INVESTING IN STOCKS FOR THE LONG TERM (PART 1)

May, 2020

Dear investors,

The current period of uncertainty caused by the Covid-19 crisis has generated large swings in the markets, which can cause anxiety among investors, especially those who only recently started investing in the stock market. Having a historical perspective at times like these helps us draw parallels with the present and allows us to try to imagine what may happen in the future.

With this in mind, last month we wrote a letter addressing the topic of investing in times of crisis. This month, we decided to explore the subject further and offer a broader perspective, comparing investments in stocks with investments in fixed income over long periods of time.

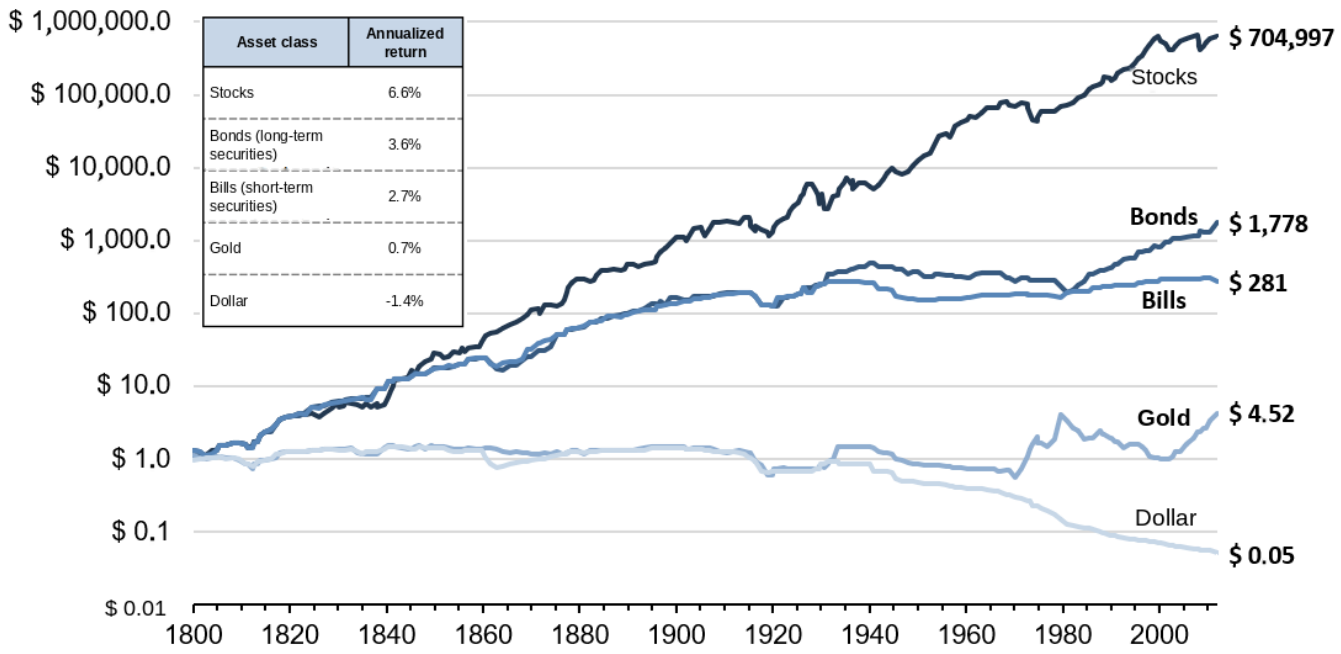
We have divided the content into two parts. This first letter offers an international perspective, comparing the historical returns of stocks vs. fixed income in several countries. In the second, which we will send next month, we will discuss the Brazilian context.

In both cases, what becomes evident is that, in the long run, investing in equities (stocks) generates better returns on capital than fixed income. An important caveat is in order: despite the superiority of equities, we are not recommending that investors put their money into equities “blindly.” Caution is needed, and one must seek to choose both the companies and the timing of the investment appropriately (overpaying for a stock, even of a good company, can make for a poor investment for many years).

1. The US example:

A very long-term analysis (more than 200 years) of the US market has demonstrated a persistent advantage of equities over the other asset classes. The chart below shows the inflation-adjusted historical return over the 1800-2012 period:

Chart 1 – Historical real return of various asset classes[1]



From the chart above, it is clear that stock appreciation not only dominates all the other asset classes, but is also remarkably stable over the long term. During the period, investing in stocks produced a real return of 6.6% per year in a very consistent manner – which means that, at this pace, the capital invested doubled every 10-11 years.

