



## Q2 2017 Market Commentary

Volatility is something that we talk to our clients about all the time – we say we want to reduce volatility in portfolio holdings, or that we like a particular fund because it is historically less volatile than other, similar funds. In some cases we use the words risk and volatility interchangeably, because they both refer to the same phenomena, although they are distinctly different in application. Risk represents the possibility that something will turn out differently than expected, and in most cases that implies loss.

There is a degree of risk in most endeavors, but people are notoriously bad at making judgements about risk. Many people fear flying, despite the little nugget about flying being safer than driving. We have all heard this line at some point – and intellectually we all understand there is truth in it (whether our fears are assuaged or not). It is why we take precautions when we drive, like using seat belts or making sure to buy vehicles with good safety ratings.

But even as most people intellectually understand how dangerous driving can be, the majority acts as though it is a relatively low-risk activity. The truth is that the risk of being involved in a car accident is so high that every driver in the US will experience some kind of accident every 10 years, on average<sup>i</sup>. Every driver – if you haven't had so much as a fender bender in the last 10 years, you are beating the odds.

Worse, 1 out of every 3 accidents will involve an injury or death.<sup>ii</sup> In fact, through 2009 motor vehicle accidents was the #1 cause of death for people in the United States through age 35. From 35 through age 55, it was cause #2. For all age groups, it is in the top 5.<sup>iii</sup>

So why do we have such a problem assessing the risk of driving? It has a lot to do with the way that risk is spread out – the degree to which our experience of driving deviates from what we have come to expect as normal, or our average experience. Most people drive for a very limited amount of time, and so their exposure to that risk is limited. Therefore, the average experience is decidedly uneventful. This is the reason why the majority of accidents occur within 5 miles of home – it is simply where you are most likely to be when the unexpected inevitably occurs.

People who drive often, or drive for a living, have an increased level of exposure. The more time you spend on the road, the more likely you are to experience the unexpected – the average experience becomes less reliable. An experienced truck drivers' understanding of the risks on the road is very different from that of anyone who commutes to work daily, because they have witnessed the unexpected more often. That commuters' understanding of the risk of driving is also probably very different from those who work from home.

The parallels to investing are numerous, and should be obvious to all of our clients. The longer you have held stocks, the more likely it is that you have experienced loss. And just like accidents, the degree of damage varies. An injury in the market, when you are forced to liquidate depreciated holdings in a downturn, makes you much more cognizant of the risks than a fender bender, when your account goes down but then back up next year while you are still working. It is why the old adage of holding 100 minus your age in stocks kind of works – you may not want to be on the road all the time in your 60s and 70s. That kind of constant exposure can be dangerous to your portfolio.

