MassMutual Wealth Management

Market Update
Oct. 28, 2020

Imagine for a moment you are a very successful football coach. At your disposal is a team of seasoned football veterans and a cadre of accomplished assistant coaches and statisticians. You have decades of experience and have personally led your team to many years of winning seasons.

Now further imagine you have one of the greatest running backs in history, you are playing one of the greatest teams in history, you are down by four points, you have one timeout, and you are on the opposing team's one-yard line. To make matters more intense, there are 26 seconds on the clock.

The question is: what play do you call? Do you pass and try to score? Do you hand the ball to your star running back? Do you try to run down the clock?

This is, as football fans might have realized, the situation Seattle Seahawks coach Pete Carroll faced at the end of the Super Bowl XLIX.

So, he made the call. He told his quarterback to throw the ball.

The ball was subsequently intercepted and his team lost. The call was lauded as the "worst call of the century" and was ridiculed[1] with headlines such as "Pete Carroll botches the Super Bowl."

This is what the behavioralist Annie Duke refers to as "resulting bias."[2] It's the flawed idea that the outcome itself is what determines whether the decision was a good one. If Carroll had been successful, he would have been marked a genius. But as he failed, he was vilified.

If we look at the statistics, however, it turns out the situation was a bit more complicated.

Run the numbers, and that specific play had a failure rate of less than 2%. That's right, run the same play 100 times, and it should result in an interception[2] just twice. During the 2014 season, there were 66 times a quarterback threw the ball from that distance, and only once was it intercepted (this pass in fact).

Viewed through the lens of statistics, it becomes more apparent that Carroll's decision was not the worst call of the century. In fact, one could argue the odds were high he would achieve his desired outcome….and probably made the right call.

As such, today we try to use this concept to focus on the perils of decision-making in investing and the overwhelming evidence of how futile it is to try to time the market. Yet before we do, we will begin with an update on the COVID-19 pandemic.

Section 1: COVID-19

For this market update, I am going to change the format a bit. While there isn't much I can do to prevent or mitigate "pandemic fatigue," I can at least attempt to provide different perspectives over time.

First, the bad news.

As I have argued time and time again, the market has been primarily (not exclusively) focused on the growth rate of the COVID-19 viral outbreak, not the absolute levels. Given daily growth rates had

[1] https://abcnews.go.com/Sports/pete-carroll-botches-super-bowl/story?id=28656286

[2] https://www.annieduke.com/how-to-make-the-right-decisions-even-when-you-dont-have-all-the-facts/

been falling since April, I have argued this was a large contributor to why markets have been so optimistic. Unfortunately, for the United States, those growth rates have begun increasing again, and the market has responded by losing a bit of its optimism. Chart 1 demonstrates how the daily growth rate in the U.S. has changed since the beginning of May.

