

# The Psychology of Bubbles: A Comparison Between the 1920s and 1990s Bull Markets

Zacharia “Zaki” Mir  
zamzaki08@gmail.com

## ABSTRACT

Even though nearly seven decades separated the Stock Market Crash of 1929 and the 2000's dot-com bubble, the psychological and economic structure underlying both market bubbles is strikingly similar. Both eras followed painful debt crises and wars where the United States emerged victorious, setting the stage for an optimistic view of national progress and personal success. This speculative optimism resulted in underestimated perceptions of risk that allowed for unhealthy investment decisions. Investors developed a sense of overconfidence, while bystanders felt compelled to enter the rising market, exemplifying a fear of missing out mentality that triggered herding behavior. The astonishing growth within the market caused the Federal Reserve to tighten rates, raising interest expenses and leading investors and lenders to withdraw their risky positions. Declining asset prices transformed the same forces that inflated the bubble into a self-reinforcing negative bubble. In both eras, speculative optimism drove security prices far beyond fundamental values, eventually culminating in severe market losses and broader economic decline.

## INTRODUCTION

Even though nearly seven decades separated the Stock Market Crash of 1929 and the 2000's dot-com bubble, the psychological and economic structure underlying both market bubbles are strikingly similar. Both eras followed painful debt crises and wars where the United States emerged victorious, setting the stage for an optimistic view of national progress and personal success founded on the idea that investing in stocks “is a road to quick riches”.

Such speculative optimism in both eras resulted in underestimated perceptions of risk that allowed for unhealthy investment decisions. Investors developed a sense of overconfidence, a phenomenon psychologists identified as causing people to overestimate their knowledge, underestimate risks, and exaggerate their ability to control events. Bystanders felt compelled to enter the rising market, exemplifying a “fear of missing out” mentality that triggered herding behavior, driven by shared psychological experiences.

The astonishing growth within the market caused the Federal Reserve to tighten rates, raising interest expenses and leading investors and lenders to withdraw their risky financial positions. Tightening rates

eventually resulted in declining asset prices where the same forces that inflated the bubble transformed into a self-reinforcing “negative” bubble. Losses spread throughout different industries, where affected markets were large and leveraged enough that losses on accumulated debt caused economic decline. During both the 1920s bull market and the dot-com bubble of the late 90s and early 2000s, investors were heavily influenced by speculative optimism in emerging industries and underestimated perceptions of risk which irrationally drove security prices far beyond fundamental values, eventually culminating in severe market losses and broader economic decline.

## **METHODOLOGY AND LITERATURE REVIEW**

This paper draws on a combination of primary economic data, historical media accounts, and scholarly analysis to compare the psychological and economic forces underlying the 1920s bull market and the dot-com bubble of the late 1990s. Federal Reserve interest rate data from the Federal Reserve Bank of St. Louis, valuation metrics, including the Shiller CAPE ratio from Multpl, and market performance data from GuruFocus provide the quantitative foundation for tracking how speculative mentalities manifested in measurable distortions across both periods. Newspaper and broadcast sources, including the Dallas Morning News, the Seattle Daily Times, NPR’s Talk of the Nation, and the Financial Times, capture the prevailing public sentiment and media narratives that reinforced speculative behavior, and also exemplifies the concerns financial leaders emphasized but never really followed. Primary documents such as John Raskob’s 1929 Ladies Home Journal interview and Jack Willoughby’s 2000 Barron’s investigation into internet company cash burn rates illustrate how optimistic, story based voices shaped investor psychology and also prevented genuine rational analysis of markets especially near market peaks.

The scholarly basis for this comparison originates from many foundational works in the fields of behavioral economics, investor psychology, and credit analysis. Ray Dalio’s Principles for Navigating Big Debt Crises provides the macroeconomic foundation through its model of the long-term debt cycle, identifying the recurring patterns where low interest rates and loose credit standards enable speculative lending, eventual asset inflation, and violent credit contraction resulting from such practices. Although Dalio’s framework explains the credit conditions that result in bubbles, he does not deeply examine the individual psychological mechanisms that drive and sustain such financially irrational behaviors. Robert Shiller’s Irrational Exuberance addresses this gap by showing how story based and over optimistic investor mentalities inflate asset prices beyond fundamental values, emphasizing the “new era” thinking that characterized both the dot-com bubble and the 1920s bull market. John Nofsinger’s The Psychology of Investing extends this analysis to the level of individual decision making, identifying specific cognitive biases including overconfidence, herd mentality, and fear of missing out as main drivers of irrational markets and credit standards. Giulio Pontecorvo’s examination of investment banking practices in the late 1920s identifies how loosened underwriting standards and competitive pressures among securities firms resulted in clearly risky loans and equity investments.

