Understanding Bond Pricing

2024 Transcript

RICHARD CARTER: Thank you. And hello, everyone. Good morning. Good afternoon. Welcome to our fixed income webinar today on bond pricing. It's wonderful to be with everyone here today. Thank you for joining us.

My name is Richard Carter. I lead our offering of bonds and CDs that we provide our Fidelity customers and associated tools and analytics that go along with them on fidelity.com. And I'm delighted to be joined here today by Luke Vance-Hills. Luke, perhaps you'd like to just introduce yourself quickly and what you do in the world of fixed income.

LUKE VANCE-HILLS: Yeah. Thank you, Richard. So, again, I'm Luke. I work as a fixed income regional brokerage consultant. So I'm based here locally in Southern California. So I partner with our clients here, boots on the ground that are building out fixed income strategies. So I partner with Richard and his team just making sure that clients are able to get the most out of the platform here.

RICHARD CARTER: Awesome. Thank you, Luke. OK, well, let's jump in, shall we? So, this is a very focused topic on bond pricing. And I think many of our customers and viewers here today may be more familiar with the world of the stock market and how stocks behave.

But sometimes bond pricing and the way you can access bond pricing may be something of a mystery. So for today's webinar, we're going to look at a couple of ways of understanding bond pricing. As a way of background, Luke will first start us off with a broader picture of the bond market looking at some of its idiosyncrasies and the context that actually leads into why pricing in bond market is the way it is.

Then, we'll look at the different types of pricing that exist in fixed income-- individual bonds, in particular. And then, finally, we'll take a look at trading costs, how they're represented, and how they impact the yield and the price and the yield of your investments. So, with that in mind, Luke, would you like to begin by setting the scene for the bond market and the context of bond pricing within it?

LUKE VANCE-HILLS: Yeah, for sure. So the first thing we're going to be talking about is comprehending the bond market. We're going to be looking at that through three different dimensions. The first one is the makeup of the bond market.

And then we'll look, next, at the size of the bond market and trading volume in the bond market. So if we look first at the makeup, the reason that we're talking about this is that Richard mentioned the stock market can feel more familiar than the bond market, and I think, oftentimes, can feel more intuitive than the bond market.

So we wanted to break this down just to make sure that everybody has a great context for understanding pricing in the bond market and maybe why it is the way that it is. So we've got the stock market shown on the left side. When you buy a stock, you kind of know what you're going to get. It's

an equity share of a publicly-owned company. So you actually have a part ownership in the total value of the company whenever you buy a stock. So that's pretty straightforward.

The bond market is a little bit different. They're debt securities that are issued by a wide variety of issuers, including corporations, governments, agencies, and municipalities. They'll have different coupon structures, different maturity dates. And so the structures in the bond market are really broadly varied, whereas in the stock market, you're just buying a partial ownership of the company.

Now, when we think about the size of the stock and bond market, the size of the stock market is limited to the size of shares offered by the companies, whereas the bond market is a little bit different. It's going to be small and large debt instruments that are built out there. When we think about the way that they trade, the bond market trades over the counter, which means that if you want to buy a bond, it's a negotiated market, you'd have to find a live dealer who actually owns that bond and is willing to sell it to you. And you'll usually have to pay the price that they're offering it at.

Whereas in the stock market, there are centralized exchanges where those stocks trade like the New York Stock Exchange or the NASDAQ. So we've got price transparency. The stock market will have market makers, which provide transparency and liquidity in the market.

In the bond market, there is a spectrum of liquidity. A larger issue is likely to be more transparent, more liquid, tighter spreads, a smaller issuance, likely to have more opaque pricing and have less liquidity. So, next, we'll look at the market size of the bond and stock markets.

So we've got the bond market on the left hand side this time. You can see the bond market is actually larger than the stock market-- $44 trillion compared to $40 trillion in the stock market. Daily trading volume here, $1.25 trillion in daily trading volume in the bond market, which dwarfs the $241 billion daily trading volume in the stock market.

Like we mentioned earlier, the bond market is much more fragmented. So you've got 1.25 million different securities or individual CUSIPs in the bond market, where you've got about 6,000 individual ticker symbols in the stock market. So, many more securities, a much more fragmented market-- if you'd like to participate in the bond market, you have a lot more options than you do in the stock market.

And we're going to look at why here. So just to use Ford as an example [INAUDIBLE] outstanding in bonds, you've got $48 billion in common stock outstanding. And here's the key difference-- 557 different issues in the Ford bond market compared to one share of common stock that you can buy. So if you think about the number of issuers there in the bond market, a lot more issuers, and then each issuer may have lots of different issues individually outstanding.

And then here's the last slide where we're going to talk about trading volume. So you can see there's this inverse relationship here between the number of CUSIPs outstanding in a market versus the daily trading volume. So at one extreme to that spectrum, you have the Treasury market where we've got 600 CUSIPs outstanding, $880 billion in trading volume per day-- so just a massive amount of treasuries changing hands every single day.

And, of course, one issuer, one issuer type in the Treasury market, which is the US Treasury, and then fewer CUSIPs outstanding there. If you compare that to the municipal market where we have so many different issuers, each with multiple pieces outstanding-- so 992,000 CUSIPs available in the municipal market, most of which will not trade in any given day. And then you've got $13 billion in trading volume-- so a much smaller trading volume than we have in the Treasury market.

And then you see MBS, which is mortgage backed securities and then corporates and agencies here kind of In the middle. So with that, Richard, I'm going to turn it, actually, back over to you.

RICHARD CARTER: Thank you, Luke. Absolutely. Well, yeah, as you were sharing there, Luke, it's amazing how at some extremes there beyond the Treasury, the bond market can be more complicated and difficult because of its fragmentation, because of so many CUSIPs, that means liquidity can be slim. And, therefore, evidence of prices transaction is limited.

