TRANSCRIPT

Rates and risk: Navigating bonds in 2020

Scott Bassler: Today, what we'll be focusing on is "Rates and Risk: Navigating 2020." And as we start taking a look at that, we're going to take a little bit of a look into beyond yield and have a little bit deeper look into today's market and going forward. Now, as we take a look at a more sophisticated landscape in the fixed income market, there's a lot of decisions that you should be empowered with to help you grow your portfolio. And as we start to grow our portfolio we want to develop a strategy, and that can be all done utilizing Fidelity.com, both using some of the education and the dimensions of bond investing that we'll review today. Some of the resources to help you inform and assess your current bond portfolios and selecting the right bond investments for your portfolio and also insights for making more prudent and informed decisions when it comes to our fixed income selections. Some of the common questions that we often see is how many of us can actually describe the risk and reward for the types of bonds? There are so many out there. And how many understand the rate cycle and the impacts on yield of those particular types of bonds? What we also want to do is take a look at how many of us actually know the different type of bond strategies to help us manage our wealth? And with that, Richard, I was wondering if you could assist us in some

of those areas, telling us a little bit about -- as we're looking at today's agenda -- exactly what will be out there for us.

Richard Carter: OK. Thank you Scott, that's a nice introduction. Certainly. So we didn't realize, I think, when we planned this event a few months ago that today would be a day when the Federal Reserve would meet and, as you may have heard, they've determined that they've decided to stay put. No rate change today, which is interesting, right? It's the first unanimous decision from the FOMC Board for -- since May, so that was also interesting. But yeah, to your point, Scott, today we're going to start off with a look at the macroeconomic trends out there. We'll look at some of the key drivers that are at work. We'll take a long-term view -- fairly long-term now -- go all the way back since -- to 2007 almost and look at this -- what has been an exceptionally long economic cycle. And we'll then translate that into how is the bond market reflecting where we are in the economy.

Just a quick summary here, how would we summarize this past year? It's been quite interesting, hasn't it? Just a year ago, 10 year treasury yields were around three percent and two percent -- sorry, two year yields were around two, two and a quarter percent, so we've come a long way in lower interest rates. And I've put here the classic "wall of worry" summary that even despite

that, the stock market has rallied, and as we'll see, the bond market also has had a strong performance year so far. Notwithstanding, global GDP concerns have been out there with the ongoing China-U.S. trade tariff dispute still, a big deadline coming up this Sunday, but we've had those before and we'll see where that leads us. Back to the bond market specifically, we had this interesting phenomenon back in the summer, if you may remember. The yield curve, which is the measurement of how much long-term interest rates are higher than short term interest rates actually inverted for a brief while in the summer, and many thought then that was going to lead to recession. We seem to maybe have dodged that bullet but we'll see. But so far I think we have. And that in part has been credit to the actions of the Federal Reserve. And if you remember, again, this time last year they were increasing interest rates. We had four increases in interest rates in 2018 from the Fed and they saw that as a period of "normalization", as they said it. The markets disagreed. If you remember how the stock market was faring this time last year, it was a pretty hair-raising time. And as soon as the calendar rolled in 2019, the Federal Reserve changed that narrative, and first of all they suspended raising rates further, and then proceeded to reduce them. So it's been quite a year, actually, looking back, right? We think about these wonderful equity market returns we've seen this year, but actually it's been quite a turbulent time, even

within a fairly low volatile environment all around. Again, we take the 12 month's perspective.

