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Investment Newsletter – March 2022

Executive Summary

In 2022 the market suddenly reassessed the expected path of interest rates and drove up long term rates by about 1%. This reduced the market value of most portfolios, but because this is inflation driven, the impact on equities was muted. Higher rates will reduce home sales, and most likely pause, or reverse, home appreciation in the near term.

War in Ukraine and sanctions on Russia will push inflation even higher in the short term. Sanctions may reduce future demand for U.S. Treasury bonds; this increases the bias towards higher long term interest rates.

Because of the high levels of inflation and uncertainty, investors face tough choices between short term market risks and long term inflation risks.

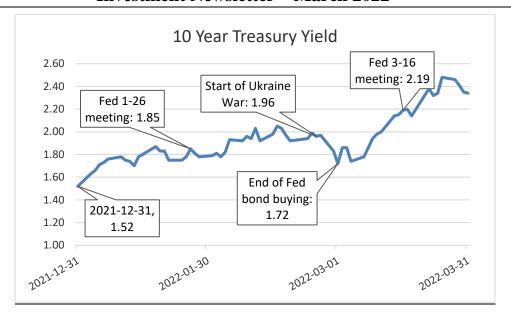
Our Short Term Income portfolio, which has relatively low sensitivity to interest rates, once again beat its benchmark over the year ended 2/28/2022 with a return of 5.1%.

Update on Interest Rates and Inflation

After the Federal Reserve's (the Fed) December meeting they indicated they would stop buying treasury bonds and mortgages by March 2022 and thereby allow long-term rates to rise according to market forces. My December 2021 newsletter focused on how the potential rise in interest rates would affect different investments. The 10 year Treasury yield is the key rate to watch for pricing most investment securities. On 12/31/21 this yield was 1.52%.

Subsequently, Fed officials have worked to convince the market that they are serious about raising rates to slow down inflation. Apparently this talk is considered new information by market participants. I'm a bit surprised that the market sees this as new since it was quite obvious short-term rates would need to go up faster with inflation at such high levels. Here is how the 10-year Treasury bond yield has moved up this year:

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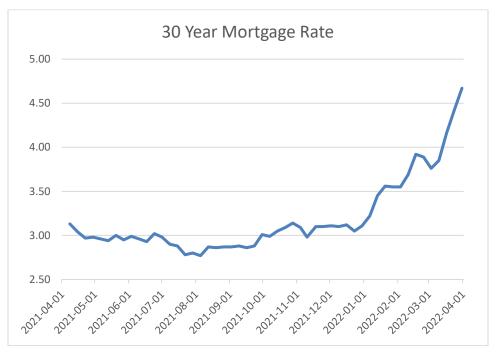
The upward move accelerated at the beginning of March 2022 after the Fed stopped its bond buying (rate repression) program. Fed board members' projections at the end of the March 2022 meeting showed an increase of 1% in the median short term (Fed controlled) interest rate expected for the end of 2022 (compared to the December 2021 meeting). Likewise median expectations for the end of 2023 increased about 1% to 2.75% for their short term interest rate. The 10-year treasury yield is now .82% higher than at year end.

As explained in the December newsletter, this rate rise reduces the market value of fixed rate bonds in our portfolios in proportion to their duration. Thus the impact is greatest on the tax exempt portfolio since it has the highest duration (9.4). The lowest impact is on the Short Term Income portfolio since its duration is below 2. Also, as detailed in the December 2021 newsletter, the relatively small decline in the stock market relative to stock durations can be explained by the fact that much of the rate increase is accounted for by increasing inflation. Annual consumer price index (CPI) inflation was 7.9% in February 2022 compared to 7% annual inflation in December. Thus inflation expectations are also increasing, which reduces the portion of rates that is a real (inflation adjusted) increase.

Higher Mortgage Rates Reduce Purchasing Power

A corollary to higher Treasury yields is higher mortgage rates. Mortgage rates moved in a narrow range in 2021. The lowest rate in the chart on the next page was 2.77% on 8/5/21. For the week of 3/31/22 the national average rate is now 4.67%. It has risen 1.56% since the start of the year.

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This very large move will significantly reduce home buyer purchasing power for those that have down payments of 20% or less. At the rate of 3.11% from year-end 2021, I estimate home purchasing power at 6.2 times annual income. Thus a buyer with \$200,000 income in the Bay Area could afford to bid \$1,240,000 for a house. (The median price in North Oakland in February of \$1,200,000 relates to contracts signed in December). For a buyer with the same income who is bidding this month, their buying power has been reduced to \$1,080,000 (5.4 times income) – a drop of 13%.