While each of these works examines either the general macroeconomic conditions, the psychological biases, or institutional behaviors that contribute to market bubbles, they largely treat these factors separately or within a single historical period. This paper synthesizes these perspectives by demonstrating

that both the 1920s bull market and 1990s dot-com bubble follow the same psychological sequence—beginning with speculative optimism born from post-crisis recovery, progressing through overconfidence and fear of missing out, resulting in herd behavior, and cultivating in a self reinforcing negative bubble triggered by sudden monetary tightening and an overdue realization of the riskiness of both low quality credit and overvalued equity investments.

## **Recovery From War and Prior Recessions**

Strong post-war and recession recoveries fostered a sense of relief and confidence, justifying speculative optimism as a natural response. The 1920s bull market emerged directly from the 1918-1919 recession and the First World War, and heralded the US's transition from relative economic isolation to a position of global industrial leadership. Many of the innovations and manufacturing methods developed for wartime use were redirected into civilian life, including washing machines, electricity, and radio. This nationwide period of rebuilding and technological abundance, created a general attitude of optimism amongst the American public. Similarly, the dot-com bubble emerged after the Cold War where the US emerged as the unchallenged global economic power and rebounded from the recession of 1990-1991 (end of business cycle). These economic and geopolitical victories, echoed the victories that preceded the 1920's bull market, namely WWI and the recession of 1919. In both cases, recovery from hardship fostered optimism and constructed a feedback loop in equity markets that eventually drove extreme stock price increases.

## **New Era Mindset**

In both the dot-com bubble and the 1920's bull market, investors adopted a "new era" mentality, believing recent technological change created a new economic order in which fundamental valuation and downside risks no longer applied. This mentality was stated during the Roaring 20s where even Economists like Dr. Charles Amos Dice, argued that traditional valuation rules had been rendered obsolete by improvements in economic efficiency and public confidence. Dice believed that the tremendous advances instilled a 'new era' which would certainly continue at such a rate, meaning elevated stock prices would hold for years. In the dot-com era, a similar claim stated the internet fundamentally transformed business economics through eliminating geographic constraints and expanding access to information rendering traditional valuation metrics obsolete, opting for more story-based measures. As Economist Robert Shiller observed, investors had become convinced the hypothetical story of internet-based technological transformation justified inflated prices, bringing on a "new era" ruled by only tech based conglomerates. In both eras, the "new era" mentality replaced rational financial analysis with a flawed framework built on stories and overly optimistic fantasies of the future.

## **Emphasis on Business Success and The Visibility of Winners**

A critical driver of speculative optimism in both the 1920s and 1990s was the visibility of early winners which resulted in a speculative emphasis on business success. In the 1920's innovative companies in the radio and electric industries like RCA and General Electric appreciated rapidly in market value with their

success widely publicised in the financial press. The September 24, 1928 edition of The Dallas Morning News celebrated the market's rise with the headline, "Stock boom, Seemingly Unending, Goes Merrily on Throughout the Country," highlighting the profits of early investors. This visibility of business success through optimistic language made avoiding the market seem like poor judgement, prompting the public to join the growing wealth and business gains. Similarly, John J Raskob, cofounder of General Motors, promoted equity investment as the best way for ordinary Americans to participate in the nation's prosperity, claiming investors would retire wealthy, an overoptimistic statement ignoring the risk of potential market decline.

In the dot-com era, internet companies became the objects of a similar veneration of business success. Companies like Amazon and Yahoo, despite approaching price-to-earnings ratios in the thousands, had their success amplified by financial media and analyst predictions that presented internet investment as the defining opportunity of the age. Large investment banks and Venture Capital firms offered grandiose predictions of internet success impact and rushed dot-com companies—many lacking even a product—to become publicly traded. Banks, epitomizing the overly optimistic claims on internet business models and soaring market values, enticed many investors to invest in such companies who feared missing out on potential lifetime profits. In both eras, the visibility of early business success and innovation created social pressure that made participation in markets founded on flawed analysis necessary.