From a long-term perspective, the market's highs and lows, driven by alternating periods of optimism and pessimism, are of little significance in the overall trend of wealth accumulation provided by investing in stocks.

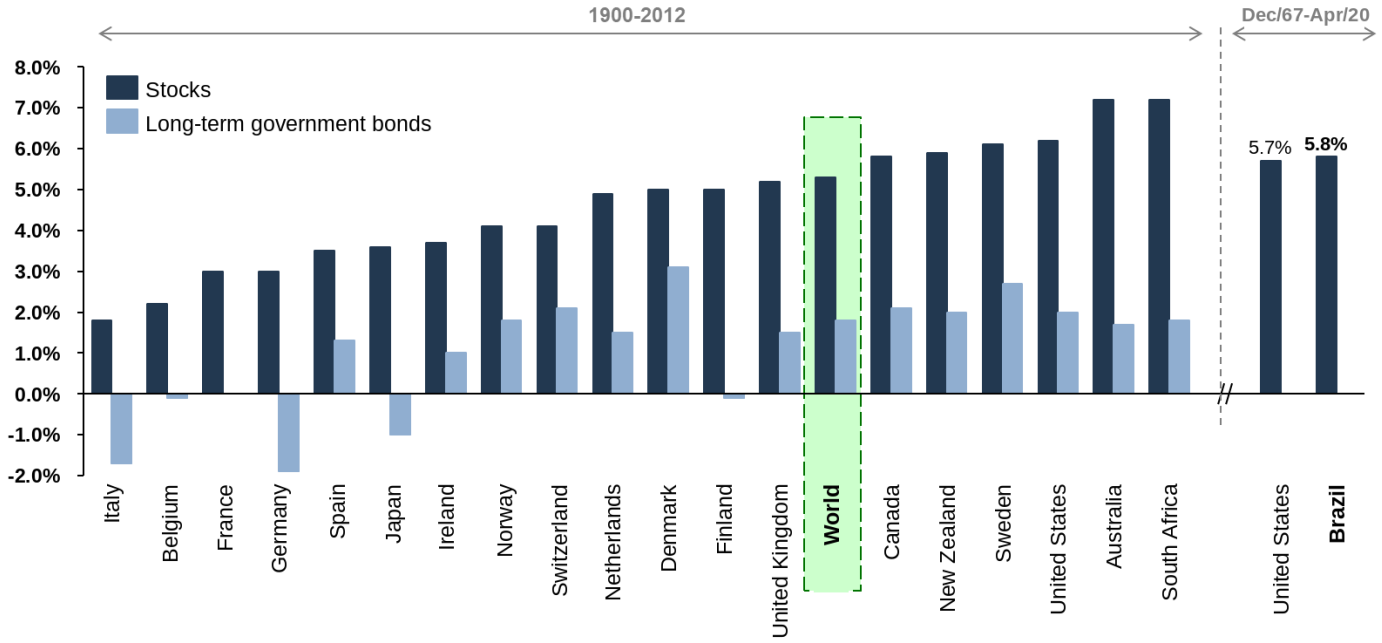
2. International benchmarks:

Many may criticize the analysis above because it is focused on the United States, a country that over the last 250 years has transformed itself from a British colony into the world's largest economic power. But an analysis

[1] Source: Stocks for the Long Run, Jeremy J. Siegel (2014)

of 20 major global economies shows that stock returns were substantially higher than fixed income returns in all of the countries analyzed.

Chart 2 - Real return of fixed income vs. equities (in US$, per year)[2]



Between 1900 and 2012, real returns ranged from 1.7% per year in Italy to 7.2% per year in Australia and South Africa. The United States, whose data formed the basis for the conclusions of the previous section, had a return of 6.2% over the period – excellent returns, but not much higher than the global average of 5.4%.

This result was achieved despite countless economic, political and social changes. Many countries moved from an agrarian to an industrial economy, and from an industrial economy to one oriented toward services and technology. Nor was there any shortage of crises during this period – since 1900, the world has gone through 2 world wars, a pandemic (the Spanish Flu), the Great Depression of 1929, the Cold War, the oil crisis of the 1970s, the attack on the Twin Towers, the economic crisis of 2008 and, more recently, the Covid-19 crisis. Despite this, the historical return of stocks shows impressive resilience.

