

Understanding the CAPE Ratio (aka the Shiller P/E)

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KEY TAKEAWAYS

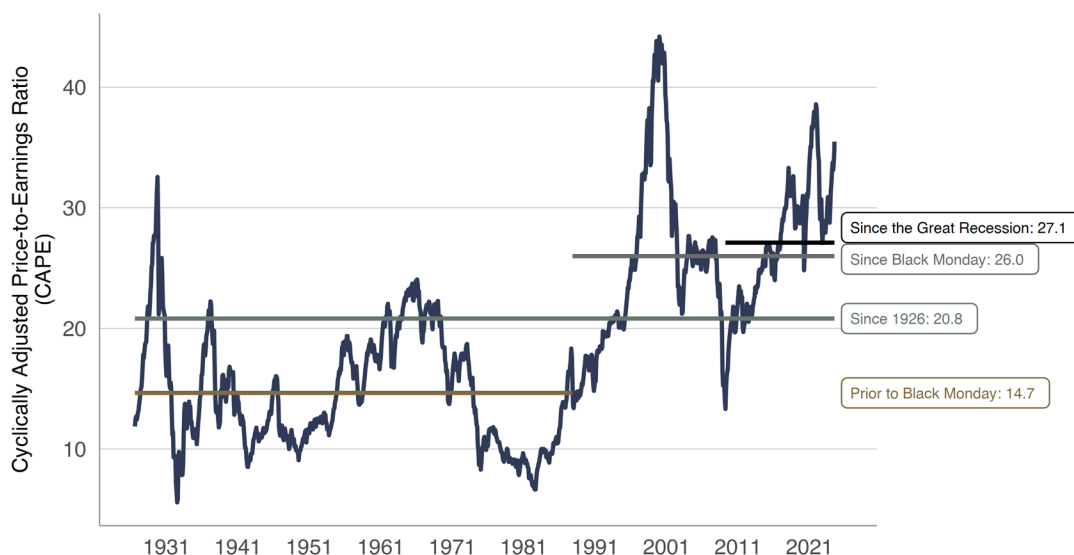
- ▶ **CAPE ratio:** Popularized by Professor Robert Shiller, the ratio is often used as a market timing tool to avoid investing in an 'expensive' stock market.
- ▶ **Invest at peaks:** With 1,376 peak days over the last century, market history shows that *now* is always a great time to invest for the long term.
- ▶ **Comparing metrics:** The cap-weighted S&P 500 index is much more expensive than its equal-weight sibling by many metrics.

Investor attention has been focused on the long-awaited pullback in interest rates, an anxious path to the presidential election in November and the apparently brief comeback of GameStop investor Roaring Kitty. As a result, the recent uptick in the CAPE ratio has gone largely unnoticed. The current reading is 35.5 (Figure 1), which is on the high end of historical values and usually causes some level of stress for investors because it becomes a key exhibit for those who try to justify that the stock market is too expensive.

THE SHILLER P/E RATIO SINCE 1926

Professor Robert Shiller popularized the CAPE ratio—or Shiller P/E—in *Irrational Exuberance*, a book published near the peak of the Dot-Com Bubble in 2000. To solve for the issue that near-term gyrations cause P/E ratios to fluctuate wildly, Dr. Shiller's calculation took into account a ten-year average of earnings per share and paired that with the current price. The accompanying academic analysis associated high CAPE ratios (when the market is purportedly expensive) with relatively poor future returns, while low CAPE ratios (when the market is purportedly inexpensive) were associated with higher future returns.

Figure 1: Higher for Longer - the CAPE Ratio



From 07.31.1926 through 06.30.2024. Horizontal lines indicate mean figures for specified time periods. SOURCE: Kovitz using data from Professor Robert J. Shiller and Bloomberg Finance L.P.

