HIGHER RATES CREATE OPPORTUNITY & IMPROVE INVESTMENT FLEXIBILITY (... STILL NO RECESSION)

THE END OF 10+ YEARS OF ULTRA-LOW INTEREST RATES

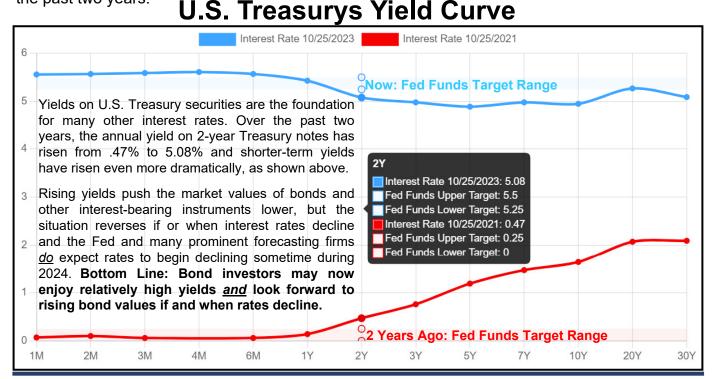
In October of 2021, the rate at which banks were lending money amongst themselves (the Fed Funds rate) was in the range of 0% - .25% per <u>year</u> while 2-Year Treasury Notes offered investors a marginally higher .47% per year on their capital. While positive, those returns may have been negative after adjusting for inflation and taxes.

Those ultra-low rates began in response to the debacle of 2008/9, began to normalize just prior to the pandemic, then plummeted again when it became clear that the pandemic posed a threat to the U.S. economy. Low rates did stimulate the economy, but that stimulation came at the expense of returns available to savers and to anyone else who relied upon income generated from bank deposits, bonds, and/or from other instruments that offer contractually guaranteed interest payments.

Savers and investors typically allocate at least a portion of their investment capital to interest-bearing instruments to control risk and to preserve liquidity, but that capital has been poorly rewarded over the past decade or so.

INTEREST RATE RESET OFFERS OPPORTUNITY & FLEXIBILITY

In March of 2022 the Fed began implementing a series of rate hikes at a pace that was fast enough to wreck a few banks. Here's a look at how dramatically rates/yields have changed over the past two years.

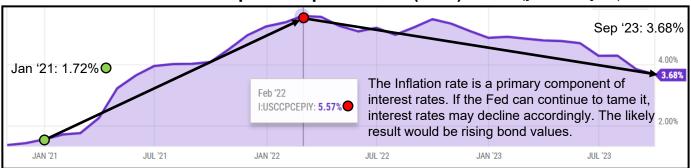


FED ENROUTE TO TAMING INFLATION AFTER FEB-2022 PEAK

The Fed's preferred measure of inflation is the Core Personal Consumption Expenditures Index where "core" indicates that the index ignores the components for food and energy. (Those two components are ignored due to their inherent volatility, not because they're unimportant.)

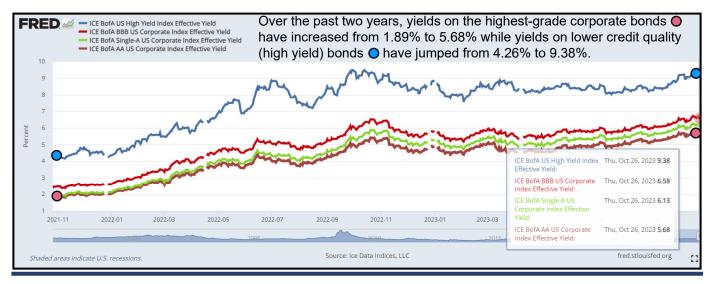
In January of 2021 the year-over-year change in the Core PCE stood at 1.72%. By February of 2022, the stimulus program that helped the U.S. economy battle the Covid slowdown culminated in the Core PCE surging to 5.57%. As already mentioned, the Fed began hiking interest rates a month later and the year-over-year change in the Core PCE has relaxed to 3.68% as of September and the Fed intends for this indicator to eventually settle at its 2% target.

