Fidelity Connects

Fixed Income: Scenario Analysis in 2023

Stacie Ware, Quantitative Analyst

Pamela Ritchie, Host

Announcer: Hello and welcome to Fidelity Connects, a Fidelity Investments Canada podcast, connecting you to the world of investing and helping you stay ahead.

Fixed-income markets are off to a promising start this year after facing their worst-ever year on record in 2022. In mid-January, the two- and 10-year Treasury notes fell to a four-month low following weaker economic data, and now all eyes will be on the Fed's next rate move to see how it will impact bond yields once again.

So, will rates remain elevated? And what are some scenarios at play in a higher rate environment? Joining us today to discuss scenario analysis across a range of fixed income sectors in 2023 is Fidelity Quantitative Analyst Stacie Ware.

Based in Fidelity's fixed income headquarters in Merrimack, New Hampshire, Stacie works closely with the Tactical Bond, Core, and Core Plus teams on asset allocation and risk management.

In speaking with host Pamela Ritchie, Stacie shares how she and the team are constantly recalibrating models as more data comes in on inflation and other macro variables and projections. They use a propitiatory risk model with 5000 simulations conditioned on the VIX, both current and forward, which shows them how various models relate to future outcomes for Fidelity fixed income portfolios. Stay tuned for all of this and more.

Today's podcast was recorded on January 25, 2023.

The views and opinions expressed on this podcast are those of the participants, and do not necessarily reflect those of Fidelity Investments Canada ULC or its affiliates. This podcast is for informational purposes only, and should not be construed as investment, tax, or legal advice.

It is not an offer to sell or buy, or an endorsement, recommendation, or sponsorship of any entity or security cited. Read a fund's prospectus before investing. Funds are not guaranteed. Their values change frequently, and past performance may not be repeated. Fees, expenses and commissions are all associated with fund investments.

[00:02:06]

Pamela Ritchie: Welcome, Stacie. Great to see you.

[00:02:09]

Stacie Ware: Thank you, Pamela. It's great to be here.

[00:02:10]

Pamela Ritchie: Very glad you could join us here. I'm going to begin with the question mark that apparently we might talk about less one day but at the moment, very much the discussion of where you see inflation at this point. We've actually seen inflation come back in certain parts of the world where, perhaps, interest rates took a pause. We've seen the Bank of Canada also talk about the pause situation. Where do you see inflation at this stage?

[00:02:41]

Stacie Ware: As you mentioned, we work very, very closely with our team of macro analysts on this topic and we constantly recalibrate our quantitative models. Right now, we're looking at a base case of core inflation moderating over the next year but it's something that we're continually looking at as we get more and more data, as the analysts and our macro team look at other projections. For example, data is coming out from Zillow for shelter, the shelter component of inflation, and that's pointing towards inflation moderating there. Goods and services is something that we're looking at closely and we have a range of scenarios based on different outcomes of those components. Right now, our models are pointing to the likely scenario of core inflation moderating over the course of the next year which, as you pointed out, has implications for the Fed and rates, etc., over the next year.

[00:03:44]

Pamela Ritchie: Broadly speaking, how does it affect the bond market?

[00:03:47]

Stacie Ware: Right now we're looking at yields which have historical highs in yields and where it's a question of how high for how long? The Fed is, obviously, wanting to dampen inflation and they're trying to tame inflation by raising rates, as they have done over the course of 2022 at a historical pace, and now is the Fed going to slow down like the Bank of Canada has? How long are they going to hold rates at this level and when are they going to start to pivot and maybe start reducing rates? That's something that we have to take into consideration when we're looking at quantitative models over the course of the next year because all these different scenarios are in play and what we're actually seeing right now with yields at the level that they are, the more likely scenarios are showing yields come down lower over the course of the next year. That's something that we're looking at the probability of in our models.

[00:05:00]

Pamela Ritchie: It's fascinating. I wonder if you can sort of situate us as you situate how your work works with various teams, specifically those fixed income teams that we mentioned in the introduction.

