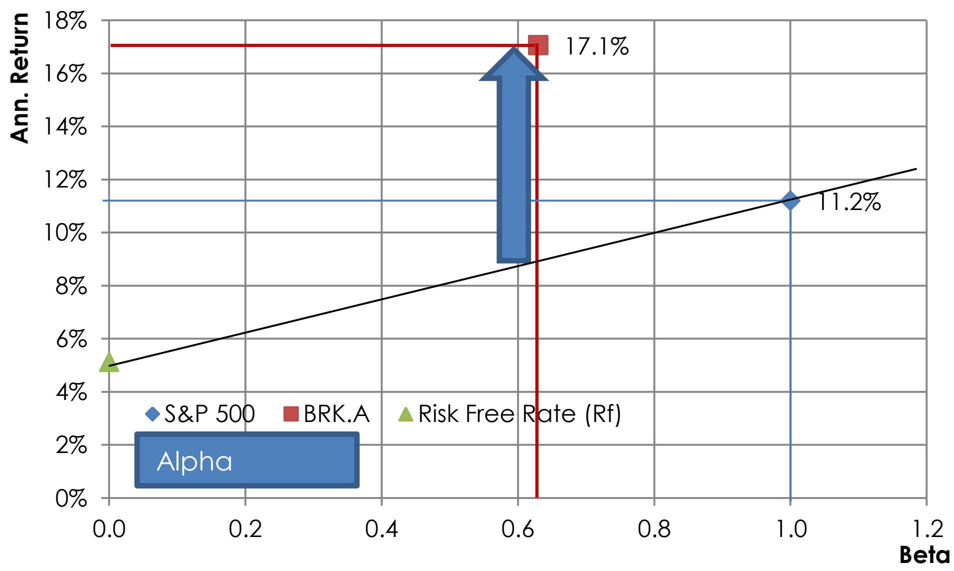
At BigSur, we believe it is important to analyze and understand the contributing and detracting performance factors for our core managers- this helps us better position our portfolios for different market environments and construct an efficient holistic portfolio.

This month's Thinking Man's Approach walks you through a performance analysis of one of core holdings, Berkshire Hathaway. We discuss an interesting paper from National Bureau of Economic Research (by Frazzini, Kabiller and Pedersen), which dissects the historic performance attribution of famed investor Warren Buffett.

For more information, including how we are positioning our equity portfolios, please contact your Investment Advisor or inquire at: ideas@bigsurpartners.com

Berkshire stock entailed more risk, realized a volatility of 24.9% (higher than the market volatility of 15.8%). However, Berkshire's excess return was high even relative to its risk, earning a Sharpe Ratio of 0.76 (19.0%/24.9%), nearly twice the market's Sharpe Ratio of 0.39. Berkshire realized a market beta of only 0.7, an important point that we will discuss in more detail when we analyze the types of stocks that Buffett buys. Adjusting Berkshire's performance for market exposure, we compute its Information Ratio to be 0.66.

Chart 1: Value Generated by BRK from 1976-2013



- Risk free = Average 3 month UST-bill from 12.31.1976 to 12.31.2013 (5.12%).
- The black line represents the SML (Security Market Line) and is a graphic representation of the expected return of investments as a function of its beta (i.e the non-diversifiable risk).
- The difference between the SML and the actual annualized return generated by BRK.a (+8.1%) denotes its Alpha (excess return).

But how *consistent* is Buffet's Alpha? For that we look at Buffett's Information Ratio – which is even lower, 0.66. This Sharpe Ratio reflects high average returns, but also significant risk and periods of losses and significant draw-downs. While this Sharpe Ratio is very good but not super-human (like for example Bridgewater's Dalio above 1), then how did Buffett become among the richest in the world?

Looking Beyond: Leverage, Selection and Succession

The answer is that Buffett has boosted his returns by using *leverage*, and that he has stuck to a good strategy for a very long time period, surviving rough periods where others might have been forced into a fire sale or a career shift. The authors of the National Bureau of Economics paper estimate that Buffett applies a leverage of about 1.6-to-1, boosting both his risk and excess return in that proportion. Thus, his many accomplishments include having the conviction, wherewithal, and skill to operate with leverage and significant risk over a number of decades.

This leaves the key question: How does Buffett pick stocks to achieve this attractive return stream that can be leveraged? They identify several features of his portfolio: He buys stocks that are "safe" (with *low beta* and *low volatility*), "cheap" (i.e., value stocks with low price-to-book ratios), and "high-quality" (meaning stocks that profitable, stable, growing, and with high payout ratios). This statistical finding is certainly consistent with Graham and Dodd, the fathers of value investing (authors of "Security Analysis," 1934). Thus, Buffett's returns appear to be neither luck nor magic, but, rather, reward for the use of leverage combined with a focus on cheap, safe, quality stocks. Buffett's genius thus appears to be at least partly in recognizing early on, implicitly or explicitly, that these factors work, applying leverage without ever having to fire sale, and sticking to his principles. Perhaps this is what he means by his modest comment:

"Ben Graham taught me 45 years ago that in investing it is not necessary to do extraordinary things to get extraordinary results"– Warren Buffett, Berkshire Hathaway Inc., Annual Report, 1994.

The performance of the publicly traded companies is a measure of Buffett's stock selection ability whereas the performance of the privately held companies additionally captures his success as a manager. As pointed out in our TM #7 of May 2013, Buffett relies heavily on private companies as well, including insurance and reinsurance businesses. Why? One reason the academics demonstrate might be that this structure provides a steady source of *financing,* allowing him to leverage his stock selection ability. Indeed, we find that 36% of Buffett's *liabilities* consist of insurance float with an *average cost* below the T-Bill rate.

One of the largest risk factors affecting BRK/a is *succession risk*, as Mr. Buffet is 83 years old. This risk factor might have been a detractor of the stock's performance over the last few years. However, newly published information confirms that the pupils are beating the master at Berkshire Hathaway Inc. The two managers seen as potential successors to Warren Buffet have netted better returns than the renowned investor. Both Todd Combs and Ted Weschler outdid both Mr. Buffet and the S&P500 in the last 2 years (since they've took over the management of $14B of the total $100B in public equity portfolio). With Berkshire's market value approaching $300B and around $200B being tied to operating businesses, it has gotten harder for the company to get a big percentage gain in net worth expressed in book value per class A share, Mr. Buffet's preferred yardstick.

Conclusion

In conclusion, Berkshire's great performance comes from several risk factors:

1. Ability to choose public stocks, focusing on stocks that are "safe" (with low beta and low volatility), "cheap" (i.e., value stocks with low price-to-book ratios), and high-quality (meaning stocks that profitable, stable, growing, and with high payout ratios).
2. Ability to acquire and efficiently manage private components.
3. The effects of leverage, which magnifies returns.

4. Further, Berkshire's Sharpe ratio is higher than those of the public and private parts, reflecting good tactical bets:
    a. from time-varying leverage; and
    b. time-varying public/private weights.

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