

**A Post-COVID Recovery is Unlikely to Resemble the Roaring 20s;
The Years 1919 and 1999 Provide More Insightful Comparisons**

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EXECUTIVE SUMMARY

The economic effects of the COVID-19 pandemic, although not unprecedented, certainly qualify as exceptional. However, as of June 12, 2021, the percentage of the U.S. population receiving vaccinations was steadily increasing, and a return to normalcy appeared to be finally within reach. From an investment perspective, this raises questions as to what the future holds. Although it is impossible to answer such questions with precision, it can be insightful to look to history for guidance. To this point, some financial writers have recently suggested that a recovery may resemble the Roaring 20s — implying that an extended period of exceptional wealth creation and spending excesses looms on the horizon. If one reviews the fundamental economic drivers during this period, however, such a scenario seems unlikely for several reasons. First, the Roaring 20s itself is a misnomer, as it took several years before Americans recovered from the devastating effects of World War I, the Great Influenza, and an oft forgotten depression that kicked off the decade in 1920-1921. The speculative phase of the Roaring 20s did not begin in earnest until around 1924 or 1925. Second, the Roaring 20s was fueled largely by a one-time expansion of consumer credit that affected both the real economy and securities markets. Real economic growth was boosted by the increasing use of credit to purchase an array of new consumer products, such as radios, televisions, and automobiles, while speculation in the stock market was fueled by lax monetary policy and reckless use of call money to purchase securities on margin. Although it is true that the stock market bubble of 1929 shows some similarity to the speculation that we may already be witnessing in 2021, it is unlikely to be amplified by margin debt like it was in 1929. **Figures 1, 2, and 3** on the following page provide a glimpse of several effects of the Roaring 20s.

Although the dynamics of the Roaring 20s offer limited insight into a potential post-COVID recovery, there are two years in the historical record that may provide important lessons. The first is 1919, which is the year immediately following the end of World War I and the deadly second wave of the Great Influenza. For much of that year, America enjoyed a sharp rebound in consumer spending, as years of pent-up demand from quarantine and war-related frugality were suddenly unleashed into the economy. The second is 1999, which is the year that Americans became possessed by the false belief that internet stocks offered a shortcut to instant wealth. Unfortunately, the euphoria experienced during both periods proved to be short lived, and Americans suffered painful corrections in 1920 and 2000.

The purpose of this paper is to prepare investors for potential post-COVID scenarios by highlighting the parallels between our current circumstances and the years 1919 and 1999. Should the next several years unfold in a similar manner, awareness of these events may enable readers to react with greater calm and discipline. There is value to this sort of scenario planning, as the root cause of financial panic is often the erroneous belief that unexpected financial shocks signal permanent economic impairment, when, in fact, they usually constitute normal points of transition that are simply unfamiliar. Building on the lessons from 1919 and 1999, the core message of this paper is that the current environment seems to call for a healthy balance of well-earned enthusiasm (the lessons of 1919) coupled with cautious restraint (the lessons of 1999). On a positive note, Americans have suffered from social deprivation for more than a year. Therefore, to the extent that their excess savings allow, increased spending on luxuries that were once considered necessities appears to be a justifiable reaction. On the other hand, excess savings also appear to be increasing speculative behavior in securities markets, which is reminiscent of what occurred in 1999. It is conceivable that this speculation will intensify as excess savings inevitably seeks a new destination over the coming months. In light of this potential scenario, it will be important for investors to recall the lessons of history and consider that an equal and opposite correction may soon follow. If it does, investors would be well-served by preparing themselves psychologically for such a possibility.

Evidence of Increased Credit-Based Sales

Figure 1: Total U.S. Radio Sales (1922 – 1929)

