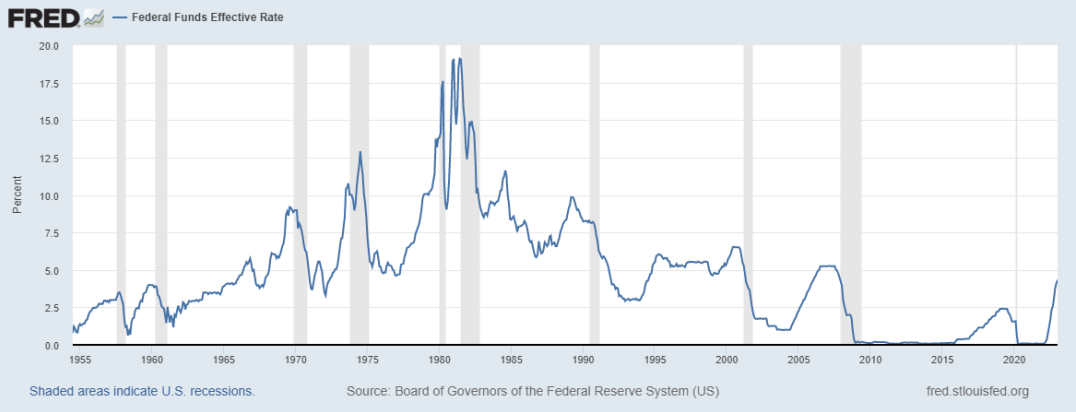
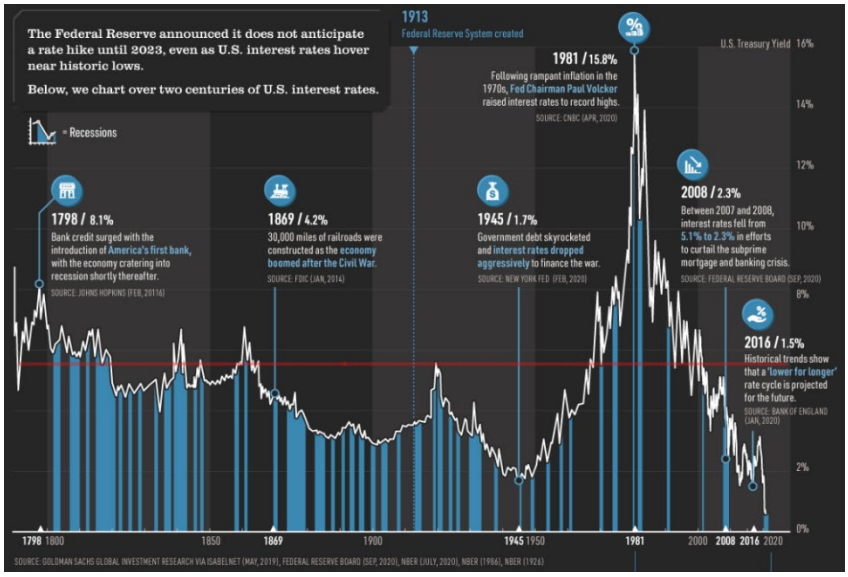
Market Commentary: Are Bond Yields Finally Getting Interesting? A Historical Perspective

February 2023



When Paul Volcker took over as Fed Chair on August 6, 1979, he meant business. Two months later Mr. Volcker announced a "radical change in the implementation of monetary policy" resulting in an immediate ~8% drop in US stocks within 2 ½ days. Mr. Volcker did not kid around. The effective Fed funds rate reached 19.39% on April 1980. By July of that year it had dropped to 9%, prior to surging again in early 1981 above 19%.[1] Wow! With disruption comes opportunity. Buying equities or fixed income when the markets looked their worst in the dog days of 1981 would have resulted in double digit annual returns over the ensuing years and up to the crash of '87.[2]



[3]

It is important to understand that yields in the early 1980s were a historical anomaly. This is not an opinion, just look at the charts above and below. Those unusually high rates have colored the view of investors for close to 40 years as they experienced perhaps the best bull market in fixed income ever.

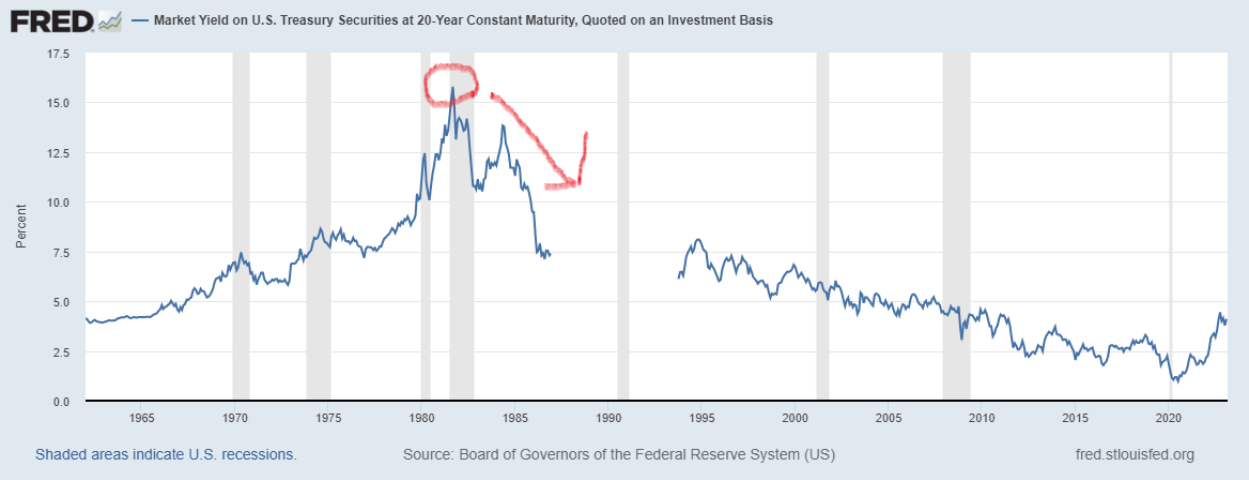
Most market participants would claim that they would obviously plow their money into double digit interest rates in 'risk-free' or 'low risk' bonds given the opportunity. In fact, though, this did not happen when one of the best opportunities in history presented itself. Fear overwhelmed pulling the trigger. At the bottom of the market, in late 1981, issuers could not get anyone to invest. An investment grade mortgage bond issuance sporting a healthy 18.75% yield was only half completed, while the US government had to offer a 15.78% yield on 20-year Treasury Bonds in September, 1981, to