So as I was saying, let's look at some of these macroeconomic drivers in a longer-term frame. Now we've got here just a few variables that are maybe important to bond investors in this chart. And I'll just quickly go through them. The one to pay attention to, maybe the most violently diving down there, you can see in '08 and '09, is the private payrolls in the dark green. You can see how, in the worst of the recession a decade ago, we were losing something -- and you look at the right axis here -- something like three quarters of a million jobs a month. It was a pretty violent time. And as you can see in the light green line at the top of the chart, that's the unemployment rate. We actually hit 10 percent at its worst. Over this next decade, of course, you can see, well, it's been a long, drawn out recovery, right? And there've been many people saying, gosh, it's been the weakest recovery we've ever experienced. But I guess the merit of that is it was still enjoying that, and unemployment is now at a fairly long-term record, I think a 50 year record, of around three and a half percent. You can see here in the blue line some of the reasons for that. Now the dark blue line represents the core CPI, Consumer Price Index, and you can see how contained inflation has been. Even as the economy recovered, really we've hardly ever seen inflation get back to two percent, which is the Fed's

target, and they've even commented publicly on that, that they're somewhat puzzled and frustrated at times that inflation hasn't risen more strongly and it's kept wage growth in check and so forth. And as Bruce Johnstone alluded to, we've had various factors for that: deflationary pressure from Amazon and other internet providers who have helped keep supply choices rich for customers and consumers. So I think one reason, as well as the global economy and global supply chains have suppressed wage increases, but now we're beginning to see some signs of that.

Now look at the light blue line. That's the two-year yield. And again, after what happens after a -- in the early stages of a recovery, that two-year yield might begin to rise, expecting the Federal Reserve to increase their rates on shorter-term federal funds rates, but this time around the two-year was fairly subdued right until the end. You can see here in the breakout chart it really wasn't until 2017 when the two-year yield began to rise, and you can see now it almost seems like a dim and distant history. A year ago we hit three percent and that was just before, again, the change in policy a year ago when the Fed started to stop increasing rates and then guided the market to lower rates. And we can see how far we've traveled this year: the two-year today at about 1.6 percent. So again, it's fallen quite considerably -- for bond yields that is.

Turning more to yields in general, this is a chart that looks at key interest rates in the treasury market. So the treasury market isn't just about one rate. There's a couple to consider. The light blue is the federal funds rate -- that's what the Federal Reserve was governing today and deciding on today -- the green is the two-year yield we just looked at, typically more volatile, you can see often shadowing the Federal Reserve funds rate. And the dark blue is the 10-year yield. And you can see since 1993, and even going further back, this long-term trend downwards in yields, right? It's been often commented on that since peaking in 199 -- '82, '83, with inflation, interest rates have carried on moving down. And you can see that within that long-term trend, though, we've seen the federal funds rate move up and down, up and down. And at the very far to the right, you can see where we are currently, where federal funds was nudging upwards from '17 and '18 and then it plateaued, and now this year we've had three rate cuts. That's, again, the light blue line. And what's happened is, you can see here, it's very interesting, if you focus at the far end of this chart, the market, in a sense, led the Fed. The 10-year rates, which is the dark blue, that started to fall, and then the two-year interest rate also fell before the Fed had really even begun to cease their interest rates. So it's an interesting tussle. The Federal Reserve are, in some ways, leading -- guiding -- the markets, and in some ways the market is also replying back and guiding the Fed.

Scott Bassler: And Richard, as we look at that, something that always comes up when I talk to our clients is, well, what's next. We've had these staggering rates for quite a long time, just looking at the chart, but what can we expect next for 2020 and beyond?

Richard Carter: Well, we're not -- I'm not going to give an interest rate prediction, because that way is a fool's errand, but I think what we can look at is some of the more interesting market dynamics. And we always that at Fidelity: look at what the market is saying. One example here, for example, is, again, the dark blue line being the federal funds rate, moving up in '16, '17, and '18. The light green line on the top of it is the euro-dollar futures market for the one-year expected maturity. So in a way it's really the market's comment, or reflection, on where short-term interest rates should be. And you can see for a long time they were moving in sympathy with the Fed. But then round about the summer of '18 there was a disagreement. And you can see how the euro-dollar futures began to fall down. And they fell pretty dramatically, again, ahead of the Fed cutting. And then the Fed cut starting this year. Now, as you look at the dotted line to the right, the market is suggesting that rates will fall a little bit further and then plateau right up until 2022 -- again, this is the euro-dollars market. The dot plot, which you can see above it, the dots is

something the Federal Reserve have been publishing for a few years now. And that reflects the opinions of the FOMC. It's slightly adjusted today. I think on today's news we hear from the FOMC that they expect no increases throughout 2020, so they're expecting a flat line, but still there's a fairly interesting disagreement to some degree between the market, the dotted blue, and the FOMC there, market still erring towards more cuts perhaps. Not dramatically so, but slightly less inclined to believe that increases are in the 2021 area than the Fed are.

