



WHEN AND WHERE WILL THE RECOVERY HAPPEN? A National and State by State Analysis of the Economic Response to the Coronavirus

By Arthur B. Laffer, Ph.D. and Stephen Moore

Executive Summary

At this moment, the U.S. economy is spiraling downward with a force unseen in recent history. Some economic forecasters and media pundits are warning that a depression is imminent. The effects of this downturn do portend to be pervasive and toxic. But the conclusion of this study is that with the right policy prescriptions and states opening up for business quickly, we will see a very sharp contraction this summer with high unemployment followed by a strong recovery that will arrive within six months.

We also find that the recovery will be uneven with some states and regions of the country advancing at a much faster pace than others. Therefore, the geographical dispersion of growth in employment, incomes and GDP will be one of the marked features of the recovery—this more so than other post-recession episodes because states are taking the lead on reopening businesses, stores, shopping centers and factories. Some governors—especially those in red states in the South, Southwest, and mountain states—are racing out of the gate to reopen by late April or early May. Others in very blue states, including many in the Midwest and Northeast, are targeting the middle of June or July for reopening their business and commerce. There will be a big difference in the recovery based upon the speed at which individual states reopen. In addition, oil and gas producing states like Alaska, North Dakota, Ohio, Oklahoma, Pennsylvania and Texas will be slower to heal economically because the energy industry will continue to be in recession.

The states we predict as leading the way in the recovery are Arizona, Colorado, Florida, Georgia, Nebraska, Nevada, South Carolina, Utah and Washington. The states we predict as being the laggards on recovery are Connecticut, Illinois, Michigan, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Texas and Wisconsin.

Three states deserve special mention because of particulars of their economies. Texas has been a very high growth state, but we predict given the state's continued reliance on oil and gas, this state will have a very tough recovery despite opening faster than most other states. New York will have a very slow and negative recovery in part because of their late reopen, but also because this state has been adversely affected by the virus at nearly an order of magnitude more than most states. California, despite a scheduled slow reopening and despite high and debilitating taxes, has an enormous technology and knowledge-based industrial sector that will allow it to come out of this recession at an average or even above-average pace.

As for the national economy, the key forecasting insight to understanding the actual path to recovery following the coronavirus pandemic rests not within economic models, as they are mostly guesses and generally lack predictive powers. They are also all over the map. Garbage in, garbage out. We examine the two best lead indicators of how long the recovery will last and how strong the recovery will be. These are i.) the stock market behavior of the last several months and ii.) the price of gold. These two indicators are not perfect, but they are highly predictive markets in terms of the direction the economy will head in the coming months. The stock market combines the wisdom of all market participants to tell us what will be, not what has been. The stock market's forecasts have been shown repeatedly to be unbiased and efficient—though these forecasts can be “surprised” by marked turns. The reason its forecasts are as reliable as any is that participants in bond, stock, commodity and other markets are risking their own well-being and wealth in the outcome. Unlike modelers, they are “putting their money where their mouth is” with respect to the likelihood of an improved economy via profits, the mother's milk of the stock market.

The gold price is the ultimate hedge against two economic events—inflation and economic doom. A rising gold price signals coming inflation and or economic trauma. It is the refuge of the bears. There is very little inflation forecast in any of the standard inflation measures. The 30-year Treasury, the TIPS spread and the consumer and producer price data are all pointing to slight deflation, not inflation. Yet, the price of gold has risen from a three-month low of \$1,478 per ounce on March 18 to a three-month high of \$1,769 per ounce on April 14—a 19.7% increase. A 19.7% increase in the price of gold is far below the levels seen during past severe and prolonged recessions and depressions in U.S. history.

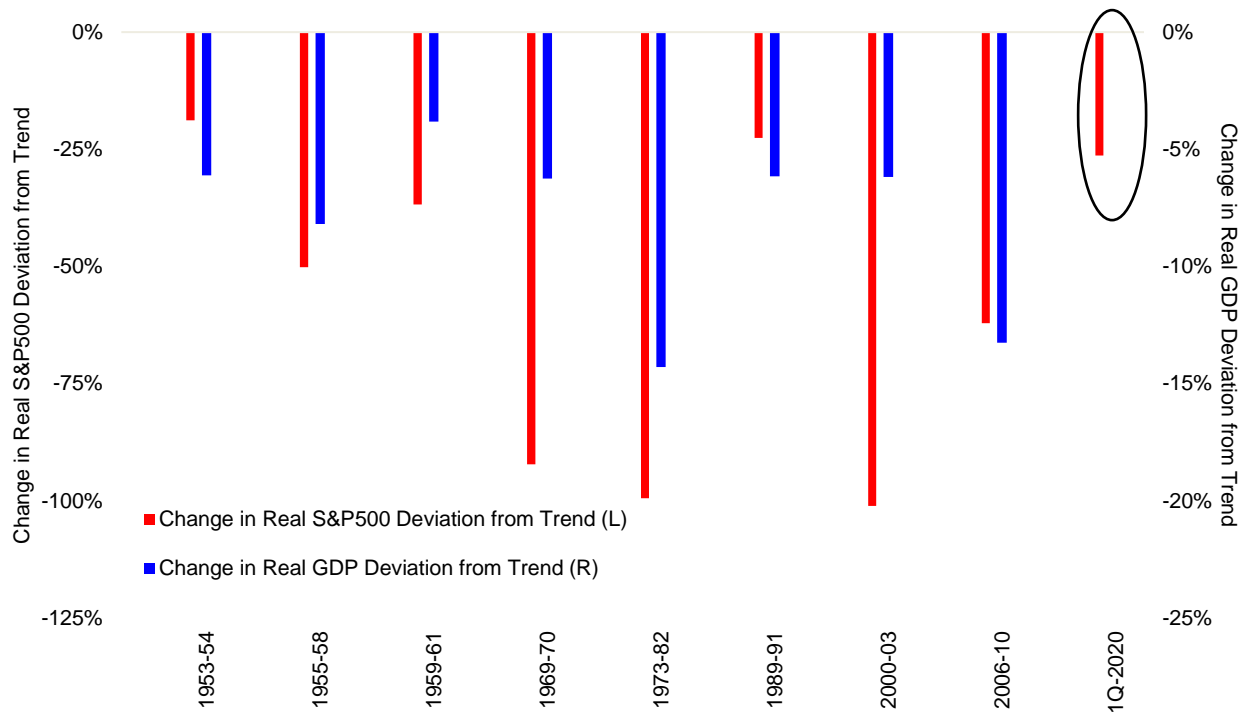
Both of these measures are pointing to an obvious severe, but SHORT TERM recession, and certainly the Great Depression scenario is nowhere in the market data. Nor is there any market indication of a massive bout of inflation coming, as some economists are predicting. In this study, we show that this current crisis pales in comparison to three of the most infamous economic crashes in American history. The first of these crashes was the Great Depression. The second was the 1970s

decade-long stagflation that occurred when the combination of high inflation and tax increases led to a multi-year sharp decline in real incomes and double digit unemployment with the “misery index”—inflation plus unemployment—reaching near 20%. The third was the Great Recession of 2008-09, which was followed by a very slow, L shaped recovery during the Obama years.