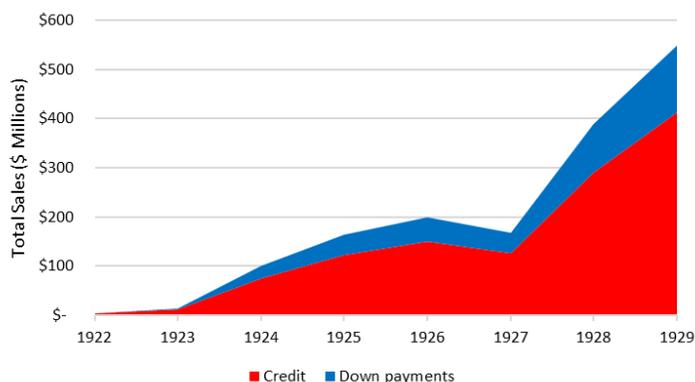


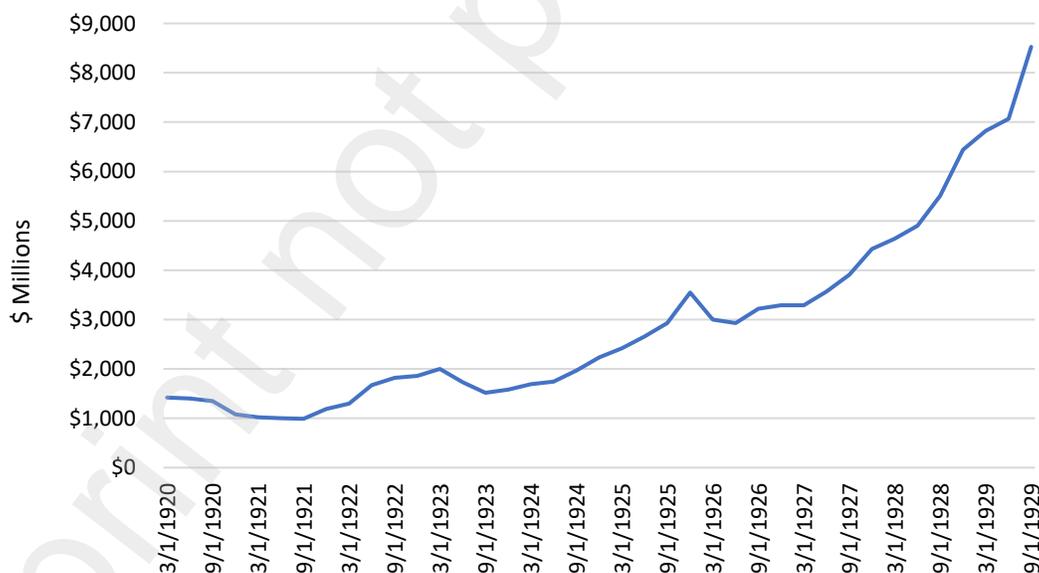
Figure 2: General Motors Acceptance Corporation Total Notes Receivable (\$ Millions)



Source: Persons, Charles E. "Credit Expansion, 1920 to 1929, and Its Lessons." *The Quarterly Journal of Economics*. 45, no. 1 (1930): 114,123.

Evidence of Increased Margin Debt in Securities Markets

Figure 3: Total Value of Call Loans Outstanding (\$ Millions) (March 1, 1920 – September 30, 1929)



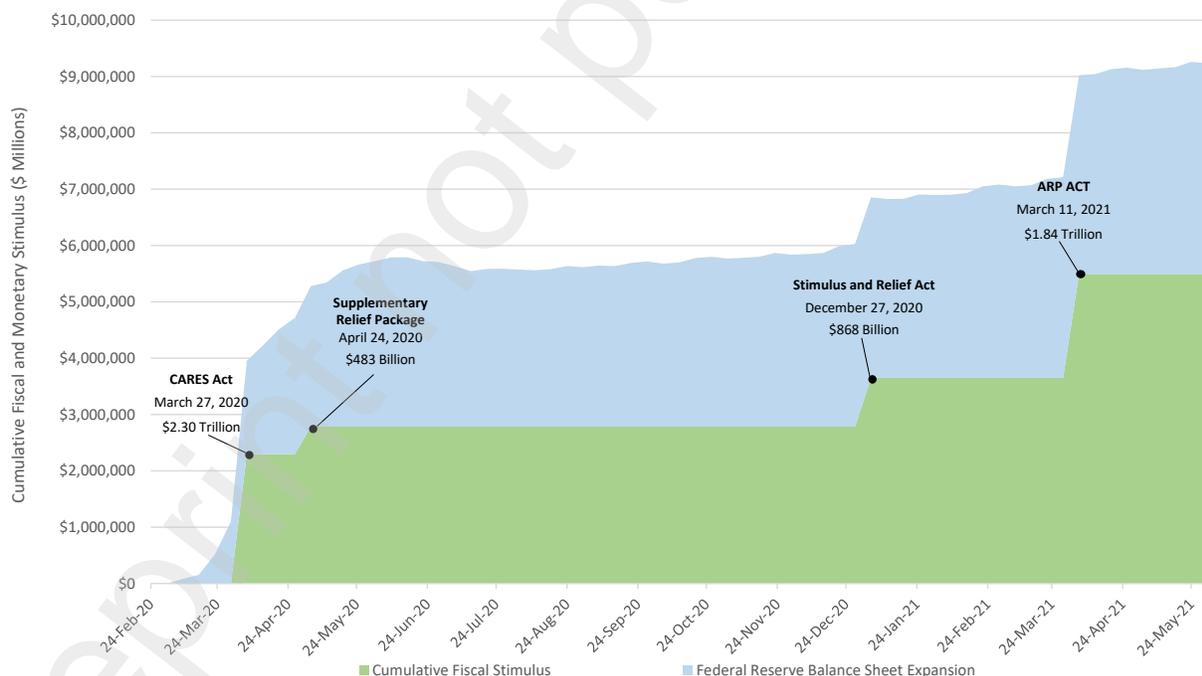
Source: Smiley, Gene, and Richard H. Keehn. "Margin Purchases, Brokers' Loans and the Bull Market of the Twenties." *Business and Economic History* 17 (1988): 129-42.