Now back to one of the themes that Bruce Johnstone shared earlier is this longer-term suppression of inflation. You can see here, if you remember his slide on the labor force peak in the 1982 period in the dark blue, we've seen continuing reductions in the labor force. Add that to the green there, which shows U.S. productivity is also trending down. So what you find today is that we're in an economy of around two percent growth -- this is the far right -- it all in general leads to a less volatile environment for interest rates. And we will see if -- again, if inflation reappears, that would change a lot, but it does lead to the lower for longer scenario of interest rates.

Now, one other interesting historical reflection rather than prediction -- but it is to consider -- is bonds performance, looking at what we call the aggregate

bond index in this chart. Over many years you can see here how the greens vastly outnumber the blues. So even though sometimes we hear from clients that bond yields are very unappealing, people remember the days when yields were much higher, it's a struggle to find good yields, remember, though, that the job of a bond portfolio is to dampen volatility. When other markets may serve up great returns one year then losses the next, you can see that in the last 30 or so years -- 40 years -- bonds have had a few years of down but generally speaking we've had nice, decent, middle, single-digit returns over the long term. And you can see at the far right this year has been an exceptionally strong year, I'd say, in recent history for bond returns.

So now let's move into our next section, Scott. I want to talk about our three dimensions of bond investing. This is trying to now dive into some more permanent lessons than the market backdrop we just provided. We'll start off looking at the big picture, again, the yield curve, we touched on that a few minutes ago: what is the yield curve and what can it help you in terms of learning about the bond market. Then we'll go into dimension number two, looking at sub-asset classes of the bond world. There's not just one bond market but there's several. And then finally we'll look at how to dive into one of those -- or two of those -- sub-asset classes. We'll look at the corporate bond market and the muni bond market, that there's many bonds to choose

from and many issues to choose from, and how that can be navigated and not to feel overwhelmed by it. So I hope you'll join me on that excursion.

So let's look first of all at the yield curve. The yield curve is a way of drawing a line between the yields, or the rates, of short-term bonds to long-term bonds. And the yield curve moves around. So here's an example of the typical yield curve, which is steep or upward sloping, and we've put here the date June 2010. Now, again, this is not 100 percent watertight, but generally speaking a steep curve is often seen after an economy is coming out of a recession. Why? Predominantly it's been historically because the central bank has cut rates in the short term. We saw that in '08 and '09, I don't know if you remember, the Federal Reserve cut their federal funds rate down to zero and the market rates responded. And the market on the longer term provides an opportunity, if you'd like, for people to take risk, commit funds for the long term, and pick up some yield versus short-term money. So that's typically what happens just coming out of a recession.

Now, you've also had the phenomenon of the flat yield curve. You see that in '06 where it may be often when the economy is going fairly strong and maybe it's indicating that the end of the cycle is coming close. And the Federal Reserve is actually then moving interest rates up at the short part of the

interest rate curve. And there, again, it's trying to dampen the enthusiasm a bit and keep inflation in check. Sorry. And then the third -- here we are -- the -- sorry. There's the inverted curve. That's the third scenario. So we've had the steep curve, the flat curve, and the inverted curve. The inversion of the curve can happen when an economic cycle has really peaked and the Federal Reserve is really putting on the brakes, moving up short-term rates quite aggressively, and that often is an interesting precursor to a recession. And we saw those -- you may remember there was articles coming out around this summer when the two-year yields briefly yielded higher rates than the 10-year treasury yield and people were concerned that that indicated that the Federal Reserve were too tight with their monetary policy and the economy was reacting, indicating a recession might be coming. Since then, the Fed's movements have actually redeemed that situation, and it was a very brief inversion. So we'll see whether we will actually head to a recession, but usually a recession follows the inversion around 18 months in the future. So it's not -- like all these things it's a guidepost. But it's certainly a useful tool to think of the -- dimension one is look at that yield curve and pay attention to it.