### **Myth of Permanent Prosperity**

The "new era" mentality reinforced by visible business success, fueled a belief in permanent prosperity. After 1927, valuation shifted from a rational basis to one treated as certainty without any potential risk, reflecting the widespread belief that asset price would always rise. Economist Dice argued that fundamental structural changes had made prolonged recession impossible. In the dot-com era, the myth of permanent prosperity was founded on the hope that the internet would disrupt the business cycle, reducing inventory costs and enabling perfectly responsive supply chains. For example, The Times of London August 1999 edition observed the S&P 500 PE ratio of thirty five against a historical average of fifteen was sustained by an optimistic belief in a "new paradigm" shaped only by the internet.

### **Overconfidence**

The speculative optimism within US markets produced distortions in investor risk perceptions. In both the 1920s and 1990s investors exhibited overconfidence, wrongly assuming they could accurately judge speculative asset values and future market performance. In the 1920's, overconfidence was institutionalized through competing, unregulated investment banks. Fierce pressure to maximize gains during the market boom led to the reduction in traditional investment analysis standards. Newer, leveraged firms like the National City Company, Halsey Stuart, and Harris Forbes competed aggressively for deals and brought increasingly speculative issues to market. For example, The National City Company sold three successive Peruvian government bond issues totalling over ninety million between 1927 and 1928 despite foreign advisors warning of Peru's political and economic instability. The ability for

investment banks to purchase extremely risky bonds excluding any basic economic advice exemplifies how overconfidence led investor decisions and excluded any risk analysis, showing the loosened credit standards.

In the dot-com era, equivalent overconfidence appeared in investors who believed internet companies with “no revenue” were worth multibillion dollar valuations. Investor overconfidence resulted in beliefs that internet stock should be valued on hypothetical market size rather than more fundamental measures. Disregarding traditional measures of valuing stock showed the overconfidence in their theoretical, market size valuation as they assumed internet companies would inevitably dominate all other industries. Investors never performed any sort of risk analysis or credit quality analysis to determine that many of these firms never generated profits in the first place. In both eras, overconfidence operated throughout the market, where even professionals failed to perform rational decisions when analyzing equities.

### **Fear of Missing Out**

The overvaluation of companies was aided by not only overconfidence but by fear of missing out, the behavioral pressure to join a rising market after seeing others profit from stocks, causing investors to purchase overpriced assets. In the 1920s *The Ladies Home Journal* featured John Raskob urging ordinary wage earners, who felt left behind by the rising market, to invest in equities to catch up. However, Raskob never highlighted the risk associated with entering the market, where at the time of publication in 1929, the equity yield was lower than fixed income bonds. The *Seattle Daily Times* noted that widespread public participation in the market had become a social expectation rather than an individual financial decision, stating “the rising tide in values has become something of a craze.” Describing market appreciation as a “craze” suggests that fear of missing out had shifted from financial motivation to social pressure. In the dot-com era, the fear of missing out mentality was more intense. A caller on an NPR broadcast right at the peak of the dot-com bubble, stated that he planned to buy more internet stocks because he was convinced the technology was real, stating he could not afford to miss out on the opportunity to invest in the internet craze. In both eras, fear of missing out through social comparison and the visible gains of internet investors diminished risk-based judgement and fundamental valuation.

### **Herd Mentality**

Eventually fear of missing out, at a significantly larger scale, becomes herd mentality, the tendency of investors to follow the crowd rather than analyze independently, amplifying price increases for leading bubble companies in both periods. Raskob's *Ladies Home Journal* interview was explicitly targeted at housewives, a demographic with no prior engagement in securities markets. The herd has grown so large that even shoeshiners were investing, exemplifying how inexperienced individuals buying equities was the only perceived path to growth in an overvalued market. In the dot-com era, herd mentality operated through the IPO market where thirty eight publicly traded internet companies had raised sixteen billion in capital in the first months of that year, a five fold increase since the previous year. Many of these internet

companies, however, were never profitable, and investors often justified buying based on the large capital already investing, using others' participation as a signal to purchase assets.

### **Valuation Not Based on Fundamentals**

The combined effect of overconfidence, fear of missing out, and herd mentality resulted in total abandonment of fundamental valuation. From 1926 to September 1929, stock yields fell from 5 percent to 3 percent, below the yield on long term government bonds. Rationally, the percentage of fixed income securities in portfolios should increase as equity yields decline. However, fixed securities in portfolios dropped from seventy one percent to just twenty six percent by 1929, highlighting investors' risky avoidance of safer bonds. Rather than noticing ridiculously low future equity yields, investor common stock financing exploded from 579 million to 4.4 billion, a 661 percent increase in two years. Investors accepted equities with weaker legal protection and uncertain income in exchange for the speculative promise of a rising market.