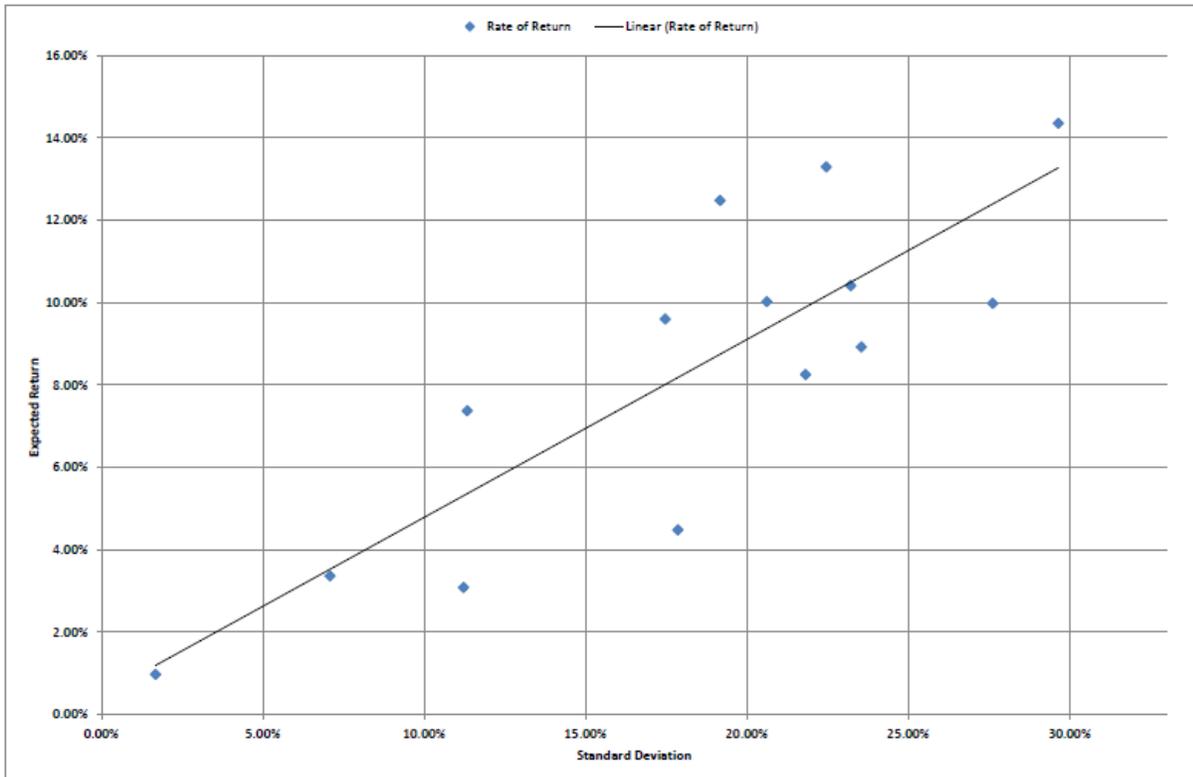
It is also true that, just as we might consider flying more dangerous than driving, investors are terrible at assessing the risk of various markets. The rally in stocks provides an excellent example of our feelings about risk. An investor's biggest fear may be missing out on gains as the price of a stock (or an index) continues to appreciate for 5, 6 or 7 years with only the most fleeting of stumbles. This is opportunity loss, and in planning for retirement it is very real and can do real damage if the growth of our savings cannot keep pace with our future spending.

In the realm of investing accidents, however, this is the fender bender. It is potentially costly, and certainly distressing, but only very rarely is it fatal to a financial plan. The more devastating accident lies in the experience of real capital loss, a more prolonged dip in the price of that investment, timed perfectly with your need to sell.

This is where degree of volatility, as a measure of risk, becomes valuable. It allows us to assess risk, not by relying on how we feel about the market or a particular stock based on our own experience, but rather on how *reliable* that average experience actually is. We express degrees of volatility using Standard Deviation, a mathematical tool that tracks how far above and below their average (mean) return any particular stock might go in a given period of time.

Low standard deviations indicate a set of possible returns that fall very close to the mean. This makes that mean return more reliable, as there is far less chance of experiencing returns that are very different in any given time period. On the other hand, high standard deviations indicate a set of possible returns that are spread very far above and below their means. Higher standard deviation means that the expected average is less reliable, so it would make sense to opt for investments with low standard deviations, and more reliable outcomes.

Investments with low standard deviations, however, tend to also produce low returns. For example, fixed interest accounts have little, if any, deviation in what they will return over a given period of time. But as we are all aware, fixed interest accounts have not been providing returns that are anywhere near sufficient for most investors. As such, most investors have been choosing less reliable investments with a greater chance of higher returns. In other words, most investors are opting for higher volatility, and increasing their risk of experiencing loss.



We are all familiar with the correlation between low deviation and low return. The following chart shows the mean return for a variety of asset classes – from cash to emerging market stocks, and including real estate – in a scatterplot that should be familiar to our clients. It is nearly identical to the type of chart that appears on page 2 of the Morningstar Snapshot reports. In those Snapshot reports, the chart will show data for a 5 or 10 year period (through the most recent month end) and somewhere on the chart there is a data point that represents the whole of a client’s portfolio. This chart uses data from 1929 through 2003 to determine the mean return for each asset class.