Now, I said there were three dimensions. The second dimension we want to communicate is that it's not just one bond market. There's several. And you can see here in this chart -- it's a lot to absorb, so forgive me -- but if you look

at the headers there, underneath the bars, you see HYCORP. That stands for high yield corporate bonds, or junk bonds. Then there's emerging market bonds, IGCORP, investment-grade corporate bonds, TIPS, which is the inflation protected securities, MUNI, municipal bonds. Then there's MBS, mortgage-backed securities. The U.S. Aggregate, which is an average -- think of it as a sort of an S&P index for bonds, all kinds of bonds -- and then finally, to the far right, treasuries, which are government-backed, usually the lowest yield but the safest type of bond, often called the benchmark bond for safety. And all the colored bars represent each year's performance for each of these sub-asset classes over the last 11-plus years. And really why we've put all of this up here is if you look at the far right, you can see how -- of each of these categories, you can see in this yellow-green color the performance for this year to date, 2019, as of the end of October. And it's been an unusual year that every category has done very well, relatively speaking, from high yield over to the left you can see we've had a return in the region of 15 percent with junk bonds. And then in treasuries we've had very decent single-digit returns. That's a very unusual situation. More typically, if you look at '08 and '09, which is the far left of the green, look what happened to high yield. In '08 high yields really lost money, the junk bond category behaving very akin to the equity market. And in that year, if you go all the way to the right there, the treasury market, you can see that the dark green in the treasury category actually was

the one area that produced a solid return for investors. Typically you see that those two categories are most in opposition, that the treasuries will move up when the high yield or the junk bond market moves down, and vice versa. This year, quite interestingly, we had almost every category moving up. And I think that reflects the fact that for a while it felt like we were going into recession and yields moved down, treasury yields moved down, providing capital gains for treasuries. At the same time, as we've come out of that feeling of recession, there's been a sudden bullishness to corporate bonds as reflected in the equity market, too.

The third dimension is to remember that when we look at these different categories, you can see this screen here from our website -- this is called the yield table -- that we break out these categories on the left of the different bond types. And on the right we show the different maturity dates, is that when you look at these yields, which are in the center of the table, these are just guides, these are just indicators of one of the bonds that either the highest yielding of the category or the median yield of the category that you're looking. So for example, you could look at treasury, treasury 10-year, and in this picture here, the treasury 10-year is yielding 1.6. If you go further down, you can see what is a corporate triple-A: 1.97 for the 10-year. So you can see the relative yield, or the spread, you could get from taking the extra risk of the

corporate bond versus the treasury bond. But that's just one data point. Dimension three is to remember that there's actually underneath those data points many different bonds. So if you look here, you click one of those numbers, you'll see what we offer at Fidelity. We offer over 50,000 bonds in a given day, and so there's a lot of choice to choose from, and we'll go into this in a few minutes how you make those choices. But you can see here around the benchmark yield that we call out in the proceedings slide here, around this benchmark, there are actually many different bonds that range around it. So it's also really an issue of recognizing that the treasury -- there's only one treasury 10-year that's valued at this point in time, but there's many corporate bonds that could give you varying yields, even for the same letter grade quality, even for the same triple-A or double-A quality, there's going to be a variety of yields depending on the specific risk of the issuer.

Scott Bassler: And as we look at that, Richard, I'm glad you shared a lot of that. There's definitely a lot of information that we're looking at: high-yield bonds, treasuries, and everything in between. There's a lot of great information that Richard and his team has put together for all of us to explore on our own, and that's right on Fidelity's website, right at Fidelity.com/fixedincome/tools. And it will help you -- help us all evaluate the types of bonds and the strategies that are out there. But when I look at that yield table, I just think to myself, wow,

there's so many choices. Is there something else that we should be looking at and that Fidelity can help us with in making those decisions?

