



By better understanding bonds, you can more confidently use them to strengthen your portfolio.



Develop an Ongoing Strategy—with Fidelity







Common Questions

1

How many of you currently have bonds in your portfolio? 2

Ever wonder why it's harder to get a bond quote than a stock quote?

3

How many of you have a grasp on what you're being charged per bond trade?





Today's Agenda

Understanding the Bond Market





The Makeup of the Bond Market Varies from the Stock Market



	STOCK MARKET	BOND MARKET
Makeup	Equity shares of publicly owned companies	Debt securities issued by corporations, governments, government agencies, municipalities
Size	Limited to size of shares offered by companies	Relatively small and large debt instruments
Trading marketplace	Centralized (Ex. NYSE or NASDAQ)	Fragmented, bonds are traded "over the counter."
Pricing transparency	Generally transparent and liquid	Larger issuance = more transparent/liquid Smaller issuance = opaque pricing/less liquid

Size





CHARACTERISTICS	BOND	STOCK
Market Size ¹	\$44 Trillion	\$46 Trillion
Daily Trading Volumes ²	\$848 Billion	\$322 Billion
Number of Securities ³	1,197,000	5,284
Ford (example) Outstanding ⁴	\$81 Billion	\$37 Billion
Ford (example) Number of Issues ⁴	405	1

In general, the bond market is volatile, bond prices rise when interest rates fall and vice versa. This effect is usually pronounced for long-term securities. Any fixed income security sold or redeemed prior to maturity may be subject to a substantial gain or loss.

^{1.}Bonds—SIFMA, Q4 2019, Equity-World Federation of Exchanges 2. Bonds—SIFMA, Q4 2019, Equity AMEX, NYSE, NASDAQ, BATS 3. Bonds-FINRA Feb 2020, Equity-World Federation of Exchanges Dec 2019 4. FINRA—Recent 10-K filing.

Volume: US Bond Markets



DAILY TRADING VOLUME (\$BN) AND CUSIPS OUTSTANDING

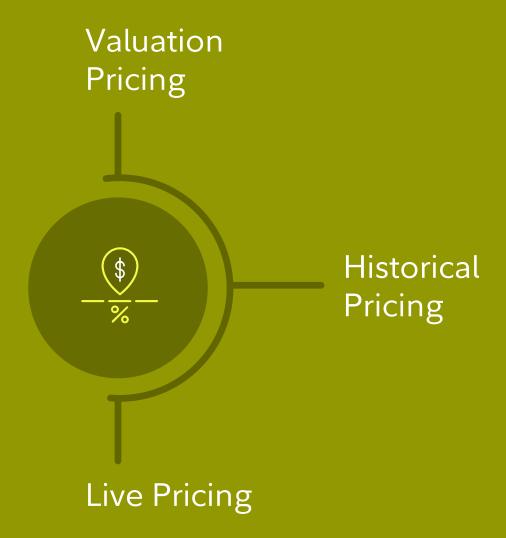


Source: FINRA, SIFMA, Dec 2019

The bond market can be difficult to navigate because of its fragmented nature, its size, and its inconsistent trading.



Assessing Pricing for Individual Bonds





Valuation Pricing: Monthly Statement **Bond Pricing Valuation**



Bonds (continued)									
		Beginning		Price	End. Market Value		Unrealized		_
Description	Maturity	Market Value Jun 1, 2020	Quantity Jun 30, 2020	Per Unit Jun 30, 2020	Accrued Int. (AI) Jun 30, 2020	Cost	Gain/Loss Jun 30, 2020	Est. Annual Income (EAI)	Coupon Rate
		Juli 1, 2020	Juli 30, 2020	3011 30, 2020	Juli 30, 2020	COST	Juli 30, 2020	income (LAI)	Nate
Corporate Bonds (continued)	1								
WELLS FARGO CO NEW NOTE	01/24/23	1,031.00	1,000.000	103.6210	1,036.21 <i>13.38</i>	1,003.87B	32.34	30.70	3.069
FIXED COUPON MOODYS A2	S&P A- SEM	MIANNUALLY NEXT C	CALL DATE 01/24/202	2 CONT CALL 0	1/24/2022 CUSIP: 949	746SK8			
Total Corporate Bonds (7% of account holdings)		\$1,933.67			\$2,001.33	\$1,977.87	\$23.46	\$65.70	
Municipal Bonds									
BABYLON N Y TAXABLE PUB IMPT BDS	09/01/24	\$11,131.40	10,000.000	\$111.7420	\$11,174.20 <i>\$141.6</i> 7	\$10,004.26B	\$1,169.94	\$425.00	4.250%
FIXED COUPON MOODYS Aaa	S&P AA+ S	SEMIANNUALLY CUS	IP: 05620PDJ9						
Total Municipal Bonds (37% of account holdings)		\$11,131.40			\$11,174.20	\$10,004.26	\$1,169.94	\$425.00	