In the dot-com era, a similar overinvestment in riskier common stock was identified. By March 2000, the Nasdaq 100 reached its inflation adjusted peak of 8963, increasing by two-fold in one year. The S&P 500 CAPE ratio leveled off at forty two against a historical average of fourteen. The S&P 500 dividend yield had fallen to barely above one percent, a historic low. For the S&P 500 to approach price multiples three times the historical average meant investor valuation philosophy must have not relied on fundamentals but instead more intangible and grandiose claims. For example companies that added "dot-com" or "internet" to their names outperformed the broader market by an average of thirty eight percent despite no growth in revenues or competitive position. In fact, seventy four percent of these internet companies had negative cash flows and a quarter were projected to exhaust their remaining cash within twelve months. Yet collectively they had a market capitalization of 1.3 trillion, roughly 8 percent of the entire US stock market. In both the 1920s and 1990s bubble, the market stopped valuing stocks based on financial metrics, and instead took extremely risky and speculative positions, relying on the belief that market valuation fundamentally changed.

### **Federal Reserve Raising Rates to Combat Speculation**

The Federal Reserve responded to increasing speculation by increasing rates in both eras, raising the cost of the leverage that sustained inflated valuations providing an incentive to end the bubble. To calm the bull market of the 20s, the Federal Reserve tightened credit in 1927, with interest rates climbing from four percent to over nine percent by September 1929. As borrowing costs increased, investors faced higher interest expenses, resulting in an increasing pressure to sell. Additionally, businesses could no longer rely on high leverage to increase returns, causing company earnings to decline, increasing pressure on investors to sell. In the dot-com era, rates increased throughout 1998-2000 in response to rapid market growth, peaking near seven percent. However, raising rates increased debt obligations, especially for internet companies that relied on external financing. In both eras, the Federal Reserve's rate increased the interest expense faced by margin investors and capital intensive businesses, further reducing the already

overvalued companies and increasing pressure to sell. When the cost of holding leveraged positions rose above the expected return from equities, investors sold, creating a self-reinforcing cycle where each liquidation drove prices down and increased the next seller's incentive to sell.

### **Market Decline Causing a Negative Bubble**

The market declines triggered by Federal Reserve tightening produced a reversal of the speculative mentality that had sustained the bubble. Just as speculative optimism was fed by market appreciation and a “new era” mentality, once markets started declining, the speculative optimism that kept the market alive declined, slowly transforming the “new era” beliefs into a recognition that the optimism was baseless. In the 1920's non-bank lenders who extended loans on assuming stock prices would keep rising, abruptly withdrew credit after the 1929 crash, causing total loans to fall from 6.64 billion to 2.45 billion in three months. The swift withdrawal revealed lenders never priced the risk of a sustained decline until declines occurred. As market prices continued to decline, investors began to realize their optimism was unfounded, and as a result they exited the market abruptly, contributing to further declines, a phenomenon known as a negative bubble.

A negative bubble also formed after the Federal Reserve tightened interest rates during the dot-com bubble. Tightening rates caused many private equity firms to stop financing risky internet ventures as increasing interest expenses made debt-based financing difficult, forcing many businesses to “hunt for cash.” For example, a Barron's analysis near market peaks showed the astonishing cash burn rate of internet companies, some only twelve months away from bankruptcy. Labeling internet companies as hype-based “cash burners” caused a mentality shift, recentering more fundamental forms of equity valuation. Just as optimism spread when equity prices exploded, a pessimistic mentality quickly spread throughout the market as prices dropped. Investors began “dumping stock” and purchasing more fairly valued assets (financial times). Companies dropped their “dot-com suffix” as they noticed the changing attitudes, pivoting services away from the former internet craze. In just two years mass equity selling made the Nasdaq lose seventy eight percent of its market value. It took fifteen years to reach a price value surpassing the record high set during the dot com bubble. In both eras, credit tightening triggered more rigorous lending standards and increased interest expenses for investors and companies resulting in a quick reduction of profits and an intense pressure to sell. As market prices declined, more investors adopted a pessimistic mindset and liquidated their positions, exacerbating market declines.