Richard Carter: Thank you, Scott. Well, I'd like to move on a bit further if I could, then, and specifically look at this third dimension. So remember, the yield curve, the sub-asset classes, the third dimension being let's look within these sub-asset classes of corporate bonds and municipal bonds and let's look deeper in those and see how you can use the information and the tools we have on Fidelity.com to actually confidently make investments in those securities. And I hope afterwards, Scott, after I'm finished you'll help us with even more of an expose on those tools.

Scott Bassler: I would be pleased to.

Richard Carter: All right, so I'll hand it back to you in a few minutes, but for now let's look at these two big areas, I think, of interest to our investors: corporate bonds and municipal bonds. And I'm going to start here, again, with a little bit of context. In the corporate bond market, these two charts, the one on the left -- they look very similar, but just look at the Y-axis. The one on the left is the investment-grade bonds, so safer type of corporate bonds. The one on the right is the high-yield, otherwise known as junk bonds. And you can see the

axis is quite different. OAS, why did we put that up there? I don't know, sorry, but it means option-adjusted spread, really, you think of it as the spread, the extra yield you get for this bond category over and above the treasury yield. So if treasuries are yielding two percent, and OAS are three, would mean the total yield for this corporate bond is two plus three, five, five percent. So it's telling you, again, how is the market assessing that extra risk for investing in these asset classes. And you can see at the top of the spike in each of those, no surprise, in '08, '09, when the recession was really raging, the great financial crisis, there was a lot of fear in the market that yields rose and prices fell. Investment-grades were yielding somewhere north of five percent, six percent over treasuries and junk bonds yielded 19 percent higher than treasuries at their most risky. And people didn't want to be involved, of course, people were selling, so the yields rose. As you can see now, we've come out of that phase, we've had a return to normalization, and this is where we are today. You can see at the far right of both of those charts we're at below the average level of spread, i.e. the risk appetites are fairly strong and people are willing to take those risks to buy those types of bonds versus a treasury bond. And you can see there almost a parallel there, Scott, between where we are today with '05 and '06, remember that period of strength and maybe over-valiance in the economy. We're not quite at that level of tightness to the treasury but we are fairly close.

Now let's look at the corporate bond market specifically. This is an area you may have seen some articles about. It's certainly been an area where issuance has grown in the last decade. The corporate bond market now in the U.S. around nine trillion, and you can see here in the top left chart, outstanding IG -- investment-grade corporate bonds -- and you can see here in the blue line how it's risen. That's just investment-grade. Then there's the junk bond category as well. But you can see here it's knocking on the door of five trillion in the U.S. now. And the breakdown there between industrials and the amount of cash held by those companies. So certainly those companies are becoming more leveraged. To the right of that, on the far top right, how many of these investment-grade bonds are triple-B, which is the very borderline between investment-grade and junk. And you can see now almost half of the investment-grade market is triple-B. So some people have raised concerned about these companies taking on too much debt, and therefore is that an indication that come a recession, many of these bonds would be downgraded to junk. And certainly you can see on the lower left how these categories have grown. Triple-B financials, triple-B industrials have grown quite a lot in the last decade. And over to the far right you can identify some big names, some big household names that have taken on a lot of debt: AT&T, Verizon, GM. These are firms that have made up a lot of this growth in the triple-B area, and again I

won't comment on any of them, but you can make your own judgement, I think, whether the cash flows are stable enough to support those bonds or they present a risk. And in certain companies the cash flow is fairly stable. It gives them confidence to take on more debt than in other cases.

