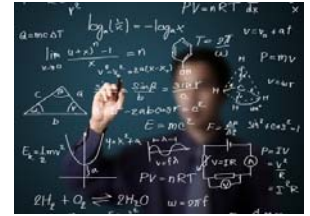


# Market Observations

## January 2018

### THE MATH OF IT

Broad stock market returns were quite favorable in 2017. In fact, coming off a year of good returns in 2016 and with the numerous political and geopolitical uncertainties one year ago, the returns of the past year generally were unexpected and quite remarkable. With the help of some basic math, recent returns can be put in context and some perspective for the period ahead can be provided. Of course, this admonition is ever present, "Past returns are no guarantee of future results."



### Perspective

While a narrow index of only 30 stocks, the Dow Jones Industrial Average ("DJIA") provides a rich history of market returns dating from 1897. **Chart I** shows the frequency of DJIA calendar-year returns since its inception. The first encouraging observation is that the stock market rises more often than not. DJIA calendar-year returns were positive in 84 of 121 years, 69% of the time. The 2017 return of +28.1% clearly was above the average calendar-year return of +8.9%, but last year's return has been surpassed in 20 of 121 years (17%). The second encouraging observation is that for those 20 years, the average return in the next year was +11.4%. However, the range of those second-year returns was wide, +48% to -33%.

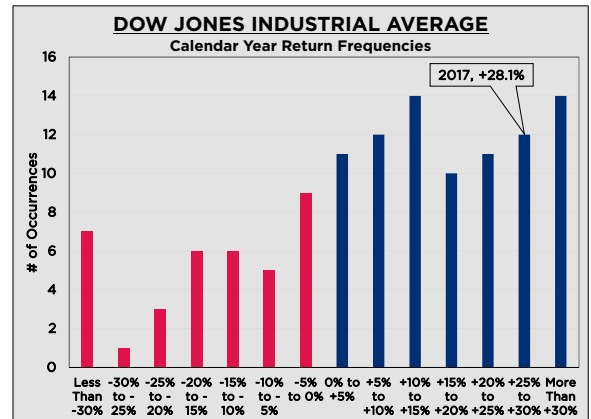
DJIA returns for a longer investment horizon are shown in **Chart II**. Rolling 10-year annualized returns have averaged +8.6%, with a high of +20.5% and a low of -5.5%. The high resulted in a more than six-fold increase in value. The low resulted in a cumulative loss of -43%. The +9.3% annualized return of the past decade is closer to average, but more math here is revealing.

Calendar-year returns for the DJIA were positive in 9 of the past 10 years as shown in **Chart III**. While this year's outcome is unknown, performance for the decade ending 2018 already is biased upward by dropping the notably negative return of 2008. Even if the DJIA return is 0% for this year, the annualized decade return through 2018 would be +13.6%, well-above the +8.6% long-term average. In fact, the +8.6% decade average would be preserved unless the DJIA declined -36% this year, a calendar-year outcome experienced only twice in 121 years.

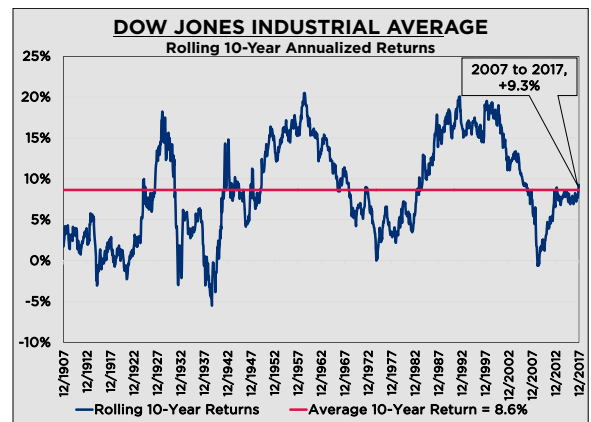
### Investment Implications

The math of it for investment returns leads to guidance, not guarantee. +28.1% in one year is satisfying; -43% over ten years is debilitating. The potential for gain is the reason for investing with its ever-present risk. The critical determination is the appropriate level of risk to be taken. Market math is helpful - return expectations relative to potential risks. However, the answer is determined from a clear understanding of investment objectives, time horizons and individual risk tolerance.

**Chart I**



**Chart II**



**Chart III**

