Library of Congress

MARKETS OF THE ROARING '20s

Are We Headed for Another Crash?

By William R. Gruver

Economist John Kenneth Galbraith famously said of those attempting to predict future stock market performance, "There are two kinds of forecasters: those who don't know, and those who don't know they don't know." He also quipped that the only function of economic forecasting was to make astrology look respectable.

"Idea for Economy Number" cartoon, originally published in *Life* magazine, 1925.

His point is well made—it is impossible to know with certainty what tomorrow holds. There are simply too many variables in today's complex markets, each changing at a breakneck speed. To best prepare for the future, ironically, investors might be better served to look to the past for trends that might impart some wisdom.

In that spirit, one can't help but compare Covid-era America with the events of 100 years ago. In 1918, the United States was battling a pandemic, the Spanish Flu, which killed more people worldwide in 15 months than the bubonic plague had in a century. Communities from coast to coast faced the aftermath of acute economic and racial unrest. In 1920, Warren G. Harding was elected President on a campaign promise of a "return to normalcy." The names have changed, but the story sounds eerily familiar.

Given the parallels, it is reasonable to wonder—are we entering a bull market similar to the 1920s when stock prices more than doubled? And, if so, are we in a financial bubble[1] headed for another 1929 stock market crash?

Financial bubbles are not always bad things. In fact, bubbles can be great for investors who can exit before market prices reach unsustainable levels. Leaving a roaring bull market, however, is harder than it sounds. It is contrary to human nature, akin to leaving a party at its peak.

In the 1920s, a few legendary investors managed to do exactly that. Among them were Roger Babson, founder of the eponymously named college; John Jakob Raskob, builder of the Empire State Building; and Joseph Kennedy, first chairman of the SEC and father of President John F. Kennedy. Each of these investors made—or added to—their fortunes by knowing when to say "enough."

There is a broad suspicion the US equities market is now experiencing a bubble. It took only a few short months in 2020 for investors to pivot from distress to euphoria as stock prices soared above pre-pandemic levels. The price-earnings (P/E)[2] ratio provides additional evidence that shares might be overvalued in today's market.

The historical average P/E ratio for the S&P 500 is 15×. Today's ratio, using data from the last 12 months, is 30×. It has only been this high twice in history—during the dot-com bubble in the late '90s, when it reached similar levels, and the 2008 financial crisis when it peaked at 70×.

One could also calculate the ratio based on estimates of future earnings per share over the next 12 months, to account for the negative effects of the pandemic lockdowns on earnings. In doing so, one would find the P/E ratio to be 20×, still above the historical average. Regardless of how the numbers are crunched, the conclusion is clear—we are in a bubble.

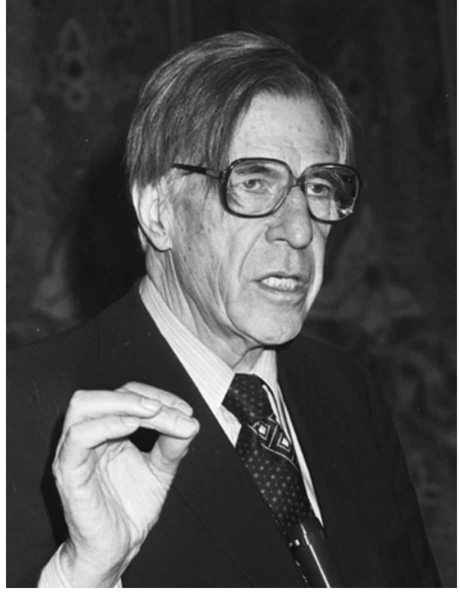
But the question remains, how close is the bubble to bursting?

After the 1929 crash, Galbraith identified four factors that support financial bubbles. Imagine a four-legged stool—when all legs are intact, the market is solid as a rock. As legs begin to break, the stool becomes increasingly perilous to sit on. In a similar fashion, when a critical mass of these indicators are disrupted, the bubble bursts.

The following four factors, in various orders and extremes, have successfully explained the 1929 crash, as well as subsequent crashes.

1. Laissez-Faire Government

Financial bubbles require regulatory and tax policies that are friendly to business. This has little to do with politics, and everything to do with the impact of public policy on earnings. In the 1920s, the beginnings of congressional tariff discussions—that eventually became the Smoot Hawley Tariff Act—were seen by market professionals as a signal that laissez-faire was coming to an end. Before the 1987 crash, mere congressional talk of eliminating the ability to deduct interest on high-yield bonds signaled to the markets that the Reagan era of hands-off authority was ending and contributed to the bubble bursting.