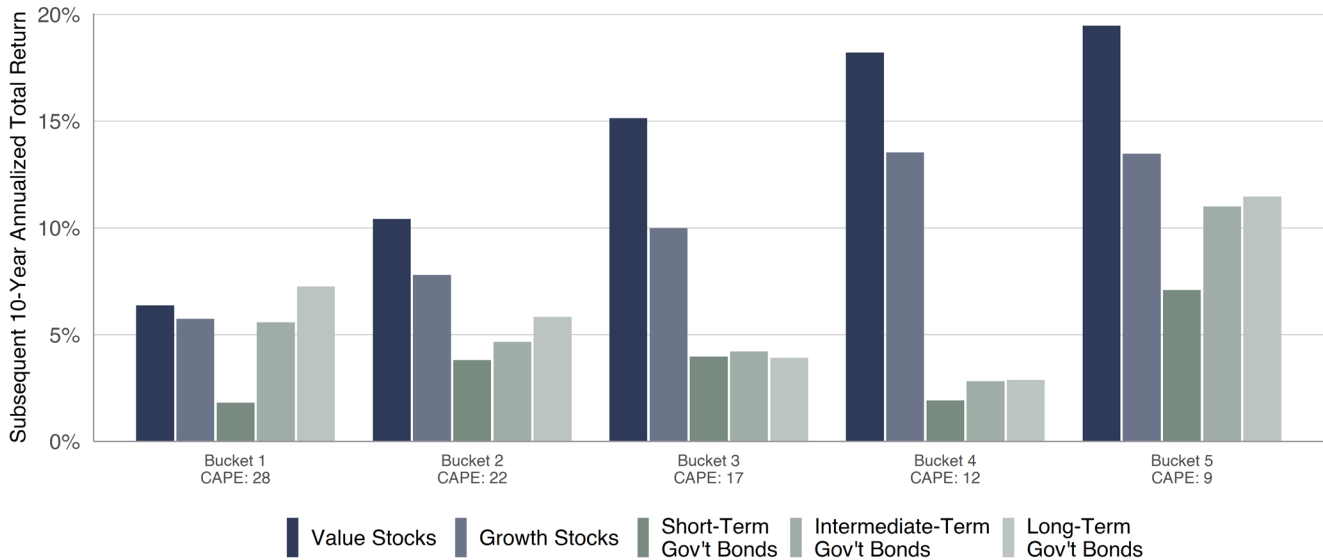


CAPE RATIOS & SUBSEQUENT PERFORMANCE

Slicing and dicing CAPE ratios into buckets with equal membership since 1926, we find in Figure 2 that lower CAPE ratios (smaller bucket numbers) tend to correspond with better subsequent five-year returns periods than when CAPE ratios are higher (larger bucket numbers). Because rolling five-year windows exhibit significant overlap and the CAPE ratio tends to move slowly (this is considered a feature, not a defect), the conclusion that low CAPEs predict better returns than high CAPEs is less robust than it might appear.

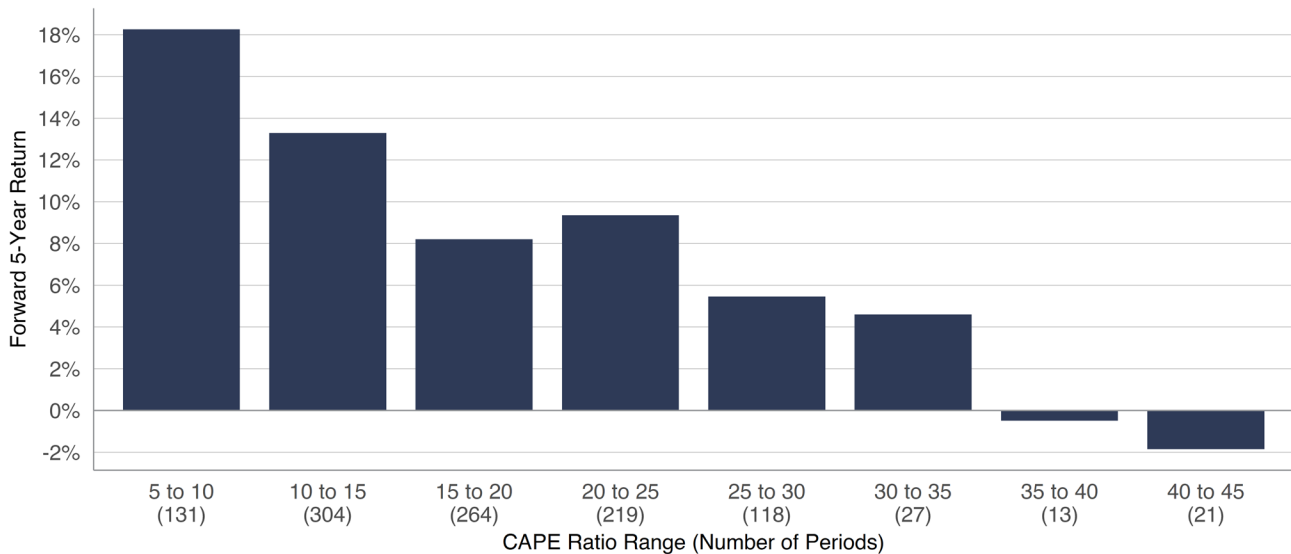
A compelling exhibit supporting the CAPE ratio's predictive power is presented in Figure 3. Terrific five-year returns followed periods with low CAPE ratios, while subsequent performance has been dreadful when the CAPE is above 35. The details matter. There are 131 periods represented by the bar with CAPE ratios between 5 and 10. Yet just 34 rolling periods make up the rightmost bars with high CAPE ratios and all of them were from 1998 and 2000, a period followed by a steep market plunge (as measured by the S&P 500) thanks to the Dot-Com Bust AND rising prices for many inexpensively valued stocks.