In each of these cases, stocks fell very sharply and the price of gold soared. For example, in 1929, at the start of the Great Depression, the gold price was fixed by the U.S. government at \$20.67 per ounce, but by 1934, the government had raised the price of gold to \$35 per ounce, which was a near 70% increase. In the 1970s, the gold price skyrocketed from \$64 per ounce in 1972 to \$595 per ounce in 1980—a near 1,000% increase. After the financial crisis, the price rose from \$870 in 2008 to \$1,088 in 2009 to \$1,664 in 2012, a 25% increase from 2008 to 2009 and a 53% increase from 2009 to 2012.¹

In Figure 1, we have roughly plotted the troughs of real stock prices detrended with their corresponding troughs of U.S. real GDP, also detrended. The last observation, of course, is missing its GDP consequence because that is the number we’re trying to forecast. Whatever the number will be, it surely doesn’t look to be nearly as large as quite a number of prior episodes. If the downturn is severe, it won’t be long-lasting.

Figure 1
Change in Deviation from Trend, U.S. Real Detrended GDP and Real Detrended S&P500 Index
 (percentage point change in deviation from trend, real detrended GDP - quarterly, 1Q-50 to 4Q-19; real detrended S&P500 index - quarterly closing price, 1Q-50 to 1Q-2020, note: separate scales – GDP data enlarged at a 5:1 ratio)



Source: Bureau of Economic Analysis, Bureau of Labor Statistics, Laffer Associates

It is important to note that the time periods selected in Figure 1 represent rough estimates of the exact periods within which these changes in deviation from trend occurred. Real GDP detrended and real stock prices detrended move in tandem. Periods where there are decreases in deviation from trend in real stock market prices exhibit similar decreases in deviation from trend in real GDP, and vice versa. The exact quarter in which each metric reaches its peaks and troughs vary slightly. For example, the first period presented in Figure 1 covers the years 1953 through 1954. While real stock prices detrended fell from a local maximum of 22.9% in the fourth quarter of 1952 to a local minimum of 4.1% in the third quarter of 1953, real GDP detrended fell from its local maximum of 12.5% in the first quarter of 1953 to its local minimum of 6.3% in the second quarter of 1954. The time periods, although not perfectly concurrent, do correspond closely. The conclusion using stock prices and GDP would suggest that the dip in U.S. GDP over an extended period of time will not be all that great.

This is all pointing to a much less severe recession and a much more resilient recovery than the aforementioned three economic crises. Of course, changes in policy and changes in the political outlook—we have a big election in November—

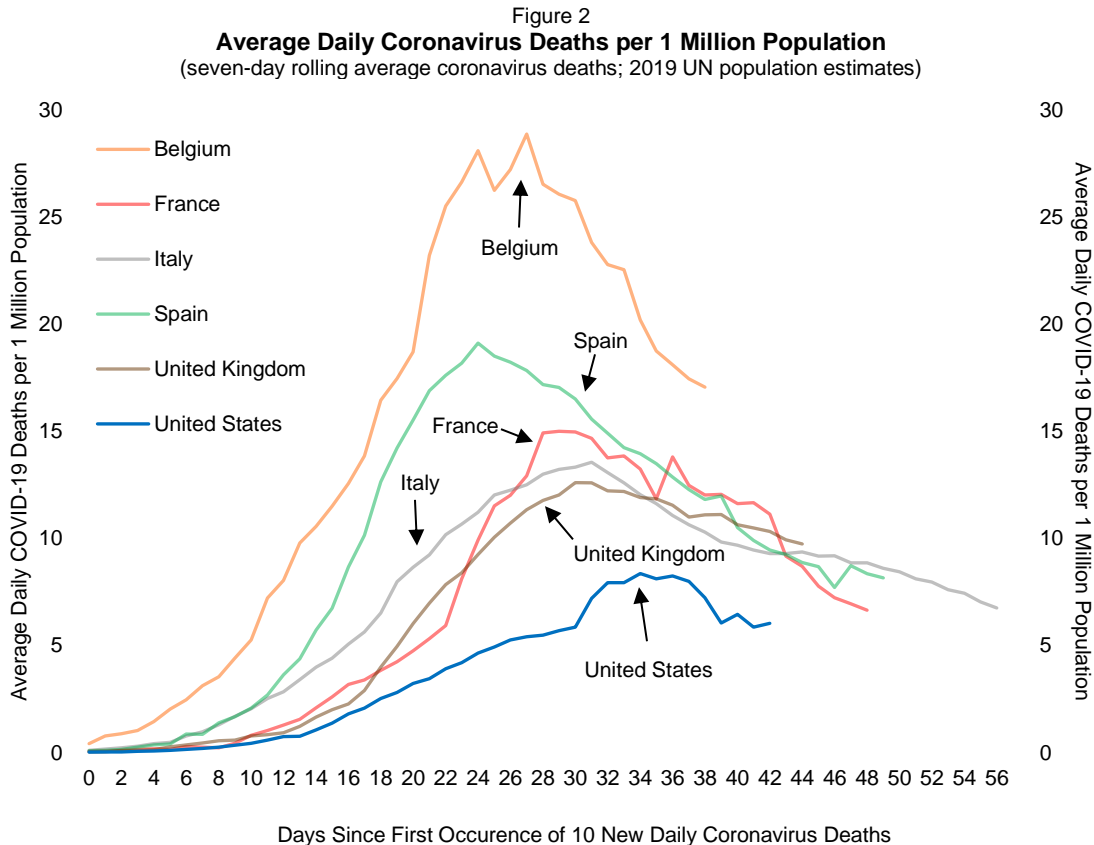
¹Listed gold prices are annual closing prices per ounce, as reported by Only Gold.

could change this forecast. So could a recurrence of the coronavirus and another economic shutdown, but the market doesn't see that as very likely or devastating as of right now.

Coronavirus Shutdown in Historical Perspective

Over the last century, the U.S. has experienced numerous downturns, crises, recessions, and even a depression and the current received wisdom points to causes of those economic collapses such as war, tax increases, terrorist attacks, natural calamities and assassinations. Today, we have a fresh set of concerns resulting from the advent of a new coronavirus and the world's governments' responses. This is far from the first pandemic to assault mankind, but it is the first assault that triggered a massive government macroeconomic response. The virus is not the Black Swan. The economic response is.

One point of optimism, or should we say less pessimism, is that the U.S. has done an outstanding job compared to other nations in limiting the death toll of the coronavirus in relation to population.