While interest rates don't affect cash buyers, overall demand must decrease as a result of this rapid move in rates. Eventually, inflation-driven increases in pay will compensate for higher interest rates, but this will take time. Consequently, I anticipate at least a pause in home price appreciation and possibly a drop in prices as demand falls. Of course the rise in rates may also deter sellers from selling and moving, thereby reducing supply further. It is very likely we'll see a significant drop in home sales volume.

Impact of Russia's War in Ukraine and Economic Sanctions

The war in Ukraine has demonstrated how interconnected our world is, thanks to international commodity markets and supply chains (i.e. different parts of products come from many different places). Many people thought Ukraine and Russia simply don't matter to the U.S. market.

The main reaction in the early part of the war was buying of "safe assets" – meaning treasury bonds and gold. In the chart of the U.S. Treasury Bond

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yield in the prior section, you can see that the yield dropped from 1.96% to 1.72% in the 3 trading days after the start of the war (meaning bond prices went up).

Sanctions announced by western countries and much of the world were much stronger than anticipated. Even though energy was specifically exempted, market participants essentially embargoed trade with Russia. Ukraine's production and trade was cut off by military action on its territory. Over time the war's impact on the supply of key products from Russia and Ukraine began to come into view. Oil, gas, and grains are in a worldwide shortage. This drives up prices even in countries like the U.S. that are net exporters of these products. In addition, the war is disrupting trade in many key components for manufactured goods. This caused factories to shut down in many other countries. So we see that Ukraine and Russia are more important to the world economy than was obvious before the war.

The reduction in supply caused by the war will drive inflation in the U.S. and the rest of the world higher in the months ahead. The Fed cannot assume that inflation will die down on its own and has talked tough on inflation. Traders are reassessing the likely path of interest rates and selling Treasury bonds in response (thus pushing prices down and yield up).

Another potential contributing factor to the drop in demand for Treasury bonds is a shocking sanction put on Russia: the U.S. and its allies have essentially blocked Russia's access to most of its foreign currency reserve holdings. This has never been done before. It is a warning to other dictatorships with aggressive intentions (i.e. China) that we can cut off access to their national savings if they keep them invested in our currency. I expect China will look to liquidate most, or all, of its holdings of U.S. Treasury bonds over the next year or two¹. This will pressure interest rates upward as the U.S. is forced to pay higher rates on the huge amount of borrowing we do every year to fund purchases from China. If the rest of the world does not absorb this selling, the Fed may be forced to resume buying bonds at some point to stop the upward surge in long term interest rates.

Risk and Return Considerations with High Inflation

The current level of inflation combined with the significant uncertainty about the future path of inflation and interest rates presents difficult choices for risk averse investors. If the Fed is telling the truth about their resolve to fight inflation and they can quickly bring it under control, then there is no reason to take on higher short term investment risks to overcome inflation's long term corrosion of purchasing power. On the other hand, if inflation is

¹ They have said they plan to take Taiwan by force and will therefore need to sell all their U.S. bonds before that.

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not brought down quickly, lower risk bond investments may not provide enough returns to compensate for inflation.

For the Fed to be successful, there is also the possibility that rates will rise much more than any time in the last 30 years. Although this would boost future returns in line with inflation, the short term reduction in portfolio value may result in abandonment of investment strategy which would lock in losses.

For what it's worth, the market consensus, as indicated by inflation indexed securities' prices, is that inflation will average < 3% over the next 10 years. This forecast, called the 10 year breakeven inflation rate has been moving up, as seen in the graph below.



For investors who are able to tolerate more risk and focus on long term strategy, it makes sense to shift some money from long duration fixed income to our real estate inflation hedging portfolio as insurance against a long-term high-inflation outcome. The caveat is that you will be increasing your downside risk in case of an unexpectedly large jump in interest rates that causes a recession. Therefore, you need to be careful not to take on risks that you cannot tolerate.

Short Term Income Portfolio Strategy and Performance

Berkeley Investment Advisors uses several different strategy portfolios to manage client assets. The Short Term Income portfolio is a fixed income portfolio that focuses on short to intermediate term rate maturity loans and bonds. Typically shorter maturity bonds offer lower interest rates (yields) than longer maturity bonds and are less sensitive to changes in interest rates. This category includes securities with floating interest rates that can

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reset periodically depending on market conditions. For example the rate paid could be set based on Banks' "Prime Rate" or the 3-month London Interbank Offer Rate (3-month LIBOR). These rates, in turn, change as the Federal Reserve Bank raises (or lowers) its "Fed Funds Rate".

The interest rate risk sensitivity of the portfolio is measured by its duration. Typically a short term bond fund strategy would own bonds with durations below 3. If we held a bond with duration of 3 when rates went up 1%, we would expect the bond's price to decline by 3%. Currently duration is 1.7 for this portfolio.