So what do we do in that environment? So what we're going to look at here in this section as we get into the meat of the topic is the idea of valuation pricing. And then we'll look at, specifically, live pricing in the context of corporate and municipal bonds. And then, finally, we'll look at the topic of requesting a bid quote, which is what happens when there is no live pricing-- what can you do?

So, let's start with something that hopefully most folks are familiar with. This is an example of one's statement. This is produced monthly. At Fidelity, you can see here we've highlighted one of the columns from June 2024.

And what we're showing here is a list of five different bonds that might be in a client's portfolio. And we're showing prices across the board. And the drive to have this, you can appreciate with the statement, is the need to value the portfolio, the need to put a valuation on every single bond, and, therefore, help our clients understand the total value of their portfolio as a result.

The necessity of that leads us to deliver what we call here valuation pricing. And the providers of this pricing are actually third party firms. These could be firms like ICE, or Refinitiv, or S&P. And Fidelity. takes their evaluations and, through our own averaging and filtering, comes up with this valuation price so that every single bond, even if it hasn't traded, can be priced like this. And, again, from our point of view, it's an impartial view of assessment. So if the bond has been actively traded or not, there will be a price there in this statement.

The same principle goes into effect when you come to one's portfolio in the website. So here's a screenshot from the positions page of fidelity.com showing the typical account with a number of positions, particularly bonds. And we've highlighted one here, the Treasury bill.

And the question, then, again, is, well, how do we come up with this price? Answer-- it's the same principle as the statement. In this case, this is a nightly valuation. So although we looked at one there that was in the statement, the end of month, the same principle is applied every single night. All the bonds that our customers hold are valued by these third parties. We then apply those prices in here. So it's a starting point, again. And the portfolio that you're looking at has a valuation in total.

This valuation price is also known as the third party price. And you can see that here in the context now of a live offering. So let's say you're looking at the bonds that we have available on our website,

you've clicked on the description field, you're going a level deeper now and looking at the overview, which is the left side of the screen.

In the overview, we provide some of the more static data, like the ratings, or the maturity date, and so on. And then if you tab over to price and performance there, the second screenshot, you'll see that we have what we call analytics and pricing information, which is more apt to change. The bid and the ask in this case, this Apple bond, it is a liquid bond-- so there's a live bid and a live ask. You'll see we'll come on to that in a few minutes.

But further down the page, again, useful context is that third party price. So that's the valuation price from the night before that you would see on your positions page lining up with that. So it the value, we think, here is the ability to say, OK, well, the live price is this-- what's the third party price? What was the valuation last night? So you can get a sense of whether the price being asked now is reasonable in the context of what you understand the market to have done or the particular bond itself to have done in the last few hours.

So that's an overview of our third party price or evaluated price that we provide nightly for all our customers bonds in the accounts and all the offerings that we just looked at as an example. But I'm sure everyone's also interested in this idea of live pricing. So to illustrate that, we're providing this graphic here.

What it does is attempt to illustrate how Fidelity uses several partners in our approach to deliver a wide inventory, a large inventory, of bonds on fidelity.com. You can see here, going from left to right, and we end up on fidelity.com with over 100,000 offerings at any one time, all of which are available for purchase and often have bid prices too. And, of course, with that, they have a price associated with them, a live price.

So what not everyone may be aware of is that a lot of these offerings, in fact the vast majority, aren't actually owned by Fidelity. We are an aggregator, if you like, of multiple sources of inventory, of liquidity. And you can see here in this chart illustrating in the far left examples of the dealers that we work with.

So some of these dealers, national names, some of them are more regional names, but they are all connected to us and providing that inventory to us through the light blue section there, which is what we call ATSes or alternative trading systems. These business partners work with us, and those other firms, and those other broker dealers to source the inventory and pass it through our own screening criteria, which I'll come onto in the light green, and then on to fidelity.com.

As I mentioned, we also do have some bonds from our own in-house Fidelity Capital Markets. And they are also subject to the same screening and so forth as all the other sources of supply. And then their bonds also would be visible on display on the website.

Some of the screening criteria you can see there-- we hope to have the screening mainly for quality reasons. So we do credit checks on the broker dealers to make sure that they're sound. We make sure that their offerings are what are called firm and executable, trying to minimize as much as possible the

experience that sometimes can happen in the bond market, especially when you think about prices are moving, that dealers can sometimes back away.

And so we've asked that the offerings are firm and executable so that if you see the price, you like it, and the quantity, you can trade and expect the fill. Also, certain products we don't offer on fidelity.com, like mortgage-backed securities and things like that-- variable rate bonds, we don't offer. But, by and large, we offer the core products such as municipal bonds, corporate bonds, treasuries, and agencies, which we'll cover today. And this leads to 100,000, sometimes over 200,000 offerings [INAUDIBLE].

With that in mind, we see that that's the principle behind it all. What does it look like when you come to the website? And how is pricing represented in that context?

So we're looking here at a couple of corporate bond offerings-- again, just to highlight what would probably be a long table if you've done a bond search on the website. But we've highlighted here where pricing is important. So, actually, in the website itself, these columns are gray highlighted.

But you can see working from left to right, we have a description, things like maturity date, the credit ratings. And then we have the bid and the ask-- so the bid being the price that the dealer is offering to buy from anyone who has bonds to offer, and the ask being the side of the market where the dealer is offering bonds to be purchased by our customers.

And there's a symmetry there you can see. So for both bid and the ask, we have the price and the yield, the corresponding yield. And you can see on the ask side, we have both the yield to worst, which is inclusive of call risk, as well as the yield to maturity, which is assuming that the bond is not called prematurely, and it exists until it matures.