### **CONCLUSION**

The similarities between the 1920s and 1990s bull markets demonstrate that while technologies and industries might change, the long-term debt cycle and the human psychology driving the economy remain constant. Speculative optimism caused underestimated perceptions of risk, creating a feedback loop that disconnected asset prices from fundamental values. This cycle is often inadvertently facilitated by monetary policy as productivity booms during low inflation cause central banks to lower interest rates and loosen credit standards, allowing for investors to take positions in extremely speculative ventures. Rather

than managing bubbles and assessing credit risk, central banks focus excessively on inflation and growth, raising rates too late leading to violent market downturns in both eras—phenomena both exemplified in the 1929 crash and the dot-com bubble collapse. Schularick, ter Steege, and Ward’s analysis of 150 years of advanced economy financial cycles found that such discretionary “leaning against the wind,” where central banks recognize a bubble late and raise rates abruptly mid cycle, actually increases financial crisis risk, where a one percentage rate hike during an active boom raises short term crisis probability by approximately ten percentage points.

Monetary policy should instead “lean gently” against bubbles through applying a “systematic leaning approach,” identifying potential bubbles early through financial stability indicators such as credit to GDP ratios, asset price deviations from historical fundamentals, and more qualitative credit analysis, then inducing small changes in interest rates rather than rapidly increasing rates near bubble peaks. This moderate correction can prevent a “long-term continuation of mispricing,” where Filardo and Rungcharoekitkul’s models find that such an approach outperforms both the current inflation focused models and the late cycle discretionary intervention. However, such a systematic framework has never been implemented mainly because bubbles are inherently difficult to identify. As Bernanke argued, a central bank cannot reliably distinguish between asset price increases driven by genuine economic fundamentals and those driven by speculation until after a collapse occurs.

Advances in artificial intelligence present a potential solution to this identification problem. AI systems capable of processing vast quantities of real time financial and economic data could theoretically detect the early signs of speculative excess that most policymakers miss or recognize too late, mainly because such research is extremely time consuming. If such models could reliably flag such imbalances quickly, central banks could implement systematic leaning into central bank practice, enabling the gradual earlier rate adjustments both the 1920s bull market and the dot-com bubble needed.

The government can mitigate the psychological biases that drive bubbles by educating low-information consumers in long-term, valuation based investing, either through funding startups focused on such programs, or instituting them in school curriculums. The most severe economic depressions arise when debt-fueled bubbles burst and unless the Federal Reserve and US government adopt proactive measures to restrain credit and investor speculation, large bubbles will continue to burst in late stages causing unnecessary economic devastation and even “the loss of hope...for uncontrolled capitalist economies.” In the wake of recessions and burst bubbles, new threats often arise, including social unrest and government instability. With a few safeguards, and dynamic monetary action, the federal government can prevent these downward spirals.

## REFERENCES

- “ANALYSIS: STOCK MARKET TREMORS.” Talk of the Nation [NPR] (USA), April 17, 2000.  
NewsBank: Access World News.  
<https://infoweb.newsbank.com/apps/news/document-view?p=AWNB&docref=news/15758BFFE94907E0>.
- Bernanke, Ben S., and Mark Gertler. “Should Central Banks Respond to Movements in Asset Prices?”  
*American Economic Review* 91, no. 2 (May 2001): 253–57. <https://doi.org/10.1257/aer.91.2.253>
- Board of Governors of the Federal Reserve System (US). “Federal Funds Effective Rate [FEDFUNDS].”  
Federal Reserve Bank of St. Louis. Accessed March 25, 2026.  
<https://fred.stlouisfed.org/series/FEDFUNDS>
- Dalio, Ray. *Principles for Navigating Big Debt Crises*. Avid Reader Press, 2022.
- Dallas Morning News (Dallas, Texas), September 24, 1928: Fifteen. NewsBank: America's Historical Newspapers.  
<https://infoweb.newsbank.com/apps/news/document-view?p=EANX-K12&docref=image/v2%3A0F99DDB671832188%40EANX-K12-104F929CE309906E%402425514-104F929D8CA4A9E5%4014>.
- Filardo, Andrew, and Phurichai Rungcharoenkitkul. "A Quantitative Case for Leaning against the Wind."  
BIS Working Papers, no. 594. Bank for International Settlements, December 2016.  
<https://www.bis.org/publ/work594.htm>
- Hill, Andrew. . 2000., Apr 29 "Dotcom Fever Fades as Investors Seek Profits: [London Edition]." *Financial Times*, 11.  
<https://www.proquest.com/newspapers/dotcom-fever-fades-as-investors-seek-profits/docview/248861068/se-2>.
- “Inflation-Adjusted Nasdaq 100 Index Price.” GuruFocus. Accessed March 25, 2026.  
[https://www.gurufocus.com/economic\\_indicators/5861/inflation-adjusted-nasdaq-100-index-price](https://www.gurufocus.com/economic_indicators/5861/inflation-adjusted-nasdaq-100-index-price)
- “Nasdaq 100 Index.” GuruFocus. Accessed March 25, 2026.  
[https://www.gurufocus.com/economic\\_indicators/233/nasdaq-100-index](https://www.gurufocus.com/economic_indicators/233/nasdaq-100-index)
- Nofsinger, John. *The Psychology of Investing Sixth Edition*. Routledge, 2017.  
<https://doi.org/10.4324/9781315230856>