Valuation Pricing: Nightly Valuation

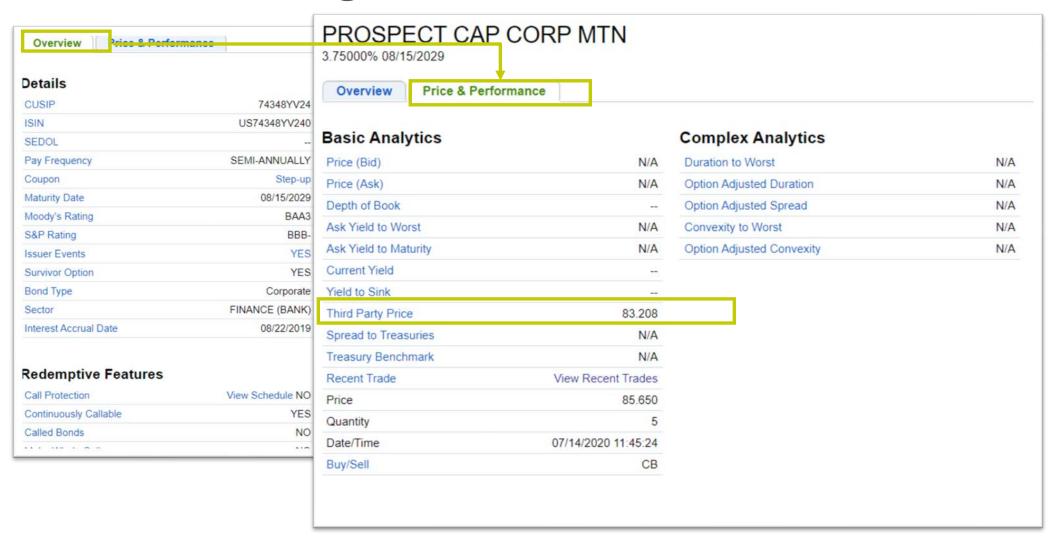


Symbol	Last Price (Change)	Today's Gain/Loss	
FCASH** CASH	\$1.00 (\$0.00)	\$0.00 0.00%	
34540TDZ2 FORD MOTOR CREDIT COMPANY MTN 3.50000% 3.500% 12/20/2022	\$96.119 (\$0.00)		12828YL8 NITED STATES
36290SYJ4 GOVT NATL MTG ASSN POOL #616413 5.00000% 0 5.000% 05/15/2034	\$114.818 (+\$0.0013)		125% 10/15/202
74348YV24 PROSPECT CAP CORP MTN 3.75000% 08/15/2029 3.750% 08/15/2029	\$83.038 (-\$0.034)	-\$0.34 -0.05%	*
002748AA0 JIL HLDG CORP NOTE CALL MAKE WHOLE 4.6250 1.625% 10/01/2020	\$100.496 (-\$0.009)	-\$0.18 -0.01%	
90348JDY3 BL UBS BK USA SALT LAKE CITY UT CD 2.90000% 10/ 2.900% 10/05/2020	\$1.0064 (-\$0.0003)	n/a n/a	*
912810PZ5 UNITED STATES TREAS BDS 2.50000% 01/15/2029 2.500% 01/15/2029	\$129.237 (+\$0.2794)	n/a n/a	*
912828YL8 UNITED STATES TREAS NTS SER AE-2024 0.12500	\$105.139	n/a	
0.125% 10/15/2024	(+\$0.1089)	n/a	+3.07%

For illustrative purposes only Source: Fidelity.com Screen-print taken on 12/22/2016