There is also credit risk in our portfolio –borrowers may default and not pay all that is due. High yield bonds have a higher probability of default than investment grade rated bonds, but these lower rated bonds compensate by paying higher interest rates. It is this spread compensation that fluctuates depending on the market's current risk pricing attitude (mood). This pricing risk is related to equity market risk and it is also correlated with the performance of the economy. We manage individual credit risk by diversifying across a large number of issuers. This ensures that the extra premiums earned will not get wiped out by a few companies defaulting. Our strategy is to accept credit risks to earn the extra returns associated with those risks.

The portfolio also earns incremental yield by holding closed-end funds (CEFs). For a detailed explanation of the advantages of closed-end funds see the March 2017 newsletter. In holding these securities we must endure more price volatility in down markets as retail investors tend to want to sell more at lows. Current market conditions are providing about .9% higher yield on our portfolio than if we held the underlying bonds directly.

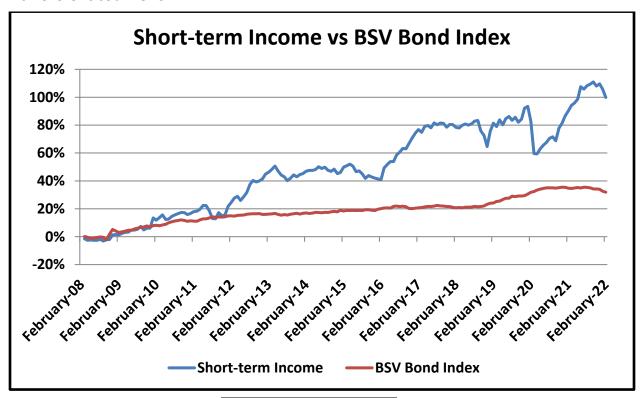
The portfolio is diversified across virtually all sectors of the fixed income market. The best comparison index is the "Barclays U.S. 1-5 year Government /Credit Float Adjusted Bond Index" as represented by the Vanguard Short-Term Bond exchange traded fund (ticker BSV). This is meant to represent the total short maturity U.S. bond market. It is not a perfect comparison to our strategy but there is nothing closer that has been in existence for the life of our portfolio.

Some clients have had money invested in this portfolio since it was created in February 2008. The graph and the table on the next page show total returns including price and interest payments in comparison to the bond index mentioned above as implemented in the exchange traded fund (ticker BSV). Our portfolio returns calculated here are based on a particular client's account and have been reduced by annual fees of 1.25% which would apply to new accounts above \$500,000 but below \$1 million.

The graph below shows moderate volatility for the strategy's returns. Although this strategy did incur a minor loss in its 8th year, generally there is much lower risk of principal loss over a year's time than in other strategies -

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such as stocks or long term bonds. Relatively large allocations to this strategy should serve to reduce risk for clients when other asset classes have elevated risks.



| | | Returns by Year | | |
|------|------------------|-----------------|-----------------|------------|
| | | Short term | BSV Bond | |
| Year | Year Ended | Income | Index | Difference |
| 1 | 2/28/2009 | 1.4% | 3.1% | -1.7% |
| 2 | 2/28/2010 | 10.3% | 5.0% | 5.4% |
| 3 | 2/28/2011 | 5.5% | 2.7% | 2.8% |
| 4 | 2/29/2012 | 5.5% | 3.4% | 2.1% |
| 5 | 2/28/2013 | 17.5% | 1.1% | 16.3% |
| 6 | 2/28/2014 | 0.5% | 0.6% | -0.2% |
| 7 | 2/28/2015 | 2.0% | 1.2% | 0.8% |
| 8 | 2/29/2016 | -6.0% | 1.5% | -7.4% |
| 9 | 2/28/2017 | 25.5% | 0.6% | 24.9% |
| 10 | 2/28/2018 | 0.9% | -0.1% | 1.0% |
| 11 | 2/28/2019 | 1.7% | 2.9% | -1.1% |
| 12 | 2/29/2020 | 0.9% | 6.2% | -5.3% |
| 13 | 2/28/2021 | 3.9% | 2.3% | 1.6% |
| 14 | 2/28/2022 | 5.1% | -2.2% | 7.3% |
| | Compounded Total | 99.8% | 31.9% | 67.9% |

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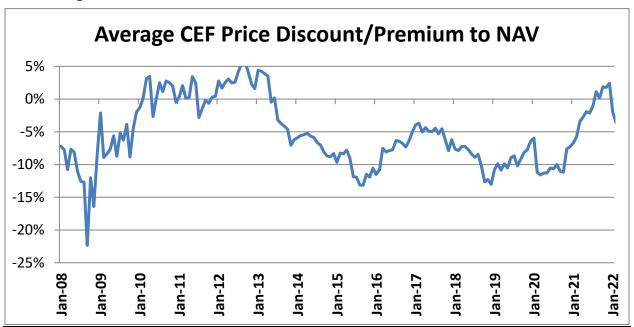
The stock market looks risky using historical valuation² norms. Our goal is to avoid large losses and have funds available to buy when the market returns to a lower valuation level.