[1] Note chart below or alt: Federal Funds Effective Rate (FEDFUNDS) | FRED | St. Louis Fed (stlouisfed.org)

[2] Based on results of the AGG index and S&P 500 index: Aggregate Bond Index vs. Stock Index 1980-2021 (thebalancemoney.com)

[3] Visualizing the 200-Year History of U.S. Interest Rates (visualcapitalist.com) with red line added by us.

get an issuance complete – 2% higher than the level auctioned just two months earlier.[4] These issuances were massive winners for the investors. Yet uncertainty and risk kept most investors from acting.



[5]

The Construction of a Bond

When an individual buys a single bond, absent a default, they are promised the return of a stated principal payment and a series of coupons. Let's say they buy a 3-year US treasury note for par ($1,000 principal per note) with an annual coupon of 5%. If the individual holds the note to maturity they will receive $50 a year for three years (coupon payments) and the return of their principal ($1,000). If, a day after purchasing the note, investor-demanded yields increase to 5.5%, the market price of the note will decline to roughly $985[6] to compensate for the now low coupon yield of the bond: 5% vs 5.5%. New issues of bonds will have a 5.5% coupon and existing bonds will see their market price drop to reflect the increase in demanded yield. Since the coupon for the associated bond is only 5%, investors will demand a discount on the price of the bond to make up for the .5% additional yield they can get elsewhere. By buying the bond for $985, yet receiving principal payment on maturity of $1,000, a new bond purchaser will generate a 5.5% return if held to maturity.[7]

Duration is a measurement used in bonds that represents the sensitivity of the price of a bond to the change in interest rates. Duration is principally affected by time to maturity and cash flows, though other factors play a role. In the example above, we simply set duration to time to maturity which is a reasonable estimate for purposes of this commentary.

[4] When Interest Rates Turn the Corner - WSJ

[5] The 20 year Treasury was discontinued in 1986 resulting in a gap in the graph, read further to understand why a purchase at the top for yields was a massive winner for investors.

[6] It would not be exactly $985 but for simplicity's sake, .5% multiplied by 3 years of time to maturity = 1.5% decline in value = $15. The technically accurate price is in the table (using PV calculations in Excel).

[7] Note we are assuming no default and we are simplifying the math. The additional $15 recouped between purchase price ($985) and principal payment at maturity ($1,000) is relatively equal to an additional 0.5% annual coupon.

Affect on rising yields on a 3 year bond					
			Demanded		
	Principal	Coupon	Yield	Duration	Price
$	1,000	5.0%	5.0%	3	$ 1,000
	1,000	5.0%	5.5%	3	986
	1,000	5.0%	6.0%	3	973
	1,000	5.0%	7.0%	3	947

A bond fund seeks to diversify the bond exposure held and typically looks to match a constant duration. For example, a core bond fund typically has an average duration of around six years. The fund manager essentially constructs a rolling bond ladder[8] where, as bonds mature (or are sold given a shorter duration), the fund buys the appropriate bonds necessary to maintain that constant duration.

When yields rose last year, there was scant coupon coverage to make up for immediate losses to principal. In the illustration above, where yields increased 2% (demanded yield increased from 5% -> 7%), the price declined by over 5% (from $1,000 to $947). An investor would show a 5% loss in the bond value (price) but then receive 5% worth of coupons over the next 12 months, breaking even for the year period. In the beginning of 2022, however, many bonds were providing a coupon yield below 2%, meaning there was little way to make up for losses as yields increased dramatically. That is why core bond funds, with a duration closer to 6 years, generated double digit losses.

Now, however, yields are materially higher. While a 1% increase in yields a year ago would have resulted in a ~5% loss for a core bond fund given the low coupon yields then, that same increase today would most likely result in a break-even year given the additional coupon yield one can now expect. The risk/reward in bonds has shifted significantly. Additionally, as can be seen from the red line drawn across the second chart above, showing the history of US interest rates going back to 1798, the expected terminal Fed funds rate[9] of 5.5% - 5.75% is actually above the average rate historically. Finally, while we cannot tell you where inflation will go, the most watched measurements are year-over-year comparisons, and those comparisons are about to get interesting as there was a spike in the Feb – June 2022 data due the Ukraine invasion (remember $5 gas?).

In summary, it is easy to get sucked into the vortex of today's terrible news, the scary geo-political state of the world, and seemingly stubbornly high inflation, but it is important to stick with the longer term view and gain perspective in respect to historical events and data that don't simply reside in the rear-view mirror (like the 1970's), while also appreciating the changing risk/reward dynamic that a higher rate environment provides.

[8] A portfolio of spaced-out maturities of bonds

[9] The expected final interest rate the Federal Reserve aims to achieve at the end of a loosening or tightening cycle – we are in a tightening cycle where the Fed is attempting to remove slack from the system to combat inflation.

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