

CALLODINE | CAPITAL

“Will The Real ~~Slim Shady~~ Rates Impact Please Stand Up?”

We're gonna have a problem here...

Quarterly Market Commentary: Q3 2023

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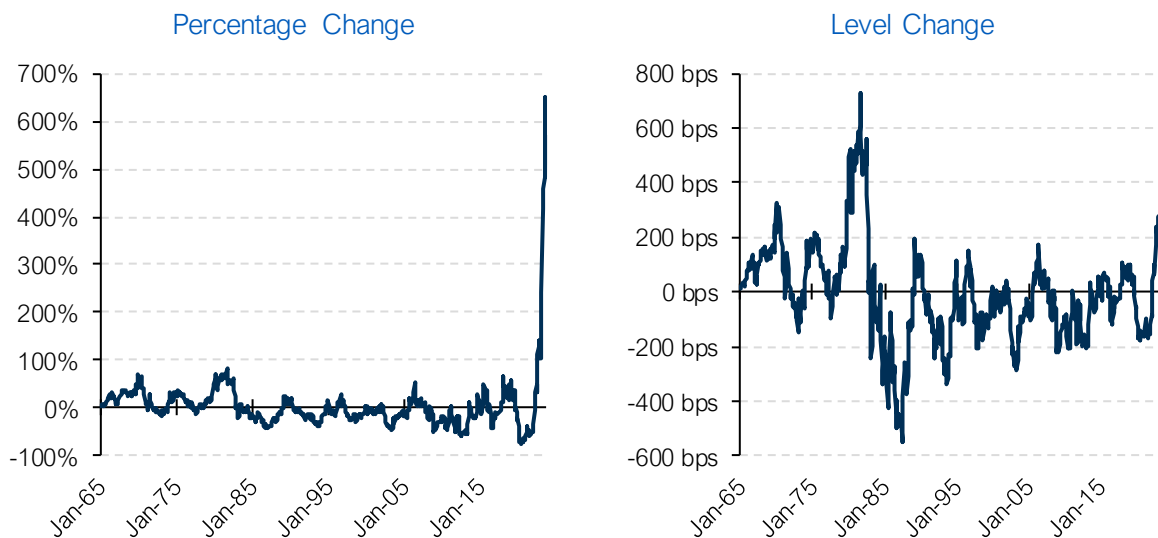
The link between the risk-free rate and the price/returns of other assets is both theoretical¹, empirical², and logical. On a long enough timescale, the returns available to an investor taking no risk should inform the returns available to an investor taking “some” risk.

In reality, and especially in the shorter term, we have a multi-variable dynamic price mechanism at work: investors with different time horizons, risk appetites, and return objectives all simultaneously trying to price assets based on their own information and inclinations. However, gravity—or, in this case, the pull of the prevailing risk-free rate—inevitably takes hold. But this doesn’t happen uniformly across all markets, creating opportunities for investors who are willing to venture outside of consensus views and spot anomalies across the capital markets.

Witness the current environment, which, depending on how you frame it, is the largest or second-largest reset in prevailing risk-free rates in the last 50+ years.

Rolling 3 Year Change in 10 Year Treasury Yield

Monthly Observations from Jan 1965 through Sep 2023



Sources: Bloomberg, Callodine Quantitative Research

One can hardly fault the markets for not knowing the right playbook to reference for a situation that almost no one has witnessed. However, one by one, various asset classes are falling in line and repricing themselves according to this newfound reality. The question is, are you prepared for it?