Dutch National Archives

Economist John Kenneth Galbraith, who famously said of those attempting to predict future stock market performance, "There are two kinds of forecasters: those who don't know, and those who don't know they don't know."

The Biden administration has played an aggressive role in attempting to mitigate the aftermath of the pandemic with passage of the American Rescue Plan, along with publishing 52 executive orders in his first weeks in office and proposing significant increases on individual and corporate taxes.

These interventions, along with the appointment of Gary Gensler as SEC Chairman—who advised on the Sarbanes-Oxley Act to address the excesses of the dot-com bubble—indicate the climate will not be as friendly toward business as it had been under prior administrations. This leg of the stool is cracked but not fractured.

President Biden has thus far not followed the preferences of the most extreme elements of his party. For example, despite Senator Bernie Sanders, et al advocating for a $5 trillion infrastructure plan, President Biden has agreed to the $1 trillion infrastructure package approved by the Senate. Were the President to succumb to these extreme elements, the crack in this leg of the stool would become a compound fracture.

2. Leverage

Is the stock price being supported by large amounts of borrowed money? Financial bubbles are inflated when investors borrow money to buy more shares than they would have been able to afford otherwise. Borrowed money accelerates volatility, which is great in a bull market when it helps push stock prices upward. However, the reverse can be catastrophic.

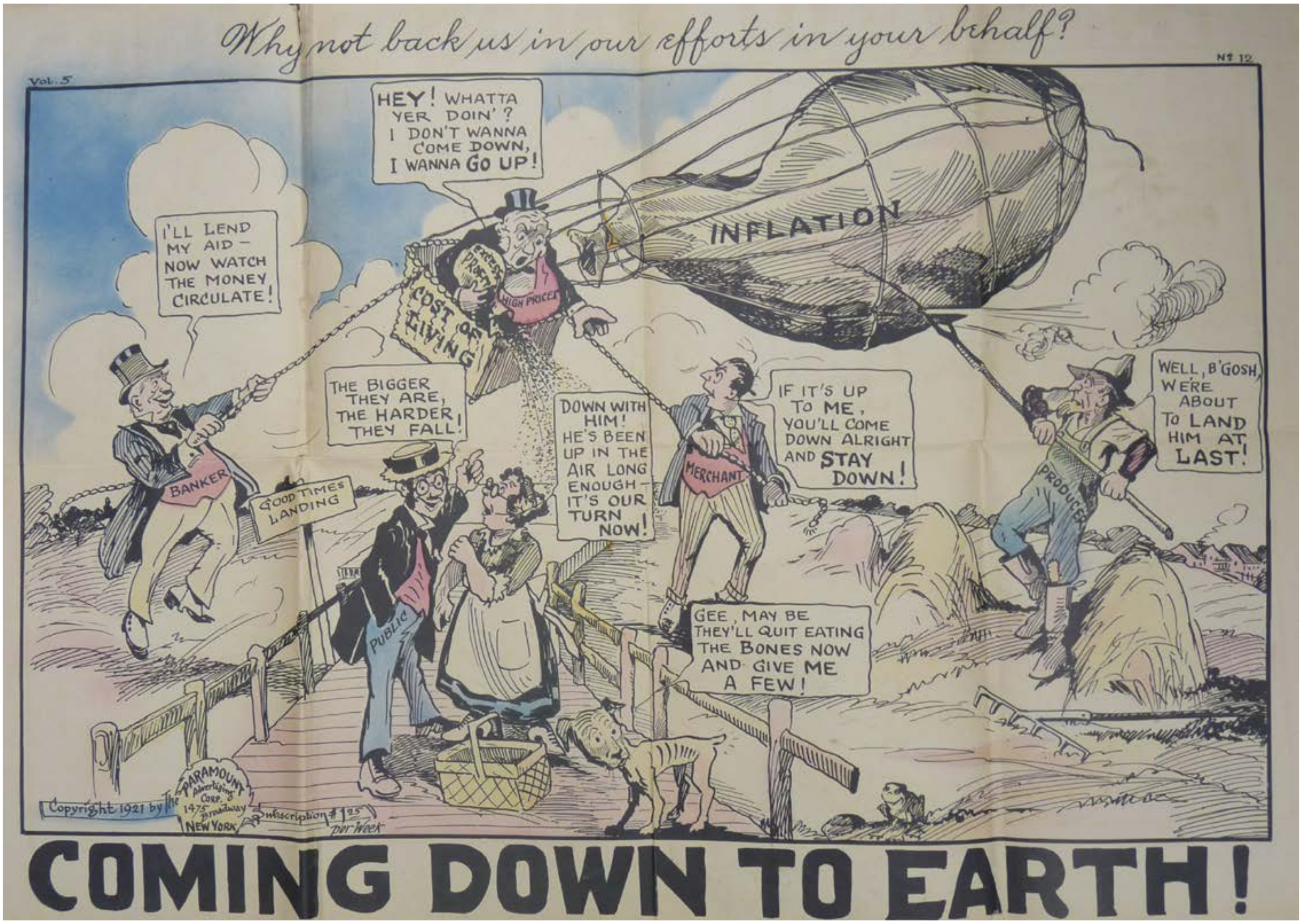
Between 1926 and 1929, the amount of money borrowed to buy stock in America, or "margin debt," doubled. In May 2021, margin debt reached an all-time high of $861.63 billion—more than double the margin debt of $328 billion seen at the height of the dot-com bubble and the $420 billion of margin debt seen at the housing bubble peak. The amount borrowed is growing by 40% with each passing year. Despite market levels rising along with it, that is a significant level of borrowed money supporting the market.