Figure 2: CAPE Ratios Divided into Equal-Sized Buckets



From 07.31.1926 through 03.31.2024. Horizontal lines indicate mean figures for specified time periods. SOURCE: Kovitz using data from Professor Robert J. Shiller and Bloomberg Finance LP.

Figure 3: CAPE Ratios Divided by Range



From 07.31.1926 through 03.31.2024. Bucket #1 captures the lowest 10% of CAPE ratios (often considered the most undervalued). Bucket #10 captures the highest 10% of CAPE ratios (often considered the most overvalued). Subsequent five-year returns. SOURCE: Kovitz using data from Professor Robert J. Shiller and Bloomberg Finance LP.

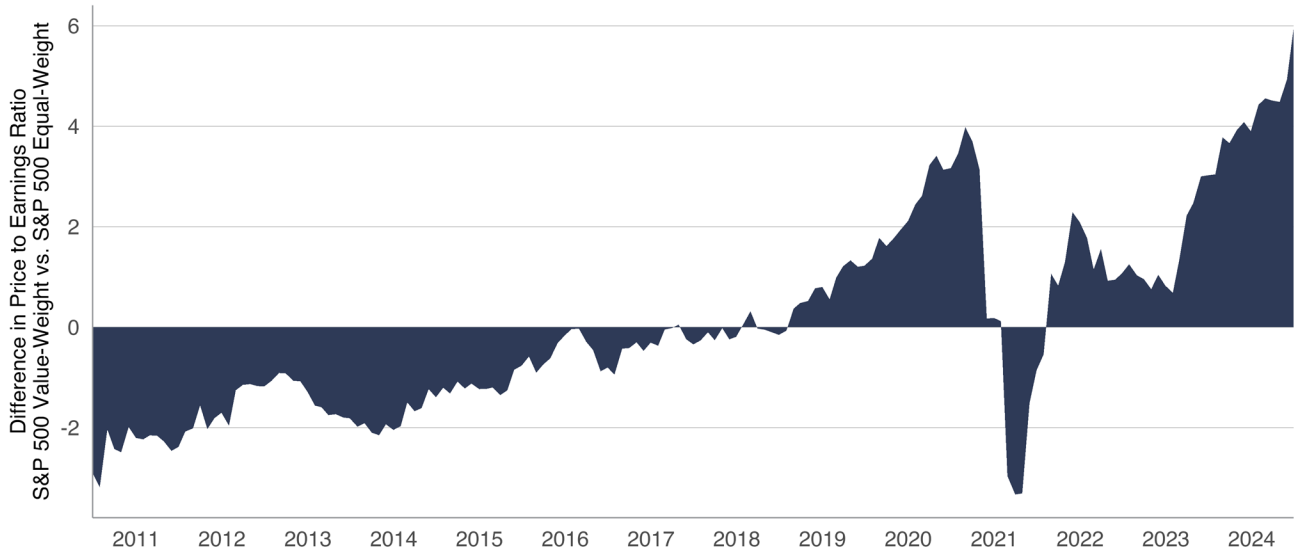


S&P 500 DIFFERENCES

The preceding text offers evidence the time period plays an important role in indicating the stock market's relative expensiveness. Index calculation methods matter, too. In Figure 4, we chart P/E ratio differences between the value-weight (market cap) S&P 500 index and its equal-weight sibling. The spread is usually not vast, but it can be meaningful if the metric is used as dividing line. On June 30, the trailing 12-month P/E for the cap-weighted index was 26.1, while it was 19.6 for the equal-weight version.

