MARTIN
CAPITAL MANAGEMENT, LLC
Registered Investment Advisor

"We are better at creating new claims on wealth than wealth itself."
—Buttonwood's notebook *The Economist*

"I became increasingly concerned by how debt continued to grow more rapidly than nominal gross national product."
—Hyman Minsky

"Here we are on top of the world. We have arrived at this peak to stay there forever. There is, of course, this thing called history. But history is something unpleasant that happens to other people."
—Arnold Toynbee, recalling the 1897 diamond jubilee celebration of Queen Victoria

"Like other practicing historians, I am often asked what the 'lessons of history' are. I answer that the only lesson I have learnt from studying the past is that there are no permanent winners and losers."
—Ramachandra Guha

"Anyone can hold the helm when the sea is calm."
—Publilius Syrus

2018
ANNUAL REPORT

For further information, contact Client Relations
at ClientRelations@mcmadvisors.com

Dear Client:

Performance Summary

Although the S&P 500 (including dividends) declined 4.39% for the year, all our client portfolios were up low single digits after fees.

Even the market's 19% plunge from September 20 through year-end had little negative effect on our performance. Favoring preparedness over prediction, we had liquidated nearly all of our remaining equity positions throughout 2017–18 and embarked on a "go long the short side" barbell strategy using index puts beginning in September 2017. Those positions gained significantly during the Q4 meltdown. All told, cash was the best-performing asset of the year across all asset classes globally. It constituted—in the form of short-term U.S. Treasuries—the bulk of your holdings.

Executive Summary

We begin our letter to you this year with an update key to the future of Martin Capital Management. Actions have been taken that will result in your (and my) portfolios being managed with exemplary experience and skill for many years into the future. Toward that end, MCM has provided seed capital for a startup investment firm, Palm Valley Capital Management, run by two consummate professionals about whom you will learn more toward the end of this report, including how this relationship will benefit you.

Second, and of more immediate import, we review the stock market's frenetic behavior in 2018, the end effect of which was the market's worst annual decline since 2008. But that's history. The central question remains: Did the market take a breather in 2018 only to rise to new highs in 2019, as the vast majority of market pundits suggest, or was the year a precursor to more ominous developments to come? We are poorly positioned if 2018 was a respite, but we're well-prepared if 2018 was in fact a preamble.

Third, in the middle of this report we will revisit our extensive 2014 study of overarching secular market cycles dating back to 1900. The long-term investor who is committed to wealth preservation and growth must assiduously avoid the ebb tides of the market and readily overcome fear to embrace the flood tides. This is paramount for achieving above-average returns over time. Based on our research—and confirmed anecdotally by observing commentary in the marketplace—the key quantitative and qualitative variables that explain these grand cycles are not widely understood. With our historical work below, you can judge for yourselves whether we are out of touch with some new paradigm *or* are tracking trends more influential than those of the daily news cycle.

2018 in Review

Seemingly intent on extending the uptrend of 2017, 2018 came in with a roar. By January 26 the S&P 500 had leapt ahead 7.5%. Dusting off the adage trumpeted by pundits when it suits—"As January goes, so goes the year"—bullish sentiment was in full swing.

Fake Bullish News?

The assault of dispiriting and exhausting political news has made distinguishing fact from fiction a continuous struggle. Misunderstanding and misrepresentation on Wall Street, however, constitute a perennial problem. Misrepresentation fueled the fire of enthusiasm around the Tax Cuts and Jobs Act of 2017, which took effect January 1, 2018. It provided $1.1 trillion in net tax cuts to individuals and pass-through entities over 10 years, with corporations receiving about $320 billion. Investors salivated over the dividends and share buybacks that would accompany increased corporate cash flows. Simultaneously, and contradictory to those investor expectations, commentators assured an unsure public that increased corporate profits would go toward investment spending—meaning more jobs—and higher wages.

GDP did benefit. After averaging 2.2% in 2017 and continuing that pace in Q1 of 2018, it nearly doubled to 4.2% in Q2, the highest since Q3 of 2014. It continued at a robust pace in Q3 of 2018, rising to 3.5%, on the strength of increased consumer spending and rebounding inventory investment.

The jobs narrative seemed intact as the unemployment rate declined throughout the year, ultimately dropping to 3.7%—the lowest in 50 years. The Conference Board's Confidence Index reached levels not seen since the fall of 2000. The Board's Expectation Index suggested that consumers saw the economy continuing to plow ahead. Our post, *The Fed On Unemployment And The Future*, argues that embedded in those statistics is a message of concern, not optimism.

Although the yield on the 10-year U.S. Treasury note rose from 2.1% at the beginning of the year to a high of 3.23% (November), the Consumer Price Index (CPI) averaged 2.2% (November), keeping the inflation-adjusted cost of 10-year money near zero. Neither investment nor speculation was theoretically inhibited because of the cost of money.

Commentators have been encouraging investors to extrapolate 2018 going forward. They could inadvertently be setting them up for disappointment.

Whether it's misrepresentation or outright misunderstanding, current projections for S&P 500 earnings seem to understate the impact of recessions, a now commonly discussed possibility in the next two years. S&P earnings per share (EPS) have become increasingly volatile since the dot-com bubble in the late 1990s. Though there was no noticeable downturn in GDP in 2001–02, trailing 12-month S&P EPS declined over 50%. During the Great Recession of 2007–09, GDP actually did decline. It precipitated a freefall in S&P EPS of 80%.

The rate of growth in GDP per capita has been declining since 2000. It has advanced 1% annually since then—60% of its long-term average. Meanwhile, total debt to GDP has grown by 1.3% annually—nearly two times its long-term average. From our vantage point, nowhere are the adverse financial consequences of this growing leverage likely to be greater than simple extrapolation of S&P earnings over the next several years. More about this important subject later in the report.

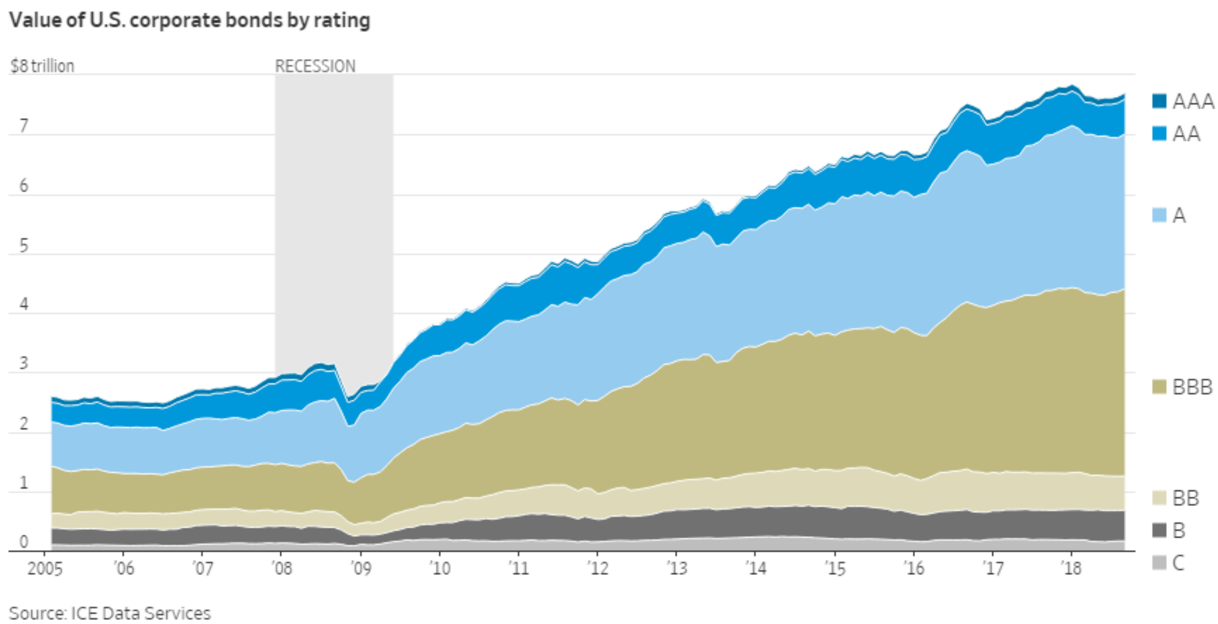
Markets and Financial Machinations

While the bull case seemed strong, market behavior left a less cohesive picture. We wrote in March about the "short volatility" trade that caused the swoon in February. That first tremor was indicative of global positioning. While "selling volatility," a bet that the market will not see volatile moves going forward, was the mistake in February, investors are holding other positions that would be even more disruptive to unwind.

For instance, the surge in leveraged loan and high-yield bond issuance, about which we have written before, is predicated on low interest rates that will allow the highly indebted borrowers (who comprise the high-yield market) to refinance their obligations at similarly low rates. Such is a corporate mirror image of the 2007 subprime episode.

Somewhat alarmingly, December saw no new issuance of high-yield, junk-rated bonds.[1] The October decline in equities saw, rather counterintuitively, an *increase* in the 10-year Treasury yield. This caused serious pain for those not defensively positioned. As the decline continued through November, credit markets began to move and we saw enormous rotations out of high-yield bonds and leveraged loans. Treasuries were the safety trade, causing their yields to fall and high-yield spreads to blow out, widening from 3.22% on October 1, 2018, to 5.33% by December 31.[2] Even leveraged loan issuance, the darling of 2018, slowed dramatically through November and December. This is meaningful as that market was the most accessible source of funding for highly indebted companies, since loans stand ahead of bonds in the capital structure.

It is in investment-grade corporate credit, however, where the greatest risk lies. Since the Great Recession, corporations have issued a historic swath of BBB-rated and A-rated bonds. These are the two lowest rungs on the investment grade scale (AAA–BBB). They dwarf the current size of the junk bond market.



Recessions can lead to downgrades in a company's credit quality, which has a direct impact on the cost of financing and access to credit. For instance, when an A bond is downgraded to a BBB, a company seeking to refinance the obligation will be required to do so at a higher rate. In such an environment, the spread of corporate credit over Treasuries widens. In 2007 the spread on BBBs bottomed at 1.12%. In early 2018 it was 1.17%. By the end of 2008 spreads widened to over 8%. As of December 2018 BBBs just broke 2%. Lower-grade bondholders can only hope that the next recession will be mild. Unfortunately, debt begets instability. The dramatic increase in corporate debt, much of which is increasingly covenant-lite, makes a soft landing ever more unlikely.

Further, the enormity of Treasury issuance at present could exacerbate the corporate conundrum. Government bonds may crowd out demand for corporates, pushing their yields higher still.

---

[1] https://www.wsj.com/articles/a-junk-bond-drought-is-making-investors-nervous-11547116200
[2] https://fred.stlouisfed.org/series/BAMLH0A0HYM2

The yields on the A and BBB securities indicate that most investors assume a recession is not in the cards. The early-warning signs of slowing growth, though, could prove them wrong. The mandates of most investment funds preclude them from holding junk-grade debt. If their BBB positions are downgraded, they will be forced to sell. Exiting those positions would be problematic, to put it mildly. Bond markets are highly illiquid. If high-yield buyers have already become skittish, how exactly would that market double in size in the event of significant downgrades?