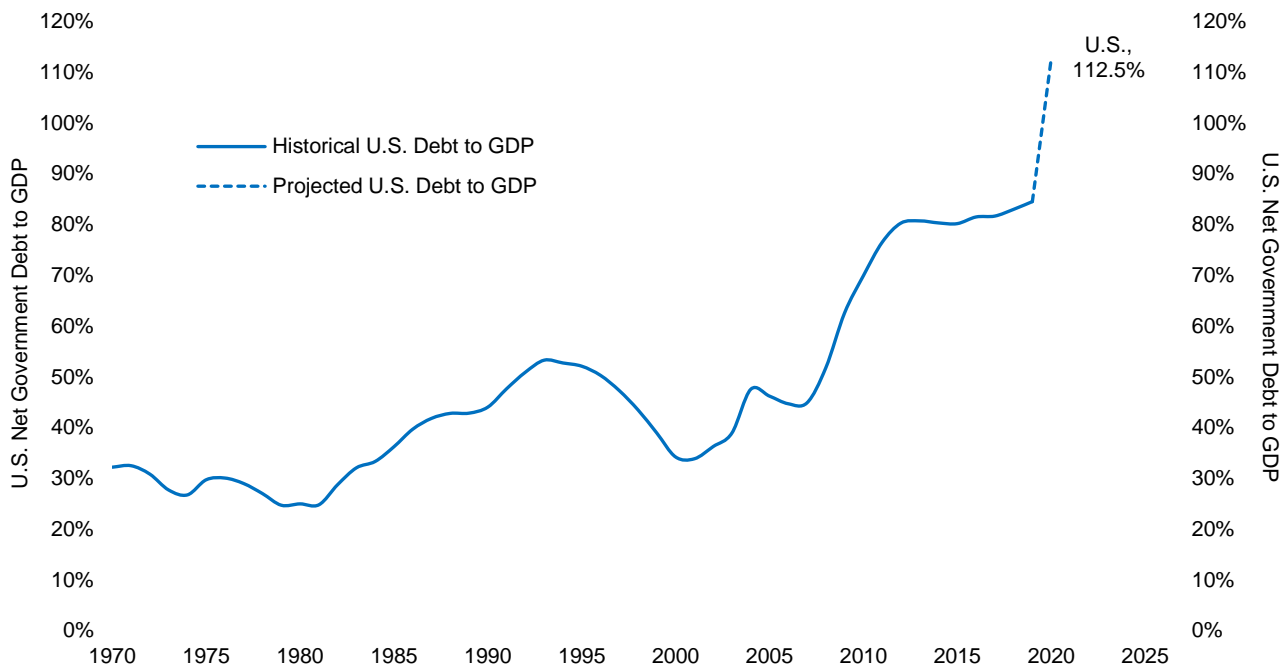


Source: Bloomberg, Johns Hopkins University CSSE, United Nations. Data as of 4/27/2020.

In Figure 2, we plot the seven-day rolling average of daily coronavirus deaths per one million population of the six countries (Belgium, France, Italy, Spain, the United Kingdom and the United States) with the highest reported total coronavirus deaths worldwide. Because the coronavirus started spreading on different dates in each country, the data are presented starting from the first day in which each country reported 10 new daily coronavirus deaths, respectively. For example, the United States reported 24 new coronavirus deaths on March 16, 2020. Previously, the United States had never reported more than nine new daily deaths, so March 16 is the first day of U.S. data in Figure 2.

In short, the fear of a pandemic spread of COVID-19 pushed governments at all levels and in all places to impose all sorts of regulations and other market interventions across myriad businesses, industries, religious organizations, social events, educational institutions, sporting events, etc. enforced by the full power of the state. For an extended period, people have been required to self-quarantine and practice social distancing. Many, many businesses have been declared non-essential and forced to close. At \$2.3 trillion plus an additional \$500 billion, the federal CARES Act has been passed, adding to the burdens borne by people and businesses. And lastly, projections include another multiple trillion dollar bill. The sum total will move the U.S. federal net debt to GDP ratio from 0.845 to 1.125 (see Figure 3). We now are on a path to challenge Italy and Japan as the most indebted nation on earth.

Figure 3
United States Net Government Debt as a Percentage of GDP
 (annual, period: 1970 to 2019, 2020 estimate)



Source: OECD Economic Outlook, Laffer Associates

Figure 3 shows U.S. net government debt as a percentage of U.S. GDP from 1970 to 2019. We also plot a projection for U.S. net government debt as a percentage of U.S. GDP for 2020. This projection reflects the expected six trillion dollar increase in government spending plus the expected deficit due to the coronavirus and uses 2019 GDP as an estimate for 2020 GDP. Should GDP contract (or expand) in 2020, the ratio of net government debt to GDP will increase (or decrease).

These governmental actions have already caused enormous economic hardship and are expected to wreak a lot more damage. The mission of this paper is to assess just how much damage will be done to the U.S. economy over the near term. It is worth noting that the stock market responded with a very sharp contraction following the economic shutdown and has gone through massive upward and downward contortions over the past two months plus. The Dow Jones fell from an all-time high of 29,511.42 on February 12 to a three-year low of 18,591.93 on March 23—a 37% decline—when the shutdown was announced and enforced. Since then, the market has actually risen by more than 25%. This rebound is, first and foremost, driven by good news about the slowing of coronavirus death rates, but also the companion data of more optimism about a sooner reopening date for many states. The markets are clearly tracking closely the “start date” for business returning to a somewhat normal flow.

A key factor on the forecast here is the content and composition of the “phase four” “stimulus” bill. If Washington does as Steve Forbes and we propose with a waiver of the payroll tax² (both employer and employee contributions for both Social Security and Medicare) at least through the end of December 2020, the outlook will be even better than we currently envision. More government spending is, in our analysis, a negative for the economy.

The Economic “Hit” So Far

Initially, we focus on the aggregate U.S. economic impact of the pandemic et al. in terms of stock prices, employment and Gross Domestic Product (GDP). This is followed by an analysis of the impact on various sectors of the U.S. economy. And lastly, we are looking at what type of differential impacts a large U.S. downturn could have on a wide variety of key metrics for select groups of states.

