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From Bears to Bulls?
A trend-follower's perspective on the U.S. yield curve

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As 2023 comes to a close, many analysts are calling the end of the bond bear market. It is surprising to see that fixed income has struggled for almost two years in a row. Since early 2022, we have witnessed one of the biggest and fastest rate hiking cycles in many decades. During this time, trend following has been one of the few strategies to be bearish on bonds. In this note, we examine how trend followers have moved in fixed-income markets during this period and what we might expect going forward from the perspective of a trend follower.

What happened in fixed income?

In finance we often use a common calculation: nominal rates equal inflation plus real rates. This equation relies on real rates continuing to be relatively sticky, slow moving, and difficult to observe. A global pandemic, supply chain disruption, and subsequent spending provided the perfect storm for a shock in inflation. As inflation surged, nominal rates moved towards the new level of real rates and central banks quickly raised rates to dampen inflation. As a result, short-term rates increased. This increase was consistent with central bank tightening as investors continued to hope that inflation would be "short lived" and not remain sticky over the longer term. As we moved into 2023, hopes quickly disappeared as inflation became less of a reality and bonds began to reprice towards more moderate levels of inflation over long horizons, resulting in a flatter and less inverted yield curve.

We can see this move graphically in two ways. First, consider Figure 1, which plots U.S. yields for different maturities from 3 months to 30 years. Notice how pre-2022 yields were all low, with short-term rates moving higher than longer-term yields for the period of late 2022 until late 2023. Figure 2 plots the yield curve at different time stamps across different maturities, which also shows the curve shape changing over time. From this figure you can see how the curve was steep in 2020 but gradually inverted and then started to dis-invert in late 2023.

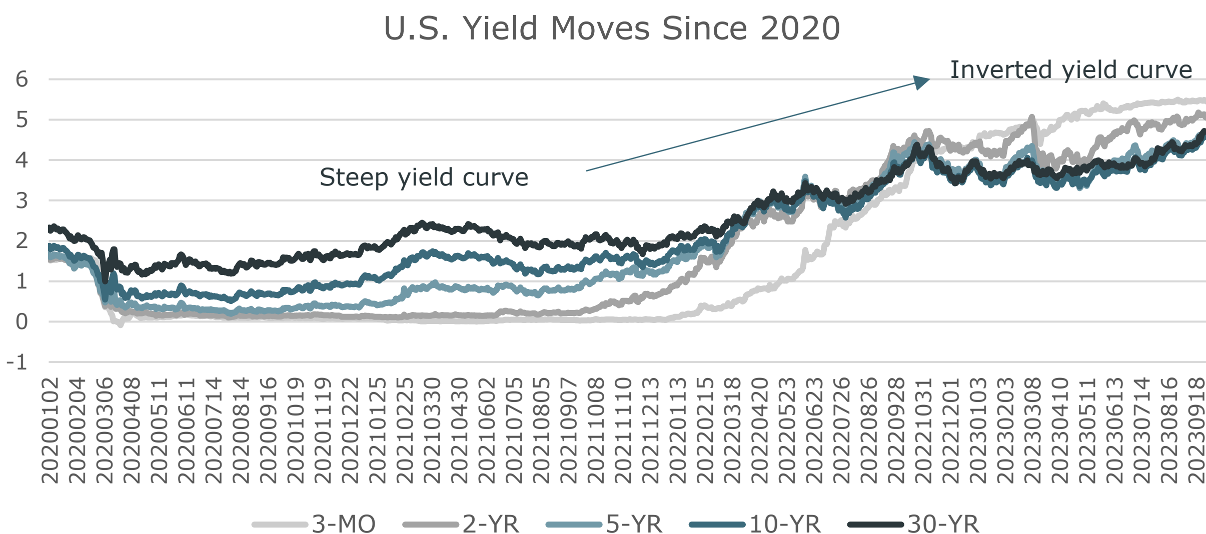

Figure 1: Yields from 2020 through 10/31/2023 for various maturities (U.S. 3-Month Bills, U.S. 2-Year Notes, U.S. 5-Year Notes, U.S. 10-Year Notes, U.S. 30-Year Bonds). Source: AlphaSimplex, Bloomberg.