Though the equity markets have made the headlines, it is the Treasury futures market issuing the starkest warnings. Instead of indicating three hikes in the Fed funds rate for 2019, it is now pricing in a 40% chance of no raise at all and a 30% chance of an interest-rate cut! Such is not the story of a strong economy—and certainly not the one the Fed is telling. In mid-December it expected two hikes next year!

Outside the U.S.A.

Other market signals this year appeared in foreign markets. As yields rose throughout 2018, the attractive rates in the U.S. (say, against negative yields in the Eurozone) worked like a giant vacuum, sucking dollars from around the world into U.S. Treasuries. The U.S. Treasury, for its part, has accommodated by selling massive issues of debt. So much so, the bid-to-cover ratios declined markedly throughout the fourth quarter.

The resulting shortage of dollars globally has severely stressed emerging market economies. The MSCI Emerging Market Index was down 20% for 2018. Turkey, Argentina, Brazil, and China have seen the most notable declines. China, of course, is an important global market, as the politics and policy around trade indicate. Trouble there weighs heavily on global economic health. Many S&P 500 companies earn a major share of their profits from that global economy.

Volatility: a Canary in the Coal Mine?

The market would recover from February and hit new highs in September. In contrast to 2017, though, the moves would be choppier. A pattern of higher volatility emerged.

S&P 500	2018	2017
Daily moves > 1%	64	8
Daily moves > 2%	20	0
Intraday move > 3%	15	0
Avg. intraday move (pts)	33	13

Further, the highs of September were not universal. As we have discussed at length on our blog, the recreational-vehicle stocks were then seeing multi-year lows. Camping World, one of two publicly traded RV dealers, saw its stock price cut 75% by year-end.[3] Were higher interest rates having their intended effect?

Though some companies faltered, technology stocks (FANG—Facebook, Amazon, Netflix, Google) continued apace for most of the year, as did their share prices. Some wondered whether the revelations of Facebook's role in the 2016 election would be an Achilles heel for the industry. It was certainly bad press, and regulation could be the result.

It was not its performance before Congress, however, that turned the tide. On July 26, 2018, after beating earnings estimates, the company reported slowing revenue growth and a 47% year-over-year increase in staff

[3] Lazydays Holdings began active trading in March 2018, and thus full-year data are not available. Nonetheless, it did decline 50% from March through year-end.

as a response to safety and security concerns post-2016. The stock closed down 20%, losing investors $120 billion in a day. It hasn't recovered.

The report did not even disclose disastrous performance. The company is still hugely profitable. But it did rub the veneer off the tech space. The sector proved vulnerable. The new tech economy still needs human monitors, suffers from shortcomings in data security, is subject to swings in consumer preferences, and gets pressured by foreign governments not aligned with the "values" of the companies, to name a few. This is a problem for the market generally because the top five tech stocks equal 15% of the S&P 500 market cap, and they're priced for perfection.

While the new economy has stumbled, the old economy is sometimes downright struggling. GE, an icon of American ingenuity and corporate performance, is fighting for its life. Chronic problems in its power-generation business, long smoothed over by some creative accounting practices, have the company looking to sell assets, such as oil producer Baker-Hughes or GE Healthcare. GE has $50 billion in debt coming due by 2023. Refinancing that debt at today's higher rates would cut dangerously deep into its cash flow. Consequently, it needs to chip away at its long-term liabilities. GE's situation exemplifies the danger of the corporate debt bubble. Should it be unable to put its house in order, its debt could be downgraded. The many mutual funds holding GE's bonds would be forced to sell. To whom is unclear. Complicating the picture: Some key assets GE hopes to sell, like Baker-Hughes, have declined in value by some 30% since October.

Forewarned Is to Be Forearmed

Throughout the course of 2018, we posted to our blog site on subjects deemed to be germane to the rational and proactive investor. We will not repeat ourselves here, knowing that those stalwarts who remain in our philosophical camp have taken advantage of this contemporaneous commentary by the installment plan. ☺

Why We Worry Top-Down and Invest Bottom-Up

"A rising tide lifts all ships" is bandied about in our profession like a shuttlecock at a garden party's badminton game.

It seems that whenever an analogy is that simple and quaint, there must be a catch. And there is: the waves. In their endless repetition they mask the invisible but prodigious ebb and flood tides. The daily headlines are almost always about the waves, particularly, even if unnoticed, when the tide is rising.

Those of us who worry top-down are keenly aware of the signs that may give us an early indication of an impending change in phase (i.e., from when the flood tide peaks at high tide and begins to reverse its flow or vice versa). If we are patient and aware, a rising tide is today's ally, and an ebbing tide is tomorrow's opportunity.

Security markets are the outward expression of an endless stream of millions of individual decisions—all along the continuum from brilliant to banal—that are both cause and effect of the market's ups and downs. They lack anything approaching the regular symmetry of the tides. As random as they seem from day to day (or even year to year), though, there is nonetheless a rhythm to them, as there is to all of nature.

This year's letter seeks to identify the tidal ebbing and flooding of the markets since the turn of the 20th century.

The endeavor is simple in concept, yet anything but easy in implementation. Like the effects of the sun and the moon on the amplitude and duration of the tides' rising and falling, the forces impacting the markets are forever changing as well. The crucial difference is that with the latter, these forces are unpredictable. We invariably find ourselves on the horns of a dilemma: We may have a general idea about the stage of the tide, but we know it's a fool's errand to try to predict when or at what level high or low tide will occur.

The macro-worrier is not powerless in resolving this tension. When, in his or her reasoned judgment, the flood tide reaches a water level above which the prevailing risks begin to overshadow the prospective returns, capital can be reallocated so as to minimize the effect of, and sometimes profit from, the eventual shift in phase.

As for the not-so-easy part, unlike the regularity of the tides, the ebbing of markets is typically disorderly—sometimes utterly chaotic—making it difficult to distinguish the waves from the tides. Occasionally the ebb current is so strong that even the best are swept out to sea. Aware of this propensity, macro-worriers are invariably early to seek a safe mooring—sometimes so early as to look the very fool they so diligently sought not to become. So why do we put ourselves through this agony? Because it works!

Macro-agnostics minimize the psychological discomfort of cognitive dissonance by avoiding situations and information that might cause it. Using backward-looking models—a common coping tool—computing the probability of something disastrous that has never happened before usually produces a number close to zero. With a probability that slim, most become disaster-myopic. They don't even think about it. Equally troubling, studies have shown that new information conflicting with one's worldview is most often rejected.

Such macro-agnosticism has become mainstream. This development is dangerous and hubristic in our view. By taking you on a whirlwind tour of 118 years of market history, we want to arm you with better tools to judge where we stand. Benjamin Graham, deservedly the "Dean of Wall Street," urged that an investor should *"have an adequate idea of stock market history, in terms, particularly, of the major fluctuations. With this background he may be in a position to form some worthwhile judgment of the attractiveness or dangers … of the market."* As pundits continue their refrain of "This time is different," we hope you will share our conclusion. Despite the deceiving/distorting "waves" caused by unprecedented Fed policies that have currently stretched asset valuations to bubble levels, the tide is still ebbing, following the once-in-a-lifetime 20-year flood tide that set a new high-water mark in 1999 of 44 times 10-year average earnings. Those who mistake the current wave for the tide may be in for a cruel awakening.

One thing we know for sure is that, in time, once the ebb tide has run its course, the next flood tide will follow. With liquidity, patience, a contrarian streak, a steely temperament, and a willingness to seize opportunity within our spheres of competence, we are ready. While thought to be crazy at the time, only Noah is part of history. Others may have talked about it, but he's the only one who actually built an ark!

A Data-Driven Story: the Ebb and Flood Tides Since 1900

The principal essay in this year's report will concentrate on low-degree-of-difficulty worrying—the kind that requires a rational mind, common sense, and an awareness of historical proportion, as well as one that pays disproportionately large psychic and financial dividends. The condensed findings of an examination of a sea of data stretching over a century of market history follow. Going back to 1900, we have subdivided history thematically into consecutive eras of rising and ebbing tides, based on the returns investors earned, alternating between long-term secular peaks and troughs. Shorter-term cyclical bull and bear markets occurred within these grand secular trends—the waves within the tides. By seeking to identify the conditions that precede both types of eras, one might find oneself happily on the right side of history.

Table I

S&P 500 Real Annualized Total Return w/ Dividends Reinvested		
Time Span	**Ebb**	**Flood**
1900-1921	2.6%	
1922-1929		20.3%
1930-1949	2.7%	
1950-1965		13.9%
1966-1981	(1.0%)	
1982-1999		14.4%
2000-2018*	3.0%	

**Not necessarily indicative of low tide, but simply the latest date for which data are available.*

The spoils of the seemingly relentless stream of innovations marking the 20th century as the most productive in the history of humanity did not fall upon investors like a steady rain of riches. Quite to the contrary, investors experienced four extended and anguishing periods of stagnation—spans of 21, 19, 16, and 18 years (thus far), respectively. Those who were invested during the ebb-tide years accepted—knowingly or otherwise—the risks of owning the equity tranche of a corporation's capital structure without any defensible prospect of earning the "equity risk premium." In a flourishing country in which people are focused on making money (among other things), how can that be? In the simplest, mathematical terms, above-average returns in the flood-tide years were offset by below-average returns in the ebbing ones. The inflation-adjusted total return from the S&P 500 (including dividends)—which averaged 6.5%—cannot indefinitely exceed (or fall behind) the rate of intrinsic value growth in the businesses themselves.

It is also a well-understood identity that investors as a whole cannot do better than the market. It should be of no surprise to readers that a frequency distribution of investment results for the total population of investors takes the shape of a bell curve with a narrow standard deviation. Clearly the vast majority of market participants experience average returns. This is not a criticism, only an observation.

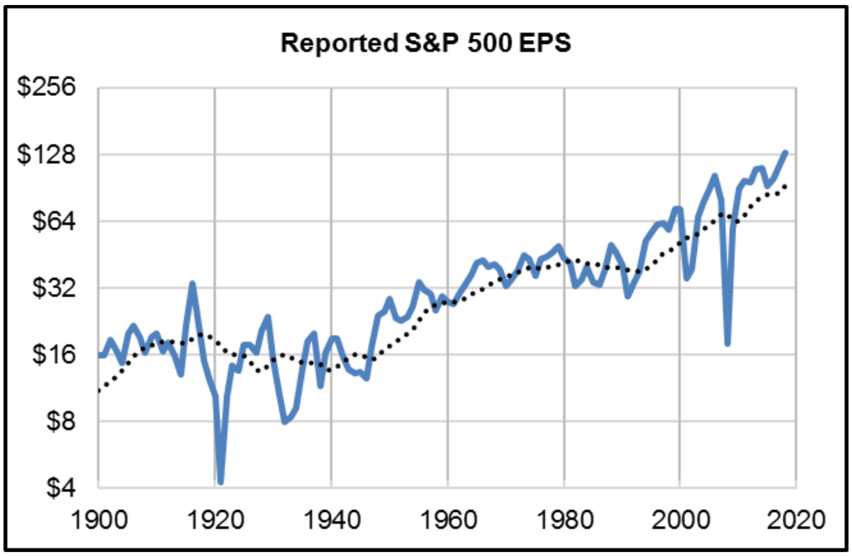
Like our clients, we aspire to be above average. Unlike the randomness of a coin toss, the great investor outliers tend, over time, to be on the "right" tail of the bell curve. Because of their rational, disciplined, process-driven approach to the game, their high batting averages overshadow the inevitable strikeouts and occasional slumps. On no lesser authority than the Buddha, we justify our single-minded desire to emulate the masters: "The mind is everything. What you think you become." Forearmed with knowledge not only of facts, figures and events, but of the nature of men and markets, giants like Ben Graham, Warren Buffett, and Seth Klarman are among the hardy perennials whom we wish to flatter by our imitative thinking.

