FINANCIAL DESIGN STUDIO
DESIGNED FOR LIFE

APRIL 2021 NEWSLETTER

MANAGING INTEREST RATE RISK IN YOUR BOND INVESTMENTS

BY: ROBERT STOLL, CFP® CFA

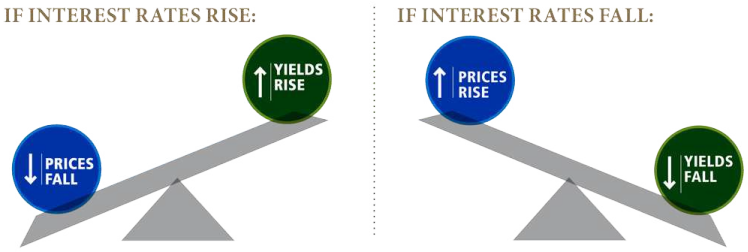
Inflation is becoming a hot topic in economic circles. Three rounds of stimulus checks and economic support are pumping enormous amounts of money into the American economy. In response, long-term interest rates have risen from all-time low levels. This brings up an important topic for investors: How do we manage interest rate risk in your bond investments?

Understanding how changes in interest rates affect your bond investments is important. Clients look towards their bonds as a source of income and stability. But bond prices can move up and down, just like stocks. Thus, it's important to understand why bond prices might move up or down. That's the focus of this month's newsletter.

How do Changes in Interest Rates affect Bonds?

Simply:

- If general levels of interest rates are rising, bond prices will be falling
- If general levels of interest rates are falling, then bond prices will be rising



This can feel counterintuitive, so to understand why this is the case, we'll look at an example.

Example of How Interest Rates Affect Bond Prices

Uncle Charlie calls me up and needs a $100 loan for 10 years. While I love Uncle Charlie, I'm also an investor and know I can get 5% on my money by buying a 10-year bond. So I tell Uncle Charlie, "Sure, I'll give you $100 as long as you pay me 5% per year."

The next day, general interest rates rise from 5% to 6%. In my frustration that I could've gotten 6% on money I lent to Uncle Charlie at 5%, I call my sister and ask her if she wants to buy Uncle Charlie's loan. My sister is no fool, and says, "Why would I pay you $100 for a loan that pays 5% when I can lend that same $100 to someone else at 6%??"

Since my sis loves her big brother and wants to help, she comes up with another idea. "I need to earn 6% on my money since that's what I can get in the market. So if you want to sell me Uncle Charlie's loan, I'll give you $92.64 for it to compensate me for the fact that Charlie's only paying 5% per year in interest."

The discounted price she'd buy the loan at entitles her to make money above and beyond the 5% interest that Uncle Charlie is paying. In fact, if she buys the loan at that price she'll end up earning 6%, all in.

Why? Recall that Uncle Charlie is going to give her $100 at the end of the loan term. So my sister would make 5% interest per year PLUS the difference between what she bought the loan for and what she'll get at the end of 10 years. When you buy a bond for more or less than "par value" (i.e. $100) they call the total return (interest + change in price) the "yield to maturity."

Buys Bond	Gets Interest Payments	Gets Repaid at Maturity	Yield to Maturity
$ 92.64	5%	$ 100.00	6.0%

This example shows how changes in interest rates lead to changes in bond prices. Back to Uncle Charlie's 5% loan. Any time general interest rates change, the price of his loan would change as seen below.

General Interest Rates	Bond Coupon	Maturity	Bond Price
6.0%	5.0%	10 years	$ 92.64
5.0%	5.0%	10 years	$ 100.00
4.0%	5.0%	10 years	$ 108.11

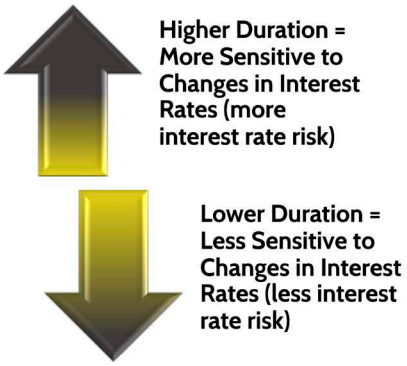
This dynamic is important to understand. It means that the value of the bonds in your portfolio – even ultra-safe U.S. Government bonds – can rise or decline in value before they mature. You might be guaranteed to get $100 at maturity, but that doesn't mean the price of the bond will always be $100. While bond prices are more stable and move less than stock prices, they will move.

