

Integrity in Investing Investing in Times of Fictitious Capitalism



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**PROFESSIONAL
FINANCIAL**

Purposeful Wealth Management

"Price is what you pay [for stocks]. Value is what you get."

– **Warren Buffett**, America's greatest investor

This is part of a series exploring integrity in professional wealth planning

Key takeaways:

- Buy low, sell high is essential for long-term successful outcomes, but it is not easy.
- U.S. rising stock markets of the past decade are strongly related to massive Federal spending.
- U.S. large stocks should not be expected to continue rising if Federal spending declines.
- Have an investment strategy that does not depend on the future being like the past.

Markets have no memory, sage investors believe. Sadly, most investors have no

memory. Suddenly the published one-year returns for U.S. stocks, funds, ETFs and alternatives show nearly the biggest, fastest return in market history. The S&P 500 index of U.S. stocks, for instance, is up 56.4% for a rolling 12 months. The broader Russell 3000 index including smaller U.S. stocks is up an astonishing 62.5%.

Due to a calendar quirk, stock market losses for the first quarter of 2020 have vanished for purposes of reporting. Wall Street marketing departments were quick to advertise their successes, but the mundane explanation is that the ghastly five weeks of enormous losses in early 2020 were simply cancelled from trailing one-year returns. Clients reviewing their accounts may have been momentarily stunned at a monstrous portfolio performance of perhaps 30, 40, and even 50 or more percent. (You have my permission to brag.) But gaining that return was due to your own commitment in the face of bad news by sitting in your seat, bearing the risk we agreed to, and sticking with your strategy.

U.S. stock indexes continue to hit record highs almost weekly as we enter Spring. Yet investors already have forgotten that on March 23rd, U.S. stocks hit bottom during an unprecedented event in what became the fastest and steepest bear market on record. Economies in the U.S. and around the globe were shutting down due to mandated lockdowns. Life was grinding to a halt. Millions of workers were being

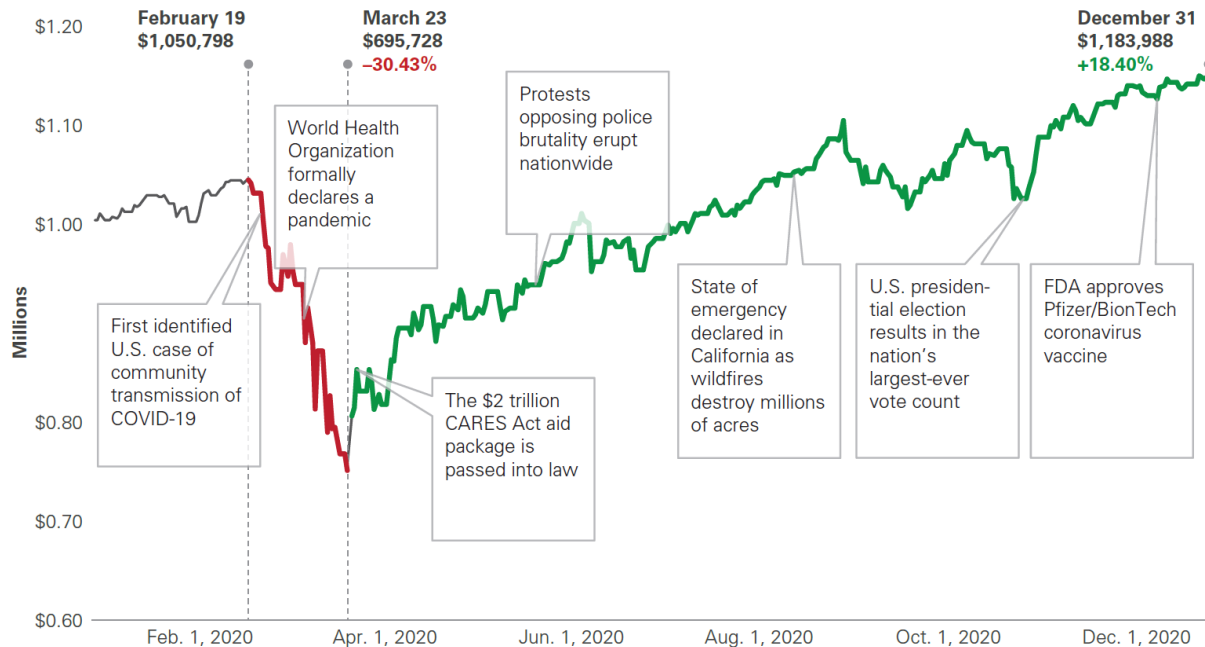
let go or furloughed. Investors weren't only worried; they were terrified by the media's doomsday pronouncements. Almost reflexively, frightened investors in a frenzy demanded "safety" for their portfolios, forcing hedge funds and traders to liquidate unprecedented amounts of stocks and bonds into cash at an unprecedented speed.

Bad news from the media combined with uncertainty continued throughout 2020. While millions focused on pocketbook pain, the stock market looked forward and upward. The market aggregated information that expected low mortality rates and a vaccine solution sooner than politicians were telling the public. Prices captured how firms were adjusting and adapting to stay in business in real time. Where they could, people worked from home. No one could know when the turnaround would be, or how fast businesses would recover. But investors who stemmed paper losses by their early selling, soon regretted that decision as the stock market's stellar recovery got underway, the best since February 1934.



Exhibit 1: Unexpected Decline and Unpredictable Market Recovery

Value of a \$1 million initial investment in the S&P 500 index, January 1, 2020, to December 31, 2020



Source: Vanguard, using data from Morningstar, Inc.

Past performance is no guarantee of future returns. The performance of an index is not an exact representation of any particular investment as you cannot invest directly in an index.