I recall Peter Bernstein, another right-tail anomaly, speaking to one of the investor tendencies that exaggerate the amplitude of market movements and give rise to ebb and flood tides:

> In their calmer moments, investors recognize their inability to know what the future holds. In moments of extreme panic or enthusiasm, however, they become remarkably bold in their prediction: they act as though uncertainty has vanished and the outcome is beyond doubt. Reality is abruptly transformed into that hypothetical future where the outcome is known. These are rare occasions, but they are unforgettable: *major tops and bottoms in markets are defined by this switch from doubt to certainty* [italics added].

An essential guide to understanding the charts and tables that follow: The data in this longitudinal study are adjusted to exclude the distorting effect of inflation, which increased some thirtyfold over the 118 years. Thus, GDP and debt, as well as S&P price, earnings, and dividends are presented as "real" (inflation-adjusted). All values are in 2018 dollars per the Shiller Consumer Price Index data. Likewise, since the U.S. population increased 3.2 times over our period, and productivity, which is always expressed on a per-capita basis, experienced unprecedented gains, all public and private debts, as well as GDP data, are presented on a per-capita basis using Census Bureau data for population. Further, all metrics are calculated on year-end values, except for 2018, which uses Q2 data. Finally, public debt includes state and local liabilities.[4]

The long-term charts at the beginning of each section appropriately use logarithmic scale so that market fluctuations over history are proportional. The tables rely on data provided by Nobel Prize winner Robert Shiller, about whose credibility more is said later in the report. Shiller's seminal work uses a 10-year average of S&P 500 EPS. It is shown on the dotted line in the following chart.



As is evident, the moving average smooths out the fluctuations in reported earnings. This metric removes (for valuation purposes) distortions from the business cycle and (for long-term investment) emotional irrationalism when times look good or bad.

The Shiller P/E is determined by dividing the real S&P index price by the real 10-year moving average of S&P earnings. The return from "Capital Appreciation" is a function of the beginning-to-end change in the P/E times the Shiller earnings. Throughout the work below, S&P dividends, the "Dividend Return," are assumed to be automatically reinvested in the index in order to arrive at the Total Return.

[4] Private debt includes corporate and household liabilities as per the Fed Flow of Funds data. No debt numbers include unfunded obligations, whether pensions, Social Security, Medicare, or otherwise.

1900–21

Chart 1

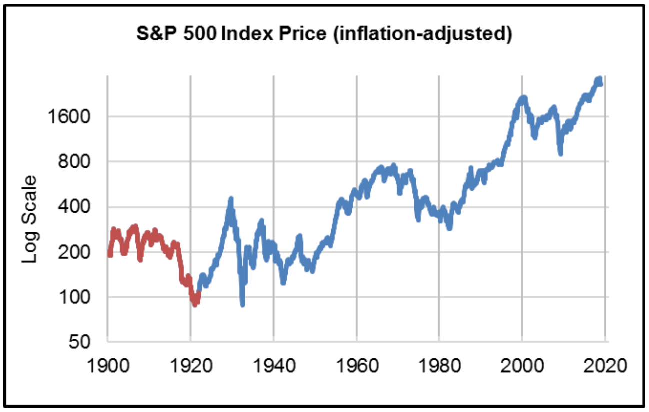


Table II

	Shiller P/E		Annualized Rate of				S&P 500 Real Annualized Return				
			Change in		Change in		Capital		Dividend		Total
Time Span	Beginning	End	Shiller P/E	+	Shiller EPS	=	Appreciation	+	Return	=	Return
1900-1921	18.5	6.1	(4.9%)		2.4%		(2.6%)		5.3%		2.6%

Leaving the station like a steam-powered locomotive on this characteristic 21st-century, information-age, high-speed tour through history, the Industrial Revolution in the U.S. was well under way by 1900, with Henry Ford introducing two life-changing and labor-saving innovations in 1903—the Model T and the assembly-line process for manufacturing it. The population was a comparatively smallish 76 million (less than one-fourth of today's 328 million). Long before the introduction of the myriad government-sponsored social and economic safety nets we know today, the national character could be summarized as hearty, resilient, hard-working, and industrious. Personal accountability was hardly a choice. Labor-saving (and thus labor-displacing) innovations proliferated throughout the 20th century. As a powerful example of increased productivity, automation and genetic engineering displaced many farmers. As a result, the task of feeding the nation, which a little over 100 years ago employed 38% of the U.S. population, today requires only 1%! What Keynes later described as "spontaneous optimism" and "animal spirits" gave rise to growth that created jobs for displaced workers, and overall productivity boomed. Per-capita GDP rose eightfold from $9,050 in 1900 to $62,977 in 2018. Still, by today's standards the country was a fledgling, with many of its political, business, legal, and social institutions underdeveloped.

This caricatured epoch began with a power struggle among railroad barons for control of the Northern Pacific Railroad, culminating in the Panic of 1901, the first such crisis since the Panic of 1893. The Panic of 1907 was a wild and woolly financial kerfuffle triggered by a failed attempt to corner the market in the stock of the United Copper Company. A run on the banks that financed the scheme ensued, the most notable of which was the Knickerbocker Trust Company, from which the run then spread to its regional correspondents and, eventually, across the nation. Side bets by unregulated bucket shops exacerbated the panic. J. P. Morgan stemmed the crisis by pledging his own money and convincing other New York bankers to do the same, thus providing needed liquidity for the banking system. The Panic of 1907 became fodder for those advocating the first central bank since the time of Alexander Hamilton. Steeped in controversy, the Federal Reserve Act was signed into law in 1913.

Militarily, the United States' active involvement in the "war to end all wars" began in April 1917 and ended with an armistice in late 1918. On the heels of World War I came an unprecedented pent-up-demand-induced inflationary boom followed by the (lower-case "d") depression of 1921. Real GDP fell by 8.4%. As a point of reference, GDP contracted 5.5% during the Great Recession of 2007–09, with both downturns lasting about 18 months. Again, for comparison purposes, not only did output fall farther in 1921, but it recovered quicker and with more force than the U.S. has experienced following the Great Recession. In the five years following the lows of 1921, real per-capita GDP surged 3.6% through 1926, compared to a paltry 1.5% from 2009 through 2014.

The depression of 1921 was the last untreated economic depression. Under the *laissez-faire* presidencies of Harding and Coolidge, no attempt was made to stop the fall in prices and wages. Wholesale prices plunged 37%: consumer prices by 11% and farm prices by 41%. By today's standards, such thinking was unenlightened—or was it? If hourly wages were allowed to bring costs in line with prices, it was reasoned, a business losing money had a chance to return to profitability. By returning to profitability, it would have a reason to invest in assets and people and thereby grow. The process wasn't heartless. Those in power understood that wage rates had to be properly realigned with other costs of production. If they were not allowed to fall, such a policy would have found favor among the dwindling remnant of fully employed workers. *But* society's overall income would have been lower at that "uneconomic" level of compensation.

In spite of the economic ups and downs, including the destabilizing effect of World War I, the impetus from the expanding use of electricity, autos, and the telephone was enough to keep the country moving, albeit slowly. Real per-capita GDP, in fits and jerks, advanced at an annual rate of 0.4%. The average for the entire 118-year period? 1.7%.

The future was looking promising as the 20th century dawned. Corporate profits had been rising and P/E ratios expanding. Having enjoyed a few flood-tide years, investors were optimistic. Considering the state of the factors that express themselves in the price-to-earnings ratio—interest rates, the expected growth in corporate profits, the risk appetite of investors—the market was surely near high tide. Unless the best got a whole lot better, the tide would eventually shift. No one could've imagined in 1900 that there would be two panics in the first decade, World War I in the second, all capped by the depression of 1921.

By the 1921 depression, the future looked as miserable as the past. And yet, the valuation metrics at the time screamed a very low tide. In the depths of despair, however, no one seemed to be listening. Few could've dreamt what was in store for the 1920s—except that the tide would eventually change. Most times that's enough.

1922–29

Chart 2

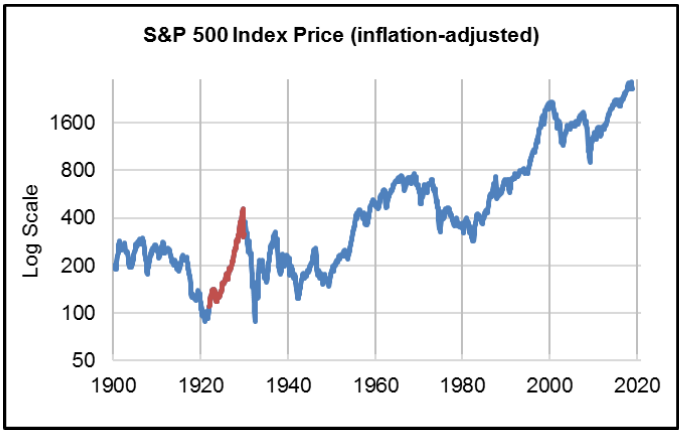


Table III

	Shiller P/E		Annualized Rate of		S&P 500 Real Annualized Return		
			Change in	Change in	Capital	Dividend	Total
Time Span	Beginning	End	Shiller P/E	+ Shiller EPS	= Appreciation	+ Return	= Return
1900-1921	18.5	6.1	(4.9%)	2.4%	(2.6%)	5.3%	***2.6%***
1922-1929	**6.1**	**22.0**	**17.3%**	**(2.5%)**	**14.4%**	**5.9%**	***20.3%***

Just as Jane Austen's novels capture the *zeitgeist* of the late-18th-century landed gentry in England, so do American author F. Scott Fitzgerald's works define the 1920s. *The Great Gatsby*, published to little fanfare in 1925, and inspired by the parties Fitzgerald attended while visiting Long Island's North Shore, explores themes of decadence, idealism, resistance to change, social upheaval, and excess, creating a vivid portrait of the Jazz Age and the Roaring Twenties. Like Austen, eventual acclaim was momentous, although awarded posthumously.

More inclined toward the pragmatic, Warren Buffett credits Edgar Lawrence Smith's 1924 book *Common Stocks as Long-Term Investments* with inadvertently providing the intellectual framework for the late-1920s stock market mania. Smith found a hole in the reasoning that stocks should yield more than bonds because they were deemed more risky. He pointed out that stocks were more than their dividends because the unpaid portion of earnings was reinvested in the business on behalf of the shareholder. If successfully allocated, the retained and reinvested earnings would later reappear in the form of higher dividends or capital appreciation—or likely both. Decades later Buffett pointed out both the folly and the genius of Smith's revelation. Quoting Ben Graham, "'You can get in way more trouble with a good idea than a bad idea,' because you forget that the good idea has limits."