Pontecorvo, Giulio. "Investment Banking and Security Speculation in the Late 1920's." *The Business History Review* 32, no. 2 (1958): 166–91. <https://www.jstor.org/stable/3111701>

Raskob, John. "Everybody Ought to Be Rich: An Interview with John J. Raskob." *Ladies' Home Journal* 46, no. 8, August 1929.

[https://archive.org/details/sim\\_ladies-home-journal\\_1929-08\\_46\\_8/page/n17/mode/2up](https://archive.org/details/sim_ladies-home-journal_1929-08_46_8/page/n17/mode/2up)

Reimann, Chris. "Predicting Financial Crises: An Evaluation of Machine Learning Algorithms and Model Explainability for Early Warning Systems." *Review of Evolutionary Political Economy* 5, no. 1 (June 2024): 51–83. <https://doi.org/10.1007/s43253-024-00114-4>

Rothchild, John. "When the Shoeshine Boys Talk Stocks." *Fortune*, April 15, 1996.

<https://www.proquest.com/magazines/when-shoeshine-boys-talk-stocks/docview/213262492/se-2>

"S&P 500 Dividend Yield." *GuruFocus*. Accessed March 25, 2026.

[https://www.gurufocus.com/economic\\_indicators/150/sp-500-dividend-yield](https://www.gurufocus.com/economic_indicators/150/sp-500-dividend-yield)

Schularick, Moritz, Lucas ter Steege, and Felix Ward. "Leaning against the Wind and Crisis Risk." *American Economic Review: Insights* 3, no. 2 (June 2021): 199–214.

<https://doi.org/10.1257/aeri.20200310>

Seattle Daily Times (Seattle, Washington), March 26, 1928: 20. NewsBank: America's Historical Newspapers.

<https://infoweb.newsbank.com/apps/news/document-view?p=EANX-K12&docref=image/v2%3A127D718D1E33F961%40EANX-K12-1290A41525F5AB43%402425332-128A599D44638F4A%4019-1290D87638F1A078>

Shiller, Robert. *Irrational Exuberance: Revised and Expanded Third Edition*. Princeton University Press, 2015.

"Shiller PE Ratio." *Multpl*. Accessed March 25, 2026. <https://www.multpl.com/shiller-pe>

"Stock Prices Will Stay at High Level for Years to Come, Says Ohio Economist." 1929., Oct 13 *New York Times* (1923-), 1.

<https://www.proquest.com/newspapers/stock-prices-will-stay-at-high-level-years-come/docview/104772985/se-2>

Willoughby, Jack. "Burning Up: Warning: Internet Companies Are Running Out of Cash—Fast." *Barron's*, March 20, 2000

[https://www.barrons.com/articles/SB953335580704470544?gaa\\_at=eafs&gaa\\_n=AWetsqfgds6KDPz31EdvqaBP50g8r3LHkNwsFBzhQUFifOGcr9VMEKncgOSm31DOiV8%3D&gaa\\_ts=6972c](https://www.barrons.com/articles/SB953335580704470544?gaa_at=eafs&gaa_n=AWetsqfgds6KDPz31EdvqaBP50g8r3LHkNwsFBzhQUFifOGcr9VMEKncgOSm31DOiV8%3D&gaa_ts=6972c)