While market downturns are always troubling, evidence shows that U.S. equity returns following sharp market drops downturns are usually strongly positive a year or more afterward. In **Exhibit 2** on page three a broad U.S. market index of stocks shows that since 1926 equities, whenever preceded by steep declines, have delivered positive returns over one-year, three-year and five-year periods on average. Cumulative returns are striking considering market declines of 10%, 20% and as much as 30%: compounded returns after five years all exceeded 50%. The historical annualized return over the entire period is 9.6%.¹

Buy Low, Sell High

Is there any investing advice more universal—or more universally ignored?

That old market axiom is a reminder for these times. When markets have not only recovered but break records weekly, when digital currencies are skyrocketing and commodity prices are surging, the crowd of investors is buying high on the hope of selling higher. Continuous media coverage and internet trading tools prompts emotions to act NOW for fear of missing out (FOMO). Logically, investors should be selling occasionally, both to pocket some gains and to rebalance back to a planned target allocation. Instead, a lot of novice investors are getting an expensive market education in what

is a generally rising market, like the three amigos in “Friends Dreamed of Fortune on Robinhood.”²

In this liquidity fueled market, speculative manias have become a new normal, symbolized by bitcoin, a digital asset with a fundamental value of zero—much like the dollar may be if inflation really takes off. For instance, recent margin balances relative to the S&P 500 are twice that of the dot-com period and relatively the highest since the late 1920s. Such investor behavior, we should point out, typically occurs near a market peak.³

But even professional investors find selling harder than buying. Peter Lynch, former legendary manager of the Fidelity Magellan fund, has said his “greatest mistakes” were selling at the wrong time. That is largely because of the unbearable feeling of FOMO. Selling what turns out to be big winner too soon, and you watch from the sidelines as it continues to soar while others get to brag. The most you could have lost from holding it is 100%, but the gains missed by selling too soon are unlimited. Behavioral studies tell us that one of the most powerful and lingering emotions people have is regret.

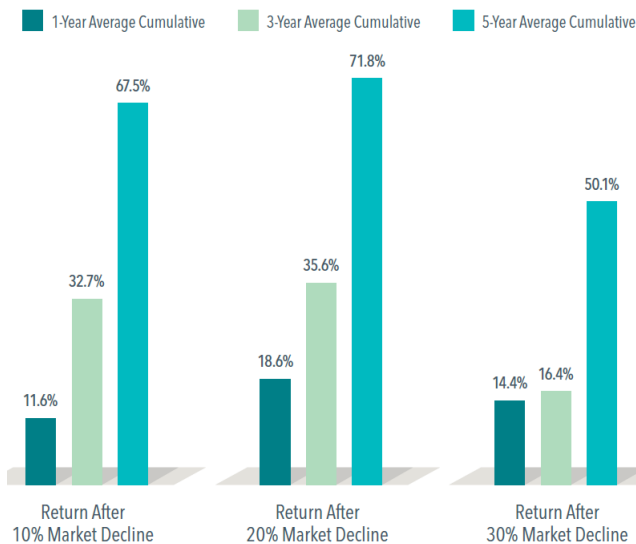
The Great Money Deluge

In a climactic change, last year’s “Blue Sweep” aided by pandemonic events put the Democratic Party in control of all three centers of policymaking power in Washington—the



Exhibit 2: U.S. Stock Returns After Major Market Declines

Fama/French Total US Market Research Index Returns,
July 1, 1926–December 31, 2019



Past performance is no guarantee of future results. Indices are not available for direct investment. Their performance does not reflect the expenses associated with the management of an actual portfolio. Investing risks include loss of principal and fluctuating value. There is no guarantee an investment strategy will be successful.

Market declines or downturns are defined as periods in which the cumulative return from a peak is –10%, –20%, or –30% or lower. Returns are calculated for the 1-, 3-, and 5-year look-ahead periods beginning the day after the respective downturn thresholds of –10%, –20%, or –30% are exceeded. The bar chart shows the average returns for the 1-, 3-, and 5-year periods following the 10%, 20%, and 30% thresholds. For the 10% threshold, there are 28 observations for 1-year look-ahead, 27 observations for 3-year look-ahead, and 26 observations for 5-year look-ahead. For the 20% threshold, there are 14 observations for 1-year look-ahead, 13 observations for 3-year look-ahead, and 13 observations for 5-year look-ahead. For the 30% threshold, there are 6 observations for 1-year look-ahead, 3-year look-ahead, and 5-year look-ahead. Peak is a new all-time high prior to a downturn. Data provided by Fama/French and found at mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html. Eugene Fama and Ken French are members of the Board of Directors of the general partner of, and provide consulting services to, Dimensional Fund Advisors LP, an investment advisor registered with the Securities and Exchange Commission.

White House, the Senate and the House. This gave united Democrats full power of the purse and the power to spend tax revenue and to spend even more on credit. Major shifts in tax and spending policies are already underway. All told, so far there has been \$5.2 trillion in official Federal spending approved, including \$1.9 trillion for “infrastructure” (loosely defined). Mr. Biden has unmasked his Progressive agenda, announcing a revolutionary agenda to “transform” American

society. Many fear that the Party’s unveiling socialist utopian dream society will “woke up” into yet another a “dead broke” Marxist nightmare.⁴

So where will the trillions needed miraculously come from to finance this revolutionary “Great Woke Society”? The answer is bond markets, the Federal Reserve and “the Rich” (meaning you). The previous administration ran a massive \$3.3 trillion deficit for 2020, for a total of \$21.6 trillion U.S. deficit at the beginning of 2021. Uncle Sam must sell enormous amounts of debt to cover the tax shortfall. The challenge is to sell debt that pays no real interest to real investors.

A Powell-led Federal Reserve is riding to the rescue with the alchemy of Modern Monetary Theory. The Federal Reserve, authorized by Congress “to coin Money” and “regulate the Value thereof”⁵ promised to peg short-term rates for the long term around zero percent and pledged to continue issuing buying U.S. Treasuries and mortgage-backed securities essentially forever to finance the Demoncratic “revolutionary” agenda.