Yet another academic, Irving Fisher, perhaps the first U.S. celebrity economist and the man who won the approbation of some of the greatest economists of his time and in the years to follow, threw one of the largest and last logs on the bonfire of the vanities (irreparably savaging his own considerable reputation) by publicly pronouncing that the stock market had reached "a permanently high plateau" just prior to the 1929 Wall Street Crash.

Fisher's prognostication acted like gasoline on a fire. Disregarding Fitzgerald's warning against decadence and its consequences, the decade's passions flamed still more intensely as speculation engulfed the general public. *"Major tops and bottoms in markets are defined by this switch from doubt to certainty."*

In terms of the fundamental underpinnings behind the great speculative epidemic coming out of the 1921 depression, growth in real per-capita GDP averaged an impressive 3.3% for the 1922–29 period. The S&P P/E rocketed from 6.1 times to 32.6 in September 1929, a valuation record that stood for 70 years until the peak of an even greater bubble in 1999. The modest downward movement of longer-term interest rates was largely irrelevant during the speculative frenzy.

Profit margins rose to a still-standing record high of 8.8% in 1929. Real reported annual S&P earnings per share initially recovered haltingly, then soared 67% from $14.28 in 1924 to $23.70 in December 1929, although well below the prior peak of over $33.40 during World War I. As noted in Table III, the 10-year moving-average earnings actually declined.

With the great bull market speeding toward the abyss, the cost of short-term credit was rising. Its eventual shortage may have been the straw that broke the camel's back. In May 1928 the Federal Reserve System began tightening, raising the discount rate to 4.5%. It was raised again to 5% in July 1928 and to 6% in August 1929. The term "call loan" was apropos. Nervous brokers in the burgeoning and unregulated market began demanding their money back as the end drew nigh. Liquidity was in such short supply that call-loan rates rose from between 10% and 25% in the summer to 50% by October.

As the data in Table III indicate, the market had become a bubble. How could all but one in 100 have missed it? Yet, as so often is said, it's complicated. Please read on …

1930–49

<u>Chart 3</u>

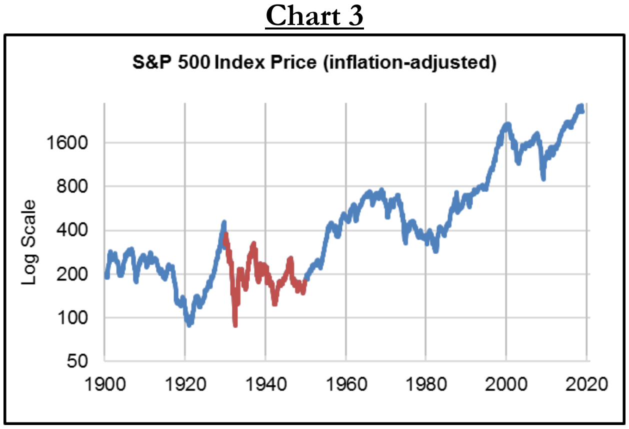


Table IV

	Shiller P/E		Annualized Rate of				S&P 500 Real Annualized Return				
			Change in		Change in		Capital		Dividend		Total
Time Span	Beginning	End	Shiller P/E	+	Shiller EPS	=	Appreciation	+	Return	=	Return
1900-1921	18.5	6.1	(4.9%)		2.4%		(2.6%)		5.3%		***2.6%***
1922-1929	6.1	22.0	17.3%		(2.5%)		14.4%		5.9%		***20.3%***
1930-1949	**22.0**	**10.5**	**(3.6%)**		**0.8%**		**(2.8%)**		**5.6%**		***2.7%***

The 1930s and '40s distinguished themselves as among the most tumultuous decades of the 20th century, with late 1929 into the early '30s being the tipping point. The series of events that marked this period—the stock market crash(es) of 1929–32, the collapse of the economy into the Great Depression, and the attack on Pearl Harbor on December 7, 1941, that inexorably forced the U.S. into World War II for the next 3½ years—were unprecedented in modern times.

Since the nexus of this letter is the investment outcomes from beginning to end of grand secular cycles, we find ourselves straddling the 1929–30 fence. Departing from historical precedent, we think it more than novel—and accurate—to view the "crash" as two discrete episodes.

The first began with the Dow's peak at 381.17 on September 3, 1929, from which point daily price volatility and trading volume convulsed into spasms of fear and relief. The freefall, which began as "The Crash" on October 24 ("Black Thursday"), ended *three weeks* later on November 13, during which time the Dow plummeted 198.6 points, an overall decline of 47.9%.

During the seemingly eternal, somnolent *five months* between November 14, 1929, and April 17, 1930, the panic subsided and the Dow marched back to 294.07, recovering 48% of the ground lost during the crisis.

President Herbert Hoover and Treasury Secretary Andrew Mellon, veterans of the 1920–21 depression, embarked on a whirlwind of intervention to "stop a depression before it could start." At the president's insistence, virtually every faction in business, industry, and labor convened in Washington on November 21, 1929, agreeing under varying degrees of duress to strike a bargain to forestall depression. For example, companies would not cut wages; neither would unions seek increases. Stabilization, an idea that gathered steam among economic luminaries (including Keynes) during the mid-'20s—not disorderly 1921-style wage and price deflation—was to be the order of the day.

In May 1930, just as the relentless descent of the Dow resumed, the chastised Irving Fisher doubled down, declaring, "It seems manifest that thus far the difference between the present comparatively mild business recession and the severe depression of 1920–21 is like that between a thunder-shower and a tornado." Thus the "Second Crash" originated (and thus the reason for so much of the narrative of the times appearing here in the 1930–49 era), this time investors suffering a death by a thousand cuts, as the Dow slipped into the black hole of ignominy, shredding all hope as it faded from 209.4 to 41, losing 81% of its value over the next 26 relentlessly excruciating months.

Returning to probable causes, Hoover was determined to shift the burden of economic suffering from labor to capital. His humanitarian-motivated intervention unwittingly brought the whole house down. In 1920 and 1921, nominal wages fell as prices fell. There was no such adjustment in 1929, 1930, or 1931. "By late 1931," as economic historian Lee Ohanian observed in a 2009 paper, "real manufacturing average hourly earnings had increased more than 10 percent as a consequence of the Hoover program and deflation. At the same time, manufacturing hours worked had declined more than 40 percent, and the average workweek in manufacturing had declined by about 20 percent."[5] Unemployment reached 25% and stayed above 10% until 1940.

Although only 10 years separated the depressions, the attitude toward the extent to which government should be involved in engineering solutions for economic problems was nothing short of revolutionary. Hands-on Franklin Roosevelt, inaugurated on March 12, 1933, wasted not a minute in enacting mountains of securities, banking, social, and other legislation. From that point forward, governmental institutions have increasingly become the private sector's keeper, engendering a culture of dependency no doubt unimaginable up to that time.

Ben Graham looks back on the episode in the first edition of *Security Analysis,* which he and David Dodd started working on at Columbia University in 1932 and published in 1934. Writing from his perspective as an educator, financial philosopher, and investor—*and not as an economist*—he captures the essence of investment morphing into speculation.

At the quarter-century mark of 1925, the great bull market was under way, and Graham, then 31, had enjoyed impressive success as an investor in the challenging years since 1915. During an early-1929 conversation with business associate Bernard Baruch, both agreed that the market had advanced to "inordinate heights, that the speculators had gone crazy, that respected investment bankers were indulging in inexcusable high jinks, and that the whole thing would have to end up one day in a major crash." Years later Graham lamented, "What seems really strange now is that I could make a prediction of that kind in all seriousness, yet not have the sense to realize the dangers to which I continued to subject the Account's capital [money he managed for clients, family and friends]," which, by 1932, had shrunk to 15% of its 1929 value. Graham's prodigious intellect was not defense enough against what he later described as a "bad case of hubris."

Surely Graham was not alone in having at least a vague notion in the mid- to late '20s that things would end so badly in the summer of 1932. What he and others lacked was not so much the conviction but the moral courage and the temerity to say "No" when everyone else was saying "Yes." Graham's brilliance as an investor was generally demonstrated in his mastery of self. Though beaten and bloodied, his Account in shambles, he kept his wits and his sense of proportion. Instead of throwing in the towel as so many did, his illustrious career began at the lowest of all low ebb tides. Based on what he wrote at the time, he saw that stocks had never been cheaper.

Owing to what is attributed to premature Fed tightening, the recovery hiccupped in 1937–38, only to be revived by demand for goods from our eventual allies before our official entry into combat during World War II. (Fast-forward to 2015 when apprehensions about repeating the 1937 "hiccup" were the Fed's greatest fear as it debated when to unwind its hyper-accommodative policy.)

It is often mentioned that the market did not get back to the levels reached in 1929 until the mid-1950s. In fact, adjusted for largely nonexistent inflation, the annualized return on the index alone was -2.1% through 1949. Adding back dividends totaling 5.7%, the return jumps to 3.5%. Dividends matter, although dramatically less so today.[6] As Chart 3 reveals, there were *two* cyclical bull markets of note: one beginning in the summer of 1932, during the depths of the Great Depression, and lasting until 1937; and a second, beginning four months after Pearl Harbor was bombed, and ending in 1946. Both were conspicuous examples of the imperative of buying on bad news, selling on good.

---

[5] "What- or Who-Started the Great Depression?" Lee E. Ohanian (October 2009).

[6] The dividend payout ratio has gradually declined over the 118 years. Over the whole period, it has averaged 58%. Some periods, like 1900 to 1950, were significantly higher, over 67%. Since the mid-1990s, it has averaged 49%.

GDP grew at a rate of 2.7% during the era. From the highs of the late 1920s to the lows in the early 1930s, profit margins averaged around 5% over the 20 years. Margins rose sharply after the wartime Excess Profits Tax was repealed. Not surprisingly, earnings inched ahead at the snail's pace of 1%, but the P/E ratio declined by half. Interest rates, which declined during the Depression and were managed down during the war, did not boost the P/E ratio.

Looking back on these two chaotic decades, there was little to be optimistic about—except that stocks were selling for 10.5 times earnings and yielding 6.9%! As was the case in 1921, for a handful of forward-thinking investors, that was all they needed to know.