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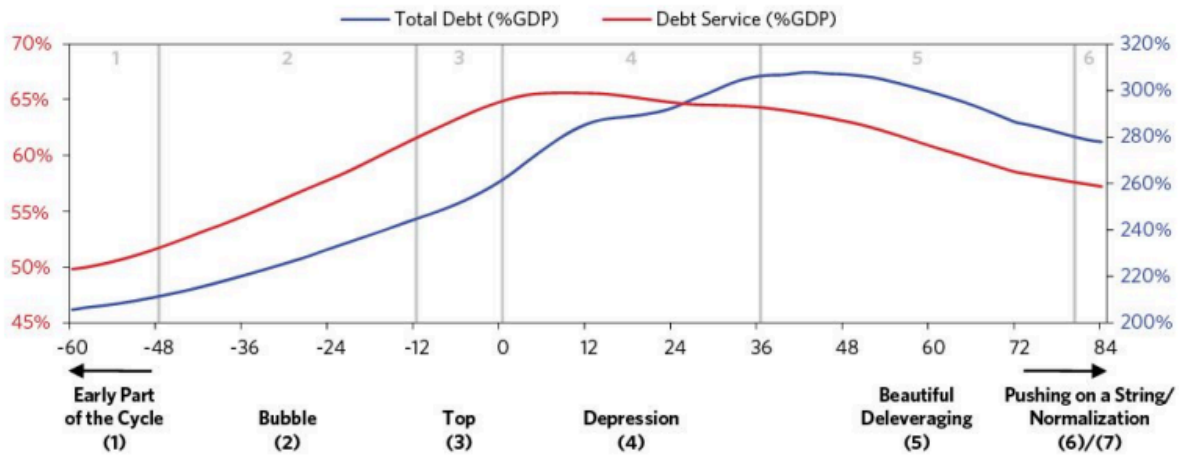


Figure 1. “Archetypal Long-Term Debt Cycle.” Source: Dalio, *Principles for Navigating Big Debt Crises*, 35.

## Shiller PE Ratio



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Figure 2. “Shiller PE Ratio.” Source: Multpl, accessed March 25, 2026.

<https://www.multpl.com/shiller-pe>

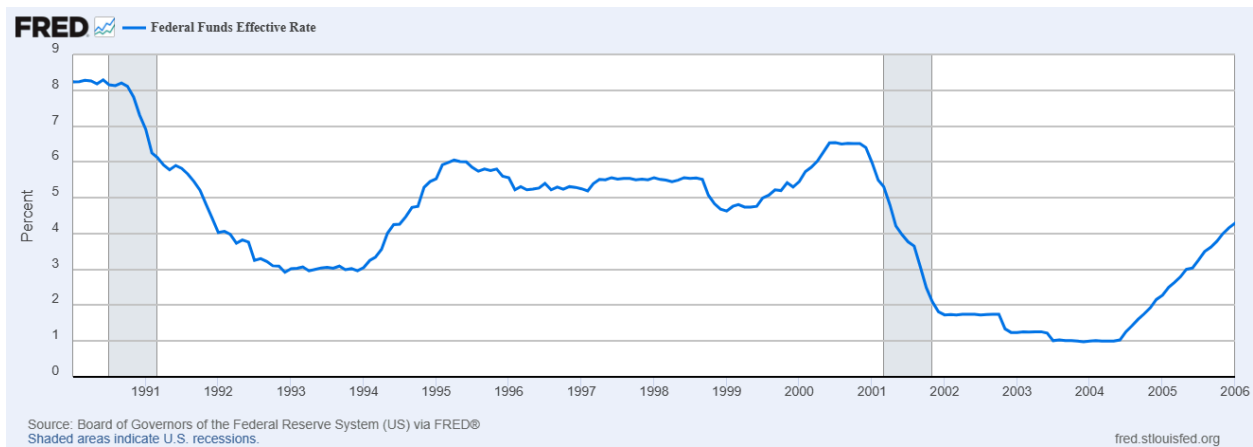


Figure 3. “Federal Funds Effective Rate [FEDFUNDS].” Source: Federal Reserve Bank of St. Louis, accessed March 25, 2026. <https://fred.stlouisfed.org/series/FEDFUNDS>



Figure 4. “Nasdaq 100 Index.” Source: GuruFocus, accessed March 25, 2026.

