Professional Investors Manage Risk

"No winter lasts forever; no spring skips its turn"
– Hal Borland

Go for It! Swing for the fences! No guts, no glory! These popular phrases are often blurted out when something risky is on the line. Whether you are a professional athlete looking for a win, an entrepreneur starting-up a business, or a newly engaged couple committing to a relationship, much of what we encounter throughout our lives deals with taking either direct or indirect risks.

As an investor, risk taking is unavoidable. The question many of us must come to terms with is - how much risk am I truly comfortable with? Do I swing for the fences and go for broke, or do I stash my money away in a savings account and rest easy at night? When

times are good, investors tend to overestimate their willingness to take-on risk, and when times are rough the opposite is often the case. To invest successfully, knowing oneself can be far more important than financial acumen.

Many experienced investors are aware of the importance of avoiding large losses and the negative effect this has on compounding returns. As a simple example, using a theoretical investment of $1,000,0000, we can observe how much must be gained after a loss, in order to make it back to breakeven. A -10% loss turns the original investment into $900,00 and requires a +11.1% return to get back to $1,000,000. A -30% loss turns the original investment into $700,000 and requires a +42.9% return to get back to $1,000,000. While a -50% loss turns the original investment into $500,000 and requires a +100% return to get back to $1,000,000. Simply put, the larger the loss, the more difficult it is to work your way back to even.

The illustration above may be intuitive for many readers, however equally if not more important is a related concept, which focuses on the impact of portfolio volatility and its effect on long-term investment performance. Too often, investors, and sadly some investment managers are solely focused on producing big returns at the expense of tolerating high levels of volatility. This is a mistake.

Variance drain, also known as volatility drag are the terms used to describe how different levels of portfolio volatility result in markedly different returns over time. Variance drain operates under the theory that comparing two portfolios with the same beginning and same average returns, the portfolio with the greater volatility will have a lower compound return, and therefore less ending wealth. Not only does controlling portfolio volatility make investors feel more comfortable, which enables them to stay the course, but minimizing volatility actually grows wealth faster than more volatile portfolios which exhibit the same or even higher returns.

Marc Odo, of Swan Global Investments, did a good job describing this concept in a blog post, “Volatility is a Drag” dated September 29, 2016. He starts with the illustration below asking which of the following three scenarios would yield the best 10 year results:

1. A portfolio up 10% one year, then down 5% the next year, with this pattern repeated for 10 years.
2. A portfolio up 25% one year, then down 20% the next year, with this pattern repeated for 10 years.
3. A portfolio up 40% one year, then down 35% the next year, with this pattern repeated for 10 years.

And the winner is… Portfolio number 1. Despite its modest gains and losses, Portfolio 1 performs the best and is the only profitable scenario. Portfolio number 2 breaks even, while Portfolio 3 loses money.

Variance drain was first introduced in The Journal of Portfolio Management by Thomas E Messmore in the 1995 summer edition. Messmore concluded that the more volatile an assets return, the greater the difference between its arithmetic and geometric returns. For readers who would like a better understanding of the math behind the above outcomes, please see the links provided here for definitions of arithmetic versus geometric returns.

To get a sense of how important controlling volatility in an investment portfolio can be, I reproduced the below eye-opening table on variance drain, which was originally published in the book "The Stewardship of Wealth: Successful Private Wealth Management for Investors and Their Advisors" by Gregory Curtis. Readers will find six scenarios, with different levels of volatility as measured by standard deviation, all corresponding to a 10-year time horizon. Notice as a portfolios Standard Deviation increases the Ending Funds and Total 10 Year Period Return % decreases.

10-Year Returns Based on Different Portfolio Volatilities

	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6
Arithmetic Annual Return	**10%**	**10%**	**10%**	**10%**	**10%**	**10%**
Standard Deviation	0%	10%	20%	30%	40%	50%
Geometric Annual Return	**10%**	**9.6%**	**8.3%**	**6.03%**	**2.58%**	**-2.42%**
Starting Funds	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000
Ending Funds	$2,593,742	$2,501,561	$2,219,353	$1,796,293	$1,290,725	$782,784
Total 10 Year Period Return	**159%**	**150%**	**122%**	**80%**	**29%**	**-22%**

Source: Greycourt

We live in unusual times. Both political and economic anxiety appear high, yet market volatility has been running at historic lows. I believe many market analysts are correct in implicating central bankers (Fed, ECB, BOJ, etc.) as being the main culprit behind asset price inflation and volatility suppression. At some point, asset purchases by global central banks will cease completely and liquidity will be drained from the market. Buying the high flyers with little regard to managing market risk could prove to be punishing. Investors who focus on thoughtful portfolio construction should prevail over the long-term. In the meantime, let's enjoy this Goldilocks market while it last, as nothing is forever.

Sincerely,

Justin Kobe, CFA
Founder, Portfolio Manager & Adviser

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