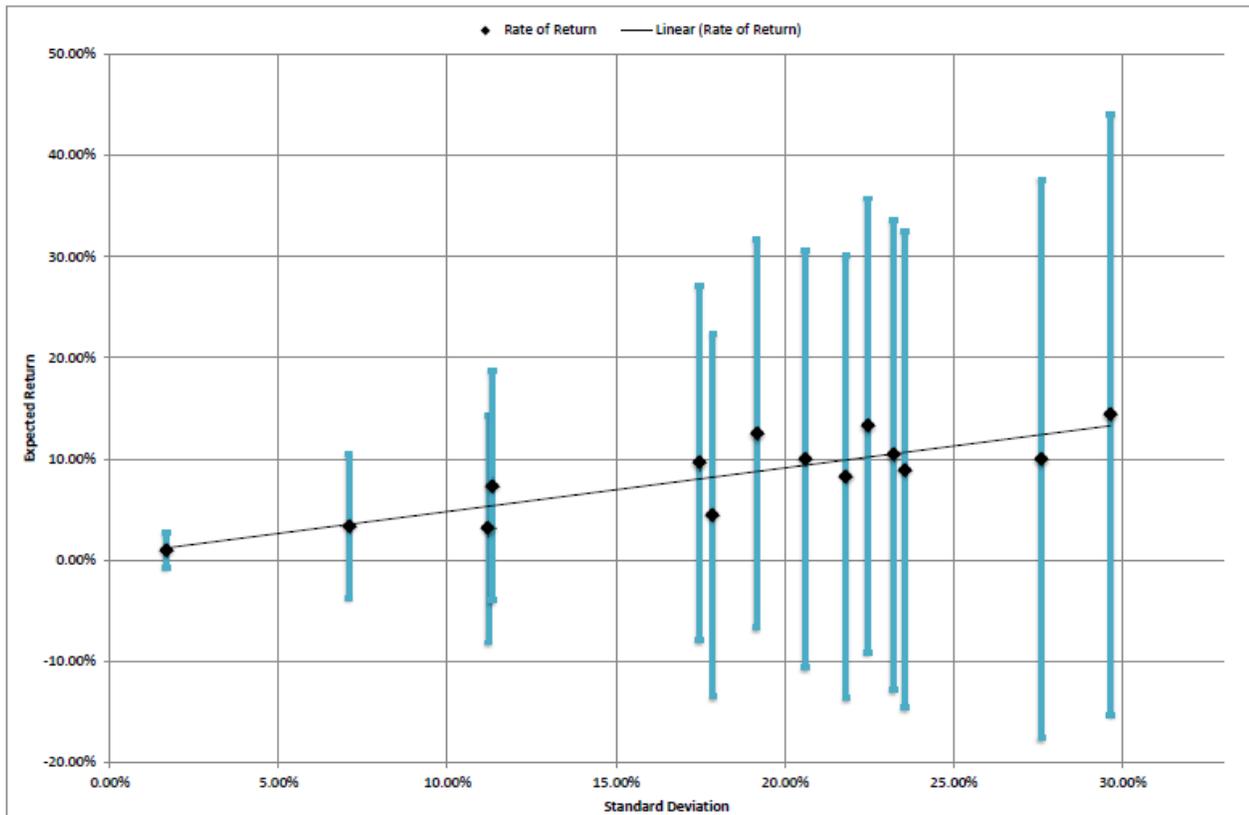
It wouldn’t take too much time to figure out where on this chart a particular asset class might fall. We know that cash and similar types of holdings are going to be the dot farthest to the bottom left of the grid, and that the opposite end will likely be dominated by small company stocks, or stocks from emerging markets. But knowing this, and the subsequent level of deviation provided by the y-axis data, doesn’t really inform investors of the level of volatility for each class. In fact, this chart may further encourage investors to seek higher levels of return by selecting those investments furthest to the right of the chart.