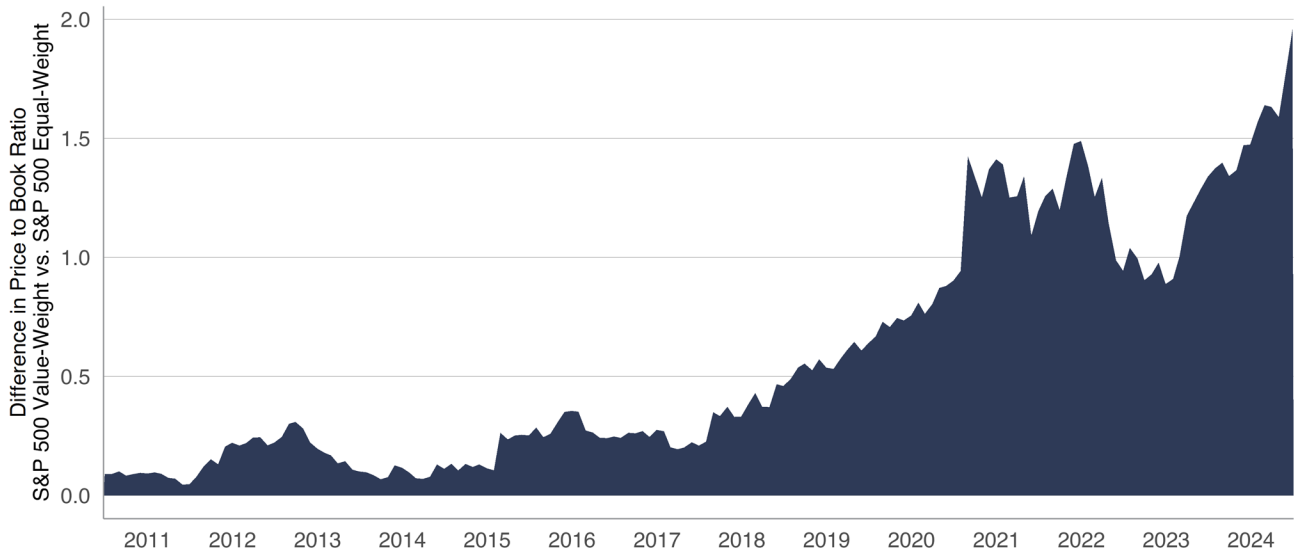
The P/E ratio isn't the only metric gap that has widened between the cap-weighted S&P 500 and its equal-weight sibling. In Figure 5, we show a huge divergence in the Price to Book ratio, which measures a company's stock price relative to a company's net assets. The P/B ratio also gives an investor a general idea what the shares would be worth if the company spontaneously went out of business and had to sell its assets. While a high P/B isn't problematic on its own, it does indicate that investors hold expectations that management will create more value from their assets.

Figure 4: Equal- and Cap-Weighted Index Price to Earnings Ratio



From 06.30.2010 through 06.30.2024. Trailing 12-Month Price to Earnings Ratio. SOURCE: Kovitz using data from Bloomberg Finance L.P.

Figure 5: Equal- and Cap-Weighted Index Price to Book Ratio



From 06.30.2010 through 06.30.2024. Trailing 12-Month Price to Earnings Ratio. SOURCE: Kovitz using data from Bloomberg Finance L.P.