Although the series used for Brazil is shorter – "only" 52 years vs. 112 years for the other economies – we have no grounds to believe that this would be any different in Brazil. An investor who had "bought" the Brazilian stock market in 1967 and reinvested the dividends received would, by April 2020, have earned a real annual return of around 5.8% per year in dollars, slightly higher than the real return of 5.7% per year obtained by investing in the US stock market over the period.

We analyze the results for Brazil in more detail in part 2 of this letter.

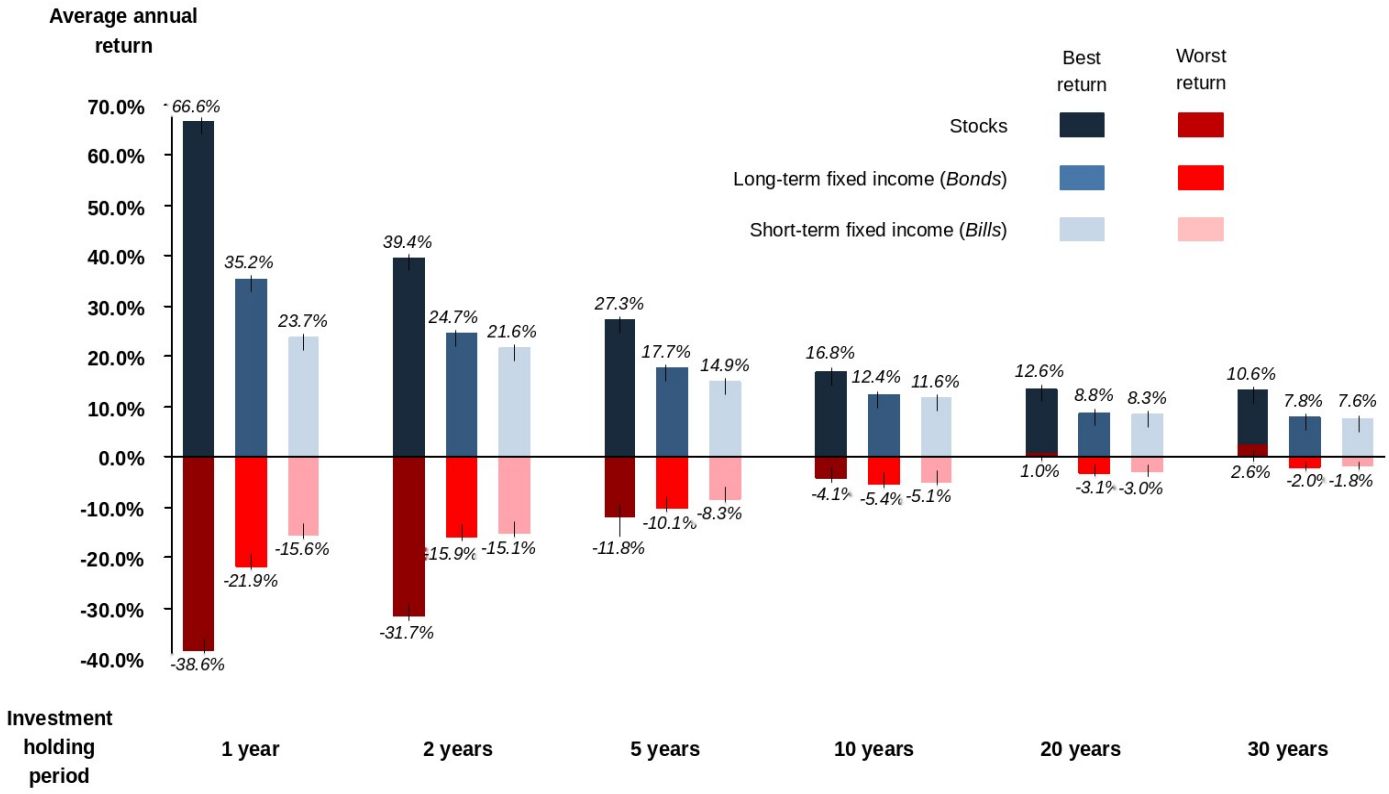
3. Discussion of risks:

The analysis would not be complete if we did not also consider the worst-case scenario: suppose an investor entered the stock market just before a major decline. Would it not have been better to invest in fixed income? The truth is that, if the investment period is only a few years, stocks can indeed deliver a poor return – in the

[2] Source: Stocks for the Long Run, Jeremy J. Siegel (2014)

worst case, a 1-year investment in the US stock market returned -38.6%, compared with a return of -15.6% for short-term fixed income (bills). For longer periods, however, the risks are limited. The worst annualized return for a 10-year investment window in the US stock market was -4.1%, better than the lowest return obtained in fixed income over the same 10-year period, which was -5.1%. Over a 30-year period, the worst return on a stock market investment was +2.6% per year!

Chart 3 - Highest and lowest returns on investments in stocks and in short- and long-term fixed income for holding periods of 1, 2, 5, 10, 20 and 30 years between 1802 and 2012 in the US[3]



The risk profile of the stock market is consistent with the data in the table below, which shows a very interesting finding:

Table 1 - Return of equities vs. fixed income for various investment holding periods (analysis between 1802 and 2012 for the US market)[4]

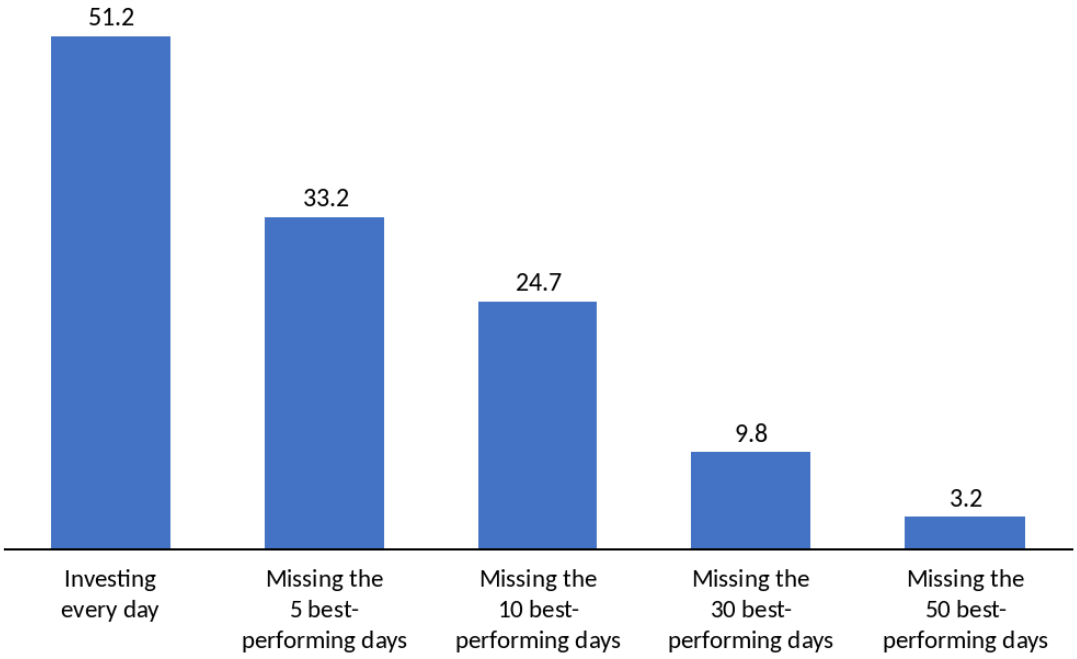
[3] Source: Stocks for the Long Run, Jeremy J. Siegel (2014)
[4] Source: Stocks for the Long Run, Jeremy J. Siegel (2014)

Investment holding period	Cases in which stocks outperform fixed income (*Bonds*)
1 Year	*58.8%*
2 Years	*60.5%*
3 Years	*67.2%*
5 Years	*67.6%*
10 Years	*72.3%*
20 Years	*83.9%*
30 Years	*91.2%*

For investments with a 1-year horizon, stocks outperformed fixed income about 60% of the time. In other words, in 2 out of every 5 years of investment, fixed income outperformed the stock market! On the other hand, for an investment held in the portfolio for 30 years, the stock market outperforms fixed income 91% of the time (considering the last 210 years). This point is important because many investors frequently "reallocate" their portfolios in search of the best returns but actually end up missing the best opportunities!