1950–65

Chart 4

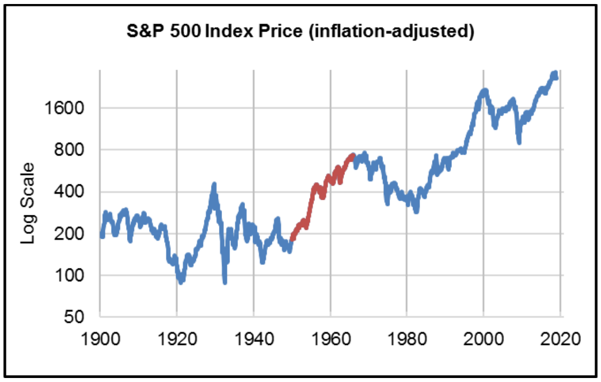


Table V

	Shiller P/E		Annualized Rate of			S&P 500 Real Annualized Return				
			Change in		Change in		Capital		Dividend		Total
Time Span	Beginning	End	Shiller P/E	+	Shiller EPS	=	Appreciation	+	Return	=	Return
1900-1921	18.5	6.1	(4.9%)		2.4%		(2.6%)		5.3%		***2.6%***
1922-1929	6.1	22.0	17.3%		(2.5%)		14.4%		5.9%		***20.3%***
1930-1949	22.0	10.5	(3.6%)		0.8%		(2.8%)		5.6%		***2.7%***
1950-1965	**10.5**	**23.7**	**5.2%**		**3.8%**		**9.2%**		**4.7%**		***13.9%***

The post-World War II era morphed into the Cold War, gave birth to the Baby Boom, spawned greater participation by women in the workforce, and freed years of pent-up demand for cars and houses, which coincided with a newfound willingness by banks and consumers to extend and use credit. Americans were driven to build the interstate highway system, out of which came suburbia, television … and the glorious story goes on! Public debt shrunk from $18,690 to $17,288 per capita on the extinguishing of wartime debts and population growth. In the meantime, the private sector went on a spending spree, with debt rising from $13,350 to $28,264 per person as consumerism took firm root.

By the 1950s memories of the 1930s had faded, and common stocks slowly returned to favor. At long last the underlying rationale of Edgar Lawrence Smith's *Common Stocks as Long-Term Investments* was embraced by investors. For the first time the yield on the S&P 500 fell below Treasury bonds. Once that line was crossed, investors never looked back.

The tide rose during those 15 years. GDP grew at an annual rate of 2.9%, and profit margins averaged 6%, reaching 7.1% in the mid-1960s, the highest level since 1929. Stock prices benefited from the double whammy of S&P earnings rising 83% and the P/E ratio's 126% surge. Although dividend payout ratios increased slightly during those years, averaging just over 55%, dividend yields declined to 3%. *The ascendancy of common stocks vis-à-vis bonds was apparent as the average premium in stock yields over Treasuries declined from 4% to -2%, crossing over in the second half of the 1950s.* CPI inflation was quiescent, rising at an annual rate of less than 1.8%. The demand for goods and services was in general harmony with the supply produced.

Every single data point on the last line of Table V confirms that stocks were expensive, and yet, looking back, most investors saw only more of the same ahead. The adages, "If it seems too good to be true, it probably is," and, "Beware, the opportunity set of tomorrow may be different from today," largely fell on deaf ears.

1966–81

Chart 5

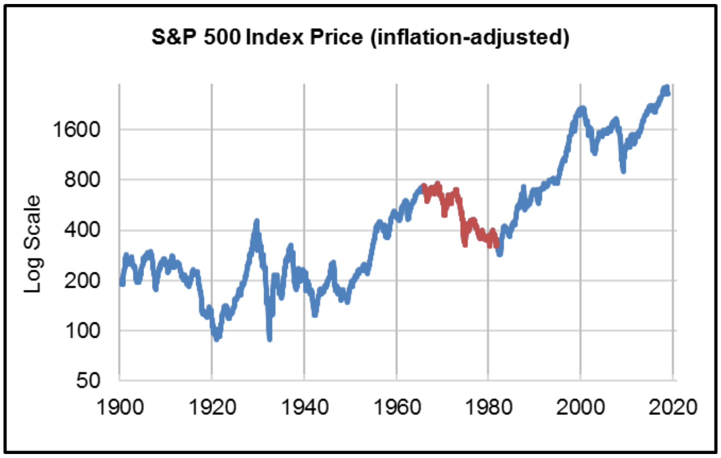


Table VI

	Shiller P/E		Annualized Rate of			S&P 500 Real Annualized Return				
			Change in		Change in		Capital		Dividend		Total
Time Span	Beginning	End	Shiller P/E	+	Shiller EPS	=	Appreciation	+	Return	=	Return
1900-1921	18.5	6.1	(4.9%)		2.4%		(2.6%)		5.3%		***2.6%***
1922-1929	6.1	22.0	17.3%		(2.5%)		14.4%		5.9%		***20.3%***
1930-1949	22.0	10.5	(3.6%)		0.8%		(2.8%)		5.6%		***2.7%***
1950-1965	10.5	23.7	5.2%		3.8%		9.2%		4.7%		***13.9%***
1966-1981	**23.7**	**7.8**	**(6.7%)**		**2.0%**		**(4.8%)**		**3.8%**		***(1.0%)***

This era began with a low inflation rate. By 1966 President John F. Kennedy's tax credit had reduced unemployment to 3.7% while inflation remained below 2%. With the economy booming, Kennedy's successor, Lyndon Johnson, repudiated Eisenhower's "guns versus butter" model of the 1950s. He wanted both: to continue New Deal programs *and* expand welfare with his own Great Society initiatives, as well as fully engage in the Cold War arms race and the fight against encroaching Communism in Vietnam. Demand outstripped supply. By the end of the decade the combined inflation and unemployment rate—known as the misery index—had exploded to nearly 10%, with inflation at 6.2% and unemployment at 3.5%. By 1975 the misery index was almost 20%. Socially, the reaction against the conservatism and social conformity of the 1950s, along with the U.S. government's extensive military intervention in Vietnam, reached a flashpoint. The hippie movement and 1969's Woodstock were emblematic of the social upheaval.

Nominal GDP and corporate earnings grew impressively. But before we become too sanguine about the supposed good times, keep in mind that the cost to build a house, buy a loaf of bread, or send your child to college tripled! *All the calculations were thrown off by the first (and so far last) bout of virulent peacetime consumer price inflation.*

It took the Consumer Price Index 66 years to triple the first time; this time it did it in just 15 years. Interest rates followed the CPI, beginning at 4.8% and finishing at 13.7%. Even after adjustment for inflation, per-capita GDP grew 1.1%, from $31,912 to $37,694. Profit margins, in part because of the high cost of labor and debt, fell from 7% to 3.5%. Counterintuitively, it was private-sector, per-capita borrowing, not public sector Great Society debt, that grew sharply during the period, the former rising from $29,253 to $45,359. Though public debt rose three times in nominal terms, adjusting for the massive inflation of the period and for population growth means that debt actually fell from $17,055 to $15,952.

To frame the debt data in the long-term context, public-sector debt, which at the end of World War II was $27,529, fell by nearly two-thirds over the next 20 years. During the same period, private-sector debt, by comparison, more than *quadrupled* from $9,810 in 1946. The age of consumer credit had shifted into second gear.

When the pricing mechanism got out of whack, there were secondary effects. Nominal interest rates followed prices upward, since few savers saw any point in saving at a negative real interest rate. As interest rates rose, long-lived earning assets like stocks and bonds (or real estate, farms, etc.) became intrinsically less valuable. (Their worth is calculated by discounting estimated future cash flows. Since the cost of money is the largest factor in determining the discount rate, the tripling of that key variable overwhelmed the contribution to stock prices from rising nominal earnings.) Since bond coupons are fixed, by 1981 the investment of choice for so many generations finally hit an ignominious bottom. Figuratively spat upon, bonds were called "certificates of confiscation." Like the 1979 *BusinessWeek* "Death of Equities" cover story, it was darkest before the dawn.

There is yet a third-order effect to be noted here. By saving, one is, by definition, deferring consumption. Investment in stocks and bonds is one of the ways savings are put to work. Eventually investments will be converted back to cash for the purpose initially deferred—consumption. If the dollar-for-dollar exchange rate declines over time, the loss of purchasing power is an effective tax on investment returns.

From the post-war euphoria that had become the standard by the mid-1960s, the ebbing investment years that followed were as unexpected as they were dispiriting. Total real GDP grew at 2.2%, while the stock market went nowhere. Although per-capita real GDP grew at just 1.1%, this did not have bearing on the market value of equities. Rather, it was the gravitational pull of interest rates, which tripled over the period, that was the nemesis of stocks.

P/E ratios declined by 67% to less than 8 times, profit margins collapsed, and earnings, like stock returns, were anemic. When surveying the moment and its immediate past, everything looked awful. Long-term interest rates were stuck in the mid-teens (a level to which they returned in 1983), and the country was enduring the unsettling consequences of the "Volcker recessions." The only bit of good news was hidden in the prices of earning assets. Whether in the bond market or, even better, in equities, the price-to-value ratio was incredibly compelling. But, as you're about to see, investors were plagued by their tendency toward hindsight.

1982–99

Chart 6

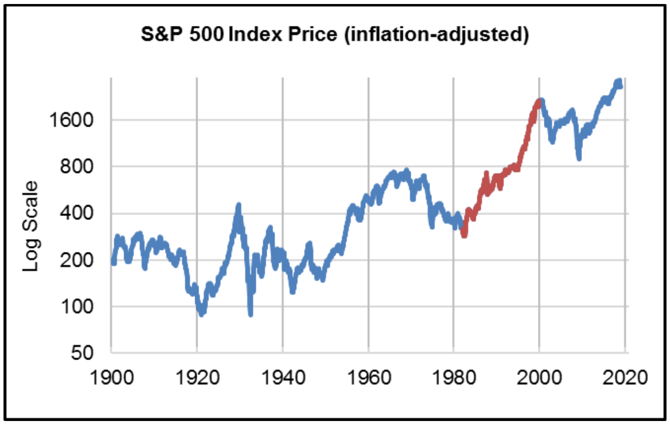


Table VII

	Shiller P/E		Annualized Rate of			S&P 500 Real Annualized Return				
			Change in		Change in		Capital		Dividend		Total
Time Span	Beginning	End	Shiller P/E	+	Shiller EPS	=	Appreciation	+	Return	=	Return
1900-1921	18.5	6.1	(4.9%)		2.4%		(2.6%)		5.3%		***2.6%***
1922-1929	6.1	22.0	17.3%		(2.5%)		14.4%		5.9%		***20.3%***
1930-1949	22.0	10.5	(3.6%)		0.8%		(2.8%)		5.6%		***2.7%***
1950-1965	10.5	23.7	5.2%		3.8%		9.2%		4.7%		***13.9%***
1966-1981	23.7	7.8	(6.7%)		2.0%		(4.8%)		3.8%		***(1.0%)***
1982-1999	**7.8**	**44.2**	**10.1%**		**0.7%**		**10.9%**		**3.5%**		***14.4%***

In 1982, as the reader may now be aware, investors projected out into the future what they were currently seeing. Nothing was less threatening to the human need for order and symmetry than simple extrapolation of known trends into the vague and distant future. Anchored as investors tend to be in the present, one of the great ironies is that they imagine the future to be what they see in the rearview mirror. The windshield is simply too foggy. 1982 was a discouraging scene. Investors expected to see more of the same: high interest rates and low profits. They valued the market accordingly.