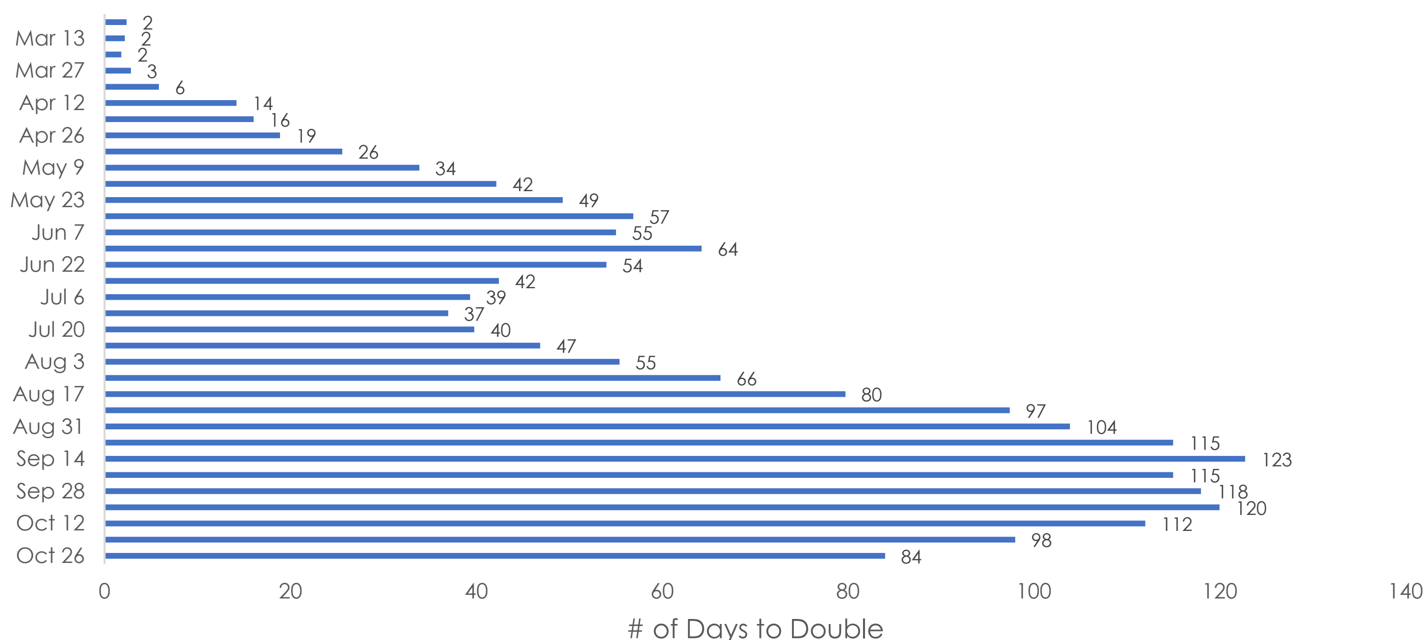
Chart 1: COVID–19 United States Case Growth Rate (since May 1)[3]

While those growth rates are not yet back to previous levels seen in April, or even July, there is nonetheless a clear (and frustrating) increase in case growth since the middle of September.

As I've done in prior updates, converting those daily growth rates into the number of days it takes to double the cases (perhaps a more intuitive measure) helps put the increase in growth into perspective. Chart 2 demonstrates that information graphically and shows just how significant those growth rate changes are.

[3] Sources: Bloomberg, World Health Organization as of Oct. 27, 2020

Chart 2: United States: Number of Days to Double Confirmed Cases[4]

