Wealth at Risk

The Price You Pay for Volatility

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Staying invested over the long-term is a well-established path to wealth creation. Compounding returns play a crucial role in this process. As we all know, compounding allows investors to earn returns not just on their initial investment but also on their gains, resulting in exponential growth over time. In this article, we explore the often-hidden negative effects volatility has on compounding returns and what investors can do to mitigate them.

A Refresher on Compounding Returns

Before delving into volatility's detrimental effects, it's essential to grasp the concept of compounding returns. Compounding is often described as the "eighth wonder of the world" because of its remarkable ability to magnify wealth over time. It occurs when the returns generated on an investment are reinvested rather than withdrawn, allowing the investor to earn returns on both the original principal and accumulated gains.

Example: You invest $1,000,000 in a strategy that delivers a consistent annual return of 9%.

	Scenario 1: Withdraw Annual Returns			Scenario 2: Reinvest Annual Returns		
Year	Investment	Withdrawn	New Balance	Investment	Reinvested	New Balance
1	$ 1,000,000	$ 90,000	$ 1,000,000	$ 1,000,000	$ 90,000	$ 1,090,000
2	$ 1,000,000	$ 90,000	$ 1,000,000	$ 1,090,000	$ 98,100	$ 1,188,100
3	$ 1,000,000	$ 90,000	$ 1,000,000	$ 1,188,100	$ 106,929	$ 1,295,029
4	$ 1,000,000	$ 90,000	$ 1,000,000	$ 1,295,029	$ 116,553	$ 1,411,582
5	$ 1,000,000	$ 90,000	$ 1,000,000	$ 1,411,582	$ 127,042	$ 1,538,624
6	$ 1,000,000	$ 90,000	$ 1,000,000	$ 1,538,624	$ 138,476	$ 1,677,100
7	$ 1,000,000	$ 90,000	$ 1,000,000	$ 1,677,100	$ 150,939	$ 1,828,039
8	$ 1,000,000	$ 90,000	$ 1,000,000	$ 1,828,039	$ 164,524	$ 1,992,563
9	$ 1,000,000	$ 90,000	$ 1,000,000	$ 1,992,563	$ 179,331	$ 2,171,893
10	$ 1,000,000	$ 90,000	$ 1,000,000	$ 2,171,893	$ 195,470	$ 2,367,364
	Initial Investment	$ Return	% Return	Initial Investment	$ Return	% Return
	$ 1,000,000	$ 900,000	90%	$ 1,000,000	$ 1,367,364	137%

In Scenario 1, at the end of the 10 years, the investor was able to earn $900,000 on their $1,000,000 investment.
In Scenario 2, at the end of the 10 years, the investor was able to earn $1,367,364 on their $1,000,000 investment.

The Impact of Volatility

Now, **while compounding is a powerful tool, its effectiveness can be significantly hindered by volatility**. Volatility refers to the degree of variation in the price of an asset over time. High volatility means an asset's price fluctuates frequently and significantly, while low volatility indicates more stable price movements.

Inconsistent returns make it challenging for compounding to work effectively, as gains are offset by losses, and losses take time to recover from. During periods of loss recovery, compounding is effectively put on hold. The returns generated are just recouping previous losses, rather than building new wealth.

Example: Let's take the same 9% average annual return, reinvested, but adjust the return stream to account for varying degrees of volatility.

Impact on Increasing Volatility

Average Annual Return	Annual Volatility (Standard Deviation)	Investment	10 Years Later	Erosion of Gain (Due to Volatility)	Compound Annual Growth Rate
9%	0%	$ 1,000,000	$ 2,367,364	0%	9.00%
9%	5%	$ 1,000,000	$ 2,345,901	-2%	8.90%
9%	10%	$ 1,000,000	$ 2,266,340	-10%	8.53%
9%	15%	$ 1,000,000	$ 2,130,852	-24%	7.86%
9%	20%	$ 1,000,000	$ 1,939,468	-43%	6.85%

As you can see, even though the average annual return in every case is 9%, the investors who experienced less volatility ended up with better results or a better compound annual growth rate (CAGR).

To add context, since 1950, the average annual return of the US stock market (S&P 500) has been 9% with volatility of 16.5%. [1]

Volatility in Withdrawal Mode

Imagine, now, that you are in retirement, and you are relying on your investment portfolio to provide a steady stream of income. If you experience frequent negative price fluctuations, but your income needs do not change, the depletion of your capital can be significantly accelerated.

Example: To keep the math simple, let's use the same 9% average annual return in a portfolio that has 20% volatility where you are withdrawing $90,000 per year. Like Scenario 1, you have been able to pull $900,000 of income from your investment account over the 10-year period, however, your $1,000,000 investment has eroded in value significantly. Continuing in this manner is unsustainable and can be extremely worrisome.

Scenario 3: 9% Average Annual Return with 20% Volatility in Withdrawal Mode

Year	Investment	% Return	$ Return	Withdrawn	New Balance
1	$ 1,000,000	13.26%	$ 132,591	$ 90,000	$ 1,042,591
2	$ 1,042,591	27.12%	$ 282,780	$ 90,000	$ 1,235,371
3	$ 1,235,371	-34.73%	$ (429,053)	$ 90,000	$ 716,318
4	$ 716,318	18.99%	$ 136,037	$ 90,000	$ 762,356
5	$ 762,356	28.46%	$ 216,935	$ 90,000	$ 889,291
6	$ 889,29	23.26%	$ 206,822	$ 90,000	$ 1,006,113
7	$ 1,006,113	11.66%	$ 117,307	$ 90,000	$ 1,033,420
8	$ 1,033,420	-17.00%	$ (175,693)	$ 90,000	$ 767,727
9	$ 767,727	23.39%	$ 179,573	$ 90,000	$ 857,300
10	$ 857,300	-4.20%	$ (36,040)	$ 90,000	$ 731,260
		Average Annual Return	$ Return	Withdrawn	% Return
		9.00%	$631,260	$900,000	63%

Watson Investment Partners: Solutions

While risk and volatility are an inherent part of investing, there are strategies that can dampen its destructive influence. Constructing a portfolio comprised solely of stocks (or products derived from stocks – mainly ETFs & mutual funds) inevitably leads to performance that tracks, generally, the overall results of that asset class. The obsession becomes performing slightly better at the margins, while remaining exposed to the whims of the market's direction.

We object to the demeaning scourge of the stock market's unrestrained swings. We utilize asset classes and unique strategies, often the exclusive domain of institutional investors, to moderate downside participation, smooth out returns, and deliver the performance clients deserve. The outcome is a higher sense of confidence, conviction, and clarity on the growth of their capital.

If you would like to understand the cost of volatility in your portfolio, please reach out to us and we will be happy to provide an analysis.

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[1] Source: Y-Charts