Out of that despair emerged the greatest bull market in modern history. Although one could argue that interest rates would've fallen on account of their own weight, Federal Reserve Chairman Paul Volcker's courageous actions have become legend. Unlike his predecessors or successors, Volcker was willing to induce short-term pain for long-term gain. The recession of 1981–82 broke the back of inflation, the bane of the mid-1970s to the early '80s. Like any number of remarkable leaders, at the very time he was doing his greatest work, he was widely vilified. Without a doubt, Paul Volcker was the last Fed chairman not to be intimidated by the markets.

Interest rates fell and the price of earning assets rose throughout 1982–1999. It was the antithesis of the preceding era. Remembering the shellacking they experienced from 1966–1981, however, interest rates had to fall a long way before bondholders were induced to return to the market. It slowly dawned on them that the fixed-coupon bonds offered in a declining interest-rate environment should be sought after rather than avoided.

"Once burned, twice shy" investors were slow to embrace stocks as well. For the first 13 years, until January 1995, the total return of the S&P 500 rose at an annual rate of 8.1%. Reminding the reader of Ben Graham's earlier admonition, "'You can get in way more trouble with a good idea than a bad idea,' because you forget that the good idea has limits," the trajectory of the market for the final five years was exponential, ascending at an astonishing annual rate of 22.4%.

It should come as no surprise, then, that the mutual fund investor, who went into hiding as the ebb-tide years progressed, ultimately came back with a vengeance. Five million families owned mutual funds in 1990. The number rose tenfold by 1999. Once a bull market gets legs, and once you reach the point where everybody has made money no matter what system he or she followed, a crowd is attracted into the game that is responding not to interest rates and profits but simply to the fact that it seems a mistake to be out of stocks. In effect, these people superimpose an I-can't-miss-the-party attitude on top of the fundamental forces that drive the market.

Per-capita GDP grew at a rate of 2%, from $37,462 to $52,090. Profit margins hovered around 4.80%, below their long-term average of 5.55%. Insidiously, total public and private debt grew 3.8% annually, more than 150% of per capita growth in GDP—$63,154 to $119,741. The period of the late-20th-century was otherwise unequaled: The P/E ratio more than quintupled, while earnings grew by 75%.

It doesn't get any better than that—and it didn't. As the data above clearly reveal, the flood-tide years had come to an end.

2000–18

Chart 7

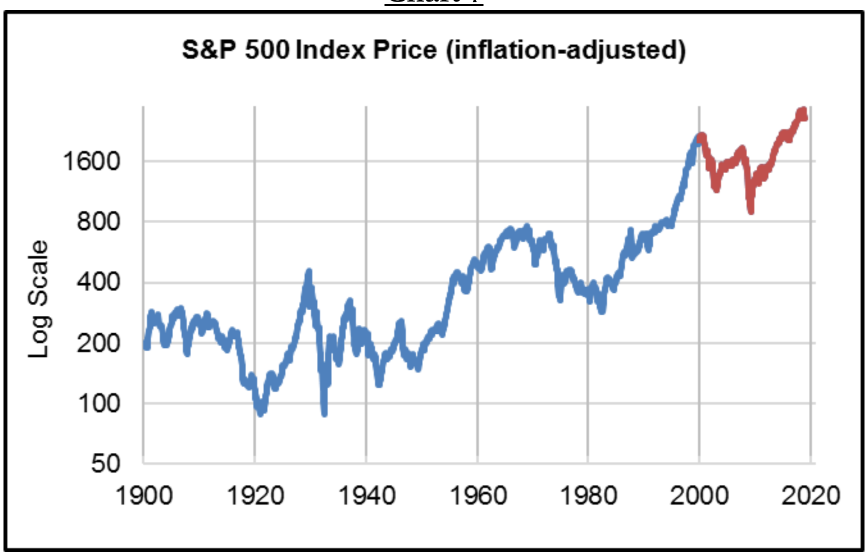


Table VIII

	Shiller P/E		Annualized Rate of				S&P 500 Real Annualized Return				
			Change in		Change in		Capital		Dividend		Total
Time Span	Beginning	End	Shiller P/E	+	Shiller EPS	=	Appreciation	+	Return	=	Return
1900-1921	18.5	6.1	(4.9%)		2.4%		(2.6%)		5.3%		***2.6%***
1922-1929	6.1	22.0	17.3%		(2.5%)		14.4%		5.9%		***20.3%***
1930-1949	22.0	10.5	(3.6%)		0.8%		(2.8%)		5.6%		***2.7%***
1950-1965	10.5	23.7	5.2%		3.8%		9.2%		4.7%		***13.9%***
1966-1981	23.7	7.8	(6.7%)		2.0%		(4.8%)		3.8%		***(1.0%)***
1982-1999	7.8	44.2	10.1%		0.7%		10.9%		3.5%		***14.4%***
2000-2018	**44.2**	**28.8**	**(2.2%)**		**3.4%**		**1.1%**		**1.9%**		***3.0%***

In 1999 Warren Buffett warned that investors looking through the rearview mirror to predict the future were destined to be sadly disappointed. Acknowledging that "markets behave in ways, sometimes for a very long stretch, that are not linked to value," he was unequivocal when he stated that, sooner or later, value counts. Prices do not exist in a vacuum but are tethered to something, even if by a bungee cord. Paine-Webber/Gallup poll results released in July 1999 revealed just how myopic investors' expectations can become. The survey showed that the least experienced investors—those who had invested for less than five years—expected annual returns of 22.6% over the next 10 years. Even those who had invested for more than 20 years were expecting 12.9%. It was simple extrapolation at its worst!

The Internet became commercially accessible in the mid-1990s, and investor fascination with the possibilities unleashed by information technology was the nemesis of Buffett's common sense. Although he was openly enamored with the proliferation of innovations launched by the revolution, he went to great lengths to explain that it was the consumer and not the investor who had most benefited from the life-changing inventions of the past. The automobile and the airplane, for instance. He felt that the Internet would be no different. Despite being the most respected investor extant, the "Oracle of Omaha" was nonetheless ridiculed in some quarters for being out of touch with the potential of this latest groundbreaking invention. Knowledge about how people behave, Buffett knew as an investor, was more important than intimate familiarity with an innovation and its potential.

His observations served him well during the 2000s. The sentiment today is not driven by technological innovation, but something more basic. Whereas the dot-com bubble was about greed—portfolios were growing by leaps and bounds—the situation today is about financial need. Dividend payout ratios have declined over the last 50 years, as Total-Return investing was canonized in the early 1970s. This leaves companies with less incentive to maintain robust dividends, which have been an integral portion of equity returns through most of the 20th century. Compounding the pain, interest rates through 2015 remained at the zero-bound and the price of long-term money still hardly covers inflation. Enormous unfunded pension liabilities, not to mention anemic 401(k)s, are all in desperate need of higher rates of return to finance the retiring wave of Baby Boomers. Thus, the only way to catch up has been to seek price appreciation in the equity market, increasingly with a passive product that will often outperform an active manager and at lower cost.

Such products, however, are cyclically agnostic. Buffett sees economic history in cycles of roughly 17 years, which compares favorably with the periods our own study has identified. Looking forward from 2000, Buffett estimated forward returns for the coming cycle in reference to the following variables.

- Interest rates
- Growth in GDP
- Corporate profitability as a percentage of GDP (which translates as corporate margins)
- The price one must pay relative to earnings in order to participate

Buffett concluded that the best investors could expect was an average real total return of 4%. If returns were to be greater than that over the ensuing 17 years, more or less, the following would need to happen (which he thought unlikely): First, interest rates would have to decline further, which they did, from 6.3% in 1999 to 1.45% in June 2016 (now 2.66%). Second, after-tax profit margins would need to rise, which also occurred. From 4.6% in 1999, they were 7.71% in June 2018, and—after the full-year effect of Tax Cut and Jobs Act of 2017—no doubt ended the year even higher.

Offsetting these factors, real per-capita GDP through 2018 has grown at a paltry 1%, two-thirds its historical rate. The P/E ratio has fallen from 44.2 to 28.8. The net effect of all the above is that the real total return for the S&P 500 18 years into this ebb-tide era is 3%—quite close to Buffett's rough estimate. The returns from 2000–18 are certainly indicative of an ebbing tide … to date.

Perverse Effects of Hyper-Accommodative Fed Policy

In the midst of the current ebb tide, there have been some especially large waves, namely the run-up to 2007 and the current cyclical bull market. We felt compelled to speak out against the excesses that culminated in the Great Financial Crisis and have become increasingly vocal about our concerns toward Fed policy since QE2 was launched late in 2010. It has swelled speculation in the post-2009 wave.

The nemesis of rational investing today, in our judgment, is the scale of an experimental Federal Reserve policy that has badly distorted the mechanism by which earning assets are priced. The "put" of Greenspan and his successors at the Fed is rarely subjected to much beyond a simplistic analysis befitting the sound-bite snippets of financial media. This has turned investors into speculators who salivate, like Pavlov's dogs, at the very hint of monetary stimulus—long before its intended effects are known. Unlike dogs, however, the Fed may find it harder to wean humans. They may ultimately bite the hand that fed them for so long, as the various protestations in late 2018 against the heretofore historically tame tightening of interest rates made clear.

As demonstrated in Table VIII, markets are currently priced at or near bubble levels. Valuations have moderated somewhat with recent increases to short-term interest rates and slowing liquidity courtesy of the Fed's tightening balance sheet, not to mention the declining market. Still, misaligned incentives continue. Until the recent volatility, conservative behavior had been penalized and speculation rewarded. The pendulum has not yet swung decisively in the other direction.

Perhaps, by contrasting the depression of 1921 with the Great Depression, we can learn something regarding effective macro policy. The former was the last "hands-off" depression, while the latter set the precedent for a "hands-on" public response to private-sector malaise. In 2008, Fed Chairman Ben Bernanke feared a repeat of the Great Depression. Seeking to fight what he believed would be a similar deflationary environment, he used every weapon in the Fed's arsenal, including those never tried, to maintain stability of employment and inflation. Ultimately, his prescription may not have cured the malaise so much as increased the patient's resistance to future doses of the medication.

It was the acute instability during the 1921 depression that likely gave rise to the stability that immediately followed. The response of President Hoover beginning in late 1929 was similar to Bernanke's intervention. Hoover sought to maintain stability of wages (thus distorting a key cost of production during the first two years of the Great Depression). In no small measure, this contributed to the chronic instability throughout the rest of the decade. Similarly, the Fed's zero-bound, interest-rate policy from 2008 to 2015 distorted the pricing of risk. In our view, this undermined the very stability it sought to create. As the Fed continues to unwind its balance sheet with quantitative tightening (QT), it has exacerbated market volatility. The longdelayed reversal of policy responses to the Great Financial Crisis will have consequences as uncertain as those resulting from the measures implemented to fight it. What seems most likely, though, is that the interventions of 2008 will prove far less effective if used again anytime soon.