This is what has been happening in the current market. Investors, faced with meager of returns from the choices at the far left side of the chart, have increasingly positioned themselves further to the right. And that positioning, in turn, has pushed the returns for a variety of assets classes far above the long-term mean as marked above, further encouraging this kind of re-positioning. Too much emphasis on the right side of the chart would be a mistake for nearly all investors, but this error is particularly harmful to those

that currently (or will soon) rely upon their assets to provide for their living expenses. Those data points simply represent the average experience for the asset in question through the period (1929 - 2003) but as we noted, the higher the standard deviation, the less *reliable* that average experience becomes.

Again, this is a concept that most of our clients will be very familiar with, as the level of deviation – of reliability – for a particular investment is something we talk about all the time, either as a criteria for comparing two mutual fund or stock choices, or in the context of a client’s total exposure to stocks or bonds. Most clients have heard us discuss this so much they might even have adopted a similar approach in their own thinking about returns. But as more and more investors make a shift to the right, bolstering those data points even higher, many clients begin to insist on selecting investments that contradict this approach – like speeding in heavy traffic, despite your understanding, intellectually, of the dangers of driving fast and the increased chances of an accident from doing so.

It might be more helpful, for the purpose of guiding investment decisions, to be able to actually visualize the degree to which a particular asset class (or stock, or index) might deviate from that mean return in the time period that we are examining. Discussing an issue is very different from seeing it in action – we all tend to drive a little more slowly immediately after passing a bad traffic accident, because such it is such a visceral reminder of what we already know. The chart below may not have quite the same impact, but it should still help to serve as a somber reminder of what *reliability* in investing actually means.



This is a scatterplot of the very same data as in the chart above, but it appears very different. The most obvious difference is that there is additional data – each data point now shows “error bars” and mark the degree of deviation, up and down. The other difference is that the x-axis doesn’t start at zero, so that the full measure of each data point, including the error bars, can be shown.

If you take that last data point as an example, the one farthest to the right, you get a very different feeling between the two charts. That is because now there is a bit more information about the context in which that mean return is found – the variety of returns that have actually been experienced in that asset class throughout that time period are laid out in those error bars.

In the first chart, that data point looks like a fairly attractive investment proposition. After all, it is the highest point on the chart, which translates into the greatest average gain over the term. That same point in the second chart, however, looks a bit less inviting as the span of returns dips significantly below zero. Whether or not you are likely to experience that bottom-most level of return in any given period is not more important than realizing its average return is now significantly less likely than getting to the average return of, say that second data point on the chart in a given period of time. In other words, the span of possible returns is large enough to make that highest average return quite a bit less reliable, especially over shorter periods, as the expected experience variation is so broad.

To equate this back to driving it’s why we create financial plans for our clients, broadly diversify our their assets, reallocate based on current economic conditions and our outlook for the near term, help our clients stay invested for life and manage the highs and lows of return need and expectations. These tasks are your air bags, your brakes, your seatbelts and your sensors. They are the designed measures necessary to provide the experience needed to get from point A to point B, with understanding that there are risks along the way, but protecting you as best as possible.

Should you have any questions regarding your planning or your portfolio Julia and I are always available to talk things through with you. We can be reached by email at [julia@nstarfinco.com](mailto:julia@nstarfinco.com) and [steve@nstarfinco.com](mailto:steve@nstarfinco.com) or by phone at 800.220.2161.

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<sup>i</sup> America’s Best Driver’s Report, 2016 – Allstate Insurance Company

<sup>ii</sup> Traffic Safety Facts Research Newsletter, Feb 2012, NHTSA (in co-ordination with NCHS and CDC), US DOT

<sup>iii</sup> Traffic Safety Facts Research Newsletter, May 2012, NHTSA (in co-ordination with NCHS and CDC), US DOT