Switching quickly to muni bonds, this chart here gives us the context where the light green line is the treasury yield, where we spoke about the government bonds, the treasury bonds, and see how those yields have fallen steadily over time. We had the blip up in the last couple of years, you can see, and then this year we've seen the decline in treasury yields. The dark green line is an interesting market that the muni investors use, which is the percent of muni yields as a percent of treasury yields. So typically -- you can see here -- back before the financial crisis the guidepost was that muni yields would yield about 80 percent of treasury yields. And why is that? Really, if you think about it, that the muni yields offer the tax break, the tax shelter, and once you take that into account you come up with the yield that is in net terms higher than treasuries for most of the investors -- certainly high net worth investors -- and that has kept muni yields around 80 percent. But you can see in the times of crisis, like we saw in '08 how there was a time when muni yields were actually yielding as much at a gross yield level as treasuries. Such was the fear, similar to the fear we saw in the corporate bond market. Muni yields spiked up as

well. Since that time you can see how we've come to a world where the yields are back towards that 75 to 80 percent of the treasury yield, even though actually now treasury yields have come down. So this has been an interesting thing this year where we're sort of at 100 percent but in a lot less volatile environment. And yet the backdrop is quite different. Back in the '07, '08 period, you can see how we say here that Ambac and MBIA reported losses and it really led to a big shift. The muni market was governed largely by insurance and many muni bonds were insured. Now to triple-A level, now that is no longer the case. About 20 percent or so of muni bonds are insured and less so than that issuing as with insurance. So it behooves you to do credit research on the muni issuer, almost more like a corporate bond now. You can't just rely on that insurance anymore.

However, there's been some good dynamics at work with the muni market. Unlike the corporate market that we see in the pink here has had a lot of issuance in the last decade, you can see here how the muni market has been fairly flat in supply terms. So the muni market has not had a lot of extra issuance and that might be a good tailwind for municipal investors. Furthermore, look at these dynamics to the right, which is the correlation of returns versus other bond categories. And so you can see here if the muni is one, the further away from one the other categories are, the less correlated

they are. So if you think about having a diversified portfolio, if you had -- on the far right here a lot of high-yield bonds -- again, we saw how earlier they behave a lot of equities, the high-yields bonds are very aligned with risky companies and can often give that same risk return profile to equities. You can see here how the correlation is very low versus muni bonds. So muni bonds, again, function for the risk side of your portfolio very nicely still in an inverse correlation way, which is actually quite hard today. A lot more asset classes are moving in lockstep.

Now, as we look at this dimension of -- the third dimension -- how to then start searching for bonds, how do you actually decide on what bond to actually invest in? You can see we have an example here from our website where we looked at Connecticut bonds. And if you look at this column, in yield, you can see how there's quite a lot of variance from bond to bond, and a lot of different issues from the state to towns and cities and various public what we call revenue bonds. It might be a toll road or a water bond. So there's a vast amount of variety of issuers to choose from. To do justice with that you have to do the research. It's just like investing in a stock, and to that end we provide that information, so, for example here with something we added just this year, actually, on our website, information from DPC providing a lot of information about the particular bond you're looking at -- in this case it was a Hartford

bond -- as well as news. Local news that might be of interest investors and it may not be specifically to that bond, but it would certainly be news that's relevant to that local economy and potentially the issuer. Also this year we added some charting for the first time. We never had historical charting before in the bond world. Now we do and we show here an example. Both this works for corporate and muni bonds. We can show here a bond historically how -- and you can change this chart to either show on price or yield terms, and you can see here these dots represent the different prices that were there. And you can zoom into the day or go out and look at it by month and year. At a fundamental level there's plenty of research. You can see here an example of Fidelity Viewpoints on the left, and also on the right from BlackRock. In our side on the bond house we definitely believe in a plurality of views, so you can see here we're happy to show some of the leading bond firms like BlackRock as well as our own in-house reporting. And then diving in even deeper, it's always useful to look at what the issuer themselves provide. So when a new issue muni bond is brought to market an issuer has to produce an official statement. We offer at Fidelity new issue municipal bonds, and when we do that, we always provide this example here. It may be a bit dry, a long document, but it is helpful if you take the time to look at the structure of the bond where is the revenue coming from and the assessment of the risks. For a quicker read we provide research from Standard and Poor's. Three or

four pages, quite easily digestible for the retail investor, and again, they give a nice insight into some of the risks on the credit rating, and they do this both for corporates as well as municipals. Here's a California one.