Measuring Interest Rate Risk With Bond Duration

We avoid financial jargon as much as possible in these newsletters. It's like getting surgery. You want the doctor to explain to you what they're going to do in enough detail, but you don't need all the technicals that go along with it. "Just give it to me straight, doc!"

At the risk of breaking the "no jargon" rule, I want to introduce a term that's key to understanding how interest rates affect bond prices: Duration. Bond duration is a measure of how much a bond's price will change for a given change in interest rates. So if interest rates go up 1%, the bond's price is expected to change X%.

If a bond had high duration, that means its price will be very sensitive to changes in the general level of interest rates, regardless of whether rates go up or down. Conversely, a bond with a lower duration will not see its price move as much when interest rates change.



The key drivers of a bond's duration are:

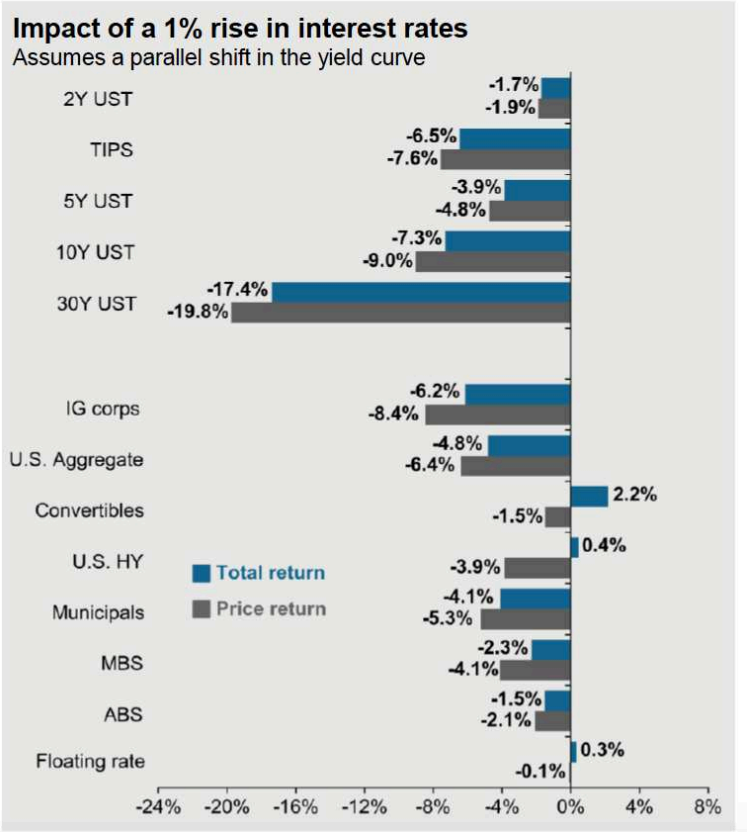
- The interest rate the bond pays
- The maturity of the bond (i.e. how many more years until it matures)

For example, a 100-year bond will have a very high duration, while a 6-month bond will have a very short duration. A rise in interest rates will hurt the 100-year bond a lot more than the 6-month bond.

Why Does Bond Duration Matter to You?

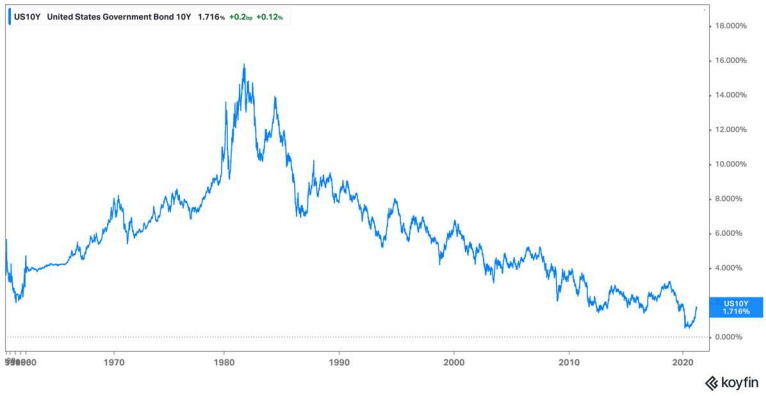
The reason it's important to have a basic understanding of bond duration is because it has a real impact on the value of your bond investments. JPMorgan Asset Management just published a handy chart looking at the estimated change in value for various types of bonds if interest rates rose +1.0%.