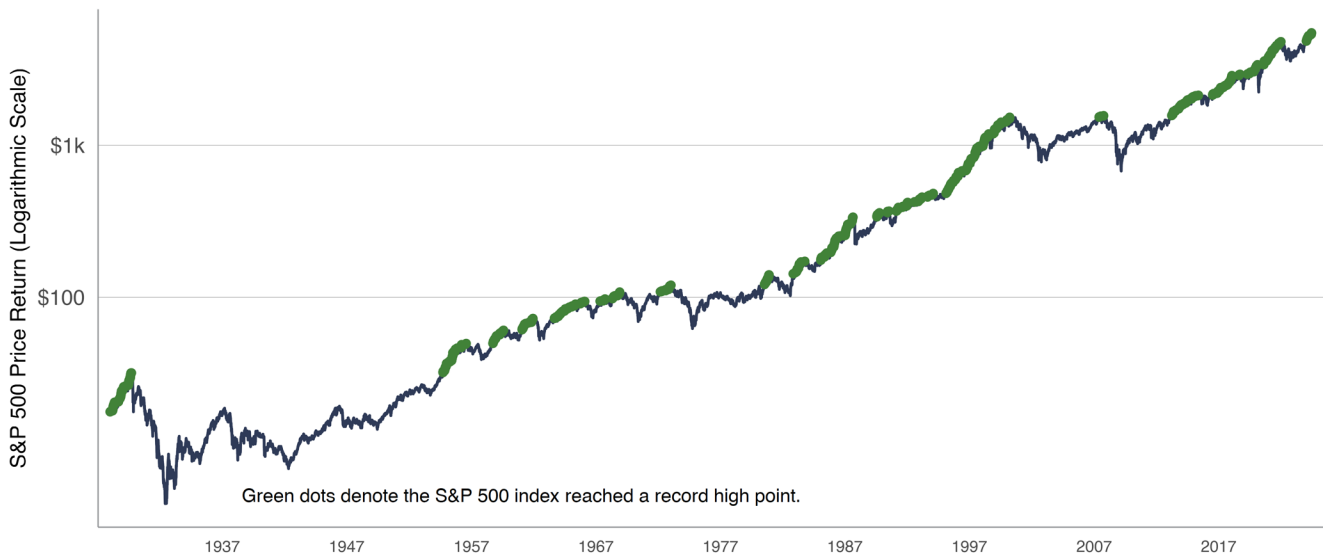


BUY THE PEAK

The fear of weak returns from “getting in” around a stock market peak turns out to be largely unfounded considering it is frequently cited as justification to delay putting money to work (i.e. timing the market). Figure 6 shows that in 24,240 trading days since 1927, 1,376 (5.68%) set a new record. Even though peaks tend to be clustered and there are long periods with no new records, subsequent returns don’t reveal that investors gain a performance advantage by avoiding putting money to work at market peaks.