1 Source: <https://pages.stern.nyu.edu/~adamodar/pdfiles/valn2ed/ch13.pdf>

2 Source: https://dash.harvard.edu/bitstream/handle/1/3207699/campbell_stockreturns.pdf

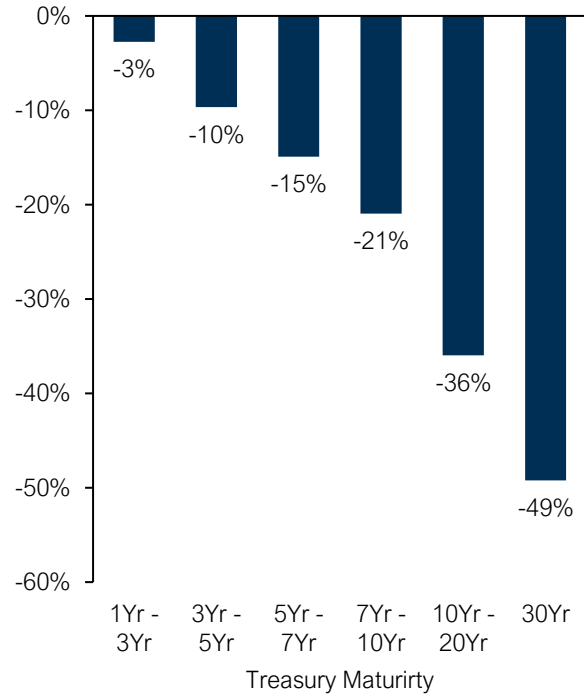
How many buyers of 30-Year Treasuries three years ago expected to quickly lose 49% of their money?³ Very few, we would imagine.

The basic math of discounting suggests that longer-duration assets are more prone to price corrections in adjustment to higher rates than shorter-duration ones. Within the bond market, where math seems to always matter, asset prices have followed a direct correlation to this idea that duration impacts price.

Within the more chaotic equity markets, cheaper cash flow-producing stocks are the short-duration equivalent of shorter-term Treasuries, and Growth stocks, where much of the expected value is out in the terminal state, are the equivalent of long-dated Treasuries. So in theory, longer-duration assets should feel the effect of this change in the discount rate most of all. When you look outside of the United States, it's evident that most global markets have already begun the rotation out of long-duration Growth names and into shorter-duration, cash-flowing equities, as exhibited by the dominance of Value over Growth globally since rates started moving higher (see chart below).

Treasuries 3 Year Returns by Duration

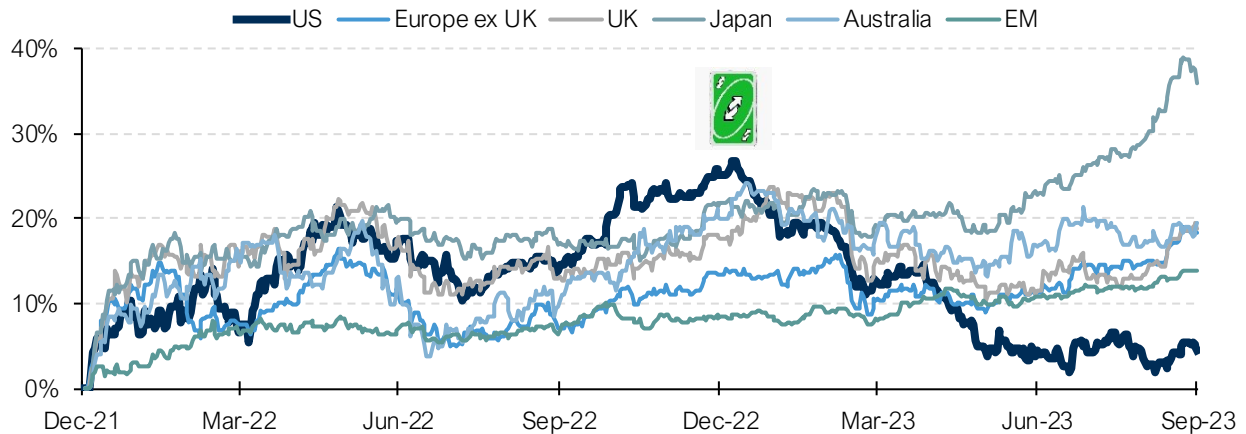
Total Returns Sep 2020 through Sep 2023



Sources: Bloomberg, Callodine Quantitative Research

Value - Growth Total Return by MSCI Region

MSCI Value USD TR Index - MSCI Growth USD TR Index Dec 31, 2021 through Sep 30, 2023 Daily



Sources: Bloomberg, Callodine Quantitative Research

3 Sources: Bloomberg, Callodine Quantitative Research

The notable exception has been within U.S. markets, where Growth investors have cleverly played a “reverse” card on both the math and that global trend, having now fully unwound what was the start of a “value over growth” cycle in 2022.