So, obviously, a bond investor is going to be looking at that yield, as much as anything, looking at when they decide, is it bond A or bond B, assessing the risk and so forth on a yield basis. But then, flipping to the price that actually creates that yield, you can see here what we're showing is, essentially, the best price.

So in the case of the first bond, the Bank of Montreal, the leading price, meaning the lowest price for the customer, is available, actually, at a price of par, of 100. And beneath it, we show the terms of that offering, which is to say that there's a quantity minimum of 15. And the dealer has a total of 45 to offer at that price.

So it's very dynamic. As Luke was saying, there's thousands of bonds that are potentially out there in the universe. In any one day, not all of them will be available for trading. So in this model that we just looked at, we are reliant on trying to source supply from as many venues as we can.

And then it's really reflecting here of what the dealer themselves may have to offer. If they have, in this case, 45 of these bonds, that's all they can offer. They're not offering at this price a limitless supply. They're offering specifically what they're saying here, 45 bonds, quantity at the minimum of 15 request. So if that suits you, then you can trade that offering. So it's very much more specific, again, going back to Luke's approach of comparing with the stock market.

One of the things to consider, of course, in bond pricing is how active and how aggressive pricing can be in different ratings contexts. So it's a general rule, not always applicable, but I think what we're showing here are some examples of this-- we study here the AAA-rated bond and a B-rated bond, so a junk bond.

Both, again, are corporate bonds, but just to highlight the diversity of what could be going on inside the corporate bond market itself, we see here the examples of how pricing is much tighter in the high quality bond than the lower quality bond. So, for example, if you took the Johnson & Johnson, you can see here that the bid and the ask spread and the corresponding yield differential, but the bid and the ask spread, is roughly 0.1 difference between the bid price of 96.59 and the ask price of 96.69.

If you compare that to the lower quality bond, you can see there that the best price we could get on the offer was $101.7. And the best price on the bid is $99.87. So that's a much larger difference between the bid and the ask.

And, by the way, these two prices, the bid and the ask, are not necessarily sourced from the same dealer. We're objectively trying to get the best price we can in each case. So for the offer price, it'll be the best price, the lowest price, for the customer. On the bid side, it would be the highest price for the customer, if you're selling, of course.

So, again, these could be sourced from different places. But, just as these examples, they are, obviously, one illustrative example. But in general, you do find that these spreads are wider in the lower quality realm of the bond market.

And this represents, again, a cost of liquidity, the cost of trading. These prices, again, not touched by Fidelity. We'll come on to that in a later part of the presentation, too. But these are from the dealers. The best we could get is illustrated here. So, again, just thinking of the slippage if you're trading. It is typically larger in the lower quality bonds and the high quality bonds in this example showing here.

Another interesting dynamic to consider is what we're calling a depth of bug. And this almost extends the last slide and then high quality bond that is actively traded by dealers and very liquid. And you can see here, if you go from the top screenshot along the row past the bid and the ask prices, there's a column headed Tap the book and a little icon.

When you see this and you see the book icon, this is an invitation to click it if you're interested. And what happens then, you get this pop-up showing the book, as we term it. And, really, what this is, again, the transparency for our investors to look at-- again, this aggregation of prices and offerings from dealers.

So although it's a bit of a small screenshot here, we've just called out some of the key points so that on the bid side, you can see there's 14 dealers bidding this bond. And on the ask side, there's nine dealers-- so nine rows of dealers offering the bond.

And they're stacked, again, in the advantage of the customer. So on the ask side, the lowest price is first, going down to more expensive. And on the bid side, best prices for the customer, meaning the highest bid-- highest price first and then going down to lower prices.

And you can see, again, just like we looked at a second ago on the offerings page, each of these prices has their associated yield. And also, the dealer is showing their quantity-- quantity available and quantity minimum. So this enables you to do two things.

One is if you're looking to buy a large amount and the top of the book, the price that you see initially and the quantity you see initially is not sufficient for your needs, you can go down and purchase a larger quantity.

Alternatively, sometimes the minimums may be high that you're looking at. But if there's book there, there's a depth of book, you can click that, work down the depth of book, and hopefully they find another dealer-- maybe slightly higher price, but they are offering a lower minimum. And that enables people to trade and, again, see the trade off-- no pun intended, but see the trade off there between saying if I buy a higher quantity, maybe I can get a better price than a lower quantity.

But, again, that's not necessarily so. In this case, you can see the leading price in this example only had a minimum quantity of 2 bonds and actually had the best price. So there's no necessarily hard rule there, but it's a very useful tool to see liquidity. And it might also inform you, if you're thinking of potentially selling the bond before its maturity date, to know this sense of liquidity before investing.

Another useful way of using live pricing, if you like, is to actually use live pricing in the past. And this is to say that this is not the same as the valuation pricing we looked at at the beginning. This is to say, looking at actual trades that have happened-- so just like you would, again, in stock investing, perhaps, right, equity investing.

We show here a chart of a bond, a corporate bond, that is looking back to around a year's worth, I think. Yes, it looks like a year's worth of prices. And these are not just trades that have happened at Fidelity, but they are ones that have happened in the market.

It's actually a regulatory requirement for dealers to report back to the regulators the prices at which bonds were traded. And so here in this case, once that data is available, we show it on fidelity.com free of charge for our customers' benefit. And it can just be another good sanity check as you're looking at a live price to say, OK, well what has been the trading history of this bond both in the longer term perspective here as a year, or you can look at it literally intraday and look at it both in a price view, as we show here-- but as you can see, a toggle to the top left of the chart saying "yield."