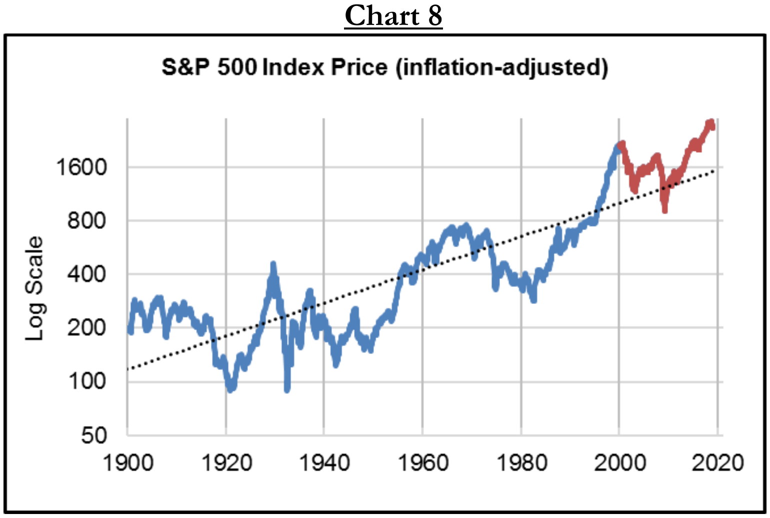
2019

As we leave the verities of the past and venture into the unknowns of the future, we are forearmed with profound insights, if not eternal truths, from two pre-eminent non-economists: an English Renaissance playwright and a 19th-century essayist. "What's past is prologue" is the central theme of Shakespeare's *The Tempest*. The play contends that history influences and sets the context for the present. Ralph Waldo Emerson adds the element of proportionality to the dynamic interplay between present and future: "Cause and effect, means and ends, seed and fruit, cannot be severed; for the effect already blooms in the cause, the end pre-exists in the means, the fruit in the seed."

Most of us are simply too busy, having neither the time nor the inclination to ponder such abstractions. Our awareness of the future tends to be limited to what is immediately visible—metaphorically speaking, the breaking waves, but not the slow-moving tides or the once-in-a-lifetime tsunami. Moving from the sublime to the ridiculous, we encourage those preoccupied with the present to bear with us. Lifeguards must remain vigilant and committed to their task even when patrolling a beach noted for its skinny-dippers (maybe especially when). For those swimming sans suit, it is only when the tide goes out that the harsh reality of cause and effect is laid bare.

Mindful of our duty to keep our clients out of harm's or indignity's way, we've brought the preceding "tide tables" up to date. The data provided are the flesh on the philosophical bones of the observations on human nature from Shakespeare and Emerson. For those wanting something more tangible, feel free to substitute Sir Isaac Newton's laws of motion or, for the mathematically inclined, mean reversion. Chart 8, which follows, has one additional feature, a best-fit trendline (ramrod straight when the scale is logarithmic). Even at the most visceral level, the message is persuasively the same. Why so many people do not see or hear the lightning and thunder of these arguments is the very essence of why markets fluctuate to extremes and why outsized opportunities exist for those willing to go against the grain.

Chart 8



In the preceding pages you may have been able to see a vague but useful symmetry in the patterns of markets past. After all, you already knew how each chapter in the ongoing story ended. But what we can't capture in historical accounts is how it actually felt to be on the front lines, in the thick of the battles prior to 1966. Do you wonder, as I often do, whether, forewarned with what we know today about bipolar markets and the madness of crowds, you could have remained emotionally detached? Would you have been looking opportunistically upward in the depths of the 1921 depression or downward with trepidation when you heard Irving Fisher's authoritative assurance that the stock market had reached a "permanently high plateau" in 1929? Of course, that's all hypothetical. It's time to get real—to see what we're made of—in early 2019.

Lest we yield to the inclination to write off the whole exercise as futile, we have reason to take heart in seeking the common threads woven through each of these discrete, secular episodes. Simply put, one of the seemingly obvious threads is that the market was expensive on the eve of the ebb-tide years, then cheap preceding the flooding ones. Exactly how expensive or cheap seems largely irrelevant. For if an expensive market becomes richer still, does not the case for its reversal become that much more compelling? Cannot the same be said for falling prices in bear markets?

Predictably, certain people stand out in history as congenitally wrongheaded, and thus they become reliable indicators of what not to do. At its publication in 1924, Edgar Lawrence Smith's *Common Stocks for Long-Term Investors* was as insightful as it was ill-timed. Ironically, exactly 70 years after Smith, Wharton professor Jeremy Siegel provided a reincarnated academic seal of approval to the once again prevailing wisdom that everyone should be invested in the stock market … for the long run.

Unlike stone-age Smith, Siegel crunched massive amounts of historical data. His thesis was mathematically pure: Given a sufficiently long period of time, stocks are less risky than bonds, where risk is defined as the standard deviation of annual return. The first edition of Siegel's rather unoriginal *Stocks for the Long Run* was published in 1994, 14 years into the greatest bull market of the century, just as it became firmly detached from reality. But Siegel didn't stop there. Subsequent editions were published in March 1998, June 2002, and November 2007. Most recently, a fifth edition was released in January 2014. Given that humans live in real time and not in the pure mathematical spheres of platonic theory, the absence of consideration regarding the tides of the market is the singular failure of Siegel's analysis.

In direct contrast, Robert Shiller is the one academic whose right-headed written record, in my judgment, has earned him a place in the pantheon of investment giants. To say the timing of the first two editions of his *Irrational Exuberance* was prescient grossly undervalues Shiller's contribution to understanding the forces behind the rising and falling of the tides. One need only read the prefaces to the first two editions to glean the significance of his work, an undertaking made both easy and simple in this information age. The third edition was published in January 2015. In addition to reprinting the earlier prefaces from the 2000 and 2005 editions, the third edition offers a preface no less compelling. In this age of information overload, allocating precious time to the most productive pursuits is critical. As much as I enjoy writing to you each year, I made time to read Shiller's latest offering within days of its release. Among the many reasons we use Shiller data is its nearly unequaled authenticity and originality of sourcing.

Anecdotes aside, market history is not entirely random, nor are price and value forever inseparable. Like tether and ball, price is tied to value, not by a rope but by the aforementioned bungee cord, and through that stretchy mechanism the past is connected to the present and the present to the future.

In examining the grand, secular ebb and flood tides above, we have thus far limited our attention to what we have observed to be the three most important historical variables: beginning and ending price-to-earnings ratios based on the smoothed trend in earnings, the slope of the trend in those earnings, and the dividends investors received. Now we turn to the creation of value.

We have done extensive research in our recent, regular blog postings on the decline in productivity and its long-term effects on economic growth, capital investment, and the distribution of income and wealth. In partial summary, see the first of the two ensuing related charts (9 and 10). As noted previously, since 2000 real per-capita GDP—a simple measure of productivity growth—has averaged 1%, the worst showing since the Great Depression years and just two-thirds of the long-term rate of 1.7%. We think it reasonable to ponder what happened to the productivity gains presumed to be the byproduct of the technological revolution. Intuitively, beginning in 2000, Chart 10 seems to contradict Chart 9. The 10-year moving average of S&P earnings rises sharply above its trendline growth rate at the same time GDP is flagging. Productivity going down, but profits going up?

Chart 9

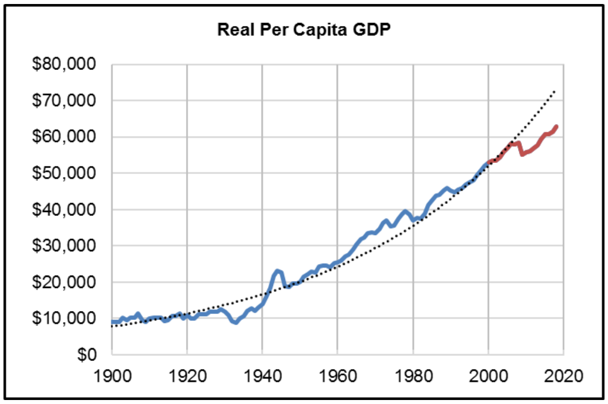
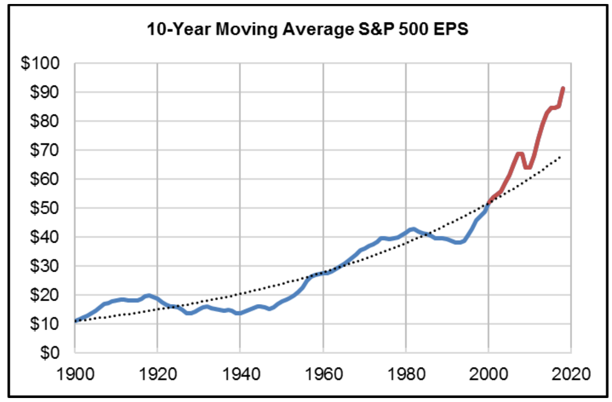


Chart 10

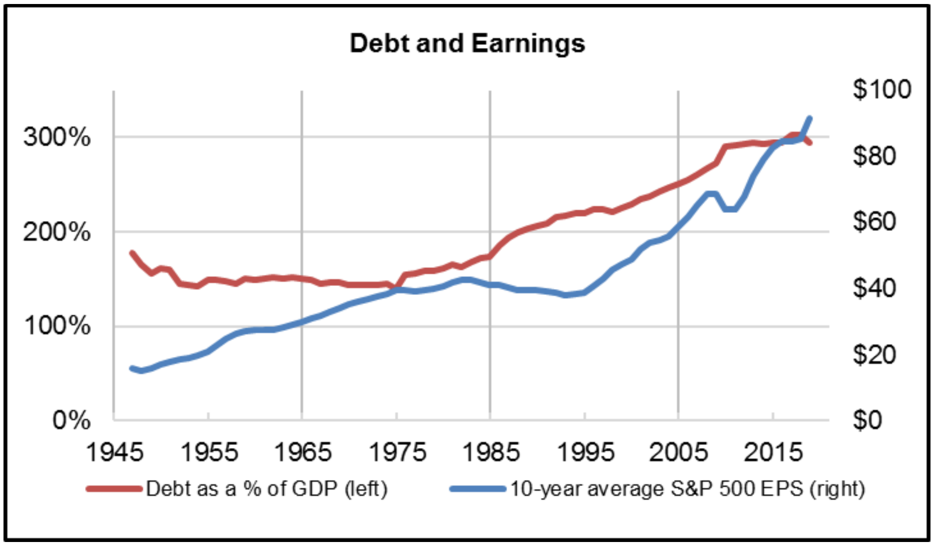


We believe there are two causal factors, with the sustainability of each in question. First, there is the much-ballyhooed improvement in after-tax, non-financial corporation profit margins as implied in Chart 10. Although exhibiting extreme volatility since 2000, at 7.71% they are currently at the high end of a range that has averaged 5.55%.

As GDP growth has slowed, companies have been forced to adjust to the new environment. Even though the cost of capital is appealingly low, the future returns on investment in a lower growth environment are similarly diminished. This may be a partial explanation for the slow growth in capital spending, especially after consideration is given to the incentives in the 2017 tax law. While this next point is conjecture, perhaps one of the reasons that profit margins are high can be explained by the low growth in wages. Throughout the value chain, wages represent a much larger share of the economic pie than do corporate profits. Thus, a small savings in labor costs makes a large contribution to margins. Unlike their employers, who can shutter a plant, employees must work to survive; they must produce to consume. Unlike the corporation, their trade-off is often between lower wages and no wages.