An analysis of the US market illustrates the impact a hypothetical investor would suffer by being out of the market on just a few of the market's best days over the last 36 years!

Chart 4 – Hypothetical growth of a US$1.00 investment in the S&P 500 from Jan/01/1980 to May/20/2016[5]



The truth is that, in addition to the transaction costs (brokerage fees, capital gains tax) involved in changing portfolios, getting the market "timing" right is extremely difficult even for the best managers. High interest rates tend to occur in crisis situations, precisely when the stock market is cheap and may offer real bargains. Thus, rather than trying to get the optimal portfolio right, it is preferable to stick to what is good and already known, and not run the risk of getting it wrong.

All of the analyses above treat an investment in the stock market as an investment in that market's stock index. We believe that a manager who shares a long-term philosophy and selects the best stocks (good companies at a good price) for his portfolio can achieve even better performance.

[5] Source: Fidelity – FMRCo *Asset Allocation Research Team*

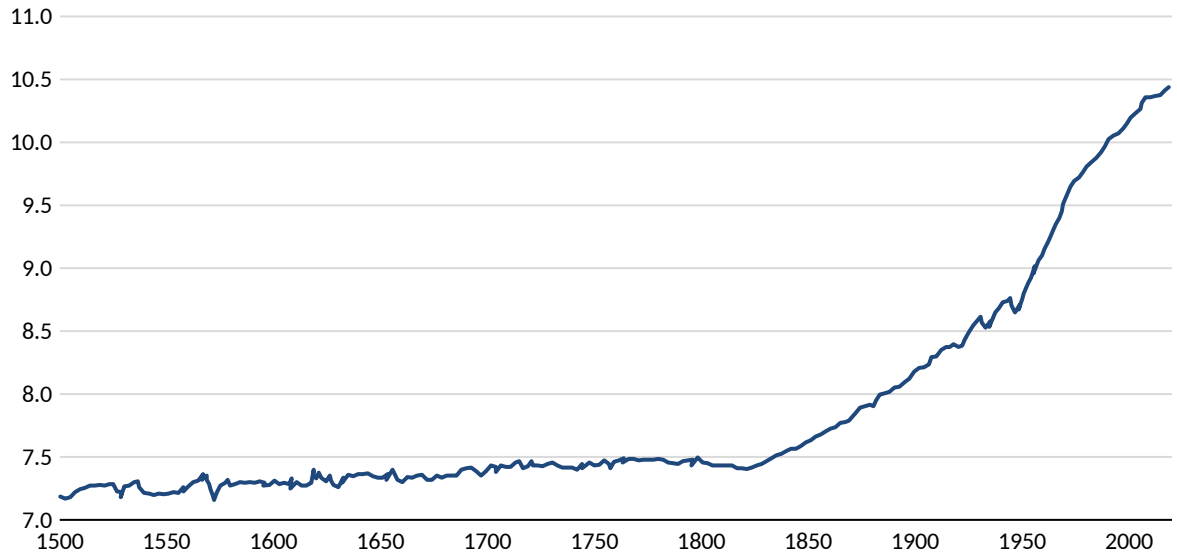
4. The fundamentals behind stock returns:

Having reviewed the historical evidence and the undeniable superiority of stocks over the other asset classes over the last 200 years, the questions that remain are: Why does this happen? And what can we expect for the future?

First, stocks are fractions of companies' capital that allow investors to benefit from the profits generated by those companies. Part of these profits can be paid out directly in the form of dividends or share buybacks, and part can be reinvested, either to expand operations or to make acquisitions. Regardless of how they are used, in the long run a stock's return tends to track the growth in the company's earnings and the dividends it pays.

When we analyze the market as a whole, corporate earnings growth is closely tied to economic growth, which has been extremely robust, especially since the mid-19th century. The chart below shows global GDP per capita from 1500 to the present day.