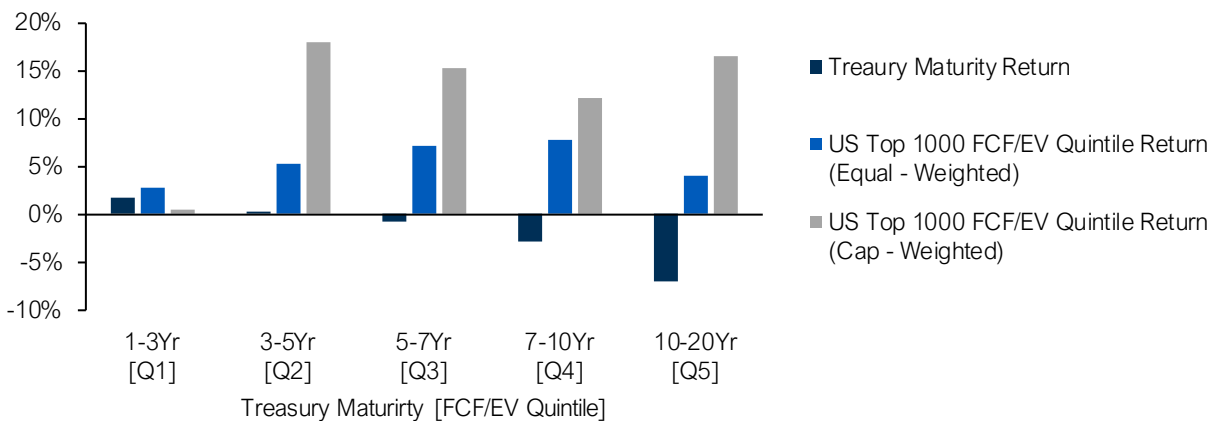
Old habits die hard in the United States after 15 years of uninterrupted success, and equity investors have held on tightly to the allure of

mega-cap tech as the last bastion of hope, allowing a nearly 15-year hegemony of Growth over Value to remain firmly in place.⁴

In fact, not only have U.S. stocks bucked the global duration-driven repricing trend, but the longest-duration stocks in the U.S. have also been some of the best performers this year, particularly on a market cap-weighted basis.

YTD Returns by Duration - Treasuries vs US Equities

Dec 2022 through Sep 2023



Sources: Bloomberg, FactSet, Callodine Quantitative Research

U.S. Growth Stocks: Where Math Doesn't Matter?

Denial is a powerful motivator, and Growth investors refuse to give up on a 15-year winning formula where, in large part, they have done best when they have ignored math and simply listened to the sounds and wonderful stories companies have told. The presence of a tremendous future “Total Addressable Market” is a difficult thing to disprove, and, in a market fueled by zero-cost money and no discount rate, the whole *when* and ultimately *how much*

can easily get lost in the breathtaking possibilities.

However, ignoring math has gotten more difficult as the cost of money has moved higher globally. Being open-minded is critical to being a good investor, so we are open to all possibilities to explain this anomaly. There may be a host of explanations for the discrepancy between U.S. Growth stocks and “the math,” but, in our minds, the three most obvious are:

⁴ Sources: Bloomberg, FactSet, Callodine Quantitative Research. See Disclaimer page for methodology detail.

1. U.S. investors are right. This time is different, and either discount math no longer applies to U.S. Growth stocks, or the current Growth cycle is so powerful that they can outrun higher discount rates.
2. U.S. investors are wrong. They're just so wedded to a strategy that has worked for a decade and a half that it's unthinkable to change until presented with overwhelming evidence (i.e. the stocks go down).
3. U.S. Growth stocks are the only prescient asset class in the current environment. They are looking past the current rate environment and seeing a return to the prior low-rate regime.

Negative Real Earnings Yield = Difficult Initial Condition

The concept of real rates is likely interesting only to corporate finance nerds like us who enjoy reading and contemplating economic theory. But skeptics may ask, has it ever really mattered to the markets? Yes, in fact, it has absolutely mattered historically in terms of projecting forward returns, including for Growth stocks.

The chart below highlights the resulting annualized five-year return, given a different real earnings yield starting point for the Russell 1000 Growth Index from 1997 to 2018. There is an obvious and direct correlation ($r^2 = 0.77$) between your starting point and your future returns, which makes intuitive sense.