So you can look at it as a yield chart as well as a price chart. And you can look at it as a table of data as well as a chart itself. So, again, just to get that sanity check, whether the bond price you're looking at to potentially execute, how does it match up with, potentially, a price that was traded elsewhere fairly recently? And if the market hasn't changed, again, is it a reasonable price to consider?

So that was we used as the context of corporate bonds. We now want to just move over to the world of municipal bonds to further emphasize some of the observations that Luke made earlier on about how many bonds there are-- over a million, I think you said, Luke-- a million different CUSIPs in the municipal bond market, but a lot less trading.

And what we find in the municipal market, again, is even though in Fidelity, we would offer something in the order of 100,000-plus municipal bonds per day, which is a lot, obviously, but it's nowhere close

to the million-- many of those millions number are just not available to trade. They, perhaps, have a small issuance in the first place, don't come to the market often, and/or some muni bond might be available today, but then it would go dormant after it's traded. And it wouldn't be offered for a few weeks, even.

And then you see it come back to trade back into the market a few weeks or months, even, later. So it's definitely a world of less liquidity. And what we're showing here is how that, again, manifests itself when you look at our website.

So, for example, here, we're doing the same thing we did before with the corporate bonds, looking at a couple of offerings highlighting and actually expanding, in the right of the slide, the bid and the ask prices for two of those municipal bonds. So, now, one thing that jumps out immediately here is that neither of these bonds have bid prices, right?

So, remember, I was saying that we do our best to source from as many dealers as we can, and the dealers, separately, can offer the offer side of the market, the ask side of the market, and/or the bid side. So here, even though we have dealers prepared to offer the bonds, they are not prepared to quote a bid price, and neither was anyone else.

But, again, if you're wishing to invest, and here we are, we have these offerings. Same principle, you can see municipal bonds do trade in a five-quantity minimum-- so $5,000 minimum par value. So units and increments are also five. So here, the minimums are 10 for both these bonds, and both dealers actually have 25 of them available, and so on.

So very similar experience as corporate bonds as also other bonds like treasuries and agencies. But I just wanted to show here the lower levels of liquidity. And, in fact, if you go to the third row, that's the Pennsylvania bond from York County, work their way along-- we're highlighting the depth of book symbol.

So in this case, there was a depth of book. If you note the two bond offerings below it, there's no depth of book symbol. So we do have here a depth of book. So we click on that, open it up to the lower right.

And again, although it's not bad, we have four dealers offering this bond, different prices, as Luke saw earlier-- again, there's no live market for the bid side. And even the fact that we have four dealers, right, it's not as deep a market as we saw with the Johnson & Johnson bond earlier from the corporate side of the house.

But, again, this is just the reality of the market. It might help you if you're, obviously, a buy and hold investor. It may not be of any interest, but if you're thinking of potentially liquidating a position, it might be worth considering how liquid or not is this position. But if you're asking yourself, what do I do, then, if there's no live pricing for the bid side, how can I sell?

The third topic in this section is just to discuss this very useful facility called request for bid quote. And the nice thing is this used to be a very manual process, one of many, many phone calls. It's now fully automated on an electronic platform we have at Fidelity on our website.

So the way to go about it is quite simple, we hope. Starting top left, it's an example from one's positions page. So, remember, that page we looked at the very beginning [INAUDIBLE] nightly valuation.

As you click into one of the rows, you'll see here the headline, the title of the bond, and then the buy and the sell buttons. So, intuitively, you would want to sell. So you click the sell button. Moving to the right, if there is a live bid, you would see it, right?

But in the case of there not being a live bid, you see that in the top right underneath the description of the bond. It says "bid prices dash dash" and "bid yield dash dash" again. But below that, you see the action box. And that would now default to request bid.

So this is the beginning of the process. And then all you have to do as the user is to put in the quantity you're interested to sell. It need not be your whole position. It could be a subset of your position.

But once you've done that, click the Submit Bid Request button. And then you go down to the bottom of the screen where we show the next screen. And this is just confirming that we've received your bid request. And you can see here the read-back, if you like, saying that we've received the bid for five bonds. And the bid response is expected at this date and time.

So, typically, the time frames are 15 minutes for corporate bonds and agency bonds and an hour-- we allow an hour for the responses to come back for municipal bonds.

What goes on there? Well, if you imagine, again, that illustration we showed earlier with all the different dealers, this message has now gone out to that network of dealers asking for them to respond, to provide a quote for what the user had input here for the CUSIP. So we send the CUSIP with the quantity requested.

Now, the dealers aren't under obligation to respond, but we find, typically, many do, and usually within the realm of anywhere from, say, 3 to 4 up to over 10. So what we do from that, then, is take the best price-- send the customer the best price, and we have a couple of ways to do that.

Firstly, hopefully, if you're eager to respond quickly, which, again, I would advise, is to sign up for the email alerts. We also offer text alert. And you can receive the response back immediately through that.

We also have what we call here the Bid Wanted Dashboard.

So this is where, again, the same information is provided on the website. And you can see here there's an account dropdown. So you select the account, and then you see all the different bid requests that have been submitted in recent days or within a day. It's very useful, this facility, for doing a number of bid requests at the same time or in a given day just to keep track of them.

You can see here it's got a couple of dynamic fields-- just replays the quantity requested, the bid that was received. So this would be the number that would be filled in. And you can see the very first row here, we're still waiting. So the bid status is the response is expected at this time, but we don't have it yet.

So that's an example of collection window is still going on. And then in the second row here, once a bid is received, again, we provide the best price and send that back on the email, as well as show it here. The action button appears to sell. So you can see the opportunity for the customer to sell.