Valuation Pricing: Bond Details

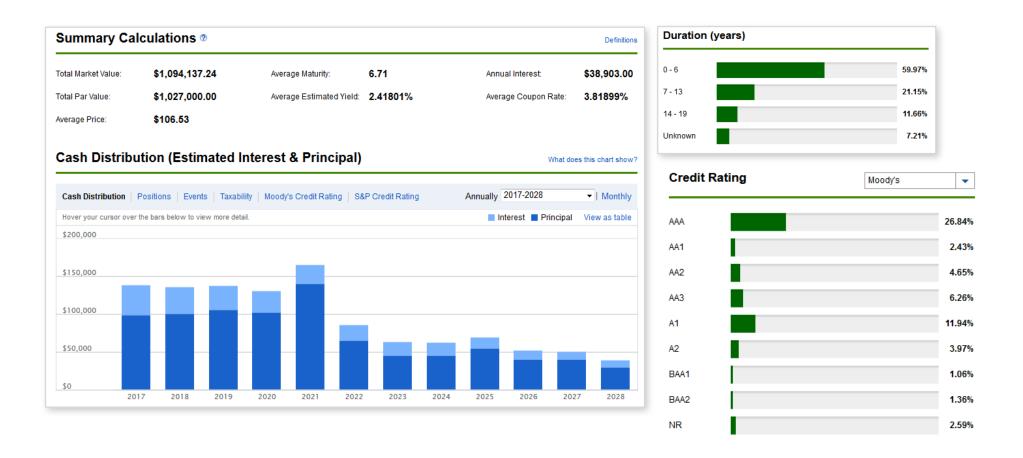




For illustrative purposes only Source: Fidelity.com Screen-print taken on 12/22/2016

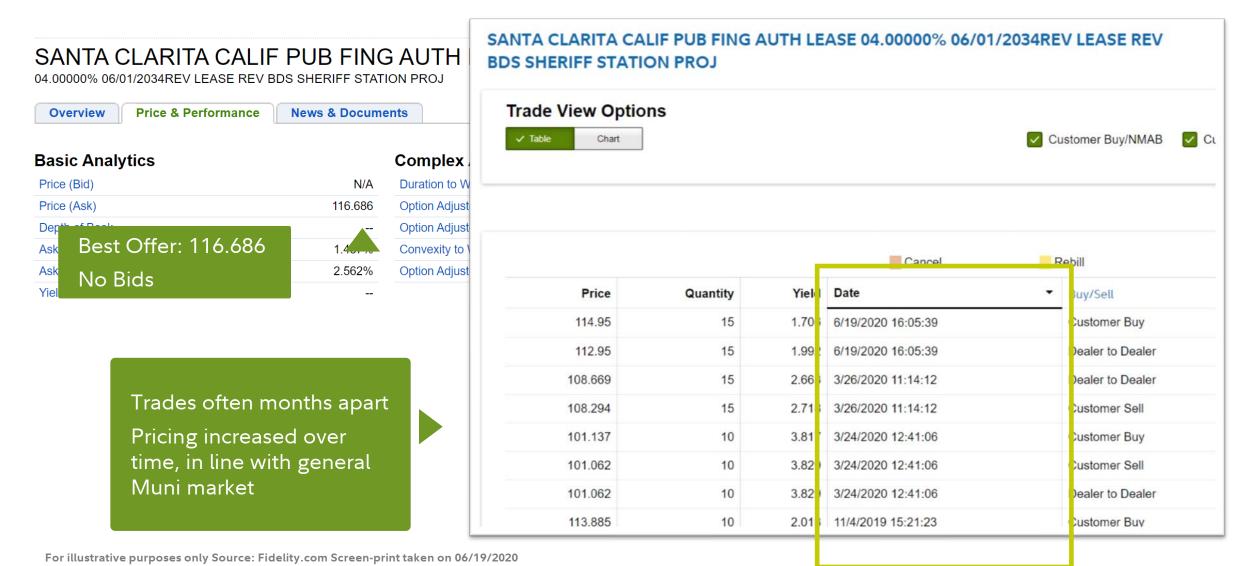
Valuation Pricing: Fixed Income Analytics





Historical Pricing: Trading Liquidity