WHAT HAPPENED IN 2020?

Before detailing the parallels between 2021 and the years 1919 and 1999, it is important to first understand what happened in 2020. Unsurprisingly, the most impactful event occurred in March 2020 when the world came to the sudden realization that a novel coronavirus had metastasized into a deadly pandemic. This realization arrived with little warning and caught most of us physically and psychologically unprepared. Although epidemiologists had warned of pandemics for decades, almost nobody had first-hand experience.

On the other hand, from a purely financial perspective, the events of 2020 were quite familiar. The U.S. dealt with a similar challenge during the global financial crisis in 2008 and 2009. In fact, our collective memory of that crisis likely provided politicians and central banks with the required fortitude to enact massive fiscal and monetary responses in record time. Actions included a return of interest rates to the zero bound, the launch of multiple asset purchase programs approaching \$4 trillion, and the approval of more than \$5 trillion dollars of fiscal stimulus (approximately 25% of GDP). All of this was accomplished in a political environment tainted by an extraordinarily high level of divisiveness. Yet even with these measures, real GDP in 2020 declined by 3.5% relative to 2019.¹ Although this was still painful, there is little doubt that the combined efforts of monetary and fiscal authorities prevented a much more devastating depression. **Figure 4** shows the magnitude of fiscal and monetary stimulus enacted since the outbreak of COVID-19 in early 2020.

Figure 4: Cumulative Fiscal Stimulus and Federal Reserve Balance Sheet Expansion (\$ Millions)
(February 24, 2020 – May 31, 2021)



Source: Federal Reserve (2021); International Monetary Fund (2021).

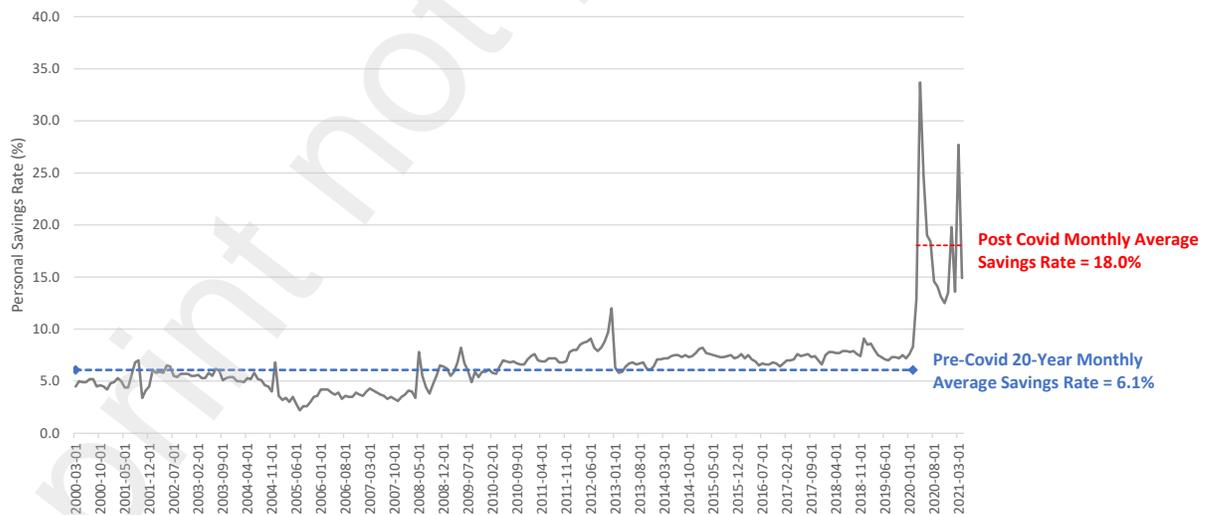
¹ "Gross Domestic Product, 4th Quarter and Year 2020 (Advance Estimate). Bureau of Economic Analysis. (January 28, 2021).