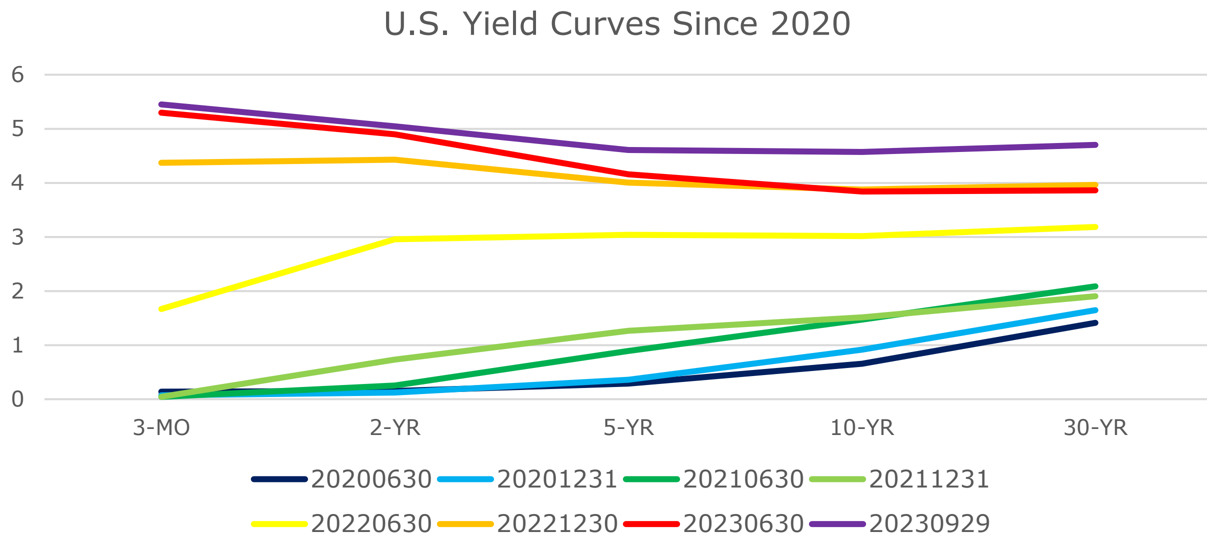

Figure 2: Yield curve shapes for U.S. bonds from 2020 to 10/31/2023, sampled bi-annually. Source: AlphaSimplex, Bloomberg.

What have trend followers done during this period?

Given the trend downwards in price (upwards in yield), it should not be surprising that trend following has taken short positions in fixed income. To demonstrate this, Figure 3 plots trend following weights in U.S. fixed income (denoted in 10-year equivalent risk weights to make them comparable) for the U.S. 10-year, 5-year, and 2-year futures contracts. From Figure 3, we can see that trend following was generally long U.S. fixed income until mid-2021 when it started to short fixed income positions going into 2022. Following this, trend following turned consistently short fixed income prior to the first rate hike in March 2022 and has stayed relatively consistently short fixed income with a small fluctuation around the SVB and regional banking crisis in March 2023.