Russell 1000 Growth
Real Earnings Yield vs Subsequent 5 Year Annualized Return
Dec 1996 through Sep 2023 Monthly



Sources: Bloomberg, Callodine Quantitative Research
Methodology: Real Earnings Yield is Trailing Earnings Yield - 10 Year Treasury Yield

In our opinion, with a current starting point of a -1.85% real earnings yield (as shown on the previous chart), odds are stacked very much against investors earning a positive return in the Russell Growth Index during the next five years. In fact, the only time this has happened


was coming out of the 2002 recession, when real earnings yields were negative due to depressed earnings among all stocks rather than due to higher interest rates, which is most certainly not the case today.


Hey, ChatGPT—Do Real Rates Matter?

As humble Value investors, we know that sometimes we miss the latest and greatest innovations in the market. So, to further our quest to understand why real rates haven't mattered to Growth stocks this time around,

we decided to look to a higher, more intelligent power for the answer. The oracle of A.I. itself, the very zeitgeist of the current market, must have the answer, right?

Default (GPT-3.5)

 Do real rates matter?

 Yes, real interest rates matter significantly in economics and finance. Real interest rates are interest rates that have been adjusted for inflation, meaning they reflect the true purchasing power of money. They are calculated by subtracting the expected or actual inflation rate from the nominal interest rate. Here's why real interest rates matter:

- 1. Investment and Capital Allocation:** Real interest rates influence investment decisions by individuals, businesses, and governments. When real interest rates are high, borrowing becomes more expensive, which can lead to reduced investment and economic activity. Conversely, low real interest rates can encourage borrowing and investment stimulating economic growth.
- 2. Savings and Consumption:** Real interest rates also impact the behavior of savers and consumers. Higher real interest rates can incentivize saving as the returns on savings are more attractive. Lower real interest rates may encourage spending as borrowing costs decrease.
- 3. Inflation Management:** Central banks often use real interest rates as a tool for managing inflation. By adjusting nominal interest rates (policy rates) in response to changing economic conditions, central banks can influence real interest rates. Higher real interest rates can help curb inflation by reducing borrowing and spending, while lower real interest rates can stimulate economic activity during periods of low inflation or deflation.
- 4. Asset Valuation:** Real interest rates affect the valuation of various assets, including bonds, stocks, and real estate. For example, when real interest rates rise, the present value of future cash flows from bonds and stocks tends to decrease, which can lead to lower asset prices. Conversely, falling real interest rates can boost the value of these assets.
- 5. International Capital Flows:** Real interest rates can influence international capital flows. Investors are attracted to countries with higher real interest rates, as they offer potentially higher returns. This can lead to currency appreciation or depreciation and impact a nation's trade balance.
- 6. Financial Market Dynamics:** Real interest rates are closely monitored by financial markets. Changes in real interest rate expectations can lead to fluctuations in bond yields, stock prices, and foreign exchange rates, affecting investment and trading strategies.
- 7. Economic Growth:** Real interest rates are a critical factor in economic growth. High and stable real interest rates can provide a conducive environment for long-term investment and productivity growth.

In summary, real interest rates play a pivotal role in shaping economic decisions, influencing financial markets, and helping to manage inflation. They are a fundamental concept in economics and finance that has far-reaching implications for individuals, businesses, and governments.

Unfortunately, this version of A.I.⁵, perhaps trained by the antiquated ideas of the past, is poorly situated to understand its own ability to disrupt the future and invalidate mathematical

concepts, thereby rendering real rates meaningless. A pity, to be sure.