Lessons from the Outbreak of World War I in 1914

Interestingly, the closest parallel to the initial shock wave that hit the United States in March 2020 was not the start of the Great Influenza in March 1918 — it was the start of World War I on July 28, 1914. Up until the moment that Austria-Hungary declared war on Serbia, few Americans thought that such a war was even remotely possible. Recounting the surprise among members of the Wall Street community, the President of the New York Stock Exchange, Henry George Stebbins Noble, lamented, “Up to the final moment of the launching of the ultimatum between the European governments, no one thought it possible that all our boasted bonds of civilization were to burst overnight and plunge back into medieval barbarism.”² Fortunately, having learned valuable lessons during the Panic of 1907, government and financial leaders responded quickly and with overwhelming force when signs of panic began to surface on July 30th. The closing of the New York Stock Exchange on the morning of July 31st, coupled with the immediate invocation of the Aldrich-Vreeland Act, prevented a catastrophic stock market crash and potential run on the U.S. banking system and gold reserves.³

In 2020, the monetary and fiscal stimulus enacted in response to COVID— although executed with different tools — had a similar effect. The sharp economic decline that began in March 2020 was largely offset by massive capital injections into the financial system and directly into the pockets of Americans. However, not all of the stimulus made its way into the economy. Instead, over the past year, Americans dramatically increased their savings. Since March 1, 2020, the personal savings rate averaged an astounding 18.0%, which is nearly triple the 6.1% average of the prior 20 years (see **Figure 5**). In other words, despite large and admittedly painful pockets of financial distress, many American households now sit on a substantial amount of excess savings. If they deploy this savings when the threat of COVID-19 subsides, it will function as a powerful economic stimulus...which brings us back to the year 1919.

Figure 5: United States Personal Savings Rate
(January 1, 2000 – April 1, 2021)



² Grant, James. *The Forgotten Depression: 1921: The Crash that Cured Itself*. Simon & Schuster: New York. (2014): Page 47.

³ Although the Federal Reserve Act was passed in 1913, it was not operational until November 1914. Fortunately, the U.S. had passed the Aldrich-Vreeland Act in 1908, which allowed for the creation of emergency currency in times of crisis. Had it not been for the Aldrich-Vreeland Act, it is likely that the private sector would have been forced to scramble to create improvised financial rescues similar to those orchestrated by J. Pierpont Morgan in October and November 1907.

Economic Activity During the Pandemic

The similarities between 1919 and the present are fairly intuitive. Just as 2021 will likely mark the end of the most acute phase of the COVID pandemic in the United States, 1919 marked the end of the most acute phase of the Great Influenza (not to mention World War I).⁴ Although total COVID-related fatalities will almost certainly be less than the estimated 50 million killed by the Great Influenza, the magnitude of the two pandemics are roughly comparable. Unfortunately, it is difficult to quantify these similarities precisely because the initial economic impact of the Great Influenza pandemic was masked by the dramatic increase in World War I-related spending that took effect at the same time. Ironically, it seems likely that U.S. war-related spending in 1918 functioned as a powerful fiscal stimulus that neutralized the decline in consumer spending resulting from the pandemic. To this point, total U.S. government spending in 1918 was approximately 24% of GDP (up from only 2.1% in 1916).⁵ This is an amount that is almost identical to the 25% of GDP spent in response to COVID-19. In short, it is conceivable that war-related spending masked what would have otherwise been a sharp decline in economic activity in 1918. Instead, Real GNP declined by only 1.5% in 1918, which is strikingly similar to the 3.5% GDP decline in 2020.⁶ These metrics are shown in **Figure 6** and **Figure 7**.