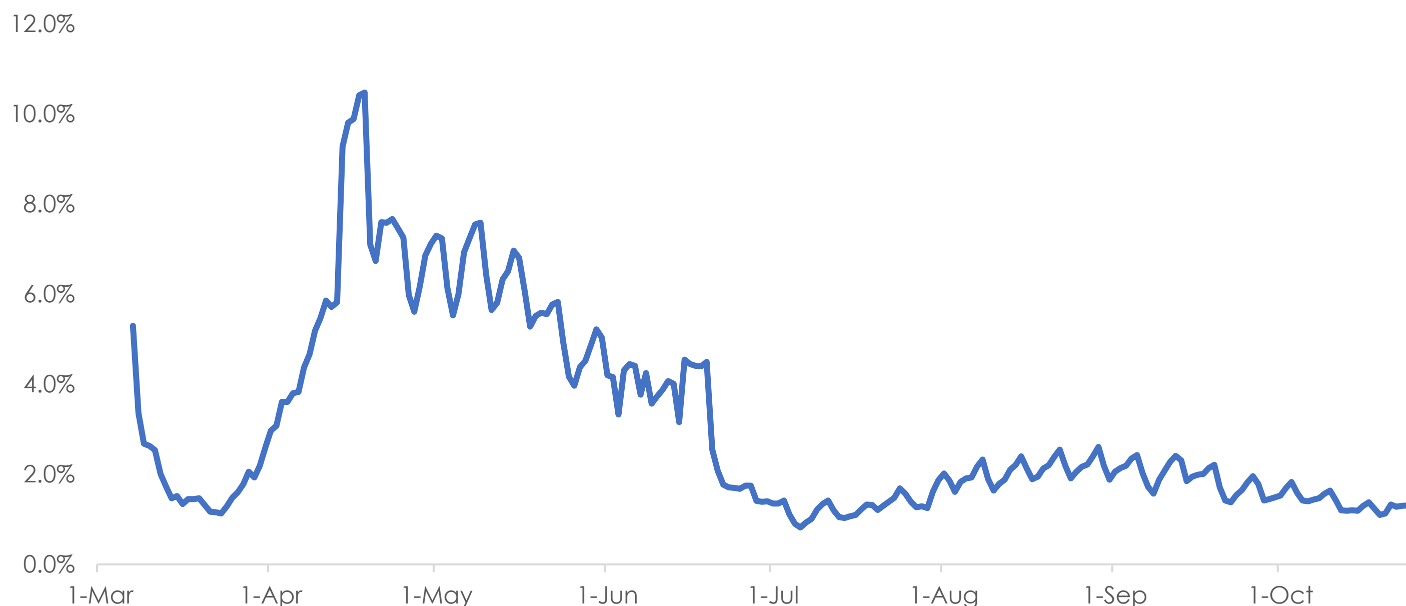


We have basically reverted to mid-August levels, and are now doubling U.S. cases in less than three months. While nowhere near the levels seen in April and May, this is significantly worse than September. To put that into context, given there are roughly nine million confirmed cases in the U.S. so far, at this growth rate we would have roughly 18 million confirmed cases by mid-January.

The less-bad-news is that the number of deaths per confirmed cases continues to drop. This means that while the total number of confirmed COVID cases rises, the number of deaths is rising less. Chart 3 helps demonstrate that picture.

[4] Sources: https://www.worldometers.info/coronavirus/country/us/, as of Oct. 27, 2020

Chart 3: United States: Number of Deaths per Confirmed Cases[5]



Please forgive the morbid tone but, as we can see, in late April and early May, the death rate was considerably higher than where we are today. My interpretation is that we, as a society, are learning how to protect our more vulnerable populations, and how to improve our treatment of those that do become ill. That translates to a lower probability of death for each additional case…while even one death is too many, it is good to see the rate declining over time, and something we should continue to watch closely.

Section 2: Decision-making and Cognitive Bias

Let's start with some facts.

Over the past 20 years, real estate investment trusts (REITs) have returned 11.6% per year[6]. High yield bonds have returned 7.9%, and small cap equities have returned 7.6%.

These numbers are interesting, perhaps, but not particularly actionable, and the order isn't something I necessarily expect to repeat anytime soon.

The Standard & Poor's (S&P) 500, however, returned 6.1% on average (before dividends). OK, again, it's rear view mirror data, so not actionable, but interesting, nonetheless.

How about the average investor?

Over the past 20 years, the average equity investor has received a paltry 2.5%.

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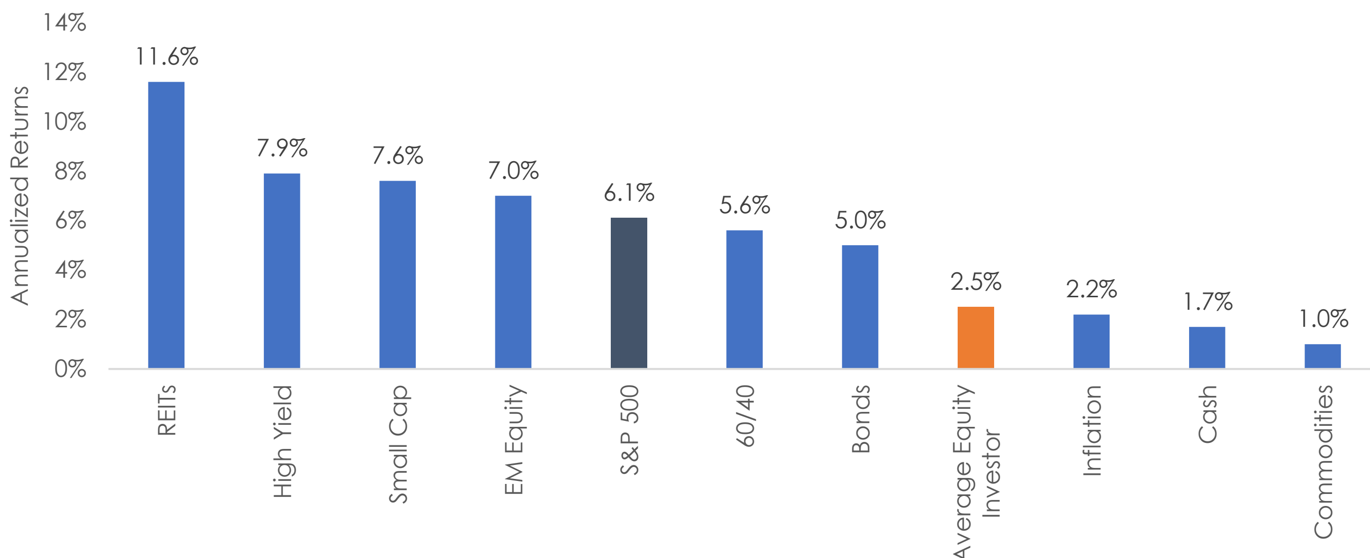
[5] Sources: https://www.worldometers.info/coronavirus/country/us/, as of Oct. 27, 2020