And then sometimes in the next case, we would assess the price as not being a good price. And this is done somewhat mechanically against the third party price or the valuation price. But we just flag that as an outlier bid. ie, if we don't think the price is that great, but you're still welcome to sell if you wish to, and by clicking that button there [INAUDIBLE] out a bid.

And then, finally, we have cases where the bid has expired. And then in those cases, you can see, usually, most of the time that we allow to exist for a few hours. But if they do expire, you can certainly request another bid and start the process all over again from this dashboard. So, with that, I'll turn it back to you, Luke.

I think we're now at the third section. We looked at a lot of different types of pricing there, but we'd now like to look at the topic of costs, because that also can impact the price and, ultimately, the yield that the investor receives.

LUKE VANCE-HILLS: Yeah. So we've hinted at this already throughout the presentation, but understanding your trading costs is going to have a real impact on your bottom line. So we're breaking this down three ways.

The first is to look at transparency in the market and the way Fidelity does things versus some of our competitors. We'll look at a markup fee comparison and then, lastly, look at the impact. So, again, as we go through this, just keep in mind that my role exists. Again, I work as a fixed income regional brokerage consultant.

After the presentation today, you're going to receive an email that offers to connect you with someone in my role. So I'm based here in Southern California, but I have peers across the country who serve our clients nationwide. So if any of this is interesting to you and you want to take a deeper dive or maybe see how it applies to your specific situation, we'll be here to partner with you for that.

So the first thing we're looking at is cost transparency. We have two different models shown here. The first is the Fidelity model, which is transparent pricing. And then underneath that, we'll look at a markup broker process, which we're calling undisclosed pricing.

So the transparent pricing, you're going to actually see real inventory. Richard pointed out those aggregator services where dealers show their inventory out to the market. So we just connect you directly to those aggregators. We show you the real prices that are posted from them.

So you see those real live prices, as we showed earlier. And then when you go into the trade ticket, you'll actually see the dollar per bond markup. So it's a flat markup regardless of the type of bond that you buy or which bond you buy. So, for secondary market, corporate and muni bonds, you'll be paying $1 per bond flat rate.

So you'll see that listed out in the trade ticket very plainly. So we don't charge you anything hidden or anything like that. So that's the transparent process that Fidelity offers. And then when we compare that on the bottom to the markup broker process, which we're calling undisclosed pricing, instead of connecting you through the aggregator process, they may connect you to just one or a few dealers. Instead of showing you the real life prices where those dealers are offering their securities, they're going to put a spread on top of it or an undisclosed markup. So if a bond is being offered by a dealer

at par or 100, you may never see that par price. You're just going to see a price of 102, which is where the dealer is willing to trade with you at.

So there's this hidden markup or undisclosed markup built in there, which you see both on the offering as well as on the trade ticket. So you get to the end, and you see there's this markup, which we think creates a conflict of interest between a broker and their client. But you don't really know how much you're paying. But you can be pretty sure that most of the time it's more than $1 per bond.

So those are the two different ways. Fidelity was a pioneer here. We think that transparency is really important in having empowered clients, which is what we want to have. And we've found that when you're empowered, you're happier with Fidelity, but also, you're able to make better decisions that really impact your bottom line. So that's cost transparency.

And next, we're going to take a look at what this would look like if you're going on the website to see a trade. So we were able to see a trade that a Fidelity client placed at a different broker at a markup-based broker. So you can see that's listed on top, boxed out in blue. And then we're contrasting that with the Fidelity trade, which is boxed out in green.

So there are going to be two trades listed for each customer purchase. So the first one is the dealer taking the bond off the market. So you see that as a dealer-to-dealer trade. If we look at the green box on the bottom, it's pretty straightforward. It's $1 per bond at Fidelity.

So you see Fidelity buys the bond from the market at 96.451. The client buys it from Fidelity at 96.551. So it's $1 per bond. Or here, it looks like a tenth of a point in the price.

So you see those two trades happen instantaneously. If we look at the markup trade, which is, again, boxed out in blue on top, a very, very different process. You can see the dealer-to-dealer trade at 96.738, and then you move to 98.609 for the customer purchase. So the client never sees this 96.738 price. They're only going to see the 98.609. So they have no idea what their broker actually paid for it, so it creates this hidden markup, which works out to $18.71 here per bond.

So to put that in context, think about something that you pay $1 for or that you're used to paying $1 for, then someone wants to charge you $18.71 for it. That's the way that the markup process works at other firms. So it works out to a total of $374.20 total on the trade for 20, whereas the Fidelity dollar-per-bond would have been for the trade.

So a very, very different process, and, again, it's going to impact both the transparency, but also really impact your dollars and cents because we think that lack of transparency leads to these wider spreads and bigger markups. So, Richard, I'm going to turn the floor back over to you. I want to see if, from your perspective, is this a one-off situation, or is this something that's happening frequently?

RICHARD CARTER: Yeah. Thank you, Luke. This is a great one. Yeah, and the price is here, right? I mean, they were traded on the same day at pretty much the same time. So it's just interesting. And I think as we've observed this thing happening, we wanted to try and get a sense of, well, we know this is post-trade. Can we get a sense of what this pricing is like pre-trade?

And so what we did for that, we just actually published the results on our website, actually, as we speak. We commissioned a third party called Corporate Insight to conduct a bond pricing kind of

comparative shopping exercise, basically looking at prices of corporate bonds and municipal bonds available at fidelity.com and comparing them with the prices offered by some of our dearest competitors for the same bonds.

So, again, one thing is in this broad market we just discussed today, finding the fact that broker A is offering the same bond as broker B, and broker C, and so on. So when we find this match, or when Corporate Insight found this match, then they say, well, what's that price that Fidelity is offering at? And what's the price of the competitor firm offering at?

