MONONGAHELA CAPITAL MANAGEMENT

PERCEPTIONS

3 rd Quarter, Sept 30, 2020			
		% Change	% Change
	9/30/20	3 rd Quarter	Year to date
Dow Jones Industrials	27,781.70	8.22 % *	(0.91) % *
S & P 500	3,363.00	8.93 % *	5.57 % *
Russell 2000	1,507.69	4.93 % *	(8.69) % *
BC Aggregate BD Index		0.62 %	6.79 %
10 YR. Treasury Yield	0.68 %		
30 YR. Treasury Yield	1.46 %		

* Includes reinvested dividends

One Elephant

In Peter L. Bernstein's 1996 book "Against the Gods", Bernstein examines the evolution of risk and probability calculus in society. He opens Chapter 7 with the following story:

One winter night during one of the many German air raids on Moscow in World War II, a distinguished Soviet professor of statistics showed up in his local air-raid shelter. He had never appeared there before. "There are seven million people in Moscow," he used to say. "Why should I expect them to hit me?" His friends were astonished to see him and asked what had happened to change his mind. "Look," he explained, "there are seven million people in Moscow and one elephant. Last night, they got the elephant."

The Soviet professor's enlightened quip concerning measuring risk was based on probability and statistics that have evolved since the Renaissance. Various theorems of probability have allowed individuals to make decisions and forecasts based on available data. This included the law of large numbers, the concept of the Bell curve and related standard deviations, regression to the mean and the mathematical reasoning behind the value of diversification.

It is interesting to note that the early pioneers of probability theorems understood the limitation of their new science. In a letter to Jacob Bernoulli, the father of the law of large numbers, Gottfried von Leibniz, a prominent 18th century polymath, noted "Nature has established patterns originating

in the return of events, but only for the most part." Leibniz understood that the quantity as well as quality of input were essential for modeling reasonable outcomes.

As we fast forward to 2020, trading on Wall Street, particularly on a macro level, is dominated by quants, attempting to quantify and program all possible future outcomes, hoping to maximize return and minimize risk ... and for the most part, it works. Many of our colleagues, extremely proficient in computer science, model the future of macro trends with enormous caches of data (from the past) on interest rates, employment, foreign currencies, health-care statistics, elections, etc. However, an unprecedented investing environment is challenging the relevance of some historical data: the long-term consequences of zero (or sometimes negative) interest rates, the ravages, both social and financial, of Covid-19, and the bulging levels of debt worldwide are hard for anyone to model. In this extraordinary time of uncertainty, the data programmers are relying on is historical and potentially flawed information; we haven't been here before, so the input side of modeling is suspect. In addition to questioning the quality of input, add a dose of irrational human behavior and the results are anything but predictable. In that regard, we are very appreciative of your rational behavior through the chaos of the first quarter, staying the course and allowing your portfolio to recover.

Which brings us to the long and winding road of individual security selection. While we spend the better part of everyday applying the laws of probability and the study of behavioral sciences to our work, our efforts are almost exclusively focused on the analysis of individual securities. We have a higher degree of confidence in forecasting the earnings and discounted cash flows of Procter & Gamble, Microsoft, Eli Lilly, Badger Meter, and Target than in forecasting macro events and their impact on the broader markets. There is also a built-in defensive mechanism with value investing in that as markets moves higher and a stock significantly exceeds its intrinsic value, we will trim or sell those positions and hold cash until a new opportunity arises. Cash, while earning little, is a very important asset class in managing your portfolio.

While statistics and probabilities are extremely useful tools in economics, we are well aware of their limitations. Rather than try to model for all foreseen and unforeseen macro scenarios, we feel designing a portfolio for you of individual stocks, each with an intrinsic value that is growing and durable, is a superior approach to investing.