US Core Personal Consumption Expenditures (PCE) Index (year-over-year)



RATE RESET AIDS INFLATION-ADJUSTED RETURNS

That blue yield curve on the previous page depicts the yields on the safest and <u>lowest yielding</u> interest-bearing instruments. Those yields, which are currently in the range of 5.0% — 5.5%, are now around 1.5% higher than the September Core PCE figure shown above which means that positive, inflation-adjusted returns are now available from even relatively low-yielding Treasury securities. The 5.68% yield offered by the highest-grade (AA) corporate bonds (shown below) is now over 2% ahead of the Core PCE inflation figure that appears above while high-yield bond yields are now dwarfing inflation by around 5.75%.



HAVE INTEREST RATES PEAKED?

According to an October 25th survey conducted by Bank Rate, 94% of economists expect the Fed to begin reducing interest rates sometime during 2024. The Fed may implement a 12th rate hike before the year ends. But even if it does, it seems likely that we're close to being in an environment where interest rates have peaked, if we're not already there. **A most important implication of higher rates is that it affords investors an opportunity to be less committed to equities.** If that appeals to you, please contact us.

STOCK VALUES MAY TEMPORARILY RELAX AS BOND YIELDS PRESENT STIFFER COMPETITION

When ultra-low interest-rates persist, as they had for 10+ years, yield-starved investors will try to bridge the resulting income deficit however they can. Some look to dividend-paying stocks for income while others accept the risks of adopting a more growth-oriented investment posture.

If or when capital appreciation does manifest, it tends to do so in uneven lumps which makes those uneven lumps of appreciation a poor substitute for the contractual smoothness of regularly occurring interest payments. Therefore, the capital that had grudgingly flowed into stocks begins a gleeful shift toward newly competitive interest-bearing instruments. As the yields on those interest-bearing instruments become more competitive, as they have since early 2022, they exert an increasingly strong pull on the capital that was never really at home in the stock market in the first place. The natural result is for stock valuations to relax a bit.

However, it is important to realize that this relaxation in stock valuations does not necessarily imply a problem with stocks, corporate earnings, or the economy any more than a receding tide implies a reduction of water or any other oceanic problem.

BOND VALUES SHOULD STABILIZE AS RATES PLATEAU ...

As already shown, the general level of interest rates has risen dramatically over the past couple of years, and in proper mathematical response the <u>market</u> values of bonds and other interest-bearing instruments have declined. However, it is important to remember that a downdraft in the market value of an interest-bearing instrument has <u>absolutely no impact on the contractual or maturity value of that instrument</u>. This is why looking at how the market value of an interest-bearing security has fluctuated from one account statement to the next will offer almost no useful insight as to the <u>actual investment</u> merit of that security.

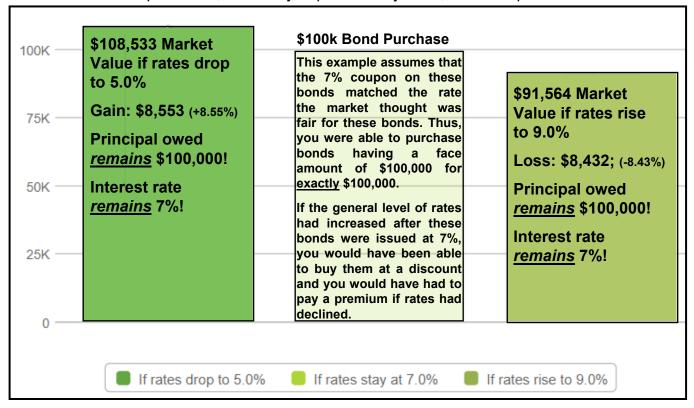
... AND RISE AS OR IF RATES DECLINE

I already covered the fact that an overwhelming majority of forecasters and the Fed itself expect interest rates to begin declining somewhat next year. As a decline in rates becomes more universally accepted, the mathematically proper response of bonds and other interest-bearing instruments will be for their market values to rise ... and this would occur while investors continue to enjoy the higher levels of income that have recently become available.