Figure 6: Government Spending As a Percentage of GDP

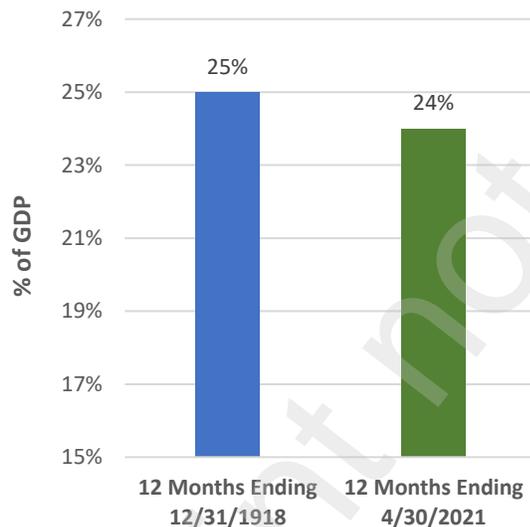
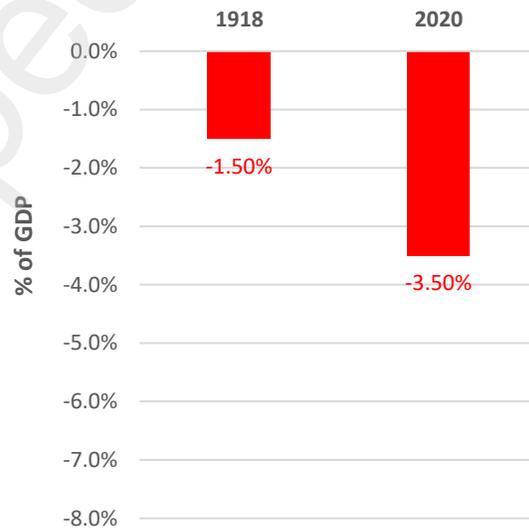


Figure 7: Year-over-Year Decline in GDP



⁴ Interestingly, 1919 did not mark the end of pandemic-related fear. After censorship restrictions were lifted at the end of 1918, newspapers frequently reported new outbreaks of influenza with a decidedly panicked tone. While the Great Influenza technically ended in 1919, that is not how people living at the time experienced it. It seems likely that the experience in 2021 will be similar.

⁵ Newman, Patrick. "The Depression of 1920-1921: A Credit Induced Boom and a Market Based Recovery?" *Review of Austrian Economics*, Forthcoming. (December 5, 2015). Pp. 15.

⁶ "Social and Economic Impacts of the 1918 Influenza Epidemic." National Bureau of Economic Research (May 2020).

Post-Pandemic Economic Activity

After the announcement of an armistice that ended World War I on November 11, 1918, most Americans feared that a deep depression was imminent. The thought was that the end of war-related spending, coupled with reduced European demand for U.S. exports, would lead to a collapse in economic activity. Although America did in fact experience a slight drop in real GNP of approximately 1% during the entirety of 1919, it was wholly attributable to economic weakness during the first few months of the year (which also happened to coincide with the third and final wave of influenza).^{7,8} For the remainder of the year, despite a more than 50% reduction in war-related government spending, strong exports and consumer spending more than filled the void.⁹ It is hard to imagine that this was not primarily attributable to post-war and post-pandemic euphoria. Americans were understandably eager to purchase luxuries and re-engage in activities that they had suppressed for years. Further, it was not as if they lacked cash. Enriched by record U.S. trade surpluses and increased propensity to save, the wealth of Americans increased substantially during the war years.

Improved consumer sentiment, however, was not the only factor at play in 1919. Spending was also fueled by cheap credit, as the Federal Reserve Banks maintained a highly accommodative monetary policy for too long.¹⁰ There were several explanations for this, the most significant of which appears to be pressure from the U.S. Treasury, which was concerned about servicing a floating rate portion of the war debt issued over the prior two years.^{11,12} In addition, both the Treasury and Federal Reserve Board were concerned about the impact of higher rediscount rates on the health of the financial system, as many banks had loaded their balance sheets with Liberty and Victory Bonds to fulfill their patriotic duty.¹³ Therefore, despite growing concerns about inflation and speculation, the Federal Reserve reluctantly delayed raising rediscount rates.¹⁴

THE DEPRESSION OF 1920-1921

The consumer spending binge in 1919 did not last long, and it was followed by a short but severe depression that began in January 1920. The most significant catalyst of the downturn was aggressive (albeit delayed) tightening of monetary policy by the Federal Reserve Banks. Faced with inflation approaching 20%, the Federal Reserve Bank of New York raised the rediscount rate from 4.75% to 6.00% in January 1920, and then followed with a second increase to 7.00% in June 1920.^{15,16} In contrast to the standards employed today, the Federal Reserve Banks offered remarkably little advanced warning, and the magnitude and suddenness of these increases caught many in the financial community off guard. In

⁷ Rockoff, Hugh. "Until It's Over, Over There: The U.S. Economy in World War I." *National Bureau of Economic Research*. (June 2004). pp. 32.