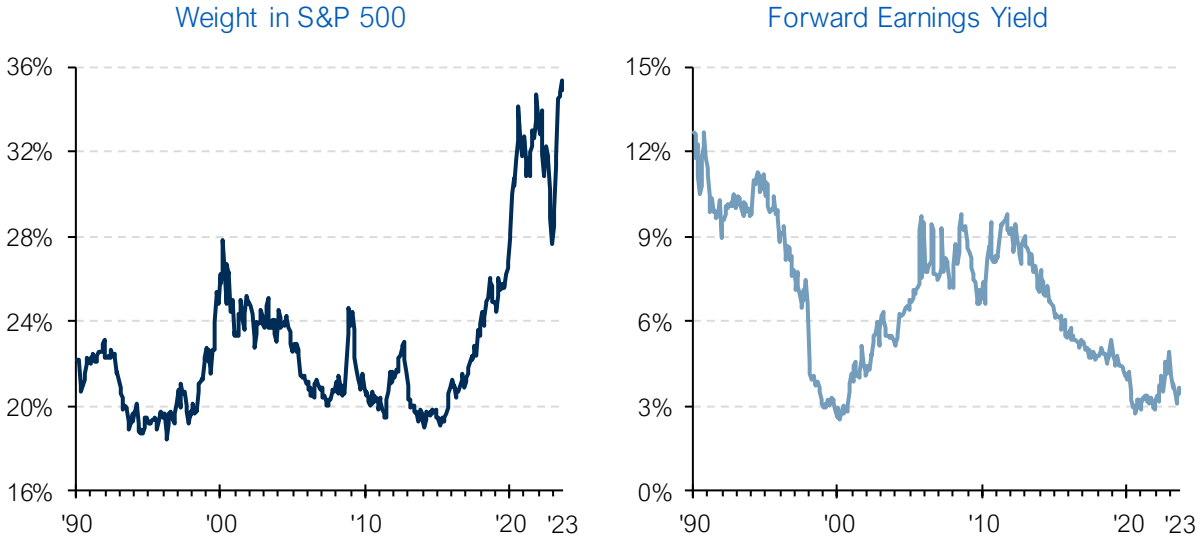
The Great Expectations of the Special Ones

Perhaps shifting from index-level to stock-specific analysis is the key. It is possible that the current group of Growth winners are, in fact, different from those anointed in the past—that is the message the market is sending, as never in the last 30+ years has the top 10 of the S&P 500 been more concentrated or provided less in terms of forward earnings yield.

It is possible that we too often see concerning signs in markets that others would deem more favorable, but what we see today is one of the most crowded consensus and expensive trades in history—one reinforced daily by passive market cap driven flows and one we want to actively avoid being part of.

Largest 10 Companies by Market Cap in S&P 500

Monthly Observations from Jan 1990 through Sep 2023



Sources: Bloomberg, Callodine Quantitative Research
Methodology: Weight in S&P 500 is the sum of market cap for the 10 largest companies in the S&P 500 ex BRK/B divided by the market cap of the S&P 500. Forward Earnings Yield is the market cap weighted earnings yield of the 10 largest companies in the S&P 500 ex BRK/B.

5 Source: As Value investors, we used the free version of ChatGPT 3.5, of course, but maybe a monetized future version will be more self-aware of the math-defying nature of the current crop of Growth darlings.

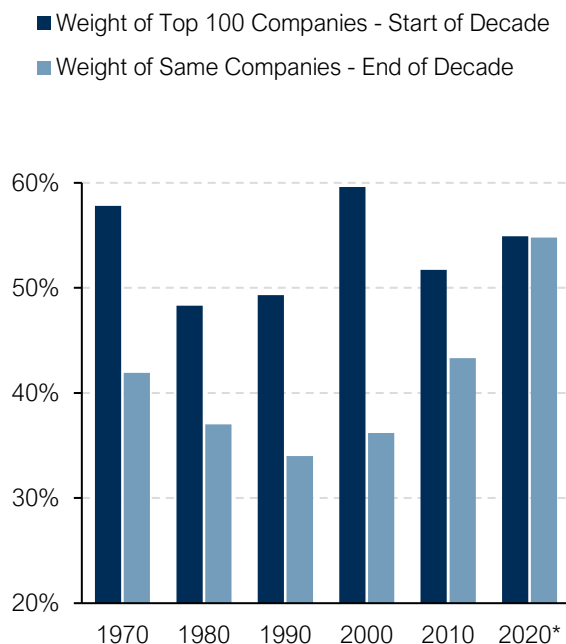
Using history as a guide (and, again, maybe this is the wrong view), it has certainly been difficult to make money by owning the biggest names in the market. The weight of great expectations and the Law of Large Numbers are daunting market forces to fight simultaneously.