And you see here in the scatter plot, the high level, the results, where the y-axis shows the average cost differential up below the 0-line, right? The $0. So any observation above $0 is the competitor charging more than Fidelity by that amount. Anything below that $0 line is where Fidelity was more expensive.

So I'm pleased to say that compared to three of our keenest competitors, that, as Luke was saying, they don't disclose their pricing upfront. But what Corporate Insight did was to observe behind the login, as an account holder would, what are these prices for specific bonds? They actually looked at somewhere in the region of 37,000 different observations, and here's a scatter plot of those differential prices.

And so this information, we think, is really proof positive that those undisclosed pricing, as you were saying, it really does mean a worse price and a lower yield for the given bond they can achieve here at Fidelity. We have this available on the website if people are interested. It's our landing page.

And you can see here, we've crystallized the scatter plot there into averages. So for corporate bonds and municipal bonds at these different competitors, how much more are they? What are they charging versus the Fidelity dollar-per-bond?

And then further from that website page, there's another page here you can see where some other interesting data points of the survey were available. First, the first block of text there shows what percentage of the time of the observations was Fidelity cheaper for the same bond at the same time versus the competitor? And for both corporate and municipal bonds, the number two chart below it, lower left, shows that in graphical form, how much cheaper or how much was the advantage for Fidelity, how much more expensive were these other firms than Fidelity for corporate bonds and municipal bonds. And then, again, thirdly, to the lower right is the scatter plot again.

So that was the survey. Luke, I'll turn it back to you. Sorry to jump ahead there, but I think you had a few words on other things that customers could use for tracking the cost.

LUKE VANCE-HILLS: I really wanted to hit this one. So this is something called a trade confirm. So if you've ever placed a trade, your broker is required to send this confirm out to you. So it gives the details of the trade.

And a few years ago, there was a new regulation that said that brokers who trade in bonds have to report the markup on the trade confirm. So we're showing what this looks like for a Fidelity trade. We've got the trade ticket here on the left. You can see the price at 99.8. And then the price with markup over here at $99.9. So, again, that's $1 per bond, or it works out to a tenth of a point in price.

And you see your effective yield, which is your yield adjusted for the trade markup highlighted here in yellow.

And then if we look on the right, this is, again, your trade confirm. And it shows details of the trade-- so things like the quantity that you bought, the price where you purchased it at. We've got the yield highlighted as well. And then you can see the second highlight box there is going to be the actual markup.

So be careful here. At Fidelity, you know what you're getting. It's always going to be $1 per bond. The way that markups are reported, there is a loophole there that would allow a broker to say that they're not charging a markup when they are.

So just keep that in mind, that there may not be the same level of transparency at other firms that we have here at Fidelity. And, again, that's a service that if you are able to connect with one of the fixed income regional brokerage consultants in your area, they'll be able to walk through-- and we can actually pull up the ticker tape, which is a very interesting conversation and look at that dealer-to-dealer versus the customer purchase trade. And you can see the real markup there.

So this is an interesting way to see the markup, whether you're buying here at Fidelity, but not always the full story. So if we look at the next slide here just to review what we've talked about so far today-- so we looked at comprehending the bond market, specifically in contrast with the stock market, just the ways that they're built differently.

We talked about assessing pricing for individual bonds, both the live pricing and the process that you're going to use to request a bid quote. And then, last, we looked at understanding the trading costs, so especially the markups that you're paying your broker. So just kind of in summation here, we wanted to talk about where you can get started if you're interested in learning more.

This is the landing page for fixed income on fidelity.com. So anything that Richard is in charge of or anything that we've talked about today is going to be found starting on this page. You've got your green navigation bar that runs along the top of fidelity.com. The middle tab is going to say News and Research.

So you'll choose news and research and then fixed income bonds, NCDs, and that'll take you to this page. So the primary feature on this page is going to be the big table with all the yield numbers, which you'll see in the bottom left corner of the page here. So that lets you know that you're on the correct page, but a lot of different functionality from here.

And, Richard, if we can go to the next slide, we're going to highlight some of the bond tools that are available through this fixed income landing page portal. There's a new fixed income dashboard.

So for those of you who have been with Fidelity for a while, you'll know this as the fixed income analysis tool, which we've rebuilt and rebranded as the fixed income dashboard-- so, still there to show you the same pieces of information, just in a newer, more friendly way. We've also got the bid quote status dashboard, which Richard highlighted earlier, which is available from the bond tools page-- a tool that you can use to build a bond ladder, which is a diverse array of maturities of bonds to build a portfolio out.