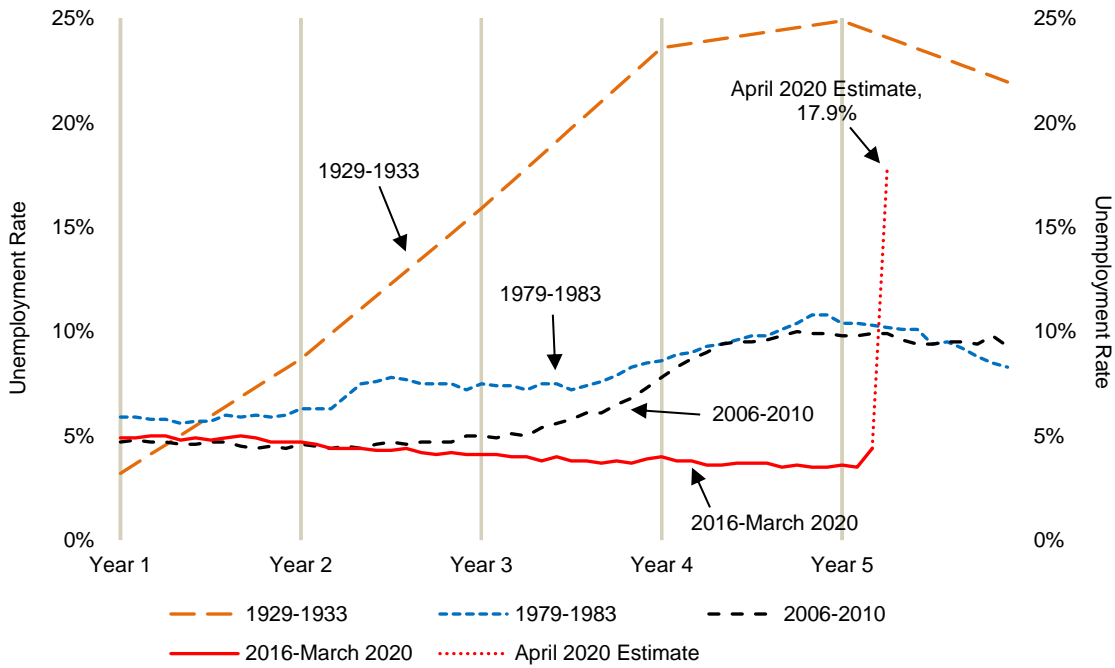
The U.S. Economy

Just look at one measure of the economic consequences of the government nexus with coronavirus.

² Arthur B. Laffer and Steve Forbes, “Suspend the Payroll Tax”, *The Wall Street Journal*, April 19, 2020. <https://www.wsj.com/articles/suspend-the-payroll-tax-11587316945?mod=searchresults&page=1&pos=1>

Figure 4
Historical Unemployment Rate, 5-year Periods

(percent, 1929-33: annual; 1979-83, 2006-10, 2016-March 2020: monthly; April 2020 estimate based on initial unemployment claims data)



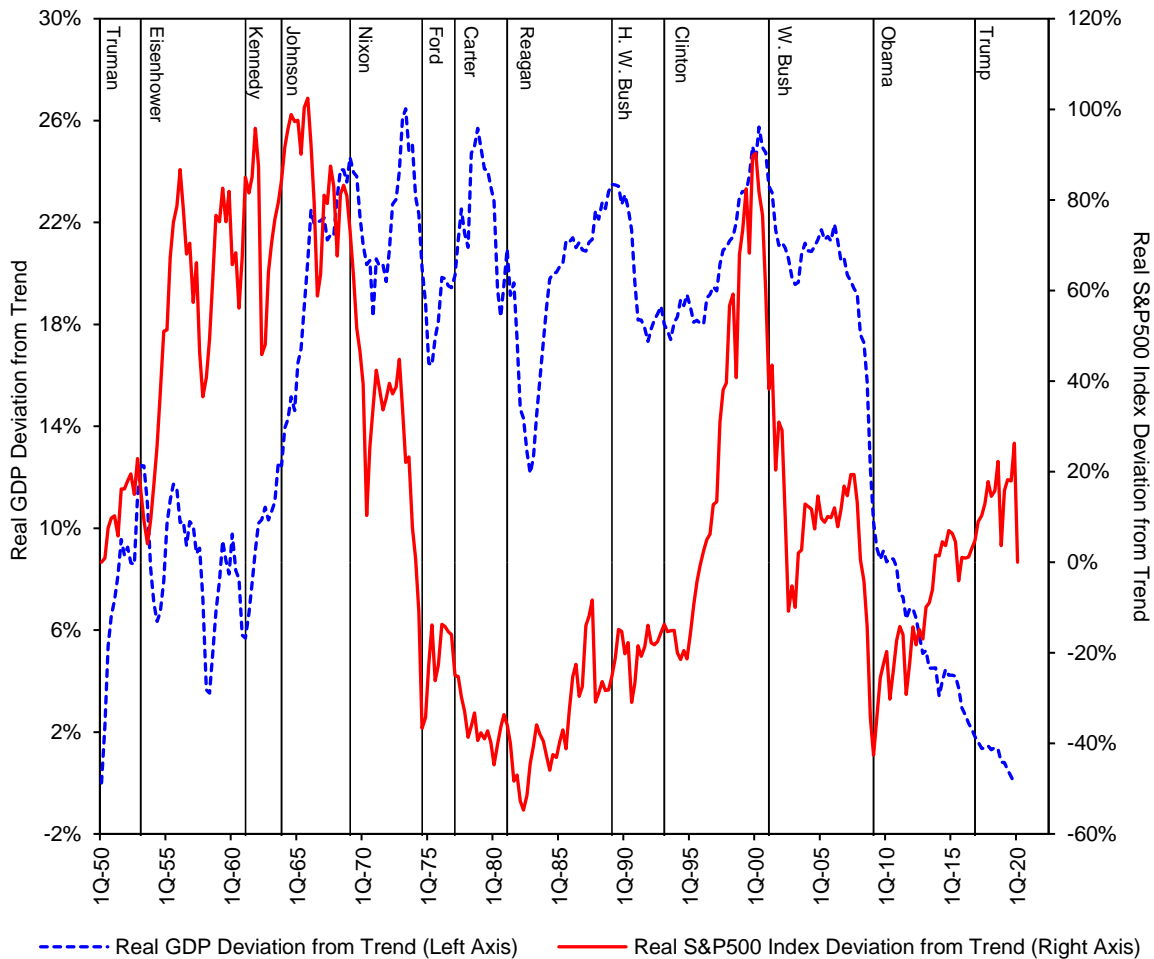
Source: Bureau of Labor Statistics, Laffer Associates

The 17.9% April 2020 unemployment rate estimate in Figure 4 reflects initial unemployment insurance weekly claims data from the four weeks ending March 21, March 28, April 4 and April 11. As many of these unemployed workers will be classified as “Not in the Labor Force”, this estimate likely overstates the official April 2020 unemployment rate that will be released on May 8, 2020.

Never before has anything like the current collapse in employment occurred in such a short period of time. In all of the other such extreme increases in unemployment, the overall economy was quick to follow suit and collapsed correspondingly.

In Figure 5, we have plotted U.S. real GDP detrended from the first quarter of 1950 through the fourth quarter of 2019, the most recent quarter with available data. We have also plotted the S&P500 stock index deflated by the GDP Price Deflator, also detrended from 1950 to the present. The thought here is that the stock market is, in part, a predictor of the future of the U.S. economy and that any major decline anticipated by those who know will show up first in stock prices.

Figure 5
Real GDP Detrended vs. Real S&P500 Index Detrended
 (real GDP detrended - quarterly, 1Q-50 to 4Q-19; real S&P500 index detrended - quarterly closing price, 1Q-50 to 1Q-20)



Source: Bureau of Economic Analysis, Bureau of Labor Statistics, Laffer Associates

It should be noted that there could well be separate biases in the two series—real stock prices detrended and real GDP detrended—which are dependent upon starting and finishing dates. For example, the trend line for real GDP is 3.17% per year and for real stock price it is 4.13% per year.