The table on the prior page breaks down the portfolio returns by year since inception. Over the last year, the strategy returned 5.1%, in line with its historical average, while the Vanguard Bond Index Fund lost 2.2%. The cumulative return for the strategy from 2/29/2008 to 2/28/2022 is 99.8%.

Thus the annualized compounded rate of return since inception (14 years ago) has been 5.07%.

What follows is an analysis of the two main market factors (other than the 10-year Treasury yield covered earlier), that cause variations in returns for the Short-Term Income portfolio. I'm focusing on this portfolio only in this newsletter because I cover it once a year in its anniversary quarter. The factors discussed, along with the Treasury yield, also are the major variables for the other fixed income portfolios held by clients.

Up until April 2013 returns were quite good but then market conditions pulled returns below normal for the next 3 years. By February 2016 the market for these securities was extremely undervalued based on several indicators. One of these indicators is the level of closed end fund discounts. The graph below is an update of the usual chart showing the time series of an average of 7 CEFs in existence since 2008.



The median level since 2008 for average discounts for CEFs as shown in the chart above is 6.25%. For these CEFs, discounts had mostly turned to premiums by April 2013 and then descended back to very wide discount

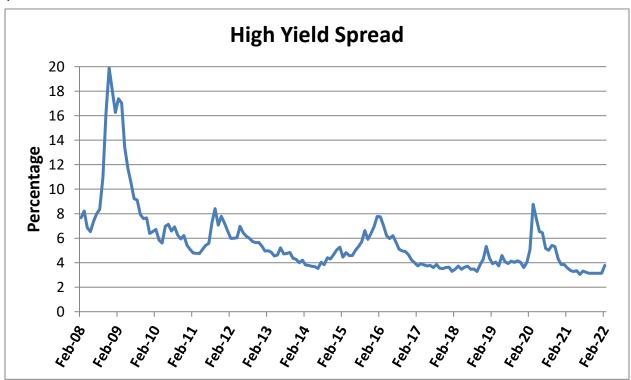
² By valuation I mean stock prices relative to underlying company earnings and cash flows to investors.

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levels by February 2016. Subsequently discounts moved back toward their central tendency, boosting returns for us to over 25% in the year ended February 2017. After that, discounts widened over the next 3 years, pushing down returns. The impact of discounts closing in the year ended February 2021 was partially offset by risk reduction strategies in the pandemic's early stages.

Over the year ended 2/28/2022 the average CEF discount in the chart on the prior page decreased from 5.7% to 3.7%. On the other hand, since I actively position the portfolio to try to take advantage of large discounts, the weighted average discount for CEFs currently in the Short-Term Income portfolio is 6.9% as of 3/31/22.

Spreads on high yield bonds also fluctuate depending on the economic outlook and investors' attitudes towards default risk. The chart below shows the Bank of America High Yield Spread index at month-end over the last 14 years.



In this chart, higher spreads indicate lower bond prices (and higher forward yields). Thus the spike up to a spread of 7.75% in February 2016 and the spike to 8.77% in March 2020 imply declines in market values of high yield bonds.³ These moves upward in spreads generally correspond with large increases in CEF discounts as retail investors sell in panic. The result was the one loss year for the portfolio in 2016. On the other hand, the 2020

³ The intra-month spikes are even higher: 8.87% in 2016 and 10.87% in 2020.

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panic was relatively short lived and thus we still ended up positive for the year. The median spread over this past 5 years (using daily data) has been 3.73%. Spreads are currently at 3.33% as of 3/30/22.

Although credit spreads are close to the 5 year median, they are low relative to longer time frames. This is consistent with the economic environment as inflation tends to decrease the probability of bankruptcies since borrowers can increase revenue along with inflation (generally). The energy sector is a significant component of the high yield market and the increase in oil prices will improve these companies' finances greatly.

Average closed-end fund discounts are neither high nor low compared to normal ranges but recent volatility has provided some good buying opportunities. Given the current portfolio yield of 6.6%, and the current CEF discount in the portfolio, the Short-Term Income portfolio is likely to perform in line with historical averages.

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