HOW MUCH MIGHT BONDS RISE IN VALUE AS RATES FALL?

Many factors influence the degree to which an interest-bearing security might fluctuate in response to a change in the general level of interest rates, however the example that appears below provides a fair example of a bond issued in the current climate.

Assumptions: You buy \$100,000 face amount of 5-year bonds that bear a 7% coupon that will entitle you to receive interest payments of \$7,000 per year for five years plus the full face amount of \$100,000 at the end of the 5-year term. Although bonds often trade at discounts or premiums, assume you paid exactly \$100,000 to acquire these bonds.



Important Bond Awareness Considerations:

- ⇒ If the marketplace felt that these bonds merited a rate higher than 7%, you would have been able to buy these bonds at a discount to their face value of \$100,000, and you would likely have had to pay a premium if rates had declined.
- ⇒ If, after buying these bonds, the marketplace suddenly demanded 9% per year to hold these bonds, their market value would then decline to \$91,564 (shown above) which would allow them to offer the proper 9% yield to a subsequent buyer and the bonds' diminished market value of \$91,564 would be reflected on your account statement.
- ⇒ In addition to reflecting that lower market value of \$91,564 on your account statement, your statement would also show a loss of \$8,432 (i.e., the difference between the \$100,000 you spent to acquire the bonds and their current market value of \$91,564).

- ⇒ If interest rates had suddenly risen to 11% rather than to 9%, the same things that have just been outlined would still happen except that the market value of your bonds would be even lower and the loss appearing on your statement would be even more severe.
- ⇒ Worse still, you'd probably own other bonds in addition to these bonds and you'd see similarly upsetting figures reflected next to each bond holding. Unless you had some understanding of bond mechanics, the figures on your statement might leave you longing for the simplicity and safety of a certificate of deposit.

Not withstanding any of the above, if you continued to hold your now-depreciated bonds, the issuer would still be contractually obligated to pay interest to you at the rate of \$7,000 for as long as you held the bonds. And as long as you held the bonds to maturity, you'd still receive your <u>full</u> 7%-per-year return on your <u>full</u> \$100,000 investment for your <u>entire</u> 5 -year period because the issuer would still be obligated to repay the entire \$100,000 face amount at maturity without regard to any market value fluctuations that may have occurred between the time the bonds were issued and their maturity date.

It's also worth knowing that any loss shown on your monthly statement will not in any way be indicative of the <u>actual</u> return you have received on your bonds since that loss does not reflect the interest income you have been receiving from those bonds.