A central insight of this study is that in all of the other episodes of severe contraction—as well as in the current coronavirus collapse—the stock market has not only anticipated the collapse, but it has also estimated the magnitude of the collapse.³ From the culmination of the Roaring 20s through the 1930s, the stock market fell by some 90% from its high in 1929 to its low in 1930. In real terms, the stock market did not return to its 1929 peak until 1958.⁴

A simple conclusion here is that the stock market, at present, is forecasting a downturn for sure, but that downturn, over the course of the next year or two, all included is not expected to be long-lasting or very deep.

What About Gold?

The gold price is also a very good and reliable forward indicator of economic calamities. The gold price rises in advance of crisis for several reasons. One, it is a commodity that investors rush to in advance of crises to avoid the crash in asset prices associated with recession/depression. Second, it is a hedge against inflation. In each of the three previous severe economic contractions, the gold price rose rapidly.

³ There's a famous story that Paul Samuelson mockingly quipped that the stock market has forecasted nine out of the last five recessions, to which Robert Bartley retorted that in the other four forecasts, the government took note, changed policies and avoided the recession.

⁴ Robert J. Shiller, *Irrational Exuberance*, Princeton: Princeton University Press, 2016.

As of April 27, 2020, the gold price has risen just over 15%. That is a clear flight to safety, but it is nowhere on par with a global collapse in economic growth for a long period of time. Things could change with this picture in the coming months, especially if policy makers raise taxes, close global trade, pass massive new spending bills or, most importantly, if progress in containing the virus stalls or reverses. For now, gold is shouting out that the contraction will not be long lasting.

Is There Inflation?

Economists like our friend Larry Lindsey, a former Federal Reserve Board member, are shouting “beware of coming inflation” due to the massive increase in debt. *The Wall Street Journal* has run articles warning of the same threat of accelerating prices when the \$3 trillion in dollar liquidity by the Fed leads to a surge in demand when the recovery ends, but no surge in supply—meaning higher prices.

The markets, in addition to those for the stock market, including bonds, commodities, etc. are not seeing that.

The bond market, if anything, is forecasting low interest rates extending out as far as the eye can see. They do not contain any indication of impending inflation, even though U.S. debt held by the public has the potential to increase by as much as five trillion dollars in the coming six months. Many people do worry about inflation because the Fed’s balance sheet has also expanded by some four trillion dollars, but as of today, there is no sign of inflation.

In the longer term, there is one difference in today’s environment that augurs for inflation. During the 2008-09 crisis, there were numerous warnings, from various political-economic observers (including us), that the massive monetary responses on the part of the federal government and the Federal Reserve would stoke inflation. These warnings came to be ridiculed when inflation—outside of big price moves up in certain goods such as oil until 2014—did not materialize.

The putting to bed of the inflation hawks since 2008-09 means that there now is comprehensive sentiment that inflation is impossible. This was not the consensus in 2008; there was sentiment then that inflation could come. When there is no sentiment that inflation can arise, market support for downside surprise is lacking. Indeed, it has been fashionable since 2008-09 to predict and muse upon deflation. In precisely this environment there is potential, there is market support, for upside inflation surprise.

Another new condition is cryptocurrencies, which did not exist but on the tiniest scale in the previous crisis (Bitcoin’s debut was in January 2009). Today, whatever the vagaries of the crypto market, it is understood that there are now money-like vehicles beyond gold that conceivably can serve as inflation hedges, ones further that do not (like TIPS etc.) have counterparty risk attributes. This can breed complacency about inflation. It is understood that the bailout-vehicles in the case of inflation—even if cryptos are still only tentatively integrated into the global financial portfolio system—are today more numerous and developed than at the time of the last crisis.

Our view from reading the markets is that inflation will not rise over the near term.

U.S. Sectors and the Coronavirus Pandemic

Still using stock prices as indicators of future performance, we have used a traditional industry-wide breakdown to indicate what sectors of the economy are expected to decline and by how much. In Table 1 below, we list the sectors of the economy and their stock price performances from December 31, 2019 to today. These rankings should indicate where, how and by how much the sectors are expected to perform.

Table 1
U.S. Stock Market Performance by Sector
 (percent, December 31, 2019 to present)

Industry	Return
Energy	-39.16%
Financials	-24.54%
Industrials	-20.27%
Materials	-14.75%
Real Estate	-9.66%
Tele Services	-9.33%
Utilities	-6.73%
Consumer Staples	-5.51%
Consumer Discretionary	-4.54%
Information Technology	-1.92%
Healthcare	-1.72%

Source: Bloomberg. Data as of April 28, 2020.

State Policies Will Dictate the When and Where of the Coronavirus Recovery

President Trump has given broad authority to the states—and their governors—to enact start date policies for the end of “stay at home orders” and for business reopening. These policies are likely to vary far and wide. In this section, we forecast which states are likely to recover faster than others.

The U.S. coronavirus episode has impacted every state in the nation, but some far more than others. In Table 2 below, we have ranked each state from highest to lowest by the number of deaths per one million population. This table should give a rough guide as to the relative impact the coronavirus has had on each state. These numbers, it should be noted, are changing all the time and reflect the most recent updated mortality data from Johns Hopkins University.

Table 2
Coronavirus Deaths per 1M Population by State⁵
 (ordered from highest to lowest deaths/1M population)

State	Deaths/ 1M Population	State	Deaths/ 1M Population	State	Deaths/ 1M Population	State	Deaths/ 1M Population	State	Deaths/ 1M Population
1. New York	1165.2	11. Pennsylvania	147.3	21. Missouri	55.9	31. New Hampshire	44.1	41. North Dakota	24.9
2. New Jersey	680.5	12. Delaware	128.4	22. Virginia	53.9	32. Kansas	43.2	42. Texas	23.0
3. Connecticut	564.3	13. Indiana	125.4	23. Minnesota	50.7	33. Iowa	40.3	43. Oregon	21.8
4. Massachusetts	435.7	14. Colorado	122.6	24. Florida	50.7	34. Maine	37.9	44. West Virginia	19.0
5. Louisiana	374.3	15. Washington	100.3	25. Oklahoma	49.8	35. Arizona	37.8	45. Arkansas	16.9
6. Michigan	341.1	16. Georgia	93.7	26. Wisconsin	48.3	36. South Carolina	34.4	46. Montana	13.1
7. District Of Columbia	262.1	17. Mississippi	76.9	27. Kentucky	47.7	37. North Carolina	32.4	47. Utah	12.8
8. Rhode Island	219.9	18. Vermont	75.3	28. New Mexico	47.2	38. Idaho	31.3	48. South Dakota	12.4
9. Illinois	156.5	19. Nevada	66.9	29. Alabama	46.5	39. Nebraska	28.9	49. Alaska	12.3
10. Maryland	156.3	20. Ohio	64.4	30. California	45.0	40. Tennessee	26.9	50. Wyoming	12.1
								51. Hawaii	11.3