Look at the example of U.S. Treasury Bonds (USTs). Those that mature in 2 years would only decline in value by -1.9% if interest rates rose 1.0%. But for a 30-year UST, the price would decline by -19.8%! This is because 30-year bonds have a much higher duration than 2-year bonds.



The other thing to notice is that an increase (decrease) in interest rates hurts (helps) the value of most types of bonds. Therefore, it's important for bond investors to have diversified exposure to different types of bonds, just as we recommend for stock investors.

The last 10 years have witnessed extremely low interest



rates compared to history. Even with the recent rise in interest rates, they're as low as they've been since 1912.

So why does Bond Duration matter to you? Ask yourself a question: "Based on the last 100 years of history, is it more likely we'll see higher interest rates or lower interest rates?"

If you answered "higher interest rates" then you can refer back to the seesaw graph at the beginning of this piece. From that, we know bond prices will go down as interest rates go up.

So how can we protect you – the FDS client – from higher interest rates?

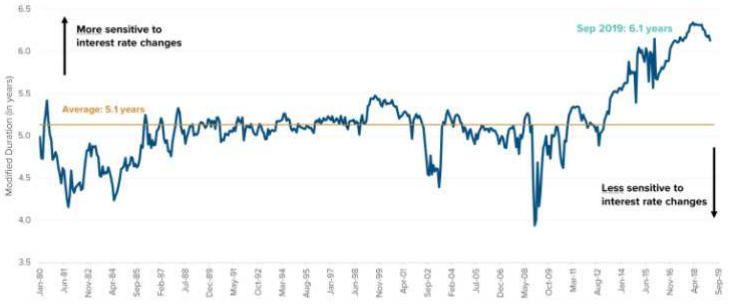
Answer: By owning bonds with a shorter duration. Lower duration = less sensitivity to changes in interest rates.

The Problem with Passive Bond Index Funds

Passive index investing has become very popular over the last 25 years. Mutual funds and exchange-traded funds (ETFs) that track an index are much cheaper and more tax efficient. It's been a win-win for many investors.

The problem with passive investing is that you're beholden to how an index is constructed. And while investing in a "total bond market" fund might sound like the best and easiest way to invest in bonds, it can also expose you to risks you may not be aware of.

The most popular bond market index is the Barclays U.S. Aggregate Bond Index. Almost every passive "total bond market" fund you find is invested in this index.



Source: PIMCO, Bloomberg

From 1980 to the Global Financial Crisis of 2008, the average duration of this Aggregate Bond index was 5.1 years. Since then, the duration (i.e. interest rate risk) of this index has increased significantly. As of April 2021, the average duration of the Aggregate Bond Index is 6.39 years, near the highest level on record.

The reason duration has increased is that companies and governments have taken advantage of low interest

rates to borrow long-term debt. For example, Apple recently borrowed $1.75 billion that won't be due until 2061 – 40 years from now! The interest rate they'll pay is just 2.8%. They don't need the cash, but decided it was worth borrowing money at those low rates!

The rise in overall bond duration over the last 12 years is significant. How significant is this change? At the current level, the overall bond market has 25% more interest rate risk than it has had historically.

Let's put the pieces together. Current interest rates are the lowest they've been in 100 years, meaning the next logical move in rates is higher. Yet the bond market has never had as much interest rate risk (duration) as it does now. Higher rates with High duration = potentially difficult returns for bond investors in the years ahead.

Structuring Bond Investments for a Rising Rate Environment

If we face a backdrop of higher future inflation and eventually higher interest rates, how can we protect against that? One of the key strategies is to make sure you control the duration of your bond investments.