Herb Stein, chairman of the Council of Economic Advisers under President Nixon, famously observed: "If something cannot go on forever, it will stop." Echoing Buffett's partner, Charlie Munger, "We at MCM have nothing to add!"

Chart 11



Second, Chart 11 depicts a financial reality that most economists don't address—the rapid growth in real total per-capita debt since the mid-1980s. It parallels the rapid growth during the 1920s (which was paid down as goods were rationed during World War II and the personal savings rate ballooned to 25%). Here we're seeing debt as money borrowed by governments, consumers, and corporations relative to the size of the economy.

In case you haven't noticed, the second line (blue in color), is the post-1950 carbon copy of the same 10-year moving average of S&P earnings brought to your attention in Chart 10. Given the relentless decline in interest rates since the mid-1980s—along with the concurrent increasing willingness of consumers, businesses, and governments to fund consumption by incurring debt—it may not be unreasonable to suggest under such conditions that earnings may have grown faster than if the debt ratio had remained around 150% of GDP. Intuitively, we believe that rising profit margins and growing levels of debt are, at least in part, connected in what has become a positive earnings growth feedback loop with corporate profits (as a share of GDP) being the mirror image of deficits in the private and government sectors. Reversing the process, which the Fed began in 2015, could have unintended (and unwanted) consequences in a disinflationary environment, not the least of which would be the negative effect on S&P earnings. In short, the rise in S&P earnings appears anomalous and ephemeral.

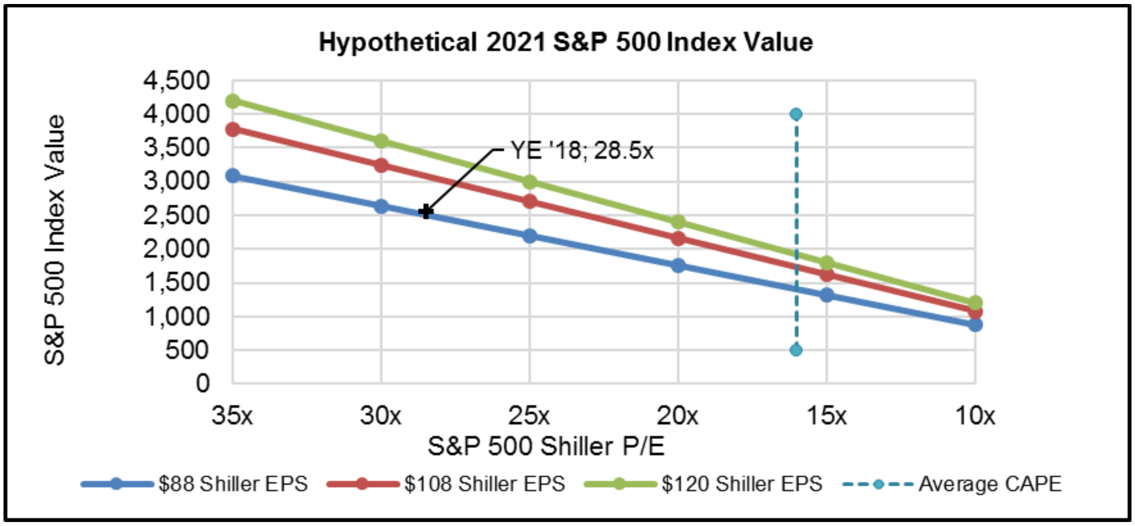
Despite the real weakness and the popular obsession with earnings, the final and critical variable in discerning the tides is determining the P/E multiple that should be applied to an estimate of those terminal earnings. Take one last look at Table VIII on page 21. *The rate of change in the Shiller P/E matters the most in almost every era; the rate of change in Shiller earnings the least. As a rarely mentioned aside, since the 1920s the steady and reliable dividend return has insidiously withered, no longer the total-return anchor it once was during ebbing tides.*

Regarding this variable, the best we can do is generalize. First, philosophically, one might reflect again on the words of Shakespeare and Emerson at the outset of this section. Since the rising-tide years from 1982 to 1999 were historically and figuratively obese and the most exuberant ever, one would expect some vague balancing of the scales of proportionality as the subsequent ebb-tide years come to an end. Second, mathematically, there is the apparent inevitability of mean reversion (and beyond) manifestly evident in each of the tables above.

"All roads lead to Rome" and, for the purposes of this communiqué to you, to the simple graphic, Chart 12, which follows. Metaphorically, the huge Fed-induced market wave since 2009 has obscured what (based on the foregoing arguments) we believe to be a continuing ebb tide. The fact that not one in 100 shares our view—or that when the tide goes out, we won't be able to predict at what level low tide will occur—doesn't detract from our conviction that it will. Chart 12 gives you what we think is a reasonable range of possible outcomes. That's the best we can (or should) do.

The graphic provides a range of hypothetical levels for the S&P index three years hence. The red line represents the Shiller EPS for the S&P 500 should reported earnings remain unchanged until 2020 ($112).[7] The green line, a best-case scenario, represents S&P earnings having grown at 10% annually (Shiller $120). Finally, the blue line shows earnings declining 50% a year over two years before rebounding 75% in the third year ($88). The vertical, dashed aqua line is the average Shiller P/E, the cyclically adjusted price earnings ratio (CAPE) over time.

Chart 12



We are not predicting prices, but simple cause and effect. Clearly, the multiple applied to earnings affect the market price far more than the change in earnings themselves. If prices are unsustainable, then they will eventually revert to their mean and likely beyond, at least temporarily. The exact timing of when this might occur is unknowable, but focusing on what is knowable—that prices will mean-revert—is critical to understanding and avoiding the risk of permanent capital loss.

Worrying top-down has been arduous. The rewards have invariably been long in coming and only after considerable pain. Despite the high cost to ourselves and our business, worrying top-down has served us well thus far. We have avoided every bear market since 1966. Here we are again in early 2019, having slipped away from the party early, long before the constables arrived. We are keenly aware of the secondary, ripple effects that no one talks about—and about risks that are infrequent, opaque, and complex. With the water near high-tide level and with a paucity of compelling investment ideas, we are long in liquidity, made slightly more attractive of late, as interest rates are creeping up for the first time in years.

The safety of liquidity in an unstable environment has allowed us a peculiar advantage. Our low-risk profile affords us the capacity, taking inspiration from Nassim Taleb's barbell portfolio construction, to take minimal

[7] Shiller EPS would rise despite flat reported earnings by virtue of the recession years (2008 and 2009) rolling off the 10-year moving average.

risks through S&P 500 put options that could provide hugely asymmetrical profits in a bear market. Updates on that program have been sent individually to those clients participating in the program.

Ultimately, we find solace in the extended and solitary sobriety of the Oracle of Omaha: "You're neither right nor wrong because other people agree with you. You're right because your facts are right and your reasoning is right—that's the only thing that makes you right. And if your facts and reasoning are right, you don't have to worry about anybody else."

Final Thoughts …

Just over 10 years ago, the succession plan for MCM appeared to be set in stone. As age- and experience-acquired wisdom reveals, life tends to make a mockery of the best-laid plans. Undeterred, the search for a successor to manage both my assets and our clients' assets upon my eventual disengagement may, I cautiously note, have recently come to fruition. Those of you who have followed my search closely know of the difficulty I've encountered in finding a successor who is genuinely like-minded.

On July 6, 2014, a story appeared in the *Wall Street Journal* about a highly atypical fund manager who found it so difficult to identify companies with an adequate margin of safety that, by default, 80% of the fund's assets were patiently harbored in cash. I immediately gave Eric Cinnamond, CFA, a call and thus began a collaboration and eventual friendship that has gotten only richer over time. Shortly before he started his popular blog site in 2016, he did the unthinkable in our profession. This 3½-minute video tells Eric's story in his own words.

In the summer of 2017, Eric encouraged me to talk with Jayme Wiggins, CFA, chief investment officer at Intrepid Capital. Eric and Jayme's careers at Intrepid Capital overlapped from 2002 to 2010. In September 2018 Jayme was fired from Intrepid for being under-invested in equities. He, like Eric and I, maintained his insistence on an adequate margin of safety to the point of jeopardizing his career. During the course of my time with Jayme it became quite apparent that his *summa cum laude* honors at Columbia Business School were well-deserved.

As of last fall, the three of us have founded Palm Valley Capital Management LLC, which has applied for registration as an investment adviser with the SEC. Eric and Jayme are the active partners. We plan to share investment research with Palm Valley and may formally expand the scope of our relationship in the future.

In the meantime, Lane Miller and I, as this annual letter attests, have been busy preparing our clients and their portfolios for what might lie ahead. As we see things, our least desirable scenario is that our aggressively defensive posture costs our clients opportunities should the capital markets move onward and upward. On the flipside, should we be on the right side of history, our clients will be spared the agony and remorse of what could be a punishing conclusion to a secular bear market dating back to 2000. With their capital and temperament intact, to say nothing of possible gains from our put-option strategy, they will be well-prepared to embrace the opportunities that lie hidden in the ruins that were once investor naiveté and apathy.

In other respects, 2018 was a watershed year for MCM. In a transaction that revealed the very best of the Community Foundation of Elkhart County and was in every respect a win-win for both parties, we sublet our office to CFEC and immediately moved to new quarters much more suitable to our needs. The good news doesn't stop there. Kristen Smith-Myers and Lane Miller have risen to the occasion, running the operations of MCM seamlessly, as measured by responses from clients. Lane and I have overseen research and portfolio management with relative ease given the simple construct of our portfolios. When the opportunity to begin aggressively buying businesses for the portfolio asserts itself, the importance of the affiliation with Palm Valley will become immediately apparent.

Lane, intellectually gifted as he is, has taken to the profession of investment management with breathtaking speed and acumen. His curiosity is insatiable, a trait that has crushed my occasional tendency to fall back on glib answers. I don't yet know what the future holds for Lane but, should he wish to cast his lot with MCM, both challenge and opportunity await!

Finally, whether we are on the cusp of the long-awaited chance to prove our worth to our incredibly patient clients is yet unknown. As was the case with Eric and Jayme, asset attrition is the price of being an absolute return value investor in a market such as the one described in the final section of this report. Who knows, perhaps the hesitation in 2018 of the grand floodtide that lifted all ships—like a pendulum that briefly pauses at its arc's extreme—signaled that the tide is about to turn. Wealth that was illusory would become loss that is real. Value investors who put clients before careers will be transformed from dunces to geniuses. To be sure, however, neither sobriquet applies to those of us who steer the steady course, regardless of the waves.

Very truly yours,

Frank K. Martin, CFA
Lane Miller

Disclosure

The materials to which this disclosure is attached as well as any electronic or verbal communication related to the subject matter of these materials are intended for informational purposes only, are subject to change, and do not constitute investment advice or a recommendation to you.

Any reproduction of these materials, in whole or in part, or the divulgence of any of the contents, is strictly prohibited. These materials are intended for the exclusive use of the designated recipients and may not be reproduced or redistributed in any form or used to conduct any general solicitation or advertising with respect to any investment discussed in the information provided.

Past performance is no guarantee of future returns; performance may be volatile and the investment may involve a high degree of risk.