But as Nobel Laureate Milton Friedman famously remarked, “There is no free lunch.” Mr. Biden promised not to tax ordinary Americans but retirees, many of whom retired 20 or more years ago believing U.S. Treasuries and FDIC-insured CDs would earn 4, 5, 6, and even 7 percent plus Social Security could safely support their lifestyles! So what does that ever-growing population of seniors with access to Google and Robinhood, now do to support their old age with some dignity?

In the short-term, fundamentals don’t matter. Much like the “random walk” of a drunk man, prices in well-functioning markets are driven higher or lower by the psychology or “animal spirits” of investors, who are essentially making bets on stock directions, with the professionals being aided and abetted by increasingly powerful computer trading algorithms. Sophisticated investors with access to cheap money and ordinary people simply desperate for a decent return on their bank accounts and no knowledge of economic history are not concerned with fundamentals, speculating that a veritable flood of money pouring out of Washington for “infrastructure” magically will justify rising stock prices.

Valuing Markets with the Buffett Indicator

In the longer-term, fundamentals matter a lot. History has shown capital markets have rewarded **long-term** investors. Research indicates that speculating is not rewarding. But

Exhibit 3: Unprecedented Torrent of Money Into Stocks

Inflows to stocks over the past five months exceed those of the prior 12 years
Inflows to global equity funds

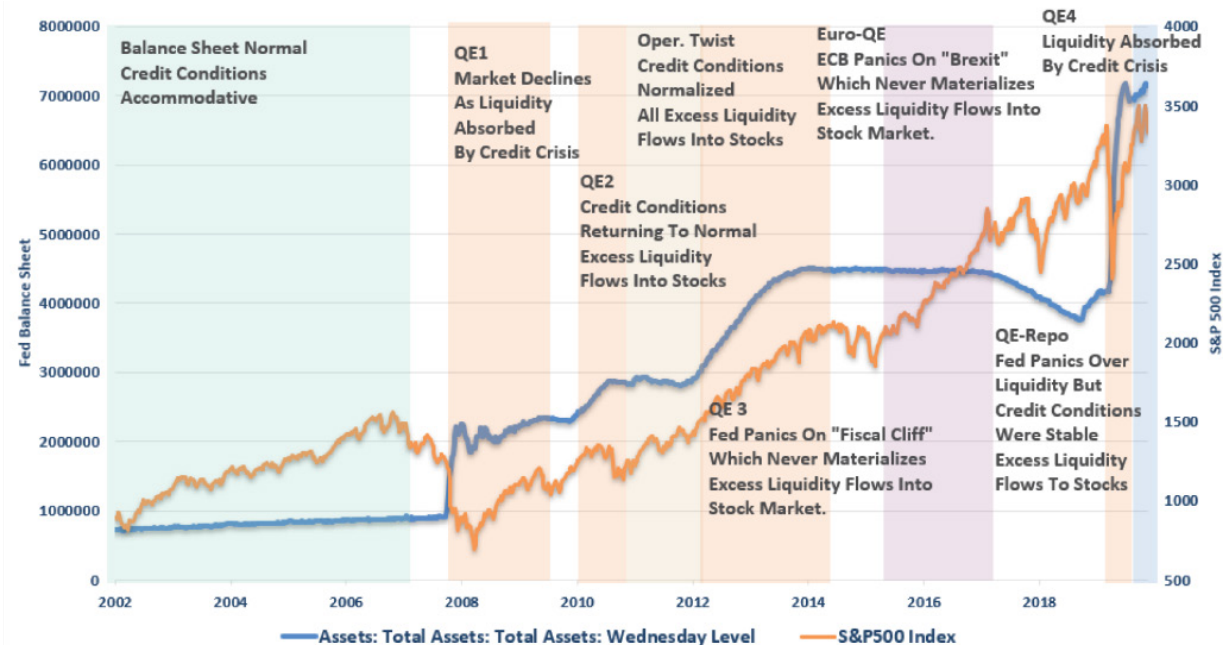


Source: Bank of America Global Investment Strategy, EPFR Global. Reuters (April 9, 2021).



Exhibit 4: Comparing Federal Reserve Balance Sheet Changes to a Major U.S. Market Index

Period January 2002 to December 2020



Source: Lance Roberts, Real Investment Advice (March 2021)

staying disciplined means planning with a sound investment framework. Using insights from modern finance requires structuring portfolios with a strategic approach. Planning in terms of time horizons improves our expectations of realizing expected returns and better control risk.

For an introductory macroeconomic way to think about today's high-priced markets, let's consider a popular market valuation indicator. Back in 2001, Warren Buffett, America's great investor, told *Fortune Magazine* in an interview that this calculation "is probably the best single measure of where [market] valuations stand at any given moment." Now known as the Buffett Indicator, it is the ratio of the market price of corporate equity (or aggregate market capitalization of all stocks within a country) to that country's Gross Domestic Product (GDP).

Raw economic data for the "Buffett indicator" goes back only to the mid-20th century. Quarterly GDP dates from 1947, and the Federal Reserve's balance sheet beginning in Q4 1951. The strange numerator in the chart title, NCBEILQ027S, is the FRED designation for Line 62 in the F.103 balance sheet of Table S.5.q of the 'Integrated Macroeconomic Accounts for the United States' (Market Value of Equities Outstanding).⁶

The current reading is 193.3%, up from 173.4% the previous quarter. A conspicuous feature is the upward trend of the ratio since 1950. Especially strong is the upward trend since 2009 after the Global Financial Panic

bottomed, with a recurring pattern of brief but increasingly sharp dips becoming more and more pronounced.

Exhibit 6 with detrending makes the very high relative valuation of U.S. stocks clearer, although still not quite as high as during the Tech Bubble in 2000.