A survey of consumers conducted from March 30 to April 6, 2021, found that 80% of Gen Z and 60% of millennial investors borrowed money to invest.

The rag-tag renegades of Reddit retail investors exposed yet another risk of excessive leverage during the GameStop saga: inadequately capitalized intermediaries. When the proletariat was prohibited from buying more GameStop stock by their broker Robinhood, it was not because the app was colluding with Wall Street pros. It was because the regulators and clearinghouses were demanding $3 billion in more capital—and quickly—to compensate for their increased exposure to GameStop's price collapsing.

Robinhood is by far the largest online broker. At the start of the year, it was being downloaded more than twice as much as Fidelity, TD Ameritrade, E-Trade and Schwab combined. Yet, at the same time, Robinhood was scrambling to find billions of dollars to meet regulatory requirements to stay in business. Not only were individual investors highly leveraged, but the infrastructure was at risk because the largest online participant was also overleveraged. Subsequently, Robinhood recognized its need for more efficient access to capital by going public via an IPO in July 2021.

What can be done to keep leverage at bay? The primary tool available to regulators to control the buying of stocks with



Inflation cartoon titled "Coming Down to Earth," 1921.

Collection of the Museum of American Finance

borrowed money is called the initial margin requirement. The requirement sets a minimum for the amount of collateral a buyer must provide to get a loan to buy stock. The Federal Reserve is charged with controlling this requirement; it did so actively in the 1920s and also from 1929 to 1974.

In the 1920s, the Fed progressively raised the requirement from 10% to 50%. Between 1929 and 1974, it changed the initial margin requirement 23 times, from a low of 40% during the Great Depression to encourage people to buy stock, to a high of 100% during World War II, effectively prohibiting buying stock with borrowed money.

If Federal Reserve Chairman Jerome Powell were to raise the requirement tomorrow, this leg of the stool would break. But the requirement has not budged from the 50% level set in 1974, and the reluctance of the Fed to make any further adjustments has made its use the capital markets' equivalent of the nuclear option. This tool is effectively off the table for now. Therefore, troubling signs of excess borrowing remain, leaving this leg of the stool cracked.

3. Interest Rates

A lax monetary policy accompanies financial bubbles, but it's not just absolute interest rate levels that matter—it's the direction in which those rates are moving. The Fed's primary means of setting interest rates is the federal funds rate, the interest rate at which banks provide overnight loans to each other. In the big picture of the markets, the federal funds rate is the captain of the team, the lead violin. All fixed income markets look to the federal funds rate before they move in a direction.

When the Federal Reserve was trying to arrest hyperinflation in the early 1980s, the federal funds rate peaked at nearly 20%, its all-time high. Last March, during the worst days of the pandemic stock market, the Federal Reserve slashed the rate to its lowest level in history, where it remains today—0.25%.