Chart 5 – Global GDP per capita (in US$ thousand, 2017 values)[6]

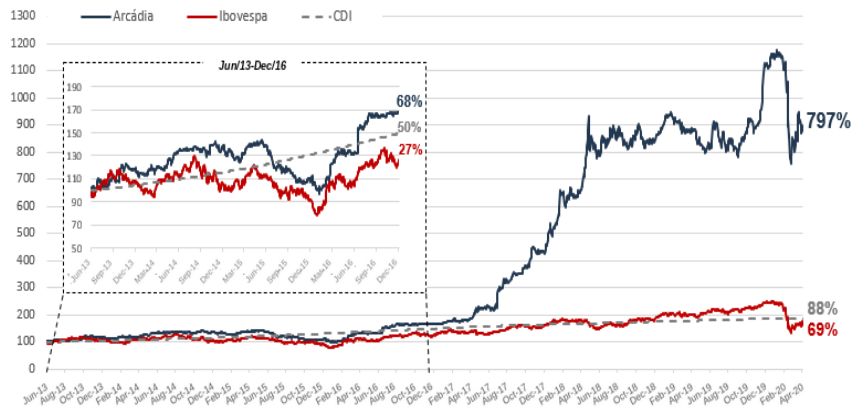


Behind this growth is the constant increase in productivity that humanity has achieved. People study, learn and develop new technologies. Each generation works on and improves the technologies developed by the previous generation and, through this accumulated knowledge, the world has increasingly efficient ways of developing products and services. In addition to driving economic growth, higher productivity also improves the living conditions of the population as a whole.

Looking ahead, the trend is for the pace of growth in human productivity (and, consequently, economic growth) to continue. The current Covid-19 crisis brings many challenges, but it also highlights our incredible technological development – the remote work that many of us are able to do today without great difficulty is only possible thanks to technologies developed over the last few decades. The crisis is also forcing us to become ever more productive, with trends that already existed before the crisis being accelerated (online shopping, digital banking, industrial automation, among others). Although the duration and economic impact of Covid-19 are still highly uncertain, the evidence from this crisis only reinforces our conviction in the trend of economic development, and stock appreciation, that awaits us in the long run.

[6] Source: The Changing World Order: Why Nations Succeed Or Fail, Ray Dalio, 2020

Historical cumulative return[7]



Indicators:

Current net assets:
R$72.4 million

12-month average net assets:
R$60.2 million

Cumulative return:
796.7%

12-month return:
2.5%

36-month return:
383.9%

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year		Since inception	
													Arcádia	Ibov	Arcádia	Ibov
2013	-	-	-	-	-	2.2%	6.7%	(5.2%)	8.8%	8.3%	(1.0%)	(0.3%)	**20.2%**	8.2%	**20.2%**	8.2%
2014	(4.5%)	2.9%	2.2%	(0.9%)	4.2%	7.7%	1.2%	0.9%	(1.2%)	(1.2%)	6.2%	(1.7%)	**16.0%**	-2.9%	**39.4%**	5.0%
2015	(4.4%)	(3.6%)	3.4%	5.1%	1.3%	(4.2%)	(10.6%)	(2.9%)	0.2%	(8.7%)	0.5%	3.5%	**-19.7%**	-13.3%	**12.0%**	-8.9%
2016	(9.7%)	2.8%	20.9%	4.7%	1.8%	(0.7%)	16.1%	7.8%	(0.3%)	(1.0%)	1.6%	0.6%	**50.3%**	38.9%	**68.3%**	26.5%
2017	2.0%	3.7%	1.4%	2.6%	20.4%	1.7%	27.9%	9.4%	8.7%	8.9%	14.1%	(1.2%)	**151.7%**	26.9%	**323.7%**	60.5%
2018	22.1%	23.9%	0.8%	2.4%	29.7%	(8.4%)	7.9%	5.1%	(7.8%)	6.5%	(4.7%)	0.9%	**98.8%**	15.0%	**742.3%**	84.6%
2019	10.7%	(1.7%)	(3.4%)	(1.2%)	(5.7%)	(1.5%)	3.6%	1.0%	(7.8%)	14.0%	0.5%	25.0%	**33.1%**	31.6%	**1,021.5%**	142.9%
2020	2.7%	(4.2%)	(24.8%)	8.0%	-	-	-	-	-	-	-	-	**-20.1%**	-30.4%	**796.7%**	69.1%

[7] Arcádia began on June 27, 2013 as an "investment club" and, on September 27, 2019, it was converted into an "equity investment fund." Returns shown from inception as a club on June 27, 2013 through April 30, 2020