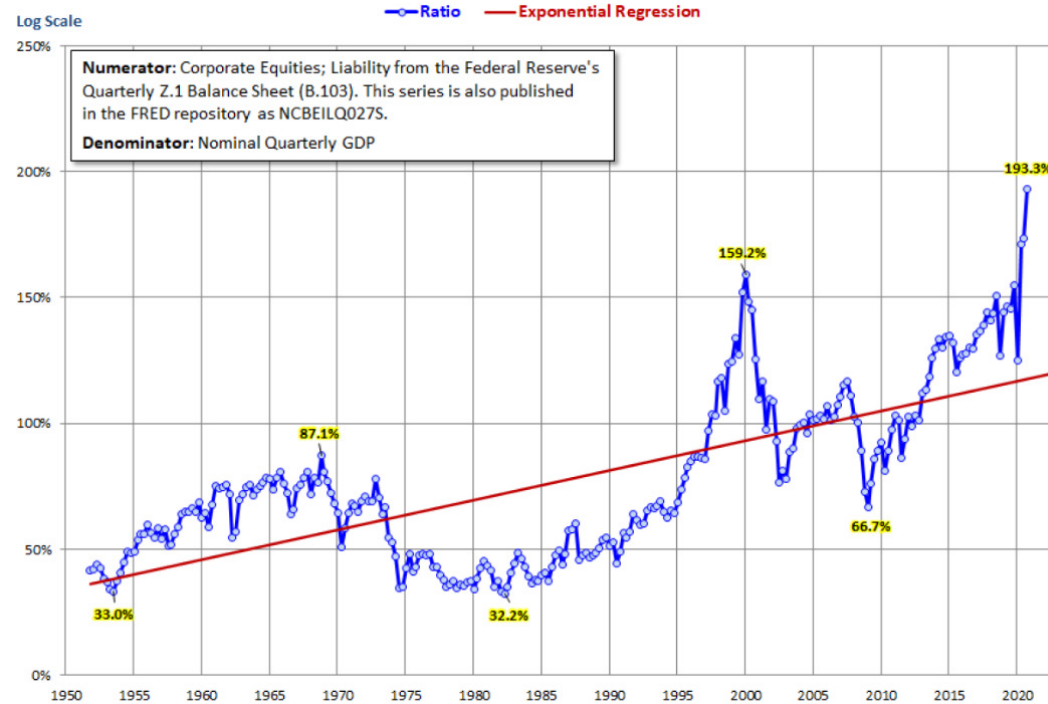
Traders and investors are in euphoria expecting central banks worldwide to plough yet more loans and cash into the banks and institutions, together with a subsidence of the COVID pandemic due to new vaccines. The popular narrative circulating among speculators and media is that corporate earnings will sufficiently recover to justify record high stock prices—and grow still higher. Citi Research has a "Euphoria/Panic" index that combining several market mood indicators. Since 1987, the market has typically topped out when this index approached the Euphoria line, where it is right now. The only exception other than now was during the technology boom, when it spent about three years in the euphoric zone.

Tobin Q Ratio and Excessive Market Valuation

A more academic way of gauging how far the stock market prices are out of cinque with underlying corporate assets is Tobin's Q Ratio. Developed by Nobel Laureate James Tobin, the Q Ratio is a rigorous method of estimating fair value ratios. The Q Ratio is the ratio of all corporate equities (total weighted market value), divided by an adjusted

Exhibit 5: Buffett Indicator for U.S. Corporate Equities to U.S. Gross Domestic Product

4Q 1951-1Q 2021 with estimates, log scale



Source: Jill Misliniski, Advisor Perspectives (April 8, 2021). Wilshire 5000 index could proxy corporate equities.

book value (total replacement cost of component companies) for the same country. Fortunately, a U.S. government agency does the laborious data accumulation. Figures are supplied in the Federal Reserve Z.1 Financial Accounts of the United States and released quarterly with a lag. Reconstructed data by a Tobin colleague provides a starting point fifty years earlier than the Buffett Indicator.

An arithmetic mean of 1 (i.e., divided the ratio data points by the average) in a baseline chart gives a more intuitive sense for explaining the numbers. From inception, the arithmetic mean Q Ratio has averaged about 0.79. The Q ratio high based on an arithmetic calculation peaked during the Tech bubble in 2000 and reached 2.17 — or 174% above historic asset replacement cost (or book value) averages. The lows were in 1921, 1932 and 1982 at around 0.28, or approximately 62% below replacement cost. The latest data point has reached 3.11 or 290% above the mean — a new record. Benjamin Graham, Warren Buffett's teacher, noted this anomaly and developed an investment approach that Buffett applied to his early investing strategy.

Andrew Smithers and economist Stephen Wright of the University of London co-authored a book on *The Q Ratio, Valuing Wall Street*. They prefer the

geometric mean for standardizing the ratio, which has the effect of weighting the numbers toward the mean. **Exhibit 7** is adjusted in that manner. This shows 342% and implies a dangerously high valuation level.

It might seem intuitive that fair value would be a 1:1 ratio, but that has not been the case. The long-term real return on corporate equity from his analysis is only 4.8%, while