[00:05:14]

Stacie Ware: My process tends to be in asset allocation. On the Core and Core Plus desk with Jeff and Mike, we have a five-step process. The first step is macro. They're working with the fundamental macro analysts, really setting the scene as to what the picture is, the macro backdrop, where we are with the Fed, what other macro factors are at play and main drivers over the course of the next year. The next step is sector. We're looking at which sectors are more attractive, which asset classes. For example, we have an overweight-to-floating-rate paper and as the Fed has raised rates dramatically over the last year, that's something that's played out really well for us, that sector.

[00:06:13]

But now, as the Fed is thinking about potentially pausing or maybe towards the end of the year reducing rates, floating rate may be not such an attractive sector. That's where we're talking to the macro and then the sector analyst to see at that level where we see the next best opportunity. The piece where I come in is I put it all together in terms of an asset allocation framework. This is where we do scenario analysis including the macro backdrop, looking at all the different sectors, and seeing what the likely scenarios are and the sensitivities of the portfolios in those scenarios to put it all together.

[00:07:06]

Pamela Ritchie: That's so fascinating. That's where there's real building blocks in there, what you're doing. I mean, could you give us just a little bit of a sense of what you're looking at on your computer when you're sort of building this?

[00:07:16]

Stacie Ware: Sure. In our risk model, we have a proprietary risk model, and so our risk model has 5,000 simulations. These simulations are conditioned on the VIX, so they are the current level of the VIX and the forward level of the VIX, because we believe that if the VIX spikes, volatility can't remain that high for a long period of time, so there's mean reversion in the VIX. If volatility in the market spike, that's a good measure using the VIX there and that means that it will come back down. But what does that mean in terms of the portfolio? If volatility spikes, then the range of outcomes for a specific risk factor, or you can think of it like an asset class, for example, the range of outcomes is a lot broader.

[00:08:16]

So, you can imagine that when you're thinking of the range of outcomes in the portfolios, especially on fixed income we like to look at the downside and focus what the risk is there. So, the tails get broader when volatility spikes. What we're trying to do is assess what are the likelihood of the downside, where is the sensitivity in the portfolio, what has the biggest tails in the portfolio and on the downside there? So, I looked at all the different risk factors. There's 270 risk factors in the model. For example, you've got Treasury rates, you've got intermediate and long and short credit spreads, you've got AB, asset-backed securities in there as a factor, so all the different fixed-income markets kind of feed into our risk model.

[00:09:12]

Pamela Ritchie: That's so fascinating. Thank you for giving us just a little bit of a tour. There's this element, when you see the word "tactical" there's, obviously, a flexibility there to move a bit as things change. You just outlined there how things can change. Volatility, obviously, can change. Sometimes investors, there's a lot of money on the sidelines, there's sort of this discussion of when some investors get back in or actually what they're losing by not being in. It sometimes gets called like a reinvestment risk or whether you can ... can you talk a little bit about that, how you manage that, ultimately, so that perhaps investors don't have to?

[00:09:52]

Stacie Ware: Definitely. Now it's very important as the Fed has come to a point where they're either decelerating in raising the interest rates or thinking about a pause. Right now yields, which means the return on your investment, are very high. They're at historical highs for the fixed-income markets. How long can they last there? How long can you lock in that yield for? Well, if you investing in a two-year maturity, then your yield is locked in for two years. Whereas if you invest in a 10-year maturity, you're locking in your investment for 10 years at that rate that you're buying in. The reinvestment really is, you know, if you think that the Fed is going to keep rates this high for a long period of time, then maybe you're not necessarily worried about reinvestment risk.