And finally, when you come to purchasing individual bonds, we really advise people to pay attention to the pricing. You may remember I showed you that chart earlier of the yields and the price. And you'd be surprised at how varied the prices can swing around, even in a particular day, and some of that is due to the amount of money that brokers charge their clients for execution. And we at Fidelity have a very simple schedule for bond investing: it's a dollar per bond and we've been at that price for a number of years. And we're very transparent and upfront in how we present that charge. And no matter what maturity you're purchasing it's still a dollar per bond, and we show here some of our competitors charging quite a bit more than us, and this is from an outside study we did a year or two ago, and we're going to be repeating it in this coming spring.

So I think, Scott, I hope I've showed you that we have a lot of resources on the website to -- within this three-dimensional structure, keeping on the yield curve, think about that there's more than one bond category, and when you get into any particular category like corporate bonds or muni bonds, really use

the resources we have. And you can actually venture forth and confidently buy a bond in the same way that you might consider buying a stock or ETF or something like that.

But Scott, I think you have one more thing to show us today, which is purchasing those bonds in a strategy and then some of the tools that help you execute that strategy as well, so that may be another way to go about it rather than one bond at a time.

Scott Bassler: Absolutely. And we'll be taking questions both online and from the audience. One of them online, actually, is a perfect segue -- Richard, did you write this before? No, I'm just kidding. It is actually -- one of the questions that came in through online was, "when is a good time to invest in bonds? What do we look for in the market, the economy, interest rates, et cetera?" Well, do tell what's a good time to invest in bonds. It should be part of an asset allocation. It's about what bonds you invest in and what is the strategy that you're looking for. So many of us will use bonds depending -- it all depends on what your strategy is. Are you looking to fund for a college education, is your view that there's going to be rising rates, is there a selloff in the stock market, is there an over-concentration in equities, in fixed income, in a particular issue, in a particular sector? These are all things that we should start

to consider. And when we start taking a look at that, that's where we start using some of those tools. We can look at the bond ladder tool and decide, do we want to look at a short-term ladder, should we look at something a little bit further out? Are we going to look at a barbell strategy? There's a lot of different ways on what we can look for. And we can dig into which strategies actually make sense for all of us. But whatever the strategy is, we want to look at some of that cash flow planning. Is there a need for cash flow? When is that need for cash flow? How flexible are we in the yield curve? How flexible is the yield curve compared to our needs? And then, of course, what we want to do is make sure that we have diversification. We always want to make sure that we have diversification. One of the pillars, whether you're looking at the equity market, or the fixed income market, can't hammer that enough. So when we say when is the right time to buy bonds, it should be part of an asset allocation. It's a matter of how much and to what type of strategy are you looking for are really the key factors when we're talking about our bonds. Now as we do this, you can have some cash flow analytics that are available right on fidelity.com. You can have a series of cash flow over here on the right hand side. This is actually a screenshot from fidelity.com. The light blue will show us our estimated principle, the dark blue will show us -- I'm sorry, the light blue represents our estimated interest, the dark blue represents our principle when they are coming, too. So when there's a particular need we can plan for that.

Now in this case they're all pretty even. You'll notice the blue on there is -- you'll notice the blue through '21 through '28 the principle is all coming due. You may have a particular need for more principle coming due in a few years. Maybe you're helping put a few kids through college. That might be an area where you want to add in a few extra layers in your '25, '26, or perhaps '27. It's always a matter of what is the type of strategy they're looking for and how can we help. The principle cost is on the left hand side. Up at the top we'll see our interest. We will also see what is the average maturity, what is our yield, and when is our annual interest, just to name a few of the areas when we're helping to decide and taking a look at our overall portfolio and our overall strategy. And it's best to take a look at it on a regular basis. "Regular basis" does not necessarily mean every day. If you're looking at it -- some people look at it every quarter, every six months, yearly, see, hey, does my strategy actually make sense. We want to make sure that we are paying attention when bonds come due, so in the year 2021, does it fit our needs. This is exactly how we would do a college education for '21, '22, '23. We have the right amount of principle coming due. What type of bond should we invest in? All depends on the type of environment and what do we need that cash flow for. Am I going to look at zeroes, am I going to look at some that you pay interest, it's all

about the strategy, what is going to get -- what is the best strategy for us to get to where we need to go?