Exhibit 6: Buffett Indicator—Ratio U.S. Corporate Equities to U.S. GDP

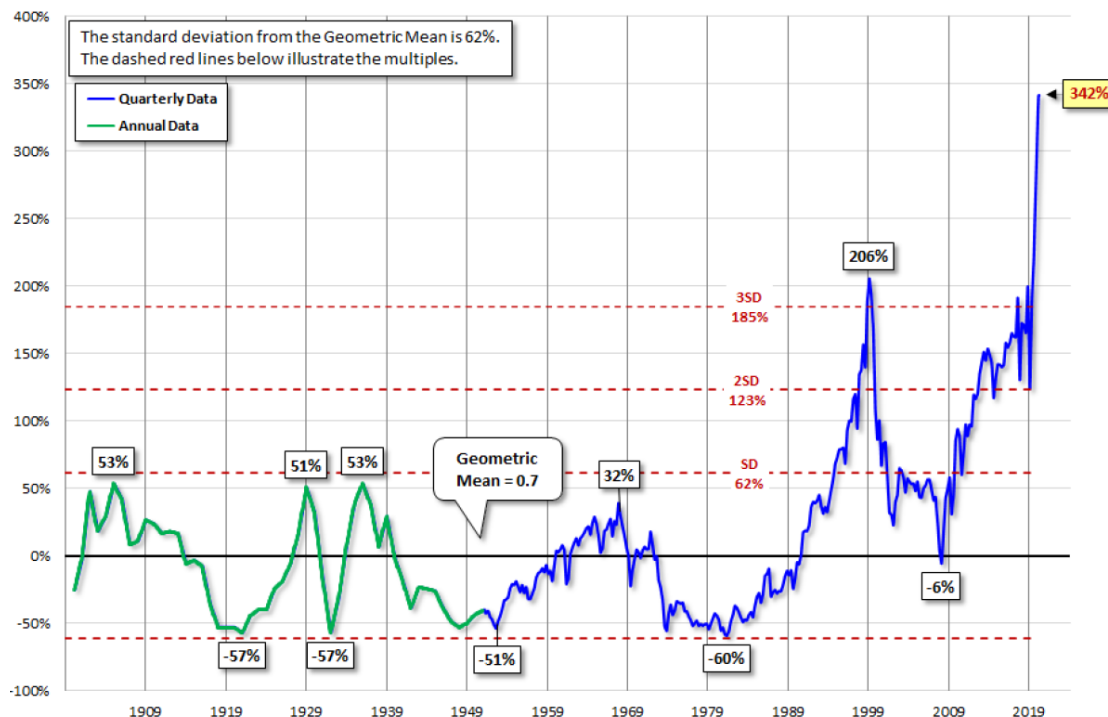
Detrended with Standard Deviations. 4Q 1951-1Q 2021 with estimates, log scale.



Source: Jill Misliniski, Advisor Perspectives (April 8, 2021). Wilshire 5000 index could proxy corporate equities.

Exhibit 7: Tobin Q Ratio Market Valuation

Percentage Change from Geometric Mean, Standard Deviations Highlighted
Period 1900 to 1Q 2021 with recent quarters proxied by VTI



Source: Jill Mislinski, Advisor Perspectives (April 7, 2021). Vanguard Total Market ETF (VTI) is proxy for Z.1 Fed data for Corporate Equities; Liability for 4Q 2020 and 1Q 2021. Data estimates before 1945 were provided by John Mihaljevic. Data since then is from the Federal Reserve Z.1 Statistical Release, section B.103, *Balance Sheet and Reconciliation Tables for Nonfinancial Corporate Business*.

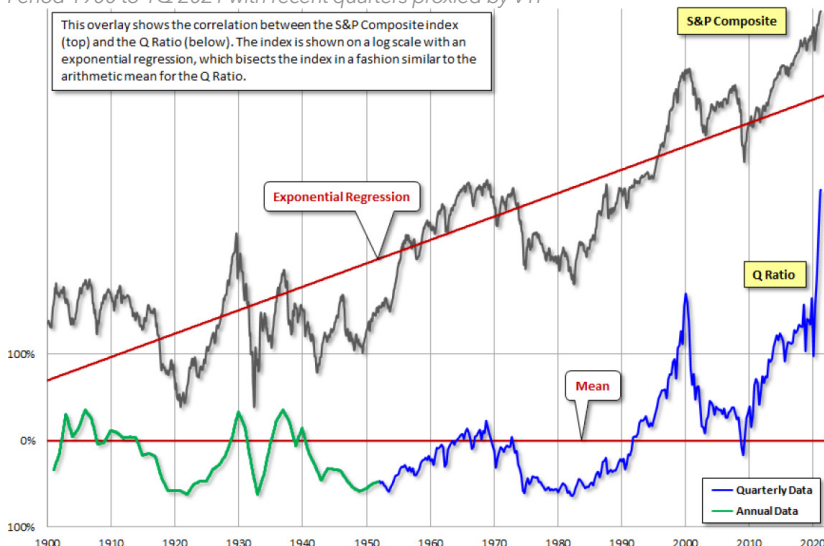
the long-term real return that investors realized is around 6.0%. **Exhibit 8** illustrates that difference, which appears to be due mostly to a shift occurring between 1950 and 1960, including the incredible spike in the Q Ratio occurring in the

first quarter of 2021. This is the gap that Marx in his writings attributed to what he called “fictitious capitalism” or speculative activities of traders. Modern finance would attribute that gap not to intangible assets, but to the discount rate or cost

of capital which has been impacted in recent and current years by substantial government intervention of setting and maintaining low short-term interest rates.

Exhibit 8: Tobin Q Ratio Comparison to Real S&P Composite

Comparing Arithmetic Mean to Exponential Regression
Period 1900 to 1Q 2021 with recent quarters proxied by VTI



Source: Jill Mislinski, Advisor Perspectives (April 7, 2021). S&P composite is inflation-adjusted in real terms. See Exhibit 9.

Intuitively, company share prices must bear some relation to its future expected cash flows or its profitability. The long-term value of a firm is somehow fundamentally related to its revenue, net profits or dividends per share. Management’s incentives for employing a company’s tangible and intangible assets reasonably must drive its expected cash flows. If profitability of those cash flows drives a firm’s share price, then we would expect that the market value of a firm based on its stock price should move up or down based on expected future cash flow rather than due to the underlying assets. But research suggests that underlying assets can proxy expected future cash

flows. The relative difference in Q Ratio calculations between the early half and later half suggest that something exogenous is impacting share prices in a materially different way that was not present until after around 1970 and become very important after 1990. This coincides with the change in the way that the Federal Reserve began to intervene in setting monetary policy.