[00:10:53]

However, if you're in, for example, a floating rate which the yield is reset periodically based on some base rate, as yields come down that yield is going to reduce and so your reinvestment risk is essentially you would miss out in future as

yields would decline because the yields you're getting today won't be available tomorrow on the same investment. That's something that we're thinking about in the portfolios. As I mentioned earlier, we're looking at the portfolios that have been overweight leveraged loans which are floating rate notes, and we're moving more into high yield which is a fixed rate investment. So, we're locking in those higher yields that we see in the marketplace today because we don't want that reinvestment risk and as things reset, yields will move lower in the floating rate piece, if that makes sense.

[00:11:57]

Pamela Ritchie: That's so fascinating. It absolutely makes sense. And it's fascinating to think about locking in a high yield. That makes me want to ask you, what's the forecast, if that's an area to go to? I mean, yes, interest rates will probably come down. How do you connect the high-yield discussion with things like headlines in the economy? There's still this big discussion of will it, won't it be a recessionary environment.

[00:12:22]

Stacie Ware: It is very interesting. As I mentioned before, in step three of the process I run all kinds of different scenarios. What we're seeing there is essentially the yield gives you a cushion in terms of your drawdown risk. So, if there is a recession on the horizon, that's something that I model too, for example, like a 20% decline in the stock market and how that would impact the portfolios over the next year. That's a scenario that we look at closely. What we tend to see right now is because these yields are so high, you essentially have a cushion from that carry, so just holding that investment over the course of the year, that carry piece and the income you're getting from your coupons is going to offset the drawdowns in price that we would see from a recession, for example.

[00:13:20]

Pamela Ritchie: Just digging a bit deeper into the economic piece, and maybe it's better to think of it as a monolith, but I'm sort of curious how your scenarios are affected or do you put in some of the pieces of, for instance, where you see wages, where you see labour discussions and things unfolding within the market? We have seen job cuts. Are there pieces of this story that you put into it to sort of, obviously, help you model where the recession risk or is not?

[00:13:45]

Stacie Ware: Yes. We have a baseline risk model and this risk model, as I mentioned before, takes into account the volatility of the market through the VIX and the mean reversion there. So, that's our base case. There we have the 5,000 conditioned simulations of where we expect the portfolio returns to be over the course of the next year. It's very interesting looking at that, and I'll touch into how we adjust that in future, but just our base case, for example, right now we model like a quarter out. When we're looking at a quarter out, for example, if we're looking at an annualized return of +10%, looking out a quarter that would be equivalent to 250 basis points in a quarter.

For our portfolios right now, we're seeing a probability of a return greater than that of 50% in the portfolio. We're really seeing our base case right now being a really good time to invest in fixed income because of those high yields that I mentioned and the cushion that you're getting from that income return, the coupon component.

If we contrast this with our base case 18 months ago, for example, we were really looking at only a 12% chance of getting an annualized return of greater than 10% over the next quarter. That has really increased, so the opportunity for fixed income to really deliver this year has really gone up.

[00:15:35]

When you mentioned on the macro front, how do we put new macro data into the scenarios? So, thinking about over the course of the last year, rates and spreads have been behaving slightly differently to what they have in the past. For example, typically rates and spreads move opposite to each other, so they're anti-correlated, they have a negative correlation, we say. But over the course of the last year, which is why fixed income, there was, essentially, nowhere to hide was because rates and spreads were moving, rates were going up and spreads were widening, so they had a positive correlation. What we're seeing now in the market is that starting to change, but that's also something that we model too.

[00:16:32]

On top of our base case simulations, we can also impose a view. For example, one of the views that I can impose is what if the equity market sells off by 20% on the S&P and the 10-year Treasury moves higher still by another 50 basis points, what does that scenario – that's incorporating some of that positive correlation we've seen – what does that scenario do for our portfolios? Well, the yields that we have right now we're still seeing over the course of the next year for the U.S. Ag, we're seeing a 70-basis-point return in that scenario. So, it's small but the yield means that you're not in negative territory. We don't anticipate a repeat of 2022 going forward just because we've got this high-yield buffer and this cushion for the bond markets this year.