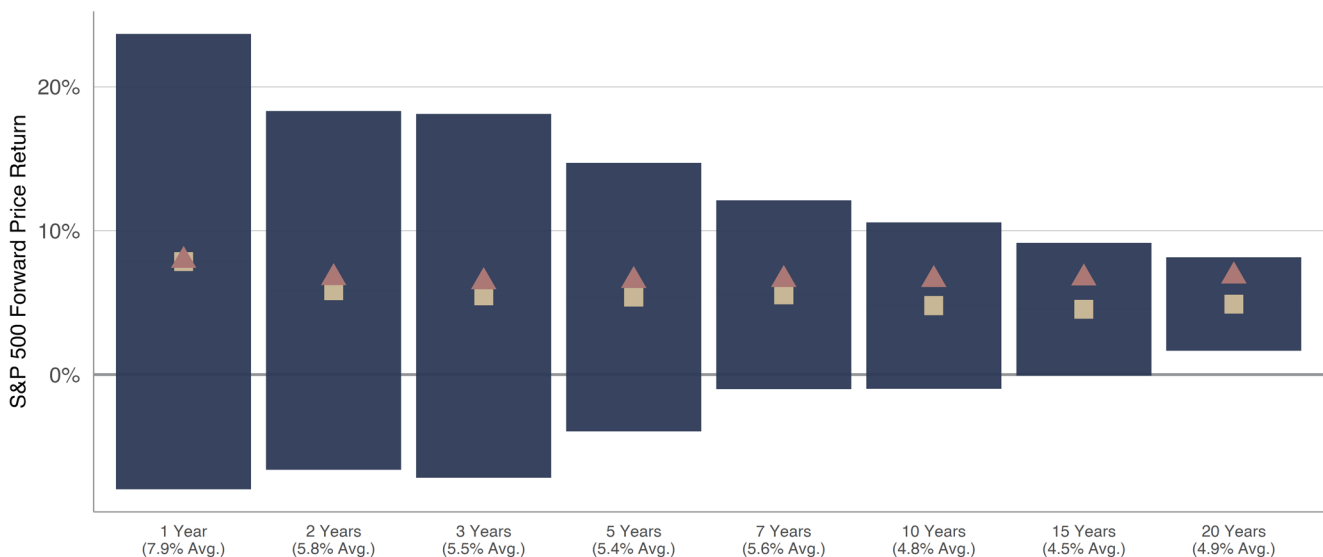
In Figure 6, we chart the price return for the S&P 500 index for one-year to twenty-year rolling periods subsequent to each market peak. The one-standard deviation confidence interval (approximately 66% of values) is represented by the navy bars. The peak-only average rolling returns are represented by the gold squares and the all-period averages are represented by the red triangles. It might come as a surprise that one-year returns subsequent to peaks are actually above the all-period average, while longer time horizons lag, even as they are still very much in the green.

Figure 6: S&P 500 Price Return since 1927



From 12.31.1927 through 06.30.2024. Price return series. Total returns are not available on a daily basis for the study period. SOURCE: Kovitz using data from Bloomberg Finance LP.

Figure 7: Subsequent S&P 500 Price Returns



From 12.31.1927 through 06.30.2024. Price return series. Total returns are not available on a daily basis for the study period. Blue bars are one standard deviation about the mean. Gold squares are the mean of post-peak rolling periods. Red triangles are the mean of all rolling periods. SOURCE: Kovitz using data from Bloomberg Finance LP.



LOOK AHEAD, FAR AHEAD

When we wrote an earlier version of this paper in early 2023, the following headline in *The Wall Street Journal* got our attention, “Stocks Haven’t Looked This Unattractive Since 2007.” After a discussion about the equity risk premium (the gap between expected returns for stocks and bonds), the article said, “Stocks look pricey again today, and markets are facing a new host of challenges...That is based on the S&P 500’s price level relative to inflation-adjusted corporate earnings over the past 10 years, or the CAPE ratio. Although well off prior peaks seen in the late 1990s and 2021, the U.S. stock benchmark trades at a multiple around 29, pricier than it has been more than 90% of the time since 1881.”

The S&P 500 index has climbed nearly 40% since that *WSJ* article went to press and it was difficult to find any mentions of the CAPE recently. Happily, one we did find in *Barron’s* on March 7, written by Dr. Burton G. Malkiel, which concluded, “Valuations are rich, and long-run equity returns are likely to be lower than we have recently experienced. But the stock market remains the best vehicle for growing wealth. And young people, investing regularly to build a retirement nest egg, can take advantage of dollar-cost averaging. If there is a market decline, they will be buying more shares.”

For nearly 50 years, we have been buying undervalued stocks for their three-to-five-year or longer potential, with the intention of holding them through a business cycle or two. While some may argue that stocks are at a precipice, our experience is that it’s always a great time to buy stocks and hold them through the fullness of time, with the incredible valuation gap between Value and Growth that exists today suggesting that it is a terrific time to be running toward inexpensive stocks.. After all, we feel inclined to reiterate that the secret to success in investing is not simply to select good stocks, but to not get scared out of them by scary P/E ratios or calls for impending doom. Indeed, we have made money (and you can, too) over the years from stock holding as well as stock picking! –



For additional information about subscribing to the *The Prudent Speculator* newsletter, please call Phil Edwards at 800.258.7786 or email pedwards@kovitz.com.