When building stock portfolios, we're careful to choose investments that are well-diversified. We know we can't avoid seeing the value of stocks go down in a bear market. But having a well-diversified portfolio of stocks can limit the downside to those events.

It's the same thought process with Bonds. We know if rates move higher, that will act as a headwind to all bonds. Yet we can control for this risk by constructing a portfolio of bonds with lower duration that mitigates some of this risk.

	High Duration Bond Portfolio	Low Duration Bond Portfolio
Higher Interest Rates	Bigger Price Drops; Slower Recovery in Bond Yields	Smaller Price Drops; Faster Recovery in Bond Yields
Lower Interest Rates	Bigger Price Gains; Slower Drop in Bond Yields	Smaller Price Gains; Faster Drop in Bond Yields

The goal of constructing a bond portfolio with lower duration is to limit price declines if interest rates increase. The offsetting benefit from this temporary price decline is that the bonds in these funds will mature faster and be replaced with higher-yielding bonds. This will help the yield on your bond portfolio increase in a shorter amount of time.

Nothing's for free, and there are two tradeoffs with a lower-duration bond strategy. First, the bond yield you get today will be lower than what you'd get on a high duration bond strategy. Second, you wouldn't benefit as much if interest rates ended up declining instead of increasing.

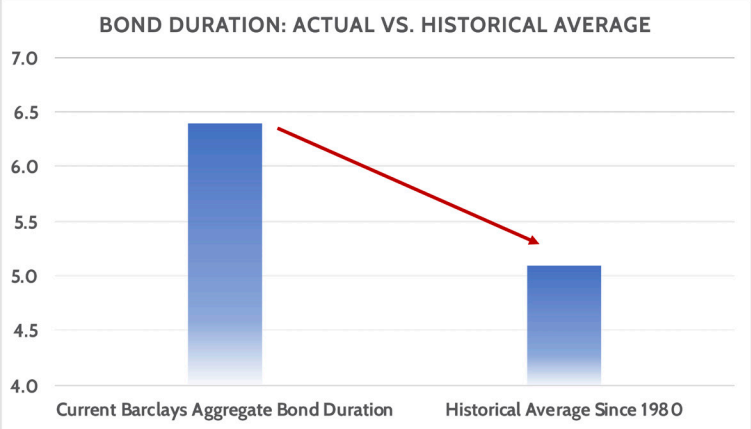
What We're Doing to Protect Client Bond Portfolios

As we step back and look at the big picture, here's what we see:

- Interest rates are at 100-year lows.
- The government has abandoned any semblance of fiscal restraint in the belief that high debt levels don't matter.
- The Federal Reserve is explicitly targeting higher inflation.

When we add things up this suggests higher inflation and eventually, higher interest rates to combat said inflation. With that backdrop, it seems prudent to us to be careful with the interest rate risk in client bond portfolios, even if there are tradeoffs to that strategy. And that's exactly what we're doing.

This doesn't mean targeting a bond duration of zero. That would be akin to stuffing money in a mattress and earning 0% on it. Instead, we're talking about shifting a portion of bond investments to shorter-duration bond funds, so we stay close to the long-term average duration for the bond market. This is like what we did for clients last Fall when we moved a portion of their bond exposure to inflation-protected bonds.



Investor attention often gravitates towards what's going on in stocks. Hopefully, this piece helps you understand what's going on with the "safe" side of your investment ledger – Bonds. You don't have to be an expert in investing – that's what you've hired us to do for you. But by being informed, you're empowering yourself to stick with your plan through all sorts of market cycles.

TAX FILING DEADLINE & STIMULUS PAYMENTS

BY: MICHELLE SMALENBERGER, CFP®

The tax filing deadline for your 2020 Federal tax return has been extended to May 17, 2020. This gives you a little breathing room to make sense of the recently passed legislation, which provided for another stimulus payment. More money is always great, right? Before you say yes too quickly, be very careful of the dollar amounts that are on your tax return!