[00:17:39]

Pamela Ritchie: It's fascinating. If we look across sort of the government bond side of things, you can go to other assets as well, it's interesting. Guide us through where you see, broadly speaking, the global government bond markets going. We've seen some massive reactions to fiscal plans in some countries. We've seen concerns over… the debt ceiling discussion is going on now in the U.S., we've heard it before, but give us the picture of sort of the global federal level bond markets, ultimately.

[00:18:12]

Stacie Ware: As we've seen over the last year, we've seen a lot of central banks raise rates, and so yields across the globe are higher at the government bond level, and so yield curves in general are flatter, in the case of the U.S. we're inverted in the yield curve. That's not something we are expecting to persist, but the question is how does the yield curve steepen? How does the short end rates essentially come down? Does it pivot around the 10-year point, the seven-year point? Where is the opportunity essentially on the yield curve? In the portfolios right now, because we've been holding this floating rate piece on the short end, we have been exposed to the 30-year Treasury on the longer end, which has worked out really well for us as the yield curve has flattened. However, as the yield curves steepen, we need to think about shifting more into the belly and where in the belly that would be, which is where some of the scenario analysis and the modelling that I do come in in terms of asset allocation: where are we going to be focused on in the belly?

[00:19:37]

So, right now we're thinking that the seven-to-10-year part of the curve is where we're thinking to get more bulleted to take advantage of some of that steepening right now. But in general overweight duration, duration is something that we are seeing is more attractive, as I mentioned, like yields being high, there's a lot of advantage to just being in government bonds. What we're seeing in spreads right now, we're kind of in the median percentile range for spreads, so it's not like there's an opportunity to add risk. Thinking with the recession kind of backdrop looming too, that's something that we're

cautious on there and using our fundamental analyst research to really pick our spots in terms of where we're thinking about adding in terms of spreads but, you know, with government bond yields as high as they are now, it's a good opportunity to invest in the risk-free portion of the fixed-income market.

[00:20:54]

Pamela Ritchie: So fascinating taking a look at that. I remember speaking to Jeff in the last several months as central banks were really getting the motor running, essentially. Also, QT was starting in the United States. He said that there's fog, but that fog was going to lift and then opportunities would be a bit, if not crystal clear, sort of much clearer. Can you just comment on that, where we are now?

[00:21:20]

Stacie Ware: I think last year a lot of the fog was in the European markets was were they going to have enough energy to survive the winter, for example. Now it's become clear that they do have enough energy to survive the winter. That recession that that might impose if factories were going to shut down is kind of, you know, the fog has cleared, to use Jeff''s words there on that side of things. So, it's making it clearer as to what's happening in Europe right now with that energy piece off the table. But then there's other things that are cropping up, and there always is. For example, now we have the uncertainty around the China reopening and how that's going to impact either the inflation side of things or whether it's going to ease the inflation problems as things kind of open back up and get back to normal. That's kind of like a question mark there. There will always be some fog which is, I guess, where my job comes in because we're looking at what are the probabilities and what are the odds of different outcomes and where the portfolio is more sensitive to. That's something that we're taking into account as we're interpreting the results from the risk model and the scenario analysis, if that makes sense.

[00:22:54]

Pamela Ritchie: Yes, absolutely. Something else that's always there but it's something to worry about, I guess, on some level, is the geopolitical question. Again, that's something that is sort of ever present but it's something that investors are concerned about, certainly today, these days. Again, how, ultimately, keeping your money, perhaps, on the fixed income and bond markets, does that sort of help or hinder, cushion the blow, if you will?

[00:23:20]

Stacie Ware: On that piece, it's been unclear whether the bonds have been a diversifier over the last year. In 2022 the equity market saw a negative return and also in the bond market, so there was no place to hide. But as I mentioned, we are having some days now where we're seeing that negative correlation. Whether it's between spreads and rates or equities and bonds, we are seeing bonds become more of a diversifier again as we are getting to slowing down the rate of hikes from the Fed and coming to more of a moderated inflation kind of world, that's something that we are seeing bonds behave more normal, if there is ever such a normal.