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The description of products, services, and performance results contained herein is not an offering or a solicitation of any kind. Past performance is not an indication of future results. Securities investments are subject to risk and may lose value.

All returns are geometric average unless otherwise stated. The geometric average is calculated using the mean of a set of products that takes into account the effects of compounding.

The Standard & Poor's 500 index (S&P 500) is a broad stock market index based on the market capitalizations of the largest 500 companies listed in the U.S. Small company stocks, via Ibbotson Associates, are the bottom twenty percent of the New York Stock Exchange. Large company stocks, via Ibbotson Associates, are represented by the S&P 500 index. The S&P 500 Growth Index is a market capitalization weighted index. All the stocks in the underlying parent index are allocated into value or growth. Stocks that do not have pure value or pure growth characteristics have their market caps distributed between the value & growth indices. Prior to 12/19/2005 this index represented the S&P 500/Barra Growth Index. The S&P 500 Value Index is a market capitalization weighted index. All the stocks in the underlying parent index are allocated into value or growth. Stocks that do not have pure value or pure growth characteristics have their market caps distributed between the value & growth indices. Prior to 12/19/2005 this index represented the S&P 500/Barra Value Index.

The factor-based (book value-to-price) portfolio data is from Eugene F. Fama and Kenneth R. French. The dataset is broken into four groups: large value, large growth, small value and small growth. The aggregate Value and Growth portfolios are monthly averages of the two returns.

Growth stocks = 50% Fama-French small growth and 50% Fama-French large growth returns rebalanced monthly. Value stocks = 50% Fama-French small value and 50% Fama-French large value returns rebalanced monthly. The portfolios are formed on Book Equity/Market Equity at the end of each June using NYSE breakpoints via Eugene F. Fama and Kenneth R. French. Dividend payers = 30% top of Fama-French dividend payers, 40% of middle Fama-French dividend payers, and 30% bottom of Fama-French dividend payers rebalanced monthly. Non-dividend payers = Fama-French stocks that do not pay a dividend. Long term corporate bonds represented by the Ibbotson Associates SBB1 US LT Corp Total Return index. Long term government bonds represented by the Ibbotson Associates SBB1 US LT Govt Total Return index. Intermediate term government bonds represented by the Ibbotson Associates SBB1 US IT Govt Total Return index. Treasury bills represented by the Ibbotson Associates SBB1 US 30 Day TBill Total Return index. Inflation represented by the Ibbotson Associates SBB1 US Inflation index.

The Russell 3000 Index is composed of 3000 large U.S. companies, as determined by market capitalization. This portfolio of Securities represents approximately 98% of the investable U.S. equity market. The Russell 3000 Index is comprised of stocks within the Russell 1000 and the Russell 2000 Indices. Russell 3000 Growth Index measures the performance of those Russell 3000 Index companies with higher price-to-book ratios and higher forecasted growth values. Russell 3000 Value Index measures the performance of those Russell 3000 Index companies with lower price-to-book ratios and lower forecasted growth values.

The MSCI ACWI Index is a free-float weighted equity index. It was developed with a base value of 100 as of December 31 1987. It includes both emerging and developed world markets. The Bloomberg Barclays Global Aggregate Index is a flagship measure of global investment grade debt from twenty-four local currency markets. This multi-currency benchmark includes treasury, government-related, corporate and securitized fixed-rate bonds from both developed and emerging markets issuers. The DJ US Real Estate Index represents REITs & other companies that invest directly or indirectly in real estate through development, management or ownership, including property agencies. The index is a subset of the Dow Jones U.S. Index, which covers 95% of U.S. securities based on float-adjusted market capitalization. The S&P GSCI Total Return Index in USD is widely recognized as the leading measure of general commodity price movements and inflation in the world economy. Index is calculated primarily on a world production weighted basis, comprised of the principal physical commodities futures contracts.

From 1927 to present, we utilized the dividend-weighted portfolio data from Eugene F. Fama and Kenneth R. French. The dataset is broken into five groups: non-dividend paying, top 30% of dividend payers, middle 40% of dividend payers, bottom 30% of dividend payers and all dividend payers (weighted 30% of top dividend payers, 40% of middle dividend payers and 30% of low dividend payers).

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