It's been a nearly sure bet that the largest cohort of names in the market will underperform and shrink as a percentage of total market cap over the subsequent decade. This is simply the law of large numbers in action. So far, this decade has been a significant anomaly in this regard.

In addition, expectations are very high and increasing for this group of stocks which are synonymous with the Growth trade currently in place across the market.

High absolute valuations, lofty expectations and ignoring the prevailing revaluation trend across nearly every global market as rates move higher makes for a set of very daunting initial conditions to expect to make positive relative returns with these names, in our view.

Largest 100 US Companies Weight at Start of the Decade vs Weight at End of the Decade



Source: Man Numeric
<https://www.man.com/maninstitute/views-from-the-floor-2023-September-05>
 * From Jan 1 2020 through December 2022

Cap Weighted Long Term Growth Est of Current Largest 10 Companies in S&P 500

Monthly Obs from Sep 2013 through Sep 2023



Sources: Bloomberg, Callodine Quantitative Research
 Methodology: Market Cap Weighted Est Long Term Growth of AAPL, AMZN, GOOGL, LLY, META, MSFT, NVDA, TSLA, V, XOM
 Note: The stocks shown here are for illustrative purposes only. This is not a recommendation to buy or sell these or any securities.

But Can't This Time Be Different?

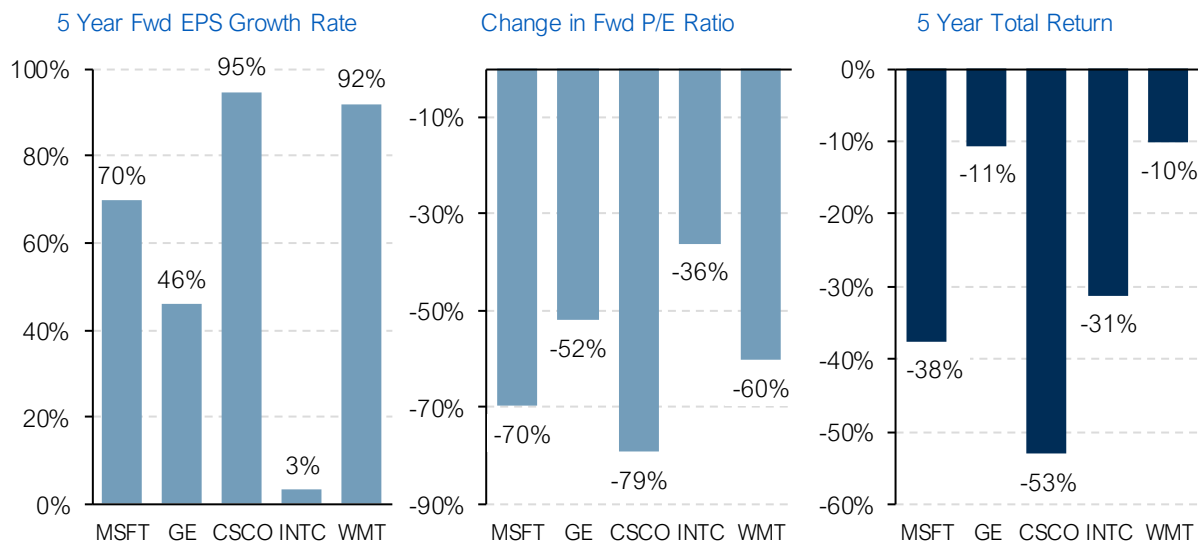
We're not trying to imply that these aren't great companies or that they won't maintain dominant, dare we say monopolistic, market positions for years to come. We're not even saying that they won't continue to grow earnings at a respectable pace. What we are saying is that they're probably not priced correctly for the risks at hand, so investors who are buying at these prices likely won't be compensated for any growth they deliver. This time might be different, but we believe it probably won't be, and you're not being paid very well to take that risk right now.

We were at a similar point in markets only once in the last 30+ years, at the peak of what is now referred to as the dot-com bubble (Note: This was not what it was called at the time). We know how that story ended for the anointed few—very badly. But why? Were growth expectations too high?

No—in fact, as shown below, these companies largely delivered solid growth, and it was simply the starting point and these assets' unfavorable pricing relative to other options that did them in. These same conditions are emerging today.