The Valuation Equation in Modern Finance

The great idea of finance we use for planning is that *markets work*. Markets function, in effect, as a vast information processing machine gathering together all the dispersed information available about a company (or an aggregation of companies), evaluating new information almost instantaneously, and converting that information into market prices as shares are traded on an exchange. Prices are set as a consensus view of a share's intrinsic value. When all stocks of a market are aggregated and capitalization weighted, we get a consensus view of the intrinsic value of that stock market. It is not a stock market, but a market of stocks.

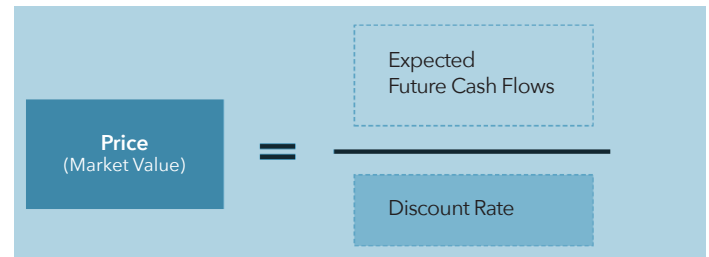
The value of a stock and consequently the market price participants—whether individuals trading stocks at home or hedge funds with computerized algorithms—are willing to assign to it, depends on multiple variables. The fundamental variable for valuing a firm's shares is book value derived from a firm's filed financial statements: what a company owns minus what it owes. Another is profitability from the company income statement. "Expected profits" are used to derive a discount rate for that company or sector. As we show below, the discount rate and "expected return" are equivalent. The firm's cost of capital is the investor's return, as the late Noble Laureate Merton Miller always emphasized.

Investors expect capital markets to compensate them fairly for bearing uncertainty and chance of loss—and security prices in public capital markets incorporate those expectations for long-term investors. Speculators with short-term horizons cannot be sure of that. They extrapolate patterns of price movements from recent market performance perhaps with a general knowledge of that stock's growth prospects. They use that information to gamble on future performance, subject to the random whims of chance factors.

Market prices and future expected profits contain information about expected returns. Economic theory predicts that profitability, together with size and relative price factors, should be related to expected equity returns.

Exhibit 9: Valuation Equation for Market Value

Price is driven by cash flows expected and discount rate applied by investors



While size and relative price are observable—changes in price data as stocks are traded moment-by-moment and easily accessible—we cannot similarly observe how market expectations change for future profitability. So the challenge is to obtain reliable information about future cash flows for an unobservable variable to estimate expected returns for taking action. What is important to notice in the valuation equation is that price, which is our best unbiased estimate of market value, does NOT depend on the firm's book value or underlying assets. (That information could relate indirectly as a proxy for potential future cash flows even where intangible assets are not adequately represented by book value.)

In the simplified dividend discount model shown in **Exhibit 9**,⁷ the value of a stock (or other security) is simply the sum of all future cash flows discounted back to present value at an assumed rate. Generally, the greater the risk a security possesses that impacts the likelihood of receiving future cash flows, the higher the discount rate. The present value of cash flows expressed as price is lower when greater uncertainty is present such as occurred when a pandemic was announced.

The discount rate is identical to a securities' expected return. It is the cost of capital. Algebraically reworking the equation and solving for expected return is shown in **Exhibit 10**. Expressing the relationship this way highlights two dimensions of expected returns for equities—relative price and profitability. Profitability is tied to the numerator and the

Exhibit 10: Valuation Equation for Expected Return

Expected returns are driven by prices investors pay and cash flows expected



relative price dimension to the denominator. Higher expected returns are the result of having either higher expected cash flows or a lower price.

For example, the price of an interest-bearing bond is determined by its stream of coupon payments and final principal repayment, discounted back at prevailing interest rates. A high-yield bond with a higher credit risk of possible non-repayment must either have a higher coupon or sell at a lower price than a lower-yielding government bond if they have the same price. Simply stated, if two stocks sell at the same price, then the one with higher expected cash flows must have a higher expected return.

Strategically Applying the Valuation Model

The Valuation Equation gives us useful insights for strategic decision-making. **Exhibit 11**, courtesy of Real Investment Advice, coordinates with the Buffett Indicator and Tobin Q-Ratio. A key question impacting planning portfolio management is: “Do stocks today imply a strong economy or strong Federal Reserve actions?”

In “real” terms net of inflation, the first question contrasts the astonishing growth of U.S. large cap stocks relative to U.S. GDP growth from the Financial Panic until now. The whopping difference is 200.1 percent to 21.5 percent. The naïve