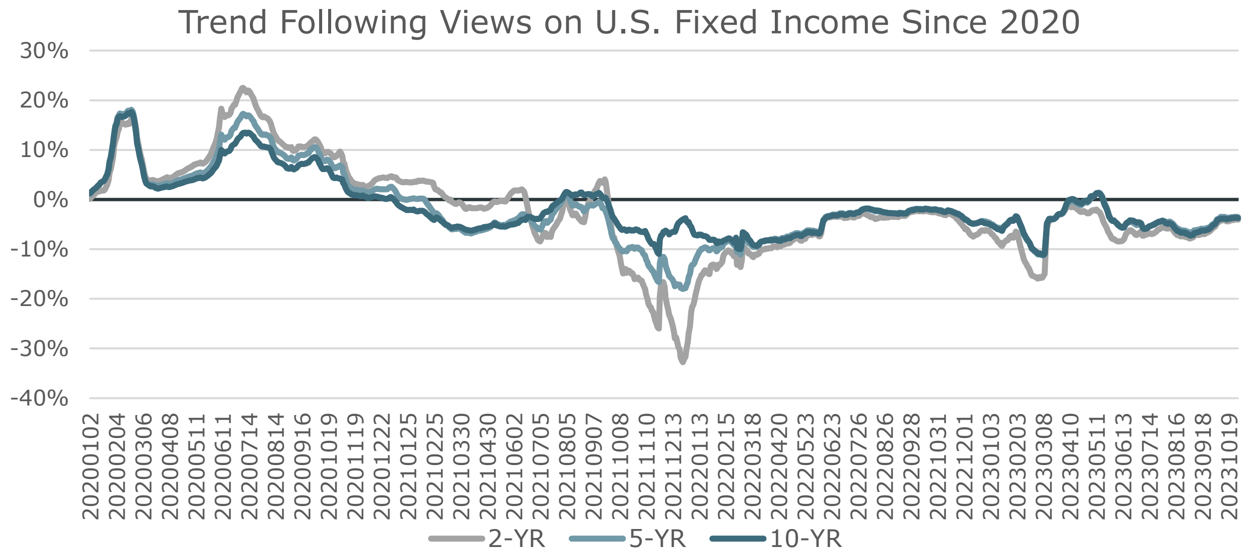

Figure 3: Fixed income positions for a representative trend-following strategy from 2020 to present. Weights are plotted in 10-year equivalents to make them comparable. Source: AlphaSimplex, Bloomberg.

From Figure 3, we can see that trend following has been consistently short for most of 2022 and 2023 as well as parts of 2021. Being short in fixed income for over two years is not an ordinary occurrence in recent history. To put this into perspective, we can consider how often trend followers have been net short U.S. fixed income over longer time horizons, consistent with our discussion in Kaminski and Sun (2022). Figure 4 plots the trend following net U.S. fixed income views in 10-year equivalents from 2000 to present. We note that trend following was net short in only 30 of 95 quarters or roughly 32% of the last 20 plus years. During the most recent period, trend following has been net short 11 quarters in a row, which is the longest net short view in over 20 years. This highlights how rare a persistent short position of this type is for a trend-following strategy in recent history. However, given the large change in yields at the short end of the curve and the dis-inversion we have seen in 2023, this is not too surprising. In fact, it is very consistent with the empirical patterns we discussed in our paper on shorting bonds in 2022 (see also Kaminski and Sun 2022). This paper suggested the following:

- During a rising rate environment, trend following will be more likely to be short than long (as opposed to a falling rate environment where trend following tends to be long).
    - More specifically, when rates are rising and/or the curve is inverted, short positions are more common and they tend to be more profitable than long positions.
    - As the curve becomes flatter, short positions continue to be more common than long positions. They also tend to be more profitable than long positions but less profitable than short positions during inverted curve scenarios.
    - Finally, when the curve steepens during a rising rate environment, short positions are less common with worse performance while long positions tend to be slightly more positive on average.

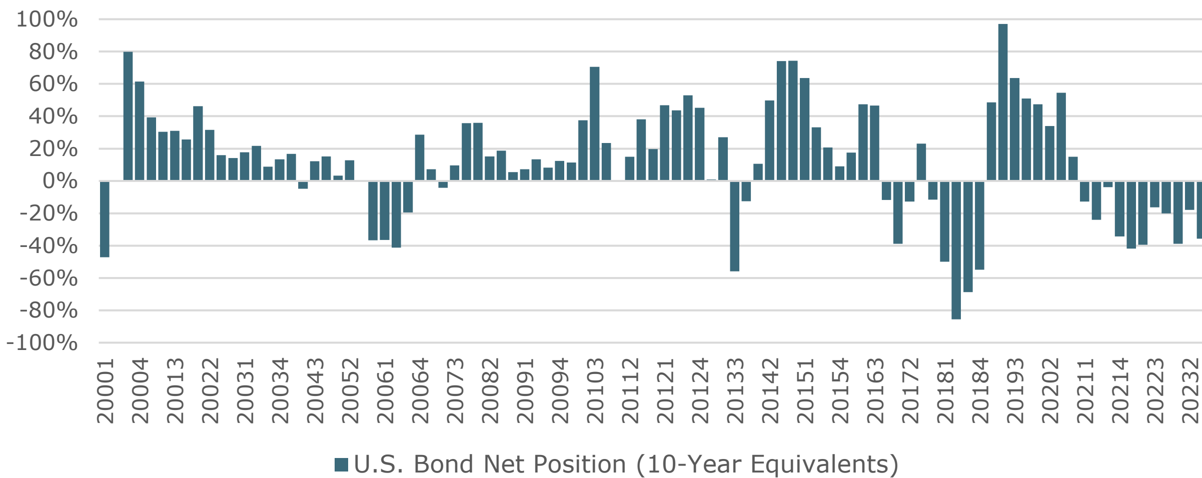

Figure 4: Net U.S. fixed income positions for a representative trend-following strategy in 10-year equivalents averaged by quarter from 2000 through 10/31/2023. Source: AlphaSimplex, Bloomberg.