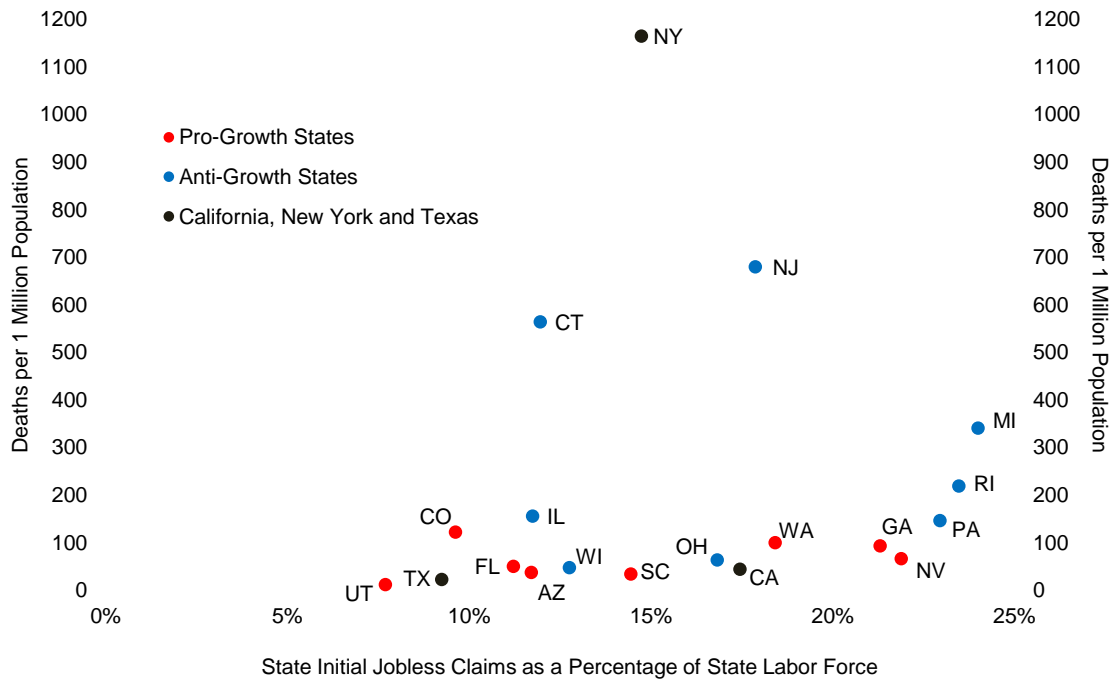
Source: Johns Hopkins University CSSE, U.S. Census Bureau. Data as of April 27, 2020.

From Table 2, New York’s impact (1,165.2 deaths per one million population) is huge compared to any other state. There are, at present, only 15 states that have 100 or more deaths per million population, while 27 states have 50 or fewer deaths per

⁵ Including the District of Columbia.

one million population. The states hardest hit will unquestionably be those states that will have to struggle the most to simply recover from the COVID-19 pandemic.

Figure 6
State Initial Jobless Claims as a Percentage of State Labor Force vs. State Deaths per 1M Population
 (initial jobless claims over five weeks: 03/21/2020-04/18/2020, population: 2019 Census Bureau estimate)



Source: Johns Hopkins University CSSE, U.S. Census Bureau, U.S. Department of Labor, Bureau of Economic Analysis. Data as of April 27, 2020.

Using a large and diverse set of characteristics, the states—on a state-by-state basis—cluster around pro-growth state/anti-growth state groupings—sometimes referred to as red states and blue states.

The blue states are likely to reopen their states more slowly than the red states for two reasons. First, they have generally been more impacted by the virus; it is clear that it is safer for Idaho and Nebraska to open up faster than Illinois or New Jersey. Even this is an oversimplification of sorts, because the coronavirus is mostly an urban disease that has most heavily impacted 12 major metropolitan areas with high population densities. The second reason that blue states and Democratic governors are calling for later start dates is that the Democrats have generally been much more cautious about the safety of starting commerce in their states. Republican governors have tended to lean toward economic and social recovery as a top priority. Or to put it another way, the anti-growth states are currently planning to open their economies slowly because they tend to value the health aspects of the pandemic relative to the economic aspects of the pandemic more than do pro-growth states. Pro-growth states, on the other hand, tend to side more with the economy and less with health restrictions. It is also a fact, as shown in Table 2, that “anti-growth” blue states tend to have suffered far more from the pandemic itself than have “pro-growth” red states.

Some critics of reopening state economies and the national economy argue that this will adversely affect the health and well-being of American citizens. Saving lives and keeping Americans healthy has to be of premier importance. But we have looked at the evidence across states and there is little if any evidence that states with stricter anti-work and business closure policies have been healthier than states with more lenient policies. Moreover, there is increasing evidence that social isolation from stay at home orders and the big increases in unemployment and business failures are highly associated with negative health consequences, including increases in suicide, heart attacks, drug overdoses, child and spousal abuse cases, depression and deprivation.

It goes without saying that each and every state’s governors and mayors reveres the health of its citizens as well as the prosperity of its economy. Different states just have different assessments of the costs and benefits as to when to reopen. We won’t know for several more months which position is right, but for now it is enough to say that blue states are laggards in getting business up and running.

In this paper, we examine what we call eight “momentum states” (or pro-growth states) which are states that have had superior economic outcomes in recent years and decades and eight “laggard states” (or anti-growth states), which are states that have tended to lag behind the national trend. We have also singled out three states to analyze separately because of their size and importance to the U.S. economy and because of unique circumstances in each of them that are likely to influence their recovery. The three separate states are California, New York and Texas.

In the Table 3 below, we show a ranking of these states in terms of economic performance prior to the coronavirus. In Table 4, we rank these states on their future economic outlook based on 15 variables related to taxes, regulations, debt, right to work laws, etc. In Table 5, we also show each state’s momentum going into this crisis based on the percentage growth in nonfarm payroll employment from 4Q-2007 to 4Q-2017.

Table 3
State Economic Performance Ranking
(2019, ordered from best ranking to worst ranking)

Laggard States	Rank	Momentum States	Rank	Special Cases	Rank
Pennsylvania	33	Washington	1	Texas	2
Wisconsin	34	Colorado	4	New York	17
Ohio	38	Utah	5	California	18
Michigan	42	South Carolina	8		
Rhode Island	44	Georgia	10		
Illinois	46	Florida	13		
New Jersey	49	Arizona	22		
Connecticut	50	Nevada	24		

Source: Rich States, Poor States: 12th Edition

Table 4
State Economic Outlook Ranking
(2019, ordered from best ranking to worst ranking)

Laggard States	Rank	Momentum States	Rank	Special Cases	Rank
Michigan	12	Utah	1	Texas	15
Wisconsin	20	Nevada	4	California	47
Ohio	24	Florida	8	New York	50
Pennsylvania	37	Arizona	10		
Connecticut	41	Colorado	17		
Rhode Island	42	Georgia	18		
New Jersey	46	South Carolina	29		
Illinois	48	Washington	39		

Source: Rich States, Poor States: 12th Edition

Table 5
Economic Performance of States – Nonfarm Payroll Employment Growth
(10yr quarter over quarter growth, 4q 2007 to 4q 2017)

