Why is the Stock Market Booming While the GDP[1] is in Free Fall?

Intuitively, one would expect the GDP and the stock market to rise and fall together. After all, aren't they both tied to wealth and as wealth falls, shouldn't the GDP fall as well? But so far this year, that hasn't happened. What follows is what I suspect is happening.

First, some terminology. (If you are familiar with these, you can skip over this part.)

> Recession: recession is defined as a decline in the GDP for two successive quarters amounting to a total decline of 1.5% and unemployment must reach 6% or more. As the GDP has fallen over 10% and unemployment has risen above 10% we are clearly in recession.
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> Depression: depression is an extended recession that can last for years in which unemployment reaches at least 20%. Obviously we are not in a depression.
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> GDP: GDP is defined as the total value of goods and services produced within a country and is the most common measure of production and consumption.
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> Markets: Technically, a market is a place where two or more parties can gather to facilitate the exchange of goods and services. In this article, I will be referring to different segments of the economy such as stock market, etc. rather than physical places.
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> Stock market indices: These indices are measures (albeit poor ones) of the value of outstanding corporate stocks held by the public and sold and traded in the stock market. In general, they do not include all stocks but only a subset of them.
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> Money supply: The money supply is all the currency and other liquid instruments in a country's economy on the date measured. There are two categories of money, central bank money and commercial money. The later is created by commercial banks through lending. Each loan creates commercial money in an amount determined by reserve ratio[2] r, and the money supply expands by an amount up to 1/r.[3] The money supply contracts at an equal rate as money is withdrawn from the system. (One can see that when the reserve ratio is small, the expansion or contraction can is amplified by a large amount when money is added or withdrawn[4].)

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1 Gross Domestic Product

2 Established by the Central Bank (Federal Reserve Bank)

3 The amount of commercial money created by a bank loan is (1-r) times the amount of the loan, where r is the reserve ratio. For example, if r is 20% commercial money would be created in the amount of 80% of the loan (20% of the amount being kept in reserve). Since the money loaned would ultimately end up back in the banking system, 80% of it could re-loaned creating that much more commercial money. Repeating this process an infinite number of times would expand the money supply by 5 times for each dollar of central bank money added. – In the fist round of lending, the bank loans out 80 cents for each dollar deposited by the central bank thus creating 80 cents of commercial money. When that 80 cents is returned to the banking system, the bank can then loan 80% of that amount or 64 cents for a total of $1.44 in commercial money. Repeating this process n times results in a total increase amounting to $\sum_{0}^{n} (1-0.2)^n$ which approaches $\frac{1}{0.2}$ = $5 as n approaches infinity (which never happens, of course, but you can see how it works).

4 On March 26 this year, the Federal Reserve dropped the reserve ratio to 0, meaning banks don't have to keep any new money in reserve. (That's scary!) The Federal Reserve Bank used to be very cautious about changing the reserve ratio as it has such a dramatic effect on the money supply. It seems they have become much more cavalier about it.

Recessions can have two different types of causes. Most often, recessions start with a loss of wealth due to market[5] failures, e.g. bubbles[6] collapsing when investor confidence collapses (which it always does sooner or later). The loss of wealth almost immediately results in a reduction of the money supply, purchasing power, consumption, production, employment, income, and ability to repay loans, all of which are reflected in a decline of the GDP.

Less frequently recessions start with natural disasters[7] unrelated to markets. Wars, hurricanes, and earthquakes can result in recession by destroying real property resulting in a loss of wealth, purchasing power, consumption, production, jobs and income. However, disease is one form of natural disaster that doesn't destroy property or have an immediate affect wealth; and that's where we are today. In the current recession, caused by the COVID-19 pandemic, production and consumption were hit hard due to the threat of contagion and the need for quarantine keeping people out of the workplace and shopping centers. With exception of the stock markets, there was no loss of real wealth. The stock market, however, experienced an immediate collapse to panic and the prospects of profit losses, but has since nearly fully recovered and appears to be thriving. So why is that?

When corporate profits decline, stock prices decline accordingly, but the effects need not be immediate. There are many ways in which declining profits can be compensated, deferred or hidden to delay the effect on stock prices. In the present crisis, major tax cuts were given to corporations resulting in windfall profits thus compensating for declining sales. In addition, the infusion of cash through the economic stimulus programs[8] provided money that has been used for acquisitions, mergers, stock buybacks and rewards for executives and stockholders. Acquisitions and mergers typically increase the apparent wealth of acquiring corporations (thus raising the price of their stock) and stock buybacks reduce the supply of outstanding stocks (further raising their price) even if profits are declining. Furthermore, market indices also hide financial losses within the market. These indices only average the prices of outstanding stock (or some subset thereof) and ignore stocks outside the subset of included stocks. They also ignore stocks that cease to exist because corporations go out of business or are absorbed into other businesses.[9] By propping up corporations with tax cuts and stimulus money and hiding real losses, the time from the beginning of the pandemic to stockholders' realization of real losses can be lengthened. As a result, a decline in the stock market can be deferred by months and possibly a year or more.

What I have attempted to show here is how the stock market's response to the declining GDP caused by the pandemic can be (and has been) stretched out for a long period of time, giving the impression that it is "booming" in spite of the recession. However, it cannot endure. If the pandemic continues to depress the GDP for any substantial time, money used to prop up the stock market will run out along with the ability to hide real market losses.

5 Typically, financial markets, commodity markets and real estate markets.
6 Market bubbles occur when speculation causes asset prices to rise far is excess of intrinsic value
7 These can take the form of war, disease, weather and geological related phenomena.
8 These tax cuts and stimulus programs can't go on forever without bankrupting the treasury and the entire nation.
9 In the case of the Dow-Jones Industrial Average which includes only 30 major corporations, all other corporations could perish with no effect on the index.