⁸ Gross National Product (GNP) was the standard metric of economic output used during this time.

⁹ Newman, Patrick. "The Depression of 1920-1921: A Credit Induced Boom and a Market Based Recovery?" *Review of Austrian Economics*, *Forthcoming*. (December 5, 2015). pp. 15.

¹⁰ The term "Federal Reserve Banks" is used several times when describing monetary policy. This reflects the fact that each regional bank had flexibility to set their own discount rates, and these rates often differed.

¹¹ Friedman, Milton and Schwartz, Anna. *A Monetary History of the United States, 1867-1960*. Princeton University Press: New Jersey. (1963): pps. 223-224.

¹² One must consider that the Federal Reserve had only existed for five years. Independence of policy decision and clarity of the Federal Reserve System's mandate (i.e., balancing employment and inflation) were not established at the time.

¹³ Friedman, Milton and Schwartz, Anna. *A Monetary History of the United States, 1867-1960*. Princeton University Press: New Jersey. (1963): pps. 223-224.

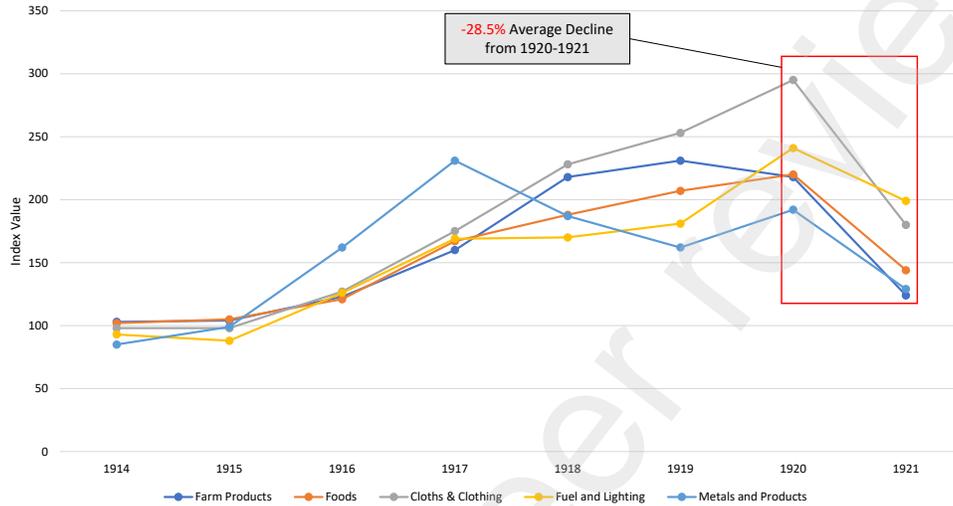
¹⁴ The "rediscount rate" was the rate of interest charged to member banks for securities that were provided as collateral to the Federal Reserve Regional Banks in exchange for currency.

¹⁵ Board of Governors of the Federal Reserve System. *Banking & Monetary Statistics, 1914-1941. (Page 441)*. (November 1943): pps. 439-440.

¹⁶ The timing and amount of the increase in the discount rate is based on the policy of the New York Federal Reserve Bank. Unlike monetary policy today, the regional banks had flexibility to offer different discounts rates. Although most adhered to the similar policies, not all adopted the same interest rate changes.