Top 5 Companies by Cap in 2000 - 5 Year Forward Metrics

% Change in Trailing EPS, % Change in Fwd P/E Ratio, and Total Return from Jan 2000 through Dec 2004



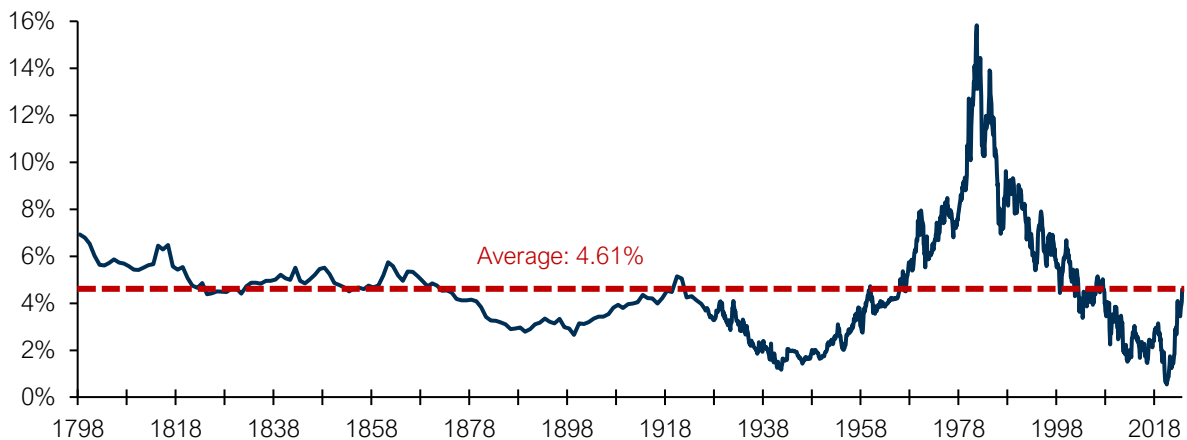
Sources: Bloomberg, Callodine Quantitative Research

Note: The stocks shown here are for illustrative purposes only. This is not a recommendation to buy or sell these or any securities.

Back to “Normal”: Where Interest Rates Matter

The last explanation to explore is that maybe the U.S. market for Growth stocks is the only market presciently looking past the current rate environment to a return to lower rates. The current level of the 10-year U.S. Treasury may seem like an aberration to anyone who started their career after 2008, but the reality is that interest rates are now back to an unremarkable level from a historical perspective. Whether you want to look at the last 30 years or the last 200, a 10-year Treasury at 4.99% is not noteworthy.⁶ When it is viewed in the context of a post-Great Financial Crisis (GFC) rate environment, only then does the yield on the long bond seem juicy.

US Interest Rates 1798 - 2023



Sources: Sydney Homer, Ibbotson® SBBI®, Federal Reserve Bank of St. Louis, Callodine Quantitative Research

In fact, it is very rare for long-term rates to reside outside of a range from 3-6%. This range has held true through almost every imaginable world condition: wars, great technological innovations, the acceleration and deceleration of global birth rates, all of it. It's a sound assumption that this is the normalized long-term risk-free rate to be used in discounting just about anything.