Tax Filing Deadline Extended

On Wednesday of this week the IRS pushed back the Federal tax filing deadline to May 17th. Please read this carefully! The IRS pushed back the Federal tax filing deadline but not necessarily your State tax filing deadline. Some states have adopted the new deadline and it's likely that all will; but it is not certain. In addition, people who live in Texas had already received a disaster declaration tax filing deadline of July 15th after the February freezing temperatures caused so much damage and loss. You need to be careful to know your own tax filing deadline(s)! These affect when you need to pay any remaining balances and how late you can make IRA contributions.

Why You Need To Be Careful

You probably remember that in 2020 and 2021 individuals have been eligible to receive up to three separate tax stimulus payments. The qualification for who and how much you receive is based on your adjusted gross income of your most recently filed tax return.

Initially, people were receiving stimulus payments based on their 2019 tax return. If you have filed your 2020 tax return you could qualify if you didn't before. You could now receive these payments if you weren't able to last year. You now need to be careful that you don't disqualify yourself from the third stimulus payment though. Let's dig in to clarify the details.

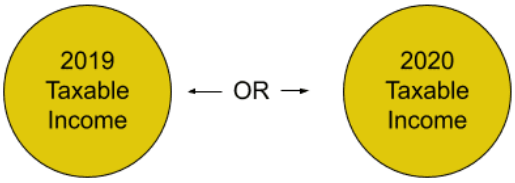
Here are the income thresholds that have been used to qualify for the three stimulus payments:

Stimulus Payment 1 – Issued March 2020

When individuals initially received stimulus payments,

Income Threshold	Married Filing Jointly	Head of Household	Individuals
Stimulus Payment 1	AGI up to $150,000	AGI up to $112,500	AGI up to $75,000
Stimulus Payment 2	AGI up to $150,000	AGI up to $112,500	AGI up to $75,000
Stimulus Payment 3	AGI up to $150,000	AGI up to $112,500	AGI up to $75,000

the eligibility was based on 2019 taxable income. That was the most recently filed tax return. If you didn't qualify for this payment based on your 2019 income you could become eligible. If your 2020 taxable income was below the income threshold, you would now receive the funds when you file your 2020 tax return. *However, if you already received a stimulus payment but your income increased with your 2020 tax filing your stimulus payment will not be taken away or "clawed-back"*

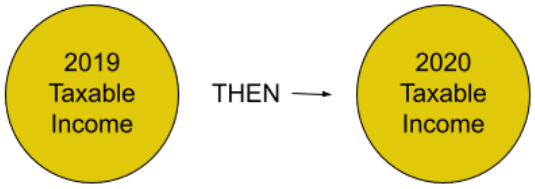


**Your eligibility for stimulus payments is based on your most recently filed tax return.*

Stimulus Payment 2 – Issued December 2020

Just like the first stimulus payment, this second

payment is based on the very same Adjusted Gross Income (AGI). This decides whether or not you receive the stimulus payment. *If you already received a stimulus payment but your income increased with your 2020 tax filing your stimulus payment will not be taken away or "clawed-back".*



Stimulus Payment 3 – Issued March 2021

This third stimulus payment is very similar to the previous payments. If you qualified and already received the stimulus funds they will not be taken away. BUT THIS IS WHERE YOU NEED TO BE CAREFUL!

Do you need to wait to file your 2020 Tax Return?

Some people have already filed their tax returns for 2020. If your taxable income was below the thresholds for both 2019 and 2020 tax filings then you are fine. But if your taxable income increased in 2020 so that you are now above the thresholds for receiving stimulus payments you need to WAIT TO FILE. Wait until you have received all three stimulus payments.

What I mean by waiting to file your tax return is waiting to hit the "Submit" button to file your return. I recommend that you work with a tax preparer. If you are close to the income threshold that could affect your stimulus payments received.

Even if you are preparing your own return you can enter all of the information into your software. Then see what the outcome will be. Once you see the result you can consider whether there is any tax planning after year-end that you can do. For example, if you had taxable income of $156,000 is there anything you can do now to get that down under the $150,000 (Married Filing Jointly) eligibility threshold? But if you just go ahead and hit "Submit" without paying attention to that small difference you could miss a BIG planning opportunity.