Fixed income alerts that can help you keep track of your portfolio-- so whether you're seeing maturities, calls, maybe upgrades and downgrades in your portfolio, you can sign up for those here.
And then, last, we're highlighting the mutual fund evaluator. There are a lot of different ways to get exposure to bonds. Primarily, today, we've focused on buying individual bonds, but there's other ways to get that exposure through mutual funds as a wrapper. And we've got that evaluator tied here.
Another tool that I use on a daily basis that we don't have highlighted here is something called the Tax Equivalent Yield Calculator. So it's a great tool that you can use to go in. All we need to know is your income and the state that you live in.
We'll be able to help you understand the tax equivalent yield for different bonds that you might purchase. So municipal bonds, which are tax exempt, compared to Treasury bonds, which would be federally taxable, but tax exempt at the state level, and then maybe corporate bonds or CDs that are fully taxable. So you're able to compare that all in one place and help understand the real take home yield that you're going to keep if you buy a bond. So let's look at the next slide.
This is the portal that I referenced a few times here. You'll receive an email after the webinar closes today. It's not spam. So just keep that in mind if you see something.
It's an offer to connect with a real live person to help walk you through this information. So if any of this is interesting or you'd like to learn more about the bond pricing process, you can connect with someone here by clicking on Get Started, and that will help you find someone local to you that you can meet with either in-person, over the phone, or virtually.
And we can help you understand your current bond holdings to help you do analytics on your portfolio, explore how you can build bonds into your portfolio. I think, especially right now, a lot of people looking to add duration to the portfolio and may need some extra help to bring that vision to life. And then, last, to look at helping you understand if you're paying markups on your outside portfolios.
Yep. So the great thing about Fidelity is we're pretty open architecture. So we want to work backwards, help understand who you are as an investor, what you're trying to accomplish. So, again, we've mostly talked about self-managed individual bonds today, which is just buying bonds live from the market on your own. But you can also buy individual bonds through a portfolio manager, which we would call a separately managed account where you carve off part of your portfolio for a specific type of exposure. And then a team of portfolio managers, analysts, traders run that strategy for you.
Like we mentioned earlier, you can also get bond exposure through a mutual fund wrapper or also an ETF wrapper. And there are tools to help you screen for those through the website. And, again, your fixed income RBC or your financial consultant can help you explore those as well.
RICHARD CARTER: Right. Thank you very much. That was great, and thank you for helping us through that. And that marks the end of the formal presentation. We just have some disclosures to flash up here.

But let's now turn to the Q&A. Thank you for everyone who submitted a question. Why don't we start with one-- maybe, Luke, you could take this one. It's really, what are the hours of live pricing that would be available at Fidelity? In the bond context, of course.

LUKE VANCE-HILLS: Yeah. So the bond market is going to be open from 8:00 AM to 5:00 PM East Coast time. So you'll see live pricing available whenever the market is open. Some prices may be very dynamic.

So you may see, if you're trying to trade a Treasury bond, that even the few seconds that you spend in the trade ticket trying to confirm the details of the trade, the market has already moved against you. So that may create an obstacle in effecting a Treasury trade.

Ours is a municipal market, much less dynamic, much more static, and you're likely to see prices good for a much longer period in that part of the market. So it really depends on the part of the market that you're trading in. But you are going to see live pricing as long as the market is open. And you'll see that both on the yield table as well as in the search results pages that you pull up.

RICHARD CARTER: And I know, Luke, you're speaking from the West Coast, right? So that's an early morning start for you.

LUKE VANCE-HILLS: Yeah, exactly.

RICHARD CARTER: And then, yeah, what we do on the website is we would, after 5 o'clock, as you mentioned, after 5:00 PM, we leave the prices there until the next day, right? So there's sort of like static as of the last prices we saw for an offering.

But, yeah, otherwise, quite good opening hours-- 8:00 to 5:00. Had another question here asking about the $1 per bond. And the question is, do we charge $1 per bond on every bond and CD transaction? So I can take a stab at this one.

First thing to think about is that the $1 per bond approach, and all that we've really talked about today in live pricing and the competitor study, that's a secondary market. There are a lot of bonds available on the new issue side of things. So, for example, Treasury auctions, many of our CDs, our new issue CDs, although there is a secondary market there too.

We have an extensive offering of new issue municipal bonds, agencies offered every week, and also corporate bonds. Now, in those cases, there's no charge as a new issue, apart from if a Treasury bond is traded through a representative, we do charge $19.95 there.

Now, back on the secondary market, it's $1 per bond every time, as Luke and I were explaining-- hopefully some benefits there to customers, too, that if you are trading over 250 bonds in one trade, there's a cap at that point-- so $250 bond would be $250 maximum. Also, if a bond has a maturity date of a year or less, the cap is at $50.

So if you're trading, for example, $100 on a short-term bond-- sorry, 100 bonds in a short-term maturity, it could be equating to $0.50, for example, and not $1 per bond, but $0.50 in that example. Aside from that, we have a few caveats.

Again, in the case of a representative-assisted trade, the $19.95 minimum. But after that minimum, it's $1 per bond. So, for example, if you buy 21 bonds with us with a representative, there's a $21 charge.

So that's our approach. But, yeah, generally speaking, $1 per bond. I didn't mention treasuries online-- no charge.

Next question-- here's one. Luke, do you want to take this one, perhaps? How often is [INAUDIBLE]?

LUKE VANCE-HILLS: So the third party price is actually, I believe, going to be static from day-to-day. Is that accurate, Richard?

RICHARD CARTER: Yeah. Yeah. That's right.

LUKE VANCE-HILLS: Yeah. Yeah. So you'll see that is kind of a close of day price. And, like we mentioned, the pricing in the bond market is not dynamic in the same way that the stock market is. So sometimes that price is very, very good and very close to what you might expect to pay or receive in the secondary market. And sometimes, it's not and really based on the size of the issuance, the liquidity in that part of the market. So that daily price is what you're going to see listed as that valuation, both on your statement as well as when you see the third party price listed on the website.

RICHARD CARTER: Yeah. Thanks. I'll just add to that, Luke, we mentioned it earlier-- the price is derived from outside vendors who are specialists in this activity. And what they do is they arrive at this nightly pricing based upon all the trading in a bond throughout the day. So it's not necessarily just the last price if it traded, say, 10 times during the day-- it's [INAUDIBLE] trade.

It's a look at and a sort of weighting-- obviously, they probably weight the most recent trades higher than the earlier trades, but they would take into account earlier trades. And if there is no trading in a particular bond in the previous day, then they would look at other bonds that look like that bond-- similar maturity, similar issuer-- as a way of guiding themselves to that evaluation price.

So that's another reason why, as you were saying, Luke, it's a daily exercise on that front. How about this one here? Someone asking about the impact of prices on yield. So, broad topic, but do you want to take a go at that, Luke? We did show it a little bit in the screenshots, but how would we say the price impacts yield?