What is interesting about the empirical results in Kaminski and Sun (2022) is that we have seen the first two phases of this rate transition consistent with trend performance in 2022 and 2023. It is still unclear if we are in a flatter phase of the curve or if we will eventually move to a steeper yield curve. This leads us to some thoughts about where we are now in fixed income and where we might be heading in the future from the perspective of a trend follower.

What should we expect going forward?

Given the moves thus far in Q4 of 2023, many investors are questioning the next phase for fixed income. From a trend follower's perspective, we have gone from inverted to dis-inverted and eventually we may move to a steeper yield curve. The question remains whether we will have a steeper yield curve from cuts on the short end or if we will see higher rates on the long end should inflation remain sticky enough to keep rates up. Historically, our analysis of trend signals suggests that these signals are most profitable if they short bonds when the curve is inverted and somewhat more mixed when the curve is flat. Since the curve is now flattening, the next phase for fixed income is becoming less clear. There are several reasons for this. First, there is a real return to be earned in fixed income, making it a viable investment. That is starting to bring buyers back to the bond market in search of higher yields than we have had for more than a decade. Second, higher yields mean tighter financial conditions, which also puts equity markets at risk. Should financial conditions deteriorate we may be more worried about recession and safety, which is generally good for bonds despite the threat of higher rates and sticky inflation. Third, there currently is no duration premium in the bond market. Longer-term bonds are trading at yields similar to shorter-term bonds. This means either that short-term yields will come back down or long-term bonds are

mispriced. So far, we don't know which one is right. Either way, we do expect the curve to eventually steepen, and the days of shorting bonds may be numbered, turning bond bears into bond bulls again.

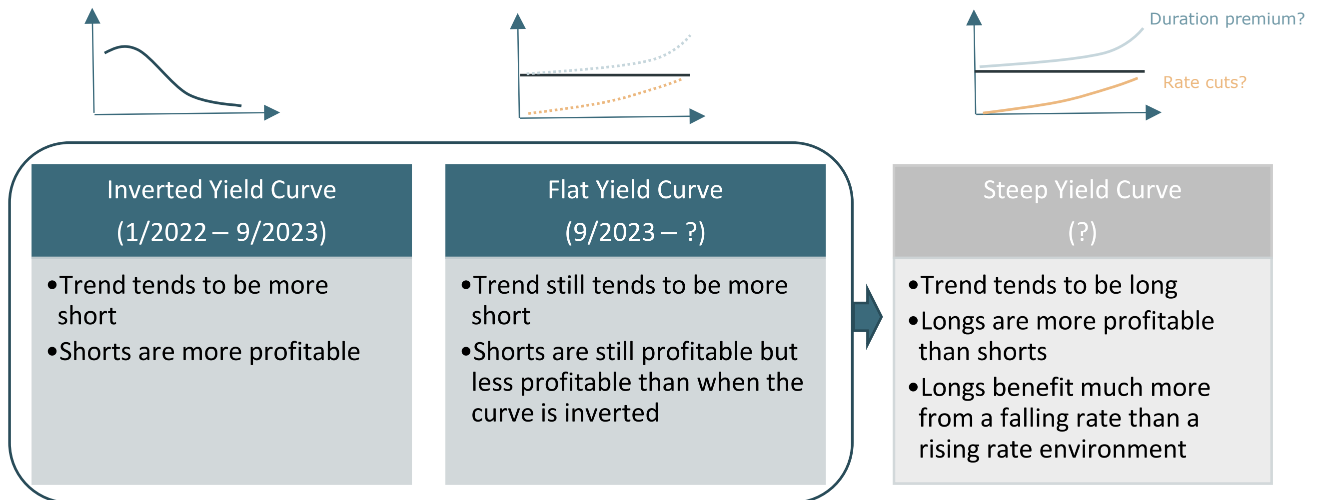

Figure 5: Illustrations of different yield curve shapes and the related trend-following behavior. For illustration purposes only.

References

- Kaminski, Kathryn M., and Jiashu Sun. 2022. "The Short on Shorting Bonds." *AlphaSimplex Insights*. https://www.alphasimplex.com/articles/the-short-on-shorting-bonds.

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