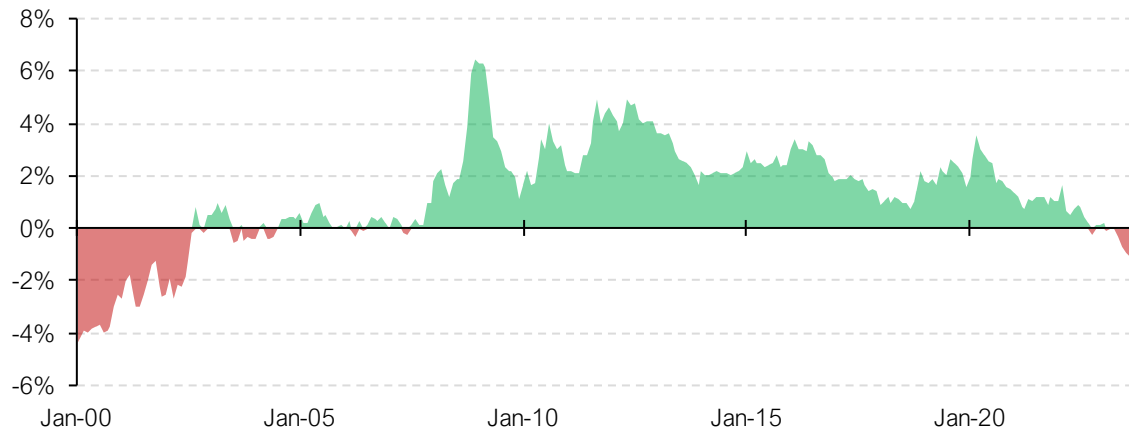
If one believes these rates are the new normal, it creates a high likelihood of a reconciliation between the Real Earnings Yield of Growth stocks and this new rate reality. The chart below highlights just how far off the current pricing for growth stocks is in a historical context. A return to just a 1.0% real earnings yield relative to the current U.S. 10-year would require a -45% correction in the Russell 1000 Growth to a 17-18x forward P/E multiple.⁷ If that sounds crazy, we would point out that is nearly exactly the average valuation for this Index from 2006-2019. Perhaps interest rates and growth stock valuations will meet in the middle, but either way the current state of the market seems highly unsustainable.

6 Source: Bloomberg. Data as of 10/19/2023.

7 Sources: Bloomberg, Callodine Quantitative Research. Data as of 10/19/2023.

Russell 1000 Growth Real Earnings Yield

Jan 2000 through Sep 2023 Monthly & Oct 19, 2023



Sources: Bloomberg, Callodine Quantitative Research

Methodology: Real Earnings Yield is Trailing Earnings Yield - 10 Year Treasury Yield

We believe we are returning to a time when the basic math of corporate finance will eclipse the “narrative” and matter once again. Companies that are no longer able to finance themselves with cheap capital will be forced to either endure higher financing costs based on the prevailing capital markets environment or fund themselves organically with cash flow from operations at a much slower rate of growth. Evaluating the impact of either path requires a level of balance-sheet and cash-flow analysis that we believe has become a lost art over the last decade-plus.

We have been living in an artificially low interest -rate environment since the onset of the GFC and the massive monetary stimulus that followed. Rates fell even further during the COVID era amid an unprecedented amount of global stimulus. Access to nearly free capital has dominated the investment landscape for those 15 years and set off an unparalleled growth cycle in its wake.

In addition, conditions had not yet returned to “normal” from an interest-rate perspective or in terms of the size of the Fed’s balance sheet

when the pandemic took hold and ushered in a new wave of liquidity. That environment and, specifically, the outsized influence that central banks have had on global markets over the past decade and a half is not normal.

Also, even if Growth stocks are right on looking toward a lower-rate future, they’re the only asset left priced that way. So, the logical outcome is that all asset classes other than this cohort will benefit. Might we see a value cycle at long last?

We’ve been asked by asset allocators for years, “What is it going to take for Value to return to favor?” As we wrote about in our December 2020 missive, “[The Case for Value](#),” it’s interest rates. It’s always been interest rates. The only difference now is that higher rates have now arrived, and to deny their role in pricing risk assets defies all logic in our view.

For the first time in a long while, real rates, the cost of capital, and the ability to generate free cash flow all matter. We believe that the sun is setting on a 15-year run for Growth stocks and that it is finally Value’s time to shine.

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YTD Returns by Duration - Treasuries vs US Equities (Dec 31, 2022 through Sep 30, 2023) chart methodology detail: Total Return from Dec 31, 2022 through Sep 30, 2023. FCF/EV quintiles form on the largest 1000 US companies by market cap (US Top 1000) that are traded on a US exchange, have a primary geographic risk of US, have a stock price greater than or equal to \$2.00, do not have “LP” or “L.P” in its name, have filed a 10Q in the past 180 days, and have non-zero volume on all trading days in the past 6 months. The universe is generated twice per year on December 31st and June 30th. Portfolio is rebalanced on a monthly basis. Return is the equal-weighted performance of companies in the quintile. Data sources include Bloomberg and FactSet.

All projections contained herein represent our current beliefs and should not be construed as recommendations or a guarantee of future results.