[https://www.gurufocus.com/economic\\_indicators/233/nasdaq-100-index](https://www.gurufocus.com/economic_indicators/233/nasdaq-100-index)



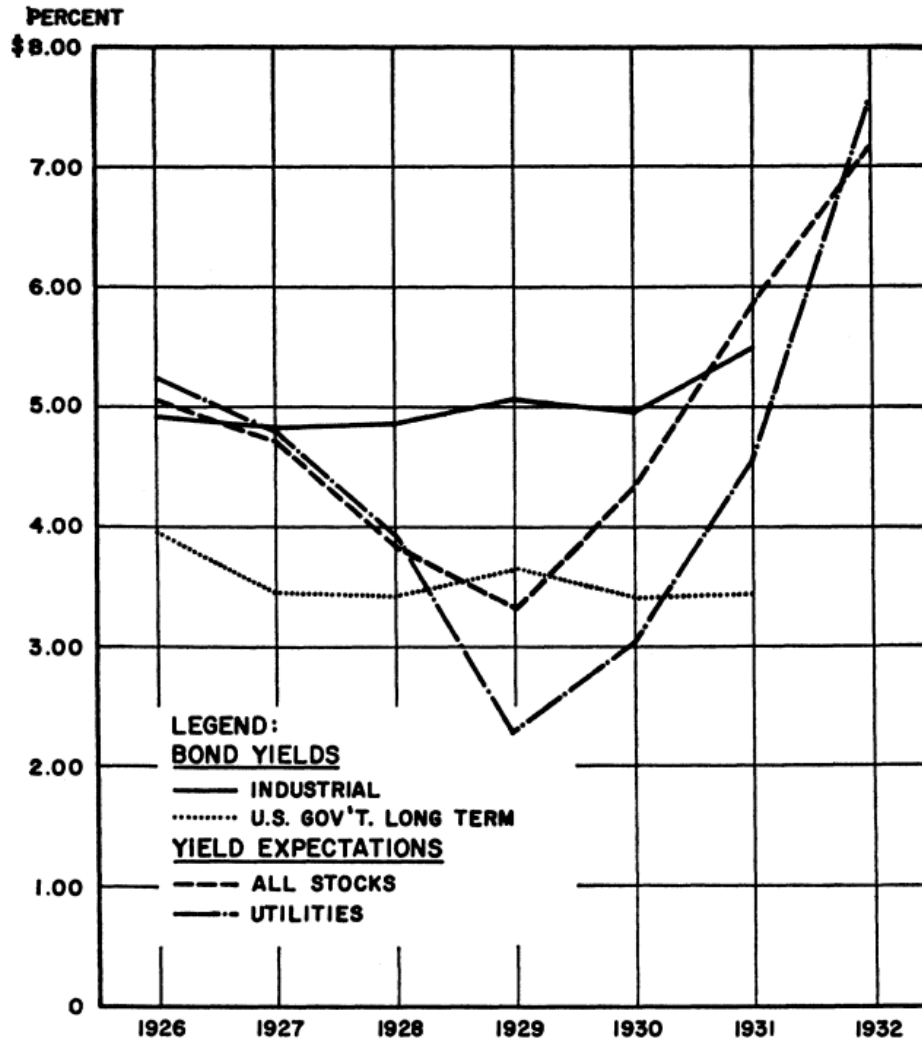
Figure 5: “S&P 500 Dividend Yield.” Source: GuruFocus, accessed March 25, 2026.

[https://www.gurufocus.com/economic\\_indicators/150/sp-500-dividend-yield](https://www.gurufocus.com/economic_indicators/150/sp-500-dividend-yield)



Figure 6. "Inflation-Adjusted Nasdaq 100 Index Price." Source: GuruFocus, accessed March 25, 2026.  
[https://www.gurufocus.com/economic\\_indicators/5861/inflation-adjusted-nasdaq-100-index-price](https://www.gurufocus.com/economic_indicators/5861/inflation-adjusted-nasdaq-100-index-price)

CHART IV  
BOND YIELDS AND EXPECTED STOCK YIELDS — 1926-1932



SOURCE: Bond Yields — U.S. Dept. of Commerce, *Survey of Current Business, Annual Supplement*, 1932, p. 99.  
Yield Expectations — *Cowles Commission Monograph No. 3. Common Stock Indexes, 1871-1937*. Bloomington, Indiana; Principia Press, Inc., 1938, p. 270.

Figure 7: “Bond Yield and Expected Stock Yields — 1926-1932.” Source: Pontecorvo, “Investment Banking and Security Speculation,” 191.

