

# Volatility Drives Down Your Compounded Dollars

When evaluating investment returns one can calculate a simple arithmetic mean or the geometric mean (compounded return). The one that truly matters to your investment success, how many dollars you end up with in your account, is the geometric mean.

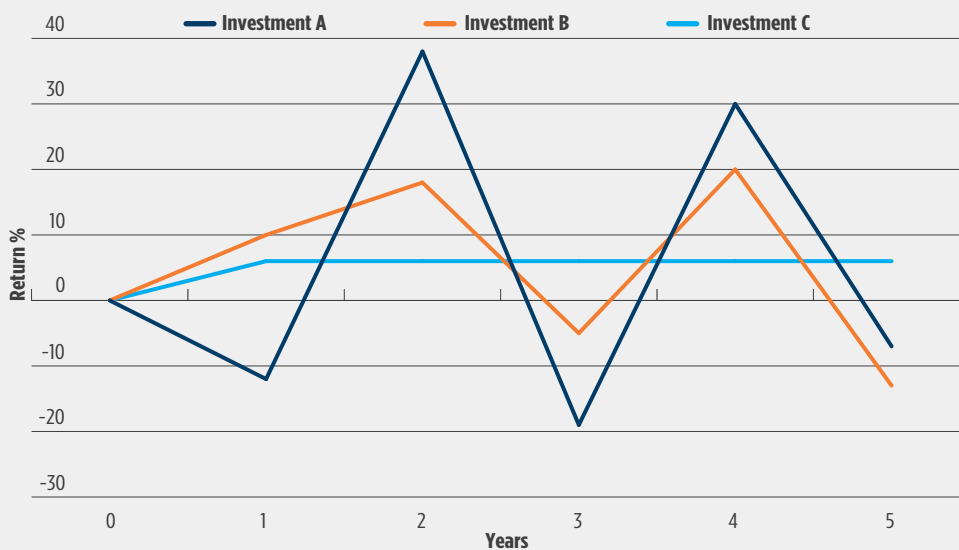
**Are the two really that different? Yes, they can be. Look at the chart below.**

Year	Investment A	Investment B	Investment C
1	-12%	10%	6%
2	38%	18%	6%
3	-19%	-5%	6%
4	30%	20%	6%
5	-7%	-13%	6%
Average Return	6%	6%	6%
Geometric Average	3.527%	5.182%	6.00%
	\$118,924.98	\$128,735.64	\$133,822.56

\* Average return is the simple average of all 5 years. Geometric average calculates the compounded rate of return for the 5 years, or the actual return.

The hypothetical scenario is based on an initial investment of \$100,000 over a five year period. It does not represent the returns of an actual investment.

Hypothetical examples are for illustrative purposes only and are not intended to represent the performance of any investment. The growth rates used are for illustrative purposes only and do not reflect any fees or charges associated with the investments. If they were taken into account, the ending value would be lower.



## There are two basic effects going on here:

- **Law of negative numbers** – you need a larger positive return to offset any negative return. If you lose 50% over a period of time, you need to gain 100% to get back to even.
- The larger the variation of returns around the arithmetic mean the smaller the compounded return.

## Conclusion

Negative returns and high volatility are destructive to long-term wealth building and particularly destructive to retirement portfolios in which yearly withdrawals may be taking place. Contact your financial professional to discuss your options.