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In a terrific book published last year, Antti Ilmanen¹ has investigated the drivers of investment returns from a number of angles including asset class (that is, equities, fixed income, commodities), investment strategy (value, growth, momentum, leverage, carry), and risk driver (exposure to economic growth, inflation, liquidity). The basic idea is that you obtain strong investment returns either by taking exposure to sources of systematic risk or by taking advantage of mistakes of other investors. He documents a variety of investment strategies that have earned significant positive risk premiums (return above the risk free return) over the recent past. These strategies include the following

1. Holding long equity positions
2. Emphasizing value stocks
3. Emphasizing small capitalization stocks
4. Momentum (that is, riding the trend)
5. Selling volatility (selling options)
6. Carry (buying high yielding assets and shorting low yielding assets)
7. Supplying liquidity to the market by holding illiquid assets

Why did these strategies work well in the past?

A key issue is whether the strategies reflect reward for taking on systematic risk or not. If they do, then there is reason to suspect that future returns will be strong. Unless, that is, the asset class or investment strategy becomes overcrowded.

Here we have another potential application of Goodhart's Law. As indicated in previous blogs, Goodhart's Law (named after economist Charles Goodhart) says that once an observed empirical relationship begins to be relied upon, it will no longer be reliable. As investors learn about strategies that have worked well in the past, it is likely that some of them will attempt to copy the strategy and by doing so weaken the conditions that supported high historical returns.

For example, equities have done very well in the past 100 years, with annual (arithmetic) returns of approximately 11%. There are several partial explanations for this. First, equities were really cheap 100 years ago. Dividend yields were 5% (greater than corporate bond yields) compared to 2% today. Price/earnings ratios were significantly lower than today. The U.S. economy performed very well over this period, and we did not lose a major war nor incur a huge inflation. Based on initial conditions alone, it is likely that equity returns over the next few decades will lag behind the historical record.

Still, a fundamental principle of finance theory is that the overall stock market carries systematic risk and therefore the average stock investor will earn a risk premium in reward for taking on this risk. For many years, financial theory maintained that the market return was the only source of systematic risk. However, recently evidence has accumulated that support the idea of multiple risk factors. In particular, small stocks and value stocks (as indicated, for example, by low ratios of price per share to book value per share) do better than large stocks or growth stocks. One interpretation for this is that both small size and low price indicate substantial exposure to an economic downturn, and that the higher returns on these strategies reflect this greater exposure. Similarly, the strategies of selling volatility (selling options), carry and holding illiquid assets each have a similar flavor – the investor earns insurance premiums for taking on a significant risk.

The one strategy that Ilmanen highlights that is not like selling insurance is momentum trading. The momentum trader buys when the price is rising and sells when it is falling. This is more like being long options than short options. The rationale for the success of this strategy, according to Ilmanen, is that it takes advantage of cognitive errors of other investors, like the error of holding on too long to losing investments.

Will these strategies continue to work in the future?

Ilmanen describes three methods by which an investor can assess future returns. First, extrapolate historical returns. Second, utilize a model that assesses fair value. Buy when the asset is cheap, sell when it is dear. Finally, identify forward looking indicators of value, like price earnings multiples or yield curve slope. Each of these methods may fall victim to Goodhart's Law.

To see this, consider the case of hedge funds. Several of the strategies listed above are deployed by hedge funds. In recent years hedge funds have been able to report strong uncorrelated returns (positive "alpha") using strategies like option selling, trend following and carry. Yet, as the success of these strategies has become well known, more investors are

attempting to achieve excess returns in the same ways. This is likely to render the strategies less effective. For example, option selling is a winning strategy so long as the volatility implied by option prices (“implied vol”) is greater than the actual volatility of the price of the underlying instrument. But as more and more investors sell options, this is less likely to be true.

It would be useful to come up with indicators that would predict which historical rule is likely to work. For example, by monitoring the spread between actual and implied option volatility investors can assess the prospects for option buying or selling strategies. Of course, these “second level” indicators could become subject to the Law as well. This is why it is not easy running a successful hedge fund. The ability to consistently earn excess returns depends on having proprietary information or insights that are not, by definition, widely available. Over time, Goodhart's Law makes outperformance increasingly difficult.

Asset Allocation for Mom and Pop

The individual investor has to answer a few important questions. First, what is his or her degree of risk aversion? The answer to this question should determine his or her exposure to risky assets. Second, what is the investor's time horizon? This will determine the selection of the risk free asset. For those investors with long-term horizons, the relevant risk free asset is a long duration bond (ideally, a long duration bond that is indexed to inflation), not cash. Third, does the investor have specialized information that would be useful in determining when any of the generic strategies highlighted by Ilmanen are likely to perform well. Or, given his or her individual situation, is there a greater than average willingness to take on specific risks? Absent affirmative answers to either of the last two questions, the individual investor should probably stick with passive index or exchange traded funds that attempt to replicate broad asset classes.

¹ Antti Ilmanen, *Expected Returns*, Wiley, 2011.