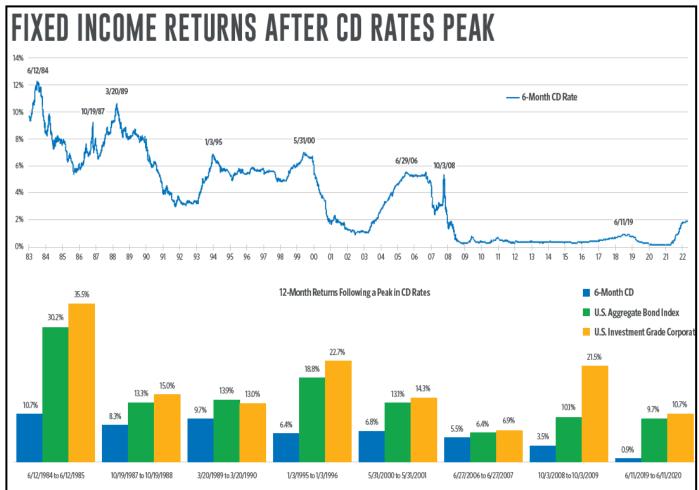
- ⇒ If you held these bonds in a taxable environment, you might sell them after they had fallen in value to "realize" that loss and that realized loss would then be "recognized" on your next income tax return(s) where it could offset other taxable gains or other taxable income.
- ⇒ If you didn't have any other gains or income to offset, the loss you realized on the sale of your bonds would create some flexibility for you to sell other assets by offsetting some or all of the tax that might otherwise be applied to the gain on the sale of that other asset.
- ⇒ If you weren't able to use the realized loss on the sale of your bonds in the current tax year, your tax preparer would capture the loss on the sale of your bonds to ensure it's available to you if/when you can make use of it in future tax years (because losses also have value).
- ⇒ If you sold your 7% bonds at a loss after interest rates had risen to 9% (or 11%), but then (smartly) used the proceeds of the sale of those bonds to buy <u>similar</u> bonds whose market value had <u>also</u> fallen, you would essentially be trading in your 7% bonds in for 9% (or 11%) bonds. Plus, you'd also have a loss available to you to offset other income or gains.
- ⇒ Best for last: It would be entirely possible for the loss you initially sustained on the sale of your 7% bonds to be <u>completely offset by the incremental return</u> you'd receive from the replacement bonds you later purchased at a discount. Therefore, <u>even if you sold your original bonds at a loss, you might still have an opportunity to earn that original 7% per year over that entire, original 5-year time frame.</u>

THE (OFTEN LESS THAN IDEAL) CD SOLUTION

It's understandable why an investor may opt to side-step the bond-related minutia I just outlined and to instead enjoy the straightforward simplicity of an FDIC-insured, certificate of deposit (CD), but that simplicity comes at a cost.

First, the entities that offer CDs are financial intermediaries. That is, they sit between the depositing public and the higher returns that are available directly via the capital markets. Healthy banks achieve a net interest margin of about 3%. This means they will, on average, pay their depositors about 3% less per year on deposited funds than what they earn on their earning assets. And because banks' earning assets often include an allocation to bonds, it's not likely for CD yields to be too competitive with bond yields at any given time.

Second, the only reason most CDs don't vary in response to changing interest rates is because the CDs most people buy are non-negotiable. Known as retail CDs, they can't be sold prior to maturity. So in exchange for an inferior yield versus bonds and other interest-bearing instruments, CD holders enjoy simplicity, an FDIC guarantee, and a stable value.



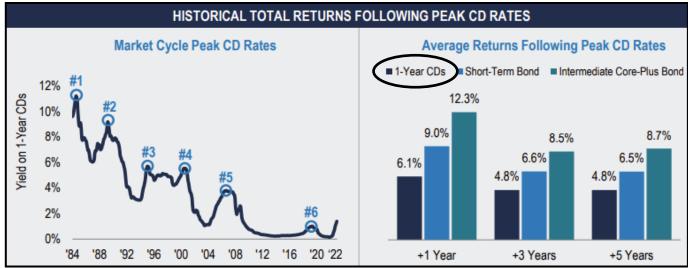
Now, instead of holding the 7% bonds I just described, imagine holding a \$100,000, 7% CD that also matures in 5 years and that, once again, interest rates suddenly decline to 5% after you purchase that CD. You may be pleased to have locked that 7% rate in for five years before it vanished. However, if rates declined after your purchase, your CD would not rise in value at all as would a bond. (Refer to the image on page 4.)

Whereas the CD holder <u>must</u> hold his CD for the entire 5-year period to avoid penalties, the bondholder may also choose to hold his bonds for that same 5-year period and continue to earn that same 7% all along the way, or sell some or all of his bonds at a gain prior to maturity. In essence, a decline in the interest rate environment has the effect of pulling returns forward for bondholders, improving investment flexibility. And remember, bonds typically out-yield CDs so if CDs are yielding 7%, bonds would typically yield more.