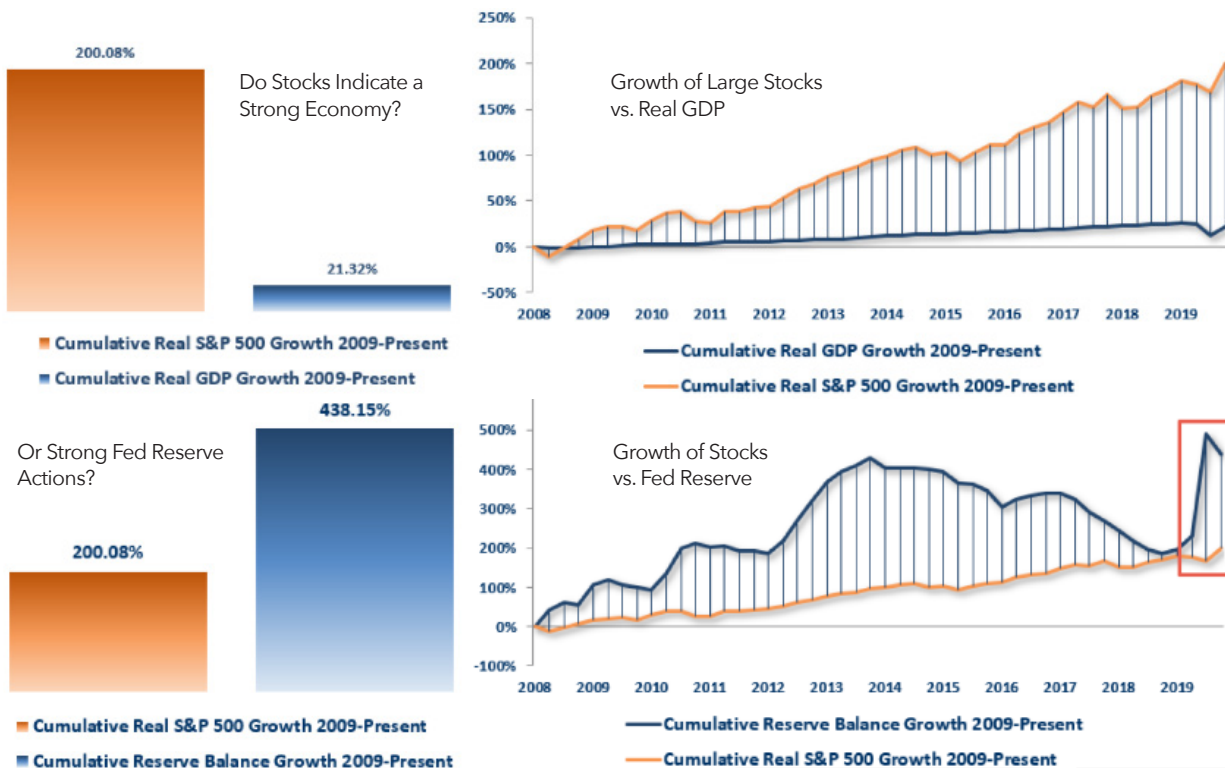
assumption is that the U.S. economy must be doing very well. Yet after all the bailouts, interventions, monetary and fiscal programs, cumulative real economic growth was just 21.5 percent for the same period. Since the valuation model explains that rising prices do not cause growth, and stock prices can rise even if the economy is not growing.

The second question contrasts what appeared to be an astonishing growth of U.S. large cap stocks in the upper charts to the cumulative growth of Federal Reserve indebtedness for the same period that dwarfs the cumulative growth of stocks. The inflation-adjusted growth of Fed indebtedness funding trillions of spending for government entitlement programs and quantitative easing crowded out the normal market mechanisms for fixed income, causing rates to drop to nearly zero at one point. Our valuation model leads us to conclude that massive Fed funding drove U.S. stocks up, and that expected spending was what drove up stock prices this past year.

Planning when Capitalism is Fictitious

Exhibit 12 looks at “real” inflation-adjusted GDP growth offsetting deficit spending by the Federal government since 2007. We see no evidence that government spending promoted real economic growth.

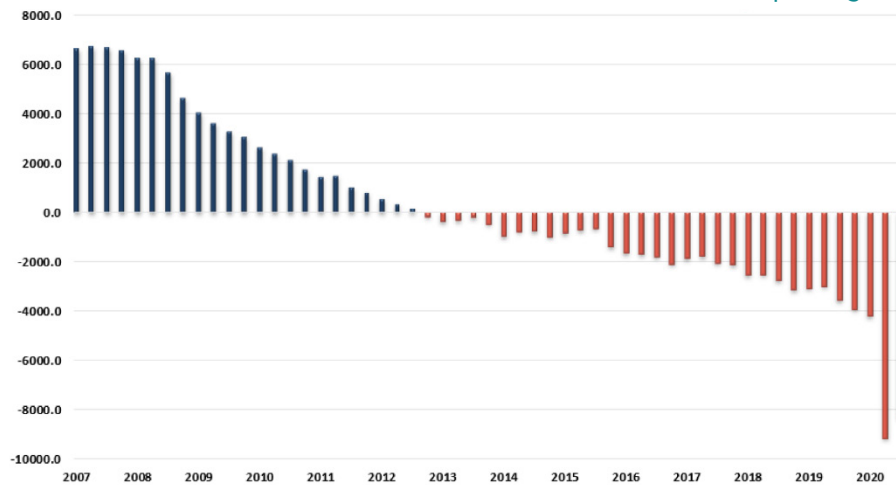
Exhibit 11: High Stock Prices with Low Discount Rates Imply Low Returns



Source: Lance Roberts, Real Investment Advice (March 1, 2021)



Exhibit 12: U.S. Gross Domestic Product Growth Less Annual U.S. Deficit Spending



Source: Lance Roberts, Real Investment Advice (March 3, 2021)

The Fed massively expanded its balance sheet after the Global Financial Crisis in 2008 through Quantitative Easing programs, and perhaps there were good reasons at the time. But QE was followed by QE 2 and QE 3. And now the Fed has promised what effectively is QE Infinity in addition to record spending deficits due to Pandemonic government intervention. The quantity of money in the U.S increased an astonishing \$4 trillion or 26% in 2020 and will be \$2.3 trillion for 2021 or 12%. That's twice its average growth rate from 2000 to 2019.⁸

With sustained government spending, primarily financed by the Fed, should Americans believe that doing the same thing—just a lot more of it—will promote real growth? The buildup of that vast debt must be paid, directly by taxes or indirectly by inflation or penalizing retirees with less income or young people with few good employment opportunities. What is being sold by Progressives to the public is Fictitious Socialism.

Modern Finance holds that incenting businesses to grow will create more and better jobs increasing GDP, put more money into people's pockets and drive more consumer spending. Politicians do not like that approach because realizing the outcomes takes longer for positive outcomes to show up than the time within the standard election cycle.

Conclusion

The late economist Hyman Minsky theorized that the financial system played a large role in exaggerating ups and downs of business cycles, a role understated in most economic theory: banks, businesses, consumers, and investors all tend to extrapolate—they act like they believe the future will continue like the recent past when saving or spending. After

several years of consistent growth, risk aversion gradually decreases, and a misguided confidence develops that benign conditions will continue indefinitely. To spend vast sums on big projects or big houses, businesses and consumers must increasingly leverage more and more as those same groups save less and less. Governments often encourage ever more such activity by fiscal or tax policy increasing for risk for the entire economic system.