[6] https://am.jpmorgan.com/us/en/asset-management/gim/adv/insights/guide-to-the-markets/viewer; 12/31/99 through 12/31/2020

Chart 4 shows this information graphically.

Chart 4: 1999 – 2020 Annualized Returns by Asset Class[7]



That's right, ladies and gentlemen, the average equity investor has received only 2.5% per year over this time period, while the most heavily used equity index returned a bit over 6%.

To put that into context, if we put $100,000 in the S&P 500* and receive 6.1% over the next 30 years, we will have nearly $591,000. If we put the same $100,000 in and receive only 2.5%, we will end up with only $209,000. That's nearly a $400,000 difference over 30 years. This means that for all the risk and the pain and the drawdowns and the anguish and the worry…the average investor received just a tad more than inflation, and nearly 2.5% LESS than bonds?

How can that be?

We, as investors, clearly have access to the same indices through many different vehicles (mutual funds, exchange-traded funds, and the like). The costs are minimal, and even the more expensive versions don't explain the difference between the various equity indices and the average equity investor. So, again, the question is why?

This is a question we think about often.

The more we dig, the more we come back to the same answer. The more we question, the more we find new evidence of the original hypothesis. The short version: we are our own worst enemy. Let me explain.

When are investors (yours truly included) most likely to act? Is it when all is going well or when the pain is greatest? Clearly the latter. Yet when are the largest returns? Interestingly, and surprisingly, also

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[7] Sources: MassMutual Wealth Management research, J.P. Morgan (https://am.jpmorgan.com/us/en/asset-management/gim/adv/insights/guide-to-the-markets/viewer), Dalbar Inc.

* Note. You cannot invest directly in an index

during the latter. If I were to ask you, over the past 20 years, which years had the largest single-day positive returns? Would you say 2019? After all that was a pretty remarkable year? Maybe 2012?

No, the 10 largest positive single-day returns came in 2008-09 and 2020. The Global Financial Crisis was raging during the first time period, and the COVID pandemic was in the second.

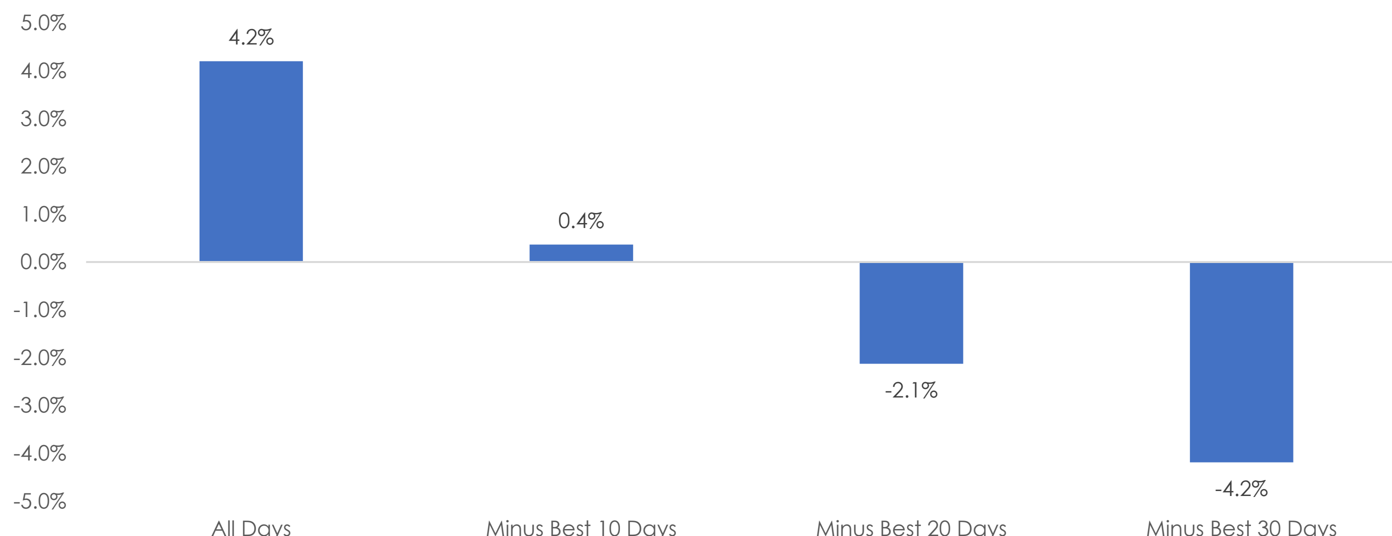
Yet those are the times when investors are most prone to act…precisely when we shouldn't.