[00:24:16]

Pamela Ritchie: It's just interesting to watch so much money be poured into economies for the very good reason that there was a global pandemic but also, obviously, seeing that come out. It also feels like not just the end of that type of stimulus due to the pandemic but also just almost two decades, decade and a half, of loose policy, of monetary policy, that is just such a big change, generational change, really.

[00:24:45]

Stacie Ware: Yes. The consumer makes up 70% of the economy in the U.S., so that's also something that's feeding into the macro backdrop. What is the consumer spending power? That's something that we look at when we're running our scenarios. Do we expect a recession, or do we not expect a recession or is that going to help inflation come down, is inflation going to drop like a rock or is it going to persist for longer than we think because of China? It's all these different pieces that come into play that we have to consider when we are looking at our models and interpreting the outcomes.

[00:25:34]

Pamela Ritchie: Can you give us a sense of what the scenarios and the models that you're building do say about the consumer's health predilections? How does the consumer sit these days?

[00:25:45]

Stacie Ware: We don't specifically feed the consumer spending into our models. Where we do see them show up, for example, is in the asset-backed security factors where those investments are based on credit cards, loans, and that's what's backing that sector. Right now, we're not seeing defaults pick up in the high-quality ABS (asset-backed securities) in that factor. So, that shows us that they still remain in good health and we're still expecting that that factor in our risk model is still in line and we're not expecting to see a dramatic increase in spread of that sector right now because of the consumers. That would be one example of where we would see a direct flow through from consumer spending power into our risk model.

[00:26:48]

Pamela Ritchie: I think it might even be a couple of years back, there's some cloudiness just sort of remembering when conversations took place, but Michael Plage I think we had a conversation on Fidelity Connects, might have been a couple of years ago, when yields were much lower. I think you did some scenario research then about what would happen, for instance, if equities fell, I think about 20%, bonds would be/give, I think, more of a modest amount back because the situation was as you stated. What about now when you run some sort of comparable scenario?

[00:27:22]

Stacie Ware: There's a couple of things in there. Right now, if the equity market falls 20%, we're looking at a 30-year Treasury return of double digits of like 10%, which is great from where we are now if we're expecting rates and spreads and the fixed income and equity to be anti-correlated or negatively correlated, as one would expect as inflation moderates and the Fed kind of pauses or slows down. The other thing, looking back in history, we project forward in some of our analyses but we also try to learn from the past. Some of the scenario analysis that we do also looks at replays of historical events, not because we think they're ever going to happen again in future, but just to learn a bit more about how things can behave. From a quantitative standpoint, you know that the next recession or the next big sell-off is never predicted going back in history, no one can really predict it. So, we're trying to learn from the past to project forward into the future. But we're also trying to really understand how the correlations between the different fixed income asset classes behave in those tails because tail events aren't something that happen very often.

[00:28:53]

Another thing that we look at right now are, if we're looking back historically, we look at peak yields in the past and what have the returns been in the different asset classes from those peak yield points. I think over the last past five peaks in the 10-year Treasury yields, if you then look at the returns in the U.S. credit market, the high-yield market and in the equity market, you do see double-digit returns over the next three to five years when we've done that analysis looking backwards.

Again, if we think we are getting to a point where the Fed is slowing down or the Fed hikes are pausing in line with what we're seeing from the Bank of Canada, who was the first to lead this back last year, we could be getting to a peak in yields in which case that has traditionally been, if you're looking backwards, a good time to invest in fixed income in these asset classes where we have exposure to in the core and the core plus portfolios.

[00:30:12]

Pamela Ritchie: Stacie Ware, it's been a pleasure to speak with you. Really appreciate your time and explaining to all of us how you work within the team and this brilliant use of scenarios, how it comes and doing what you see with them. Thanks for your time.

[00:30:24]

Stacie Ware: Thank you for having me. It's been a pleasure too.