Laggard States	Percent Change	Momentum States	Percent Change	Special Cases	Percent Change
Michigan	3.33%	Utah	17.61%	Texas	16.98%
Pennsylvania	2.94%	Colorado	14.21%	California	9.66%
Wisconsin	2.59%	Washington	12.39%	New York	9.17%
Ohio	2.08%	Florida	8.76%		
Rhode Island	1.87%	South Carolina	8.03%		
Illinois	1.63%	Georgia	7.57%		
New Jersey	1.56%	Nevada	4.96%		
Connecticut	-1.33%	Arizona	4.10%		

Source: Rich States, Poor States: 12th Edition

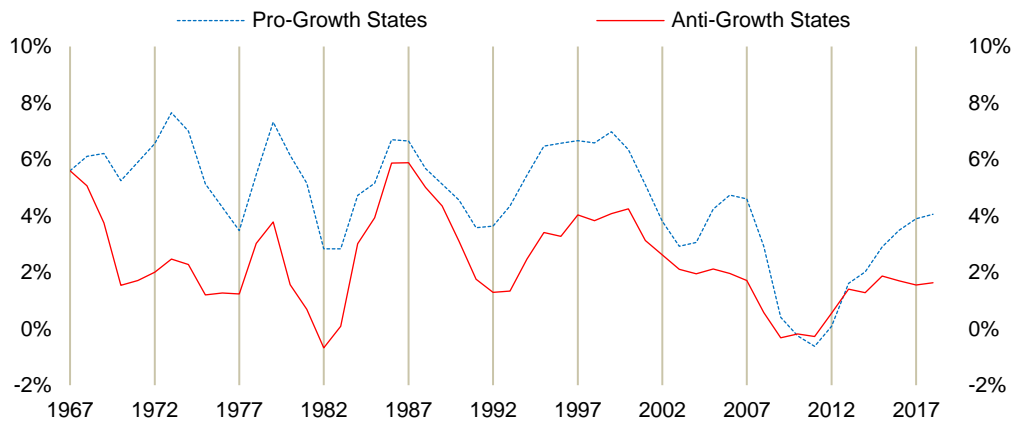
The criteria for grouping the two collections of eight states each are not precise, but do include Gross State Product (GSP) growth, employment growth, population growth and growth in total state and local tax revenues. The states that this study isolates are chosen based upon each state’s historical overperformance or underperformance vis-à-vis the whole U.S. economy. The study uses a long period of history to determine each grouping, but also notes breaks in some of the individual state’s relative performance. In the case of a radical shift in performance, the study weights more recent periods over more distant past periods. Connecticut and New Jersey, for example, were very pro-growth states until the late 1980s and early 1990s when they became the poster children of underperformance. But more on this later.

The criteria for classifying states is based primarily on three measures: their employment growth, their income growth and their state and local tax revenue growth over the past decade, plus the direction of their policies, i.e., are they reducing taxes and regulations or raising them. The eight “laggard states” are Connecticut, Illinois, Michigan, New Jersey, Ohio, Pennsylvania, Rhode Island and Wisconsin. The eight “momentum states” are Arizona, Colorado, Florida, Georgia, Nevada, South Carolina, Utah and Washington (state). At the outset, we eliminated from consideration the four small carbon, petrochemical and mining dependent states, to wit: Alaska, North Dakota, West Virginia and Wyoming. These four small overly dependent on hydrocarbons states are in for a lot of hurt. Oil prices have tumbled as never before.

In order to smooth over stochastic elements of an individual state’s performance, we present each state’s data using a five-year moving average. Hopefully, five-year moving averages will enhance the signal to noise ratios to support relevant conclusions.

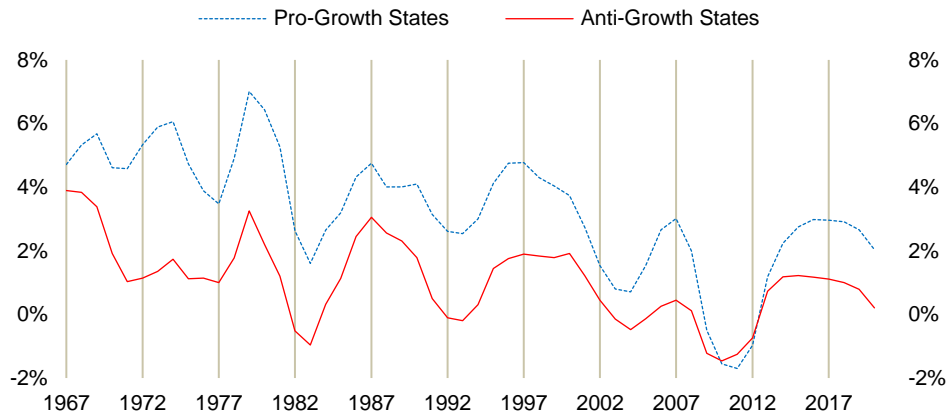
Lastly, by way of background information, we take our data series back to 1963 (1967 for reported five-year moving averages). There’s a lot to be learned from this longer perspective. In Figures 7-9, we have plotted the equal-weighted five-year rolling annual average real GSP growth, nonfarm employment growth and real state and local tax revenue growth of the eight anti-growth states versus an equal number of pro-growth states from 1967 through the most recent period with available data.

Figure 7
Unweighted Average Real GSP Growth, Pro-Growth States vs. Anti-Growth States
 (five-year rolling annual average, 1967-2018)



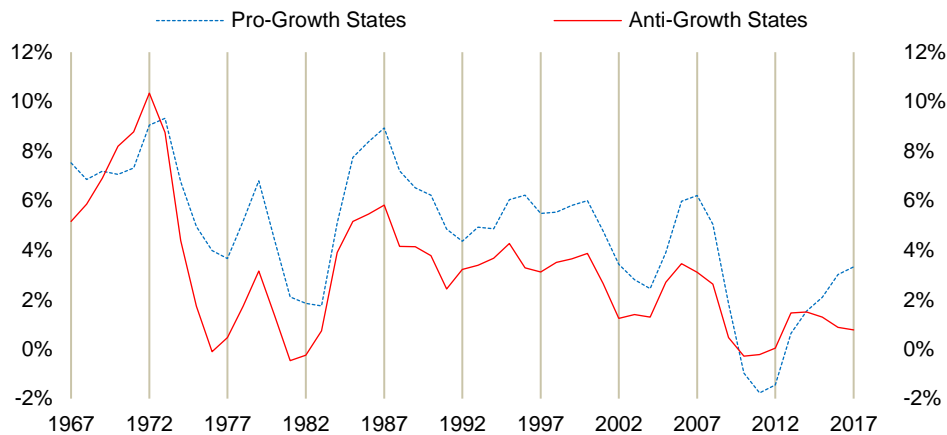
Source: Bureau of Economic Analysis

Figure 8
Unweighted Average Nonfarm Employment Growth, Pro-Growth States vs. Anti-Growth States
 (five-year rolling annual average, 1967-present)



Source: Bureau of Labor Statistics

Figure 9
Unweighted Average Real State and Local Tax Revenue Growth, Pro-Growth States vs. Anti-Growth States
 (five-year rolling annual average, 1967-2017)



Source: U.S. Census Bureau

A good bit of the explanation for the patterns of the early years of Figure 7 through Figure 9 can be attributed to major policy shifts in states that introduced income taxes after the time period began, such as Michigan (1967), Illinois (1969), Pennsylvania (1971), Rhode Island (1971), Ohio (1972), New Jersey (1976) and Connecticut (1991).⁶ These seven states, because they didn't have an income tax prior to 1967, raise the anti-growth line to the level of the pro-growth states for the year 1967. The fact that so many of these states introduced income taxes in or after 1967 contributed to the wider-than-normal disparity from about 1970 on through 1996. These laggard states also tend to have "closed shop" union work rules, high minimum wages, larger pension deficits and more regulation and red tape imposed on businesses.