If, instead, interest rates rose and the market value of your bonds declined, your account statement would show that reduced value along with market value loss, but you could simply ignore the reduced value and that loss and continue to earn that 7% right up to the day your bonds mature, the same way a CD owner would. Your CD statement would not show a loss, but what difference would it make if your bonds show a loss on your statement if you're planning on holding them to maturity anyhow?

THE LURE OF THE PEAK-RATE CD

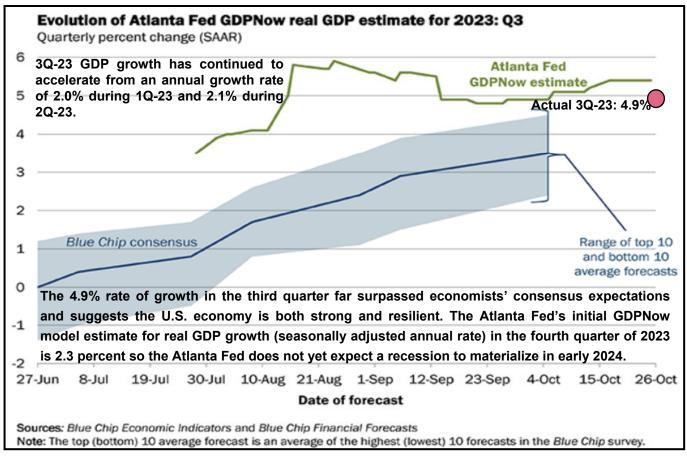
The image to the left compares the returns a CD investor might have achieved by investing in 6-month CDs after each labeled interest-rate peak to the returns available from competing alternatives. A similar study appears below. After each peak in each study, **CD investors would have been better off if they hadn't been CD investors**.



Source: Calculated by PGIM Investments, using data from Morningstar and Bankrate.com as of 12/31/2022. Returns for 3-years and 5-years are annualized. Average returns are calculated following peak CD rate periods, it is important to note that other periods may have produced different results. CD peaks are For illustrative purposes only. CD peak rate periods are based on historical monthly data. The table above shows the historical performance of CDs, Short-Term Bond Funds, and Intermediate Core Plus Bond Funds following the previous 6 periods in which CDs reached their respective peak rate. Short-term Bond and Intermediate Core-Plus Bond are represented by Morningstar category averages. 1-Year CDs are represented by 12-month national average CDs, using rates as provided by Bankrate. One-year CDs have fixed rates. Short-term bonds and intermediate core-plus bonds are longer in duration with daily price fluctuations and market volatility. The purpose of this illustration is to highlight the growth of \$100k over the past 39 years not to make a direct comparison between the CD index, and the short term and intermediate core plus bond category averages provided by Morningstar. Past performance is no guarantee of future results.

3RD QUARTER GDP COMES IN STRONG — NO RECESSION YET

Not only is the recession not here yet, consensus estimates for the annual rate at which GDP will advance during the 3^{rd} quarter have continued to increase right up until the final figure of 4.9% was released.



A 4.9% rate of annual economic growth is high by historical standards. However, in its quest to tame inflation, the Fed would prefer the U.S. economy to slow a bit. Therefore, the high current rate of economic growth actually increases the odds that the Fed will implement a 12th interest rate hike before year-end which could cause bond values to sag and yields to rise a bit more.

RECESSION STILL LIKELY WITHIN NEXT 12 MONTHS

The Conference Board, which publishes the Leading Economic Index, notes that the recent surge in GDP was driven by growth in consumption despite a contraction in real disposable income. Consequently, it regards the recent rate of GDP growth to be unsustainable and it continues to forecast economic contraction during the first half of 2024. And although the Federal Reserve Bank of New York recently reduced its probability estimate of the U.S. falling into recession within the next 12 months from 70% to 56%, the NY Fed still thinks that the probability of a slowdown occurring during the next 12 months is more likely than not.

Investors are a forward-looking lot, so the impact of a recession may already be reflected in current asset values (... and bond losses may not be what they seem). — Glenn Wessel