And as we start taking a look at some of those short interest rates and we have inflation fears or deflation fears, that's where that can ladder can help us out. We can stay on the short term, we can see how much we actually have coming due, we can build those ladders on the short end, and so if we expect higher rates in the future we can build that in. I'd also mention an area called barbells, and there's not one particular strategy that I'm recommending more than another, because remember it all comes back to what is the best strategy for us. You can have some on the short end, that's one side of the weight, and you can have some on the longer end. So, hey, we think that interest rates are going up, and I try to trick Richard into telling us what was going to occur with rates, but he's a bit more savvy than that and he would show us the outlook for it but we all know things can change. So on that short end you have flexibility, the longer end they give us a little bit more yield on that side of it. So we can build strategies that meet our needs. Now, if stocks sell off, what are the correlations that we're looking at? Treasuries, you look at the U.S. aggregate index, the bond market -- you can look at the mortgage-backed securities, investment-grades, emerging markets, and then those high-yield corporates. So those high-yield corporates, the one down at the bottom, those are the

ones that tend to be the most sensitive, most highly correlated to the U.S. stock market. So depending on what is your view on the economy and where are rates, that may determine how much high yield if -- and also your personal risk tolerance -- how much high yield you have in there.

When it comes to treasuries, on the other hand, those tend to be the safest house on the block. I know in a lot of strategies I'll look at longer-term treasuries as one that you would invest in in a more volatile market and a more volatile type of economy as well. So the correlations up here will give you a good idea of a benchmark is to how and what type of bonds we want to invest in in different types of environments. And as we take a look at those, the bond types, and what is in my portfolio. We can dig in in the analytical tools on Fidelity.com and see what sectors am I investing in when it comes to the bond market. Am I just looking at taxable bonds, am I looking at tax-free bonds, and as we start taking a look at each one of those, we want to make sure, hey, is this still the need that we have. Just because you've always purchased tax-free bonds throughout your life, is it something that still makes sense today, or if you've always purchased corporate bonds, does that still make sense based on where you are in your life and what those -- essentially your needs are. And as we go into these, this where we want to take a look at some of those ladders, the tools, and some of the analysis that are available for us. And as

we look at that analysis, we have a wealth of information for us. So we do want to take a look at our ladders. Is it the right timeframe for us, does it make sense for our objectives? We can model in a CD ladder to see what that would actually look like. What would it look like if I build it out for a college education five years, what would be that income? What would be -- how much will I need for each year? I can figure all of that out using the tools that are on Fidelity.com. And as we use those tools, we can analyze. There's a fixed income analysis tool that we can actually dig in, review all of our bonds, take a look at sectors, it takes a look at states. Is it AMT? Is it non-AMT? We want to learn about everything about our bond portfolio and does it make sense for what we like to view. And as we start viewing some of that, those are all of the different factors that we want to view. We want to understand what is going on in the macro view in the economic trends, explore some of those different dimensions that Richard has discussed with us, also talk about do I want to invest in corporates, do I want to invest in munis, is it CDs, is it treasuries? It's all about the right mix as to what is appropriate for you, and then where can I go for more information. You can view a lot of viewpoints on Fidelity.com, viewing bonds, looking at the tools and a lot of those strategies. And as we start to review that, we've got some next steps. So when we do this, we can go into Fidelity.com/fixedincome/research, and we can learn all about this information. We want to make sure that we understand balanced pricing,

using some of those tools, so at Fidelity is just a dollar per bond. Many of you may be surprised that brokerage firms are allowed to charge still up to two percent of the principle on their bonds. That's amazing but something we run into every day. So know what you're paying, know what you're buying, and is it the right fit for what your needs and your strategies are.

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