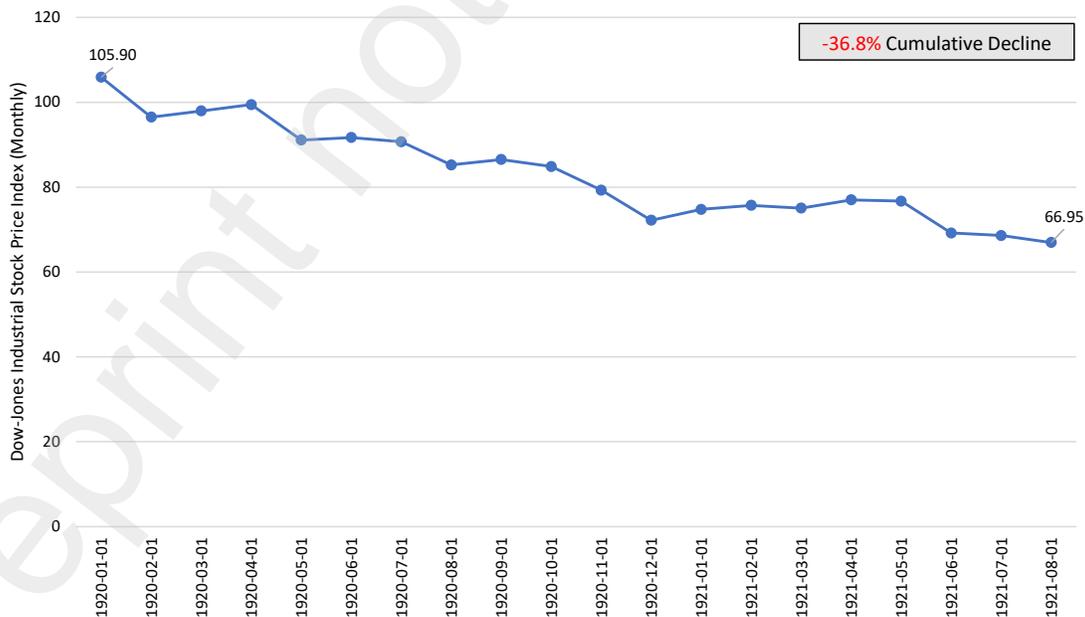
terms of the outcome, if the goal was to reduce inflation, the Federal Reserve System certainly achieved its objective, as wholesale prices collapsed over the next year (see **Figure 8**). Unfortunately, higher rediscount rates also took a toll on stock prices, as reflected by the decline in the Dow-Jones Industrial Average (see **Figure 9**).

Figure 8: Wholesale Prices for Selected Commodities and Products (1914 - 1922)



Source: Wholesale Prices, 1890 to 1922: Bulletin of the United States Bureau of Labor Statistics, No. 335.

Figure 9: Dow-Jones Industrial Stock Price Index (January 1, 1920 – August 1, 1921)



Source: Dow-Jones Industrial Stock Price Index for United States. Federal Reserve Bank of St. Louis. (M1109BUSM293NNBR)

The Federal Reserve was soon forced to reverse course, and in May 1921, the Federal Reserve Bank of New York took the lead by cutting the rediscount rate to 6.50%. By December 1921, a series of additional cuts reduced the rate to 4.50%. By early 1922, the economy regained its footing, and the short, but severe depression of 1920-1921 came to an end. The remainder of the 1920s is a story in and of itself, and it concluded with one of the most intense periods of speculation in U.S. history. However, the infamous bull market of the Roaring 20s did not begin until around 1925, and the most intense period of debt-fueled speculation was largely concentrated in 1928 and 1929. Therefore, the Roaring 20s (particularly the early years) seem to offer few similarities to a potential post-COVID economy. The Internet stock craze of 1999, however, does offer some interesting insights.

THE INTERNET BUBBLE OF 1999

The parallels between 1999 and 2021 are the more alarming of the two comparisons presented in this paper. In his classic book, *A Short History of Financial Euphoria*, author John Kenneth Galbraith makes the following observation when explaining the mania that possesses investors who participate in speculative bubbles.

“There can be few fields of human endeavor in which history counts for so little as in the world of finance. Past experience, to the extent that it is part of memory at all, is dismissed as the primitive refuge of those who do not have the insight to appreciate the incredible wonders of the present.”¹⁷