A Big Planning Opportunity

Even if you already received your three stimulus payments there is still one more thing affected by your taxable income going forward. If you have children and had higher income on your 2020 tax return this is where you need to pay attention. In this recent legislation there was an increase in the child tax credit to $3,600 per child under the age of 6 and $3,000 for those older from $2,000. If your income was significantly over the thresholds you may not be able to do enough to change your eligibility. But if you are close you need to consider any planning options available to you.

The reason it matters to pay attention to this when filing your 2020 tax return is that you could begin receiving these child tax credit payments as early as this summer. It has been discussed in Congress to send monthly payments for eligible children starting this summer and then receiving the remainder when you file your 2021 tax return. The idea here is that the money can further help those who need it sooner.

So what are the most important takeaways from these most recent changes?

- Provide your tax preparer with all of your documents so they can have your return entered to see of the planning opportunities that exist.
- Pay attention to your taxable income on your 2020 tax return. You want to know what this amount is BEFORE you or your accountant submit your return. This way you know if there's any potential for savings first.
- Be aware of the stimulus payments you have received so far as well as any you might still benefit from. If you're unsure, you can look it up by at www.irs.gov/individuals/get-transcript, creating a profile and downloading your 2020 Account Transcript.
- Get help if you don't know the details and how they affect you. If you file your 2020 return and don't take advantage of planning then you will need to amend your return to do so later.
- Pay attention to your tax filing deadline so you know when you are required to file your tax return, have any payments due, and how late you can make IRA contributions by.

As always, this is the planning that we are thrilled to help your family with. It's these important details in this new legislation that can literally mean a difference of thousands of dollars to your family. We want to help you!

BUSINESS OWNERS, SEPARATE YOUR BUSINESS AND PERSONAL FINANCES

BY: STEVE SMALENBERGER, EA & TREVORE MEYER, CFP®, CKA®

This is specifically for our business owners. Trevore and I are going to talk about some things that our business owners should be thinking about, whether you are a one man, one woman shop, or you have a team surrounding you that you can separate yourself from your business.

What's the very first thing people should be considering?

Depending on your net income we want you to be thinking how to separate yourself both legally and also from a tax perspective. Like setting up an LLC so if your business is sued or has any type of legal issue.

Just like an S Corp that helps separate yourself from your business for tax planning.

So one is legal and one is tax.

Along those lines another element of the tax side: Is your business is a separate entity?

When you incorporate you get a new EIN or identification number. This is different from your social security number and it is very important that you have both of those handy in case you have to use something for business and something for personal use.

We always want to be thinking about how we segregate things. We have personal bank accounts and personal credit cards. And we want to make sure that as we are drawing the line that we have business bank accounts and business credit cards as well.

We keep those separate for creditor's protection and to make sure everything is very straightforward and not crossing any lines.

And with those bank accounts, that will also help with accounting. So whether you are recording on a spreadsheet, piece of paper, a software, this way you keep what is yours, personal and separate from the business.

It will make your tax filing that much easier, cleaner, and straightforward.

The last item we want to talk about is paying yourself. This is very important! You are a business, so treat it like a business. You are not working for free. No one else is working for you for free so make sure you are paying wages to yourself and your employees.

So those are five ways you can separate yourself from your business.

Think about that in this upcoming year. If Trevore or I can help you here at Financial Design Studio, let us know!

FREQUENTLY ASKED QUESTIONS

Are you a Fiduciary?
Yes, we are! This means we have a duty to act in your best interest. A person acting in a fiduciary capacity is held to a high standard of honesty and full disclosure in regard to the client and must not obtain a personal benefit at the expense of the client.

You're Fee-Only: What does that mean?
We have chosen to be a fee-only advisory firm. This means we do not accept any fees or compensation based on product sales. While we know our clients need products like insurance we do not receive any benefit from any source when you buy a product.

How does Financial Planning Work Virtually?
With advances in technology, it is amazing how much we can accomplish virtually! We are able to share everything we do in person, virtually. We simply use screen sharing and video software so we can see you and look at the same documents, together. Most forms can also be electronically signed.

Are you taking on new clients?
Yes! We are happy to work with friends or relatives that you think would benefit from a Financial Advisor relationship. A quick phone call is all it takes to see if they are a great fit.

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