Many are concerned that threats from income or capital gains tax increases or costly new regulations will negatively impact portfolio values. That could

happen. But the valuation equation explains what drives stock returns and consequently their values. Stocks with dimensions of profitability, relative price or size have much better expected returns yet to be realized than currently fashionable growth stocks.

Exhibit 13 on the next page implies how an informed dimensional strategy approach could provide you with much higher expected returns for planning. We see *the largest valuation difference ever* between large and small growth dimensions and large and small value dimensions. Notably, the implied valuations—therefore, the forward-looking expected returns—for large and small value dimensional is like that of the past. The record valuations of large and small growth dimensions, higher than even the Tech Boom in 2000, implies low or even negative realized returns. Never forget, it is not a stock market, but a *market of stocks*. The firm's cost of capital is the investor's return.

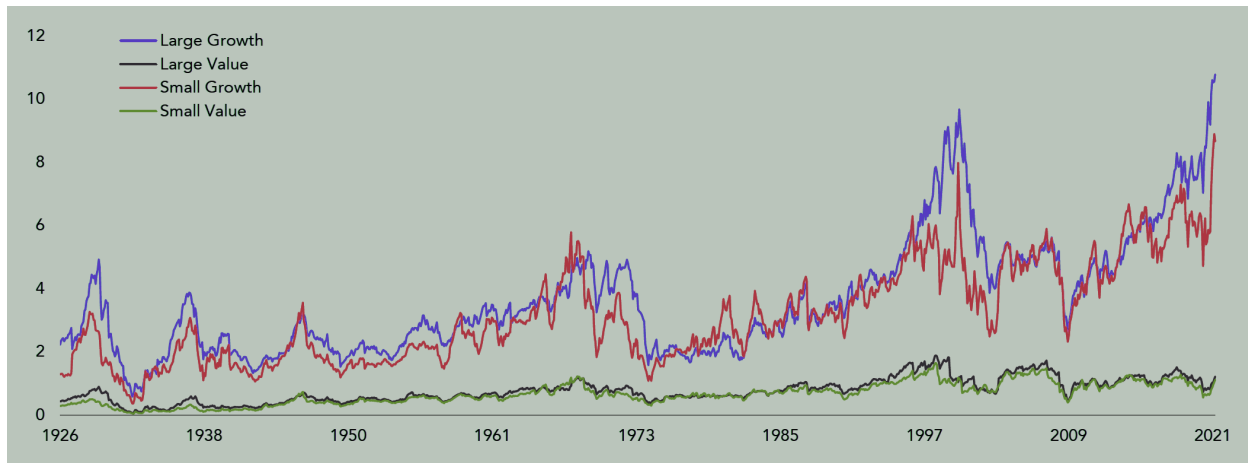
The "Lost Decade" of 2000 through 2009 turned out well for many clients, even though growth stocks had poor returns those years. But if you could have held a diversified index portfolio back in 1932, during the Depression years, you could have realized an annualized *real* return of 6.9% for the following ten years, even though interest rates, like now, were almost zero. Alternatively, if you could have owned a diversified index portfolio for the decade after 1974 following two years of recession—you could have experienced real returns of 7.4% annualized *plus another 7.4% for inflation*.

Have an investment strategy and trusted advisor you can stick with, and stay in your seat through market highs and lows.



Exhibit 13: Contrasting Large/Small with Growth/Value Market Valuations

Price-to-book ratio, June 1926-March 2021



Source: CRSP and Compustat data calculated by Dimensional. Fama/French data provided by Fama/French. Large Value stocks represented by the Fama/French US Large Value Research Index. Large Growth stocks represented by the Fama/French US Large Growth Research Index. Small Value stocks represented by the Fama/French US Small Value Research Index. Small Growth stocks represented by the Fama/French US Small Growth Research Index. Includes the higher or lower 30% in price-to-book of NYSE securities plus NYSE Amex equivalents since 1962 and Nasdaq equivalents since 1973. Monthly aggregate price-to-book ratios are computed as the inverse of the weighted average book-to-market value as of month-end, where book equity used from July of year t through June of year $t+1$ is the book equity for the last fiscal year end in $t-1$, and market equity is as of month-end for each month. Firms with negative book value are excluded. In USD.

Endnotes

- 1 The average annualized returns for the five-year period after 10% declines were 9.33%; after 20% declines, 9.66%; and after 30% declines, 7.18%.
- 2 Rachel Louise Ensign, *Wall Street Journal* (April 23, 2021), A1.
- 3 *The Wall Street Journal's* Opinion section had an article, "Name a Great Socialist Country." After a couple weeks of letters to the Editor, no one could name one. Equality of income does prevail in Cuba, Venezuela, North Korea, the old USSR—the populace is equally poor and equally terrorized by a very rich and militarily-backed elite.
- 4 See U. S. Constitution, Article I, Section 8. Evidently regulating the Value of money is now based on Modern Monetary Theory.
- 5 Lance Roberts, "There is No Way This Bull Market Doesn't End Very Badly," *Real Investment Advice* (April 21, 2021), p.3.
- 6 All of this is available on the Federal Reserve's website for those interested in such arcane matters.
- 7 This is derived from the old Gordon Dividend Discount Model or DDM. By algebraically rearranging $P = E/R$ to $P/E = 1/R$ you have a standard price-earnings ratio. See Paul Byron Hill, "Expecting Great Returns and Great Investors," *Planning Perspectives* (1st Quarter 2009), pp. 5-8 for a detailed discussion.
- 8 See John Greenwood and Steve H. Hanke, "The Money Boom Is Already Here," *Wall Street Journal* (February 22, 2021), A17.

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