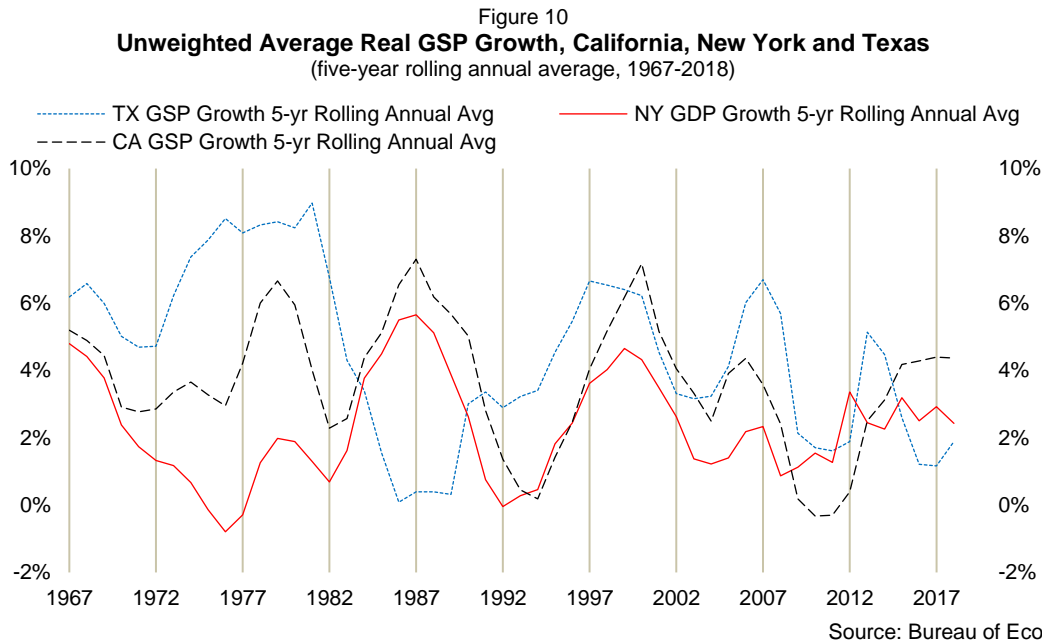
But if the truth be known, the adoption of a state income tax is almost the perfect indicator of poor performance. Other states also have poor performance, but tax policies and the concomitant set of other anti-growth policies, such as pro-union laws, minimum wages, etc. are the trademark of anti-growth states.

Conversely, on a state-by-state basis, the "momentum" states also share a number of characteristics, such as no income tax, right-to-work legislation, proximity to California, low other tax rates, etc. But there is no simple economic policy designation when it comes to the pro-growth states. Their successes tend to be due to the absence of bad policies rather than the presence of good policies. In other studies we have conducted, we have documented that the momentum states have produced jobs and population growth about double that of the laggard states. Their state personal income growth has been about 30 percent faster—though they have tended to start with a lower income level.

⁶ Arthur B. Laffer, Stephen Moore, Rex A. Sinquefeld and Travis H. Brown, *An Inquiry Into the Nature and Causes of the Wealth of States*, Hoboken: John Wiley & Sons, Inc., 2014.

The take from Figure 7 through Figure 9 is that both momentum states and laggard states have stayed pretty much on trend over the last several decades. Momentum states almost always outperform laggard states, and momentum states demonstrate far greater volatility than do the laggards.

When it comes to the three special states—New York, Texas and California—the overall U.S. pattern emerges as well, but performances are all over the board.



Based upon the data presented in this paper, we believe that New York, because of the huge incidence of coronavirus in the state as well as its late opening date, on top of the strong anti-growth posture, will suffer enormously over the coming years. Texas also is going to have serious problems recovering from the economic downturn, due to the enormous collapse in oil prices. Texas has diversified over the last few decades, but it is still highly dependent on oil and gas production, which has been grounded due to low prices. The only factor mitigating Texas's bad outlook is its aggressive, pro-growth status.

The other laggard states will fare poorly in their attempted recovery over the long run. A portion of the pro-growth states, specifically Arizona, Florida and Nevada, will take a large hit in the near term, but then will recover quickly and strongly. In the longer term, the patterns of state performance will proceed as they have in the recent past, only at a more accelerated pace.

California, is likely to perform right in the middle of the pack of all states because it has not been as hard hit as previously thought and because the industries that drive the state—especially technology—are less negatively impacted by the lockdown than other industries.

Concluding Thoughts

- 1) An important assumption underlying our optimism for the economy is that the federal government will not attempt to bail out states or spend trillions more on income redistribution programs. A bail out of the states would have a large negative impact on the U.S. economy. Federal spending is negative, not positive, for economic growth, especially if it is aimed at low priority projects, such as bailing out state and local pension funds, mass transit, green new deals and so on.
- 2) A recurrence of the virus with a second shutdown would have a very negative effect on the economy, but financial markets have already priced in that risk.
- 3) A payroll tax cut will strongly accelerate the recovery by rewarding both work and hiring.
- 4) If the national economy performs poorly, then the blue states are likely to suffer a bigger blow than the red states. Already, we have seen large increases in unemployment in states like Connecticut, Illinois, Michigan, New Jersey, New York, Ohio and Pennsylvania. These states already have very large budget deficits and their state budgets will be wrecked by a prolonged economic slump. We wouldn't be all that surprised if a handful of states, counties, cities and special districts file for bankruptcy protections over the coming two years.
- 5) Every day that states keep their economies closed leads to a cascading negative impact on not only their own economies, but also the national economy. We are a 50-state free-trade zone. A strong national economic recovery

will be inhibited if California, Illinois, Michigan and New York keep their economies shuttered into the summer months. These four states alone account for about one-third of the national output. ALL states would benefit mightily if California, Illinois, Michigan and New York open sooner rather than later.

©2020 Laffer Associates. All rights reserved.

No portion of this report may be reproduced in any form without prior consent. The information has been compiled from sources we believe to be reliable, but we do not hold ourselves responsible for its correctness. Opinions are presented without guarantee.