With this statement, Galbraith articulated an enduring characteristic shared by virtually all asset bubbles throughout history – the false, but pervasive, belief that things will turn out differently this time. In 1999, the “this time is different” thesis infected Americans. Although it may not have seemed so at the time, the internet stock bubble of 1999 followed a well-trodden path. The process goes something like this: (1) somebody invents a new technology; (2) hordes of entrepreneurs launch new businesses and promise to generate enormous profits by leveraging the new technology; (3) millions of people invest in these companies, believing that any business remotely associated with the new technology will bring instant wealth; (4) prices of companies associated with the new technology (regardless of the strength of the association) soar to heights that become utterly disconnected from any reasonable estimate of future earnings; (5) after enough time transpires, investors wake up to the reality that although the new technology itself may be revolutionary, most companies seeking to exploit it are not; and (6) the bubble bursts, and those who wagered their nest eggs find themselves in the unenviable company of countless victims who suffered similar fates across cultures and time. These victims include Dutch investors who traded their homes for tulip bulbs; English investors bankrupted by investments in South Sea Company shares; French investors suckered into John Law’s Mississippi Company; and American investors fleeced by transcontinental railroad pioneers. In short, bankruptcy databases are teeming with names of individuals who believed that new technologies would somehow magically negate the time-tested repetition of greed-induced mania.

Even before the emergence of COVID-19, behavior reminiscent of 1999 appeared to be creeping back into securities markets. Contenders for the next bubble include cryptocurrencies, meme stocks, and a selection of overheated tech stocks. This does not mean that there is no long-term value in some of underlying technologies (or some of the companies for that matter). The Internet was a real game changer in 1999, and these technologies may be game changers as well. The point is simply that many, if not most,

¹⁷ Galbraith, John Kenneth. *A Short History of Financial Euphoria*. Penguin Books: New York. (1994): pp 13.

of the companies seeking to exploit these technologies are unlikely to deliver the earnings that are implied by their current valuations. It is also conceivable that, in aggregate, the valuation of these companies has or will become disconnected with their aggregate earnings potential. In other words, there is risk that entire sectors of the market have or will become substantially overvalued. The question, of course, is when this will occur and how painful the correction will be. To provide some crude guidance, it may be helpful to consider the fate of the top performing Internet mutual funds. Funds such as the Monument Internet Fund, Enterprise Internet Fund, or just the shamelessly opportunistic “Internet Fund” posted impressive triple digit gains in 1999, but quickly ceased to exist after crashing back to earth in 2000.¹⁸ It is not a stretch to believe that many trendy funds today will suffer similar fates.

In the meantime, however, there is reason to believe that prices of these companies are more likely to rise before they fall back to earth. The extent to which this occurs depends on how Americans deploy their excess savings. If savings is primarily directed toward increased consumer spending rather than speculation, upward pressure on prices could be modest. However, if the timeless temptation of instant riches proves to be the more powerful draw, upward pressure on prices could rise quite a bit more. Further confusing the picture is the potential for stock valuations to emit deceptive signals. For example, it is conceivable that company earnings as a group may become temporarily inflated by a sharp, but temporary, uptick in economic activity fueled by the drawdown of excess savings. Once Americans exhaust these savings, it is conceivable that earnings will return to a lower level. This would not be unlike what happened in 1928-1929, when corporate earnings were artificially inflated by the systematic pulling forward of future sales due to the increase in credit-based consumer purchases, coupled with the practice of using spare cash on corporate balance sheets to generate supplemental income from issuing call loans to investors. When the economy turned in 1930, this magnified the decline in corporate earnings, as demand for consumer products collapsed from heights that were otherwise unachievable and income from shadow banking activities evaporated. Although the underlying cause of inflated earnings were certainly different in 1928-1929, the effect of their disappearance could be similar to what happens over the next few years.

CONCLUSION

During the 12 months following the March 2020 announcement of the COVID-19 pandemic, massive monetary and fiscal stimulus prevented a catastrophic economic contraction in the United States. Although much of the stimulus is already spent, a large portion remains on the sidelines in the form of excess personal savings. As the COVID-19 pandemic subsides, it is conceivable, if not probable, that people will spend down their excess savings, which could fuel a consumer spending rebound reminiscent of 1919. Alternatively, some people may prefer to speculate, which could fuel a further rise in asset prices reminiscent of 1999. Should these scenarios play out, it will be important to remain disciplined, as it may not last long. Painful economic contractions and substantial asset price declines quickly followed in 1920 and 2000, respectively. Therefore, investors would be wise to mentally prepare for sharp market movements in both directions. It is conceivable that within the next few years investors will be first tempted by the lure of a speculative frenzy, but this may soon be followed by an equal and opposite urge to flee from a painful a market correction. Should this scenario occur, it will be important to remain committed to one’s long-term objectives and resist the temptation to alter it based only on a knee-jerk reaction to the present.

¹⁸ Sahadi, Jeanne. “Net Funds Shine in 99.” *CNN Money*. (December 29, 1999).