[00:30:27]

Pamela Ritchie: Stacie Ware. Thanks for joining us. We'll see you soon. I'm Pamela Ritchie.

Announcer: Thanks for listening to the Fidelity Connects podcast.

If you haven't done so already, please subscribe to Fidelity Connects on your podcast platform of choice - and if you like what you're hearing, leave a review or a 5-star rating.

Fidelity Mutual Funds and ETFs are available by working with a financial advisor or through an online brokerage account. Visit fidelity.ca/howtobuy for more information - and while visiting fidelity.ca, you can also find information on future live webcasts. Don't forget to follow Fidelity Canada on Twitter and Linkedin. Thanks again, see you next time.

Commissions, trailing commissions, management fees, brokerage fees and expenses may be associated with investments in mutual funds and ETFs. Please read the mutual fund or ETF's prospectus, which contains detailed investment information, before investing. The indicated rates of return are historical annual compounded total returns for the period indicated including changes in unit value and reinvestment of distributions. The indicated rates of return do not take into account sales, redemption, distribution or option charges or income taxes payable by any unitholder that would have reduced returns. Mutual funds and ETFs are not guaranteed. Their values change frequently, and investors may experience a gain or a loss. Past performance may not be repeated.

If you buy other series of Fidelity funds, the performance will vary largely due to different fees and expenses. Investors who buy Series F pay investment management fees and expenses to Fidelity. Investors will also pay their dealer a fee for financial advice services in addition to the Series F fees charged by Fidelity.

Any reference to a company is for illustrative purposes only. It is not a recommendation to buy or sell, nor is it necessarily an indication of how the portfolio of any Fidelity Fund is invested. The breakdown of fund investments is presented to illustrate the way in which a fund may invest and may not be representative of a fund's current or future investment. A fund's investment may change at any time. Mutual Fund and ETF strategies and current holdings are subject to change.

The statements contained herein are based on information believed to be reliable and are provided for information purposes only. Where such information is based in whole or in part on information provided by third parties, we cannot guarantee that it is accurate, complete or current at all times. It does not provide investment, tax or legal advice, and is not an offer or solicitation to buy. Graphs and charts are used for illustrative purposes only and do not reflect future values or returns on investment of any fund or portfolio. Particular investment strategies should be evaluated according to an investor's investment objectives and tolerance for risk. Fidelity Investments Canada ULC and its affiliates and related entities are not liable for any errors or omissions in the information or for any loss or damage suffered.

From time to time a manager, analyst or other Fidelity employee may express views regarding a particular company, security, and industry or market sector. The views expressed by any such person are the views of only that individual as of the time expressed and do not necessarily represent the views of Fidelity or any other person in the Fidelity organization. Any such views are subject to change at any time, based upon markets and other conditions, and Fidelity disclaims any responsibility to update such views. These views may not be relied on as investment advice and, because investment decisions for a Fidelity Fund are based on numerous factors, may not be relied on as an indication of trading intent on behalf of any Fidelity Fund.

Certain Statements in this commentary may contain forward-looking statements ("FLS") that are predictive in nature and may include words such as "expects", "anticipates", "intends", "plans", "believes", "estimates" and similar forward-looking expressions or negative versions thereof. FLS are based on current expectations and projections about future general economic, political and relevant market factors, such as interest and assuming no changes to applicable tax or other laws or government regulation. Expectations and projections about future events are inherently subject to, among other things, risks and uncertainties, some of which may be unforeseeable and, accordingly, may prove to be incorrect at a future date. FLS are not guarantees of future performance, and actual events could differ materially from those expressed or implied in any FLS. A number of important factors can contribute to these digressions, including, but not limited to, general economic, political and market factors in North America and internationally, interest and foreign exchange rates, global equity and capital markets, business competition and catastrophic events. You should avoid placing any undue reliance on FLS. Further, there is no specific intentional of updating any FLS whether as a result of new information, future events or otherwise.