In comparison, between 1927 and 1929 the Fed raised the discount rate (a much more draconian move than adjusting the federal funds rate) three times from 3.5% to 5.0%. Early in 2020, in response to the pandemic, the Fed lowered the discount rate from 2.25% to 0.25%, a huge stimulus signal for the markets. And that is where the discount rate remains today.

The Federal Reserve is taking more stimulative measures today than at any point in its nearly 110-year existence. Chairman Powell stated that low rates are here to stay for the foreseeable future, and "it will be measured in years" before the Fed considers raising interest rates.

But what about the long end of the

Collection of the Museum of American Finance

Throng at the steps of the subtreasury building (now Federal Hall) across the street from the New York Stock Exchange, October 1929.

yield curve, for bonds maturing over the span of 10 years or more that traditionally have not been controlled by the Fed? Historically, the difference between the federal funds rate and the long end of the yield curve has signaled either inflationary times or recessions coming.

In March 2020, the interest rate on a 30-year US Treasury bond bottomed at 1.27%. By March 2021, it had surpassed 2.4%. It currently stands at 2.09%. This peripatetic movement of the long end of the curve with a constant federal funds rate at the short end indicates the market is confused between inflation or deflation on the horizon. This market confusion is compounded by the Federal Reserve buying up government bonds through a process called quantitative easing (QE) to inject more money into the economy. Without the Fed purchasing billions of dollars in Treasury bonds each day, interest rates at the long end of the yield curve would be higher.

If the Fed terminated QE, we could hear the resulting crack of this leg of the stool. The Fed has stated that it will begin to "taper" (i.e., reduce the level of QE purchases) as early as mid-November 2021. Until then, with the Fed intervening on the long end and controlling the short end of the yield curve, however, the true stability of this leg of the stool is unknown.

Importantly, these record-low interest rates also affect the equity evaluations calculated above, which had suggested that P/E ratios above their historic averages indicate we might be nearing a bubble burst. If one were to adjust for record-low interest rates using the earnings yield[3]—the inverse of the P/E ratio—one might discover that stock values are not as inflated as they initially appeared.

The difference is currently 3.89%. For perspective, that spread had narrowed to zero at the peak of the housing bubble. This suggests that because of record-low interest rates, stock prices are not as inflated as they first appeared. Certainly, they are not as inflated, or in as much of a bubble as the bond market. There is a maxim on Wall Street among the pros: "Don't fight the Fed." It seems as true today as it ever was.

4. Public Participation

There has never been a financial bubble without the public getting into the market. The general public is the last party to begin participating in a bubble, and inevitably the last to get out—a phenomenon (borrowing from accounting terminology) of LILO, "last in, last out."

Today, easy-to-use trading apps like Robinhood with zero commissions lure retail investors to return to the stock market after exiting in droves after the

2008 crash. With that stage set, the pandemic hit. Many spending alternatives were removed by lockdowns at precisely the same time fiscal and monetary easing went on steroids.

The personal savings rate jumped from a historical average of 7.5% to nearly 34% in April 2020 as a result. Suddenly, US households were flush with cash.

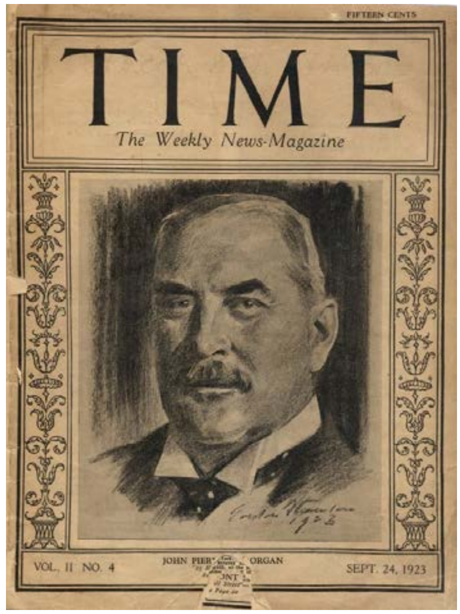
The psychology of "free money from the government," combined with leisure spending taken off the table, and the ease of reentering the market using apps like Robinhood, all proved too much to resist for Americans. The amount of stock owned directly by individuals jumped from $7.8 trillion after the housing bubble burst to over $22 trillion in 2020. It nearly tripled.