Let's perform a thought exercise.

Ignoring dividends, since 1999, the S&P 500 returned 4.2% (roughly 6% including dividends). That represents a bit more than 5,000 days.

What if we removed just the 10 best days? The annualized return drops to 0.36%. What if we remove the 20 best days? The annualized return drops to -2.13%. And removing the 30 best days? The annualized return drops to -4.19%. Chart 5 shows the information graphically.

Chart 5: 1999 – 2020 Annualized S&P 500 Price Return by Removing Top N Days[8]



Well, that's not fair you say! Investors don't just miss the best days. OK, fair point. But the largest up days tend to come following the largest down days…which is precisely when investors are most likely to be exiting the market.

The largest positive day over this time period was on Oct. 13, 2008, when the market was up 11.58%. Over the previous seven days, the market was down 23%.

The second largest positive day over this time period was Oct. 28, 2008, when the market was up 10.8%. Over the previous 10 days, the market was down 15.4%.

More recently, the market was up 9.4% on March 24 of this year (the third largest up day in the past

[8] Sources: MassMutual Wealth Management research, J.P. Morgan (https://am.jpmorgan.com/us/en/asset-management/gim/adv/insights/guide-to-the-markets/viewer), Dalbar Inc.

20 years). And consistent with our pattern, the market was down a whopping 28% in the 12 days leading up March 24!

And on and on it goes…

The point is when fear is highest, volatility tends to be highest. When volatility is highest, by definition, the market is making the largest moves. And when those moves are occurring and the pain is highest (because we aren't used to such large moves) is when we, as investors, tend to make emotional decisions. We can't stand the pain of the losses, and so we sell our positions. When this occurs, we then disproportionately miss out on the gains.

Hence, what should be a strong return turns into a low (or a negative) return by making decisions when the emotion is greatest.

So, what are we to do? How can we increase the odds that we achieve the returns the market produces?

First, we need a plan. Our goals, constraints, and objectives need to firmly balance with the reality of what markets could deliver.

Second, we need to focus on controlling what can be controlled. Mitigating taxes, minimizing expenses, and maximizing savings are all tools we can control (to some extent) to help us achieve our goals.

Third, we need to use events like the Global Financial Crisis of 2008 and the COVID-19 selloff of 2020 to help us understand our own emotional make-up and risk tolerances. If we can't endure the pain of the losses, we likely don't have the right portfolio.

Fourth, we need to iterate and evolve. We must measure whether we are on track to meet our goals, and how much progress is being made. If the current plan won't meet our objectives, we need to alter the plan. That process should continue as we learn more, and as our life circumstances change.

Finally, and this is often the most difficult as the data above confirms, we need to stick to the plan we put in place. As with the earlier example, regardless of short-term outcomes, we have a better chance of achieving success by adhering to the probabilities we witness through history.

Capital markets, as extensions of capitalism, tend to produce strong returns over the long term. Short-term outcomes are painful yet are largely irrelevant. Long-term outcomes are what matter and what, ultimately, should drive our decision-making.

In closing, stay safe, and please turn off the investment news channels.

We remain at your service and watching closely. Please let us or your financial professional know how we can serve you.

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CRN202110-273814