LUKE VANCE-HILLS: Yeah. So one thing you'll notice on the slide that Richard showed where we went out and did a study where we showed the different prices where you could buy the exact same bond at Fidelity versus our competitors, you can see that spread or the markup charged by the broker is going to increase as the maturity goes further out. So just, yeah, in this scatter plot here-- yeah, perfect.

So you can see this line goes up and to the right, which is just showing that that markup is going to be bigger the further that you go out. And a big reason for that is that it's easier to hide a large markup in the yield for a longer dated bond. So if you're buying a one-year bond, that markup is going to eat up a huge chunk of yield, and you'll see maybe a bond that would trade at Fidelity for 3% is going to trade at a different firm for 2.5%, whereas if you go further out, you can really charge some of these very, very high $20, $30, $40 markups, and it gets washed away in the yield there.

So there is a very real impact on the yield that you keep based on what your broker is taking at the time of the trade. Sometimes, it's small. Sometimes, it's large. The further that you go out, the easier it is to hide that markup and the yield that you see.

RICHARD CARTER: Perfect, Luke. Yeah, that's a good way to put it. And, of course, that price does have a detrimental effect, right, on the yield. Even if you're trying to hide, it still would have a negative effect, whereas the $1 bond would have a less negative effect. I guess we maybe time for one more, which is a gentleman asking, doesn't the price that Fidelity pays for the bond include the dealer markup? So the client cost is the dealer markup plus the $1 per bond?

I can take that one, Luke. Do you want to have a go with it? I'll just say yes, it does. We can't control what the dealer themselves want to make on a bond. So that's why we have this idea of gathering as many prices as possible, showing that in the depth of book from all the dealers, saying, here's the best prices we could get, and then we add our $1 per bond.

What we've done here is to try and say, even that, right, the dealers are, obviously, in any retail sell or trade, there's the dealer markup and there's the end broker markup, if you like. And so here is a comparison shop study where we are looking at the net effect of both. So these prices are just, again, prices that we observed from competitors for their retail clients, just in the same way that what we show-- so, yes, there are spreads-- and you saw that in the bid and the ask.

Remember that other slide, we showed the bid and the ask-- that's the dealers making their spread. On top of that, the $1 per bond-- what we're showing with this type of data is the fact that there's further spreads going on, further markups going on in other competitors above and beyond $1.

LUKE VANCE-HILLS: And we do provide some data points to help give context to that story. The first one is, obviously, the third party price that's provided. So if you see a bond and it's being offered at $1.05 because the dealer on the other side of the trade has a big markup built in and it's priced, the third party price, at $100, you can say, that's a pretty lousy price. I'm going to skip over that one.

But you'll also be able to get context through the recent trades and the trading history or the ticker tape, and then also in the depth of book. So if you see multiple dealers offering the same security at different prices, then that lousy price moves to the bottom of the stack and you see other better prices ahead of it.

RICHARD CARTER: Very true, Luke. Yeah, absolutely. Well, thank you very much, Luke. It's been a pleasure. Thanks for joining me today. And to our audience, thank you very much for joining us today and your interest in this topic.

Disclaimer:

1.(from pages 25, 26 and 27) Fidelity commissioned Corporate Insight to study bond pricing, available online, for self-directed retail investors from three brokers that offer corporate and municipal bonds for comparison to Fidelity's standard online pricing. The study compared online bond prices for more than 37,000 municipal and corporate inventory matches from June 4 through July 10, 2024. It compared municipal and corporate inventories offered online in varying quantities. The study found that, on average, the three online bond brokers identified in the chart were asking $12.95 more per bond. Corporate Insight determined the

average price differential by calculating the difference between the prices of matching corporate and municipal bond
inventory at Fidelity, including Fidelity's $1 per bond mark-up for online trades vs. the prices offered online for the same bonds from the three brokers in the table, then averaging the differences of the financial services firms. The analysis included investment grade corporate and municipal bonds only.

Minimum markup or markdown of $19.95 applies if traded with a Fidelity representative. For U.S. Treasury purchases traded with a Fidelity representative, a flat charge of $19.95 per trade applies. A $250 maximum applies to all trades, reduced to a $50 maximum for bonds maturing in one year or less. Rates are for U.S. dollar-denominated bonds; additional fees and minimums apply for non-dollar bond trades. Other conditions may apply; see Fidelity.com/commissions for details. Please note that markups and markdowns may affect the total cost of the transaction and the total, or "effective," yield of your investment. The offering broker, which may be our affiliate, National Financial Services LLC, may separately mark up or mark down the price of the security and may realize a trading profit or loss on the transaction.

References to individual securities are for illustrative purposes only and should not be construed as investment advice.
In general, the bond market is volatile, and fixed income securities carry interest rate risk. (As interest rates rise, bond prices usually fall, and vice versa. This effect is usually more pronounced for longer-term securities). Fixed income securities also carry inflation risk, liquidity risk, call risk and credit and default risks for both issuers and counterparties. Any fixed income security sold or redeemed prior to maturity may be subject to loss.

Interest income earned from tax-exempt municipal securities generally is exempt from federal income tax and may also be exempt from state and local income taxes if the investor is a resident in the state of issuance. A portion of the income received may be subject to federal and state income taxes, including the federal alternative minimum tax. In addition, investors may be subject to tax on amounts recognized in connection with the sale of municipal bonds, including capital gains and “market discount” taxed at ordinary income rates. “Market discount” arises when a bond is purchased on the secondary market for a price that is less than its stated redemption price by more than a statutory amount. Before making any investment, investors should review the official statement for the relevant offering for additional tax and other considerations.
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