This trend has only accelerated. From Q1 to Q2 of 2020, as the pandemic hit the United States at full strength, purchases of stock by retail investors increased by a factor of nine. Currently, retail purchasers are buying stock at a rate six times larger than before the pandemic, and Robinhood has nearly doubled its monthly users from 11.7 million to 21.3 million this year. In June, retail investors bought $28 billion of stocks and ETFs, the most since 2014.

Retail investors who exited the market after being badly burned in the dot-com and housing bubbles are back like never before. Regrettably, in times like these, Wall Street does have a history of introducing new and poorly understood products that ultimately become profit vehicles for the sellers and traps for the individual investor.

In the 1920s, Wall Street innovation took the form of investment trusts, the highly leveraged predecessor of today's mutual funds that were run by the banks and offered to unsophisticated investors. Today, the rise of SPACs (special purpose acquisition companies) bears an unsettling resemblance to the leveraged investment trusts of the 1920s. These "blank check" companies are sponsored and permitted to sell new stock through an IPO with no earnings history and no assets other than money given to them through the IPO. The rise of SPAC mania is a sign no doubt that retail investors are foregoing the time-tested rules of principled investing for simple gambling.

Public participation is by far the strongest leg of this stool. However, it cannot be ignored that public participation was at historical highs in 1929, 1987, 2000 and



Collection of the Museum of American Finance

Time magazine featuring a cover story on J.P. Morgan and the American economy, September 24, 1923.

2008 when those bubbles burst. Retail investors betting the farm on SPACs would be wise to remember: LILO.

When bubbles burst, they burst quickly, and with ugly consequences. When prices crashed in the Roaring Twenties, they did not return to their 1929 peak until the 1950s—more than 20 years later, through a Great Depression and another world war. These events scarred a whole generation of Americans, including the investing public.

Galbraith has given us a framework to contemplate the answer to a question that has saved people throughout history from the calamities of burst bubbles: When have I made enough? When is it time to get out?

To the frustration of economic forecasters—and the delight of those like Galbraith who make fun of them—there is no way of knowing for sure. The correct answer will also certainly differ from investor to investor, who each possess their own risk tolerance, investment time frame and personal goals.

As we end where we started, looking to history to help us plan for tomorrow, perhaps investors should heed the pithy warning of another legendary prophet of profit, Sir John Templeton, who cautioned, the four most dangerous words in investing are "this time it's different." $

William R. Gruver is a senior fellow at the Open Discourse Coalition, a think tank that promotes a variety of intellectual viewpoints in higher education. He is a Bucknell professor emeritus, *as well as a former Goldman Sachs general partner and naval officer. Through his role as a board trustee and director, William helps oversee the investment activities of Lee Health Foundation and Private Client Bank AG.*

Notes

1. A financial bubble is a period in which the market price of an asset exceeds the intrinsic value of the asset. In other words, the asset is overvalued. Eventually market prices reach unsustainable levels, and the bubble bursts.
2. The P/E ratio is commonly used to determine if a company's stock price is overvalued. The ratio is calculated by dividing share price by earnings per share. For example, if a stock share sells for $10, and it has earnings per share of $1, its P/E ratio would be 10x. A high ratio could mean the stock price is overvalued, and vice versa.
3. The earnings yield is calculated by dividing a company's earnings per share by the stock price. It determines the return on investment for buying stock today. The difference between a stock's earnings yield and the yield on Treasury Inflation-Protected Securities (TIPS) paints a picture of the comparative attractiveness between the stock and fixed income markets.

Sources

2021 Joseph R. Biden, Jr. Executive Orders, found at: https://www.federalregister.gov/presidential-documents/executive-orders/joe-biden/2021

Barry, John M. "How the Horrific 1918 Flu Spread Across America." *Smithsonian Magazine*. November 1917.

Dailey, Natasha. "A Majority of Millennial and Gen-Z Investors Are Taking Personal Loans or Borrowing from Friends and Family to Invest in Stocks." Business Insider. June 24, 2021.

"Fed's Jerome Powell: Jobless Rate Better Than Expected; Recovery to Take A Long Time." NPR. September 4, 2020.

McCabe, Caitlin. "Retail Investors Power the Trading Wave with Record Cash Inflows." *The Wall Street Journal*. July 5, 2021.

Wang, Echo and David French. "Robinhood, gateway to 'meme' stocks, raises $2.1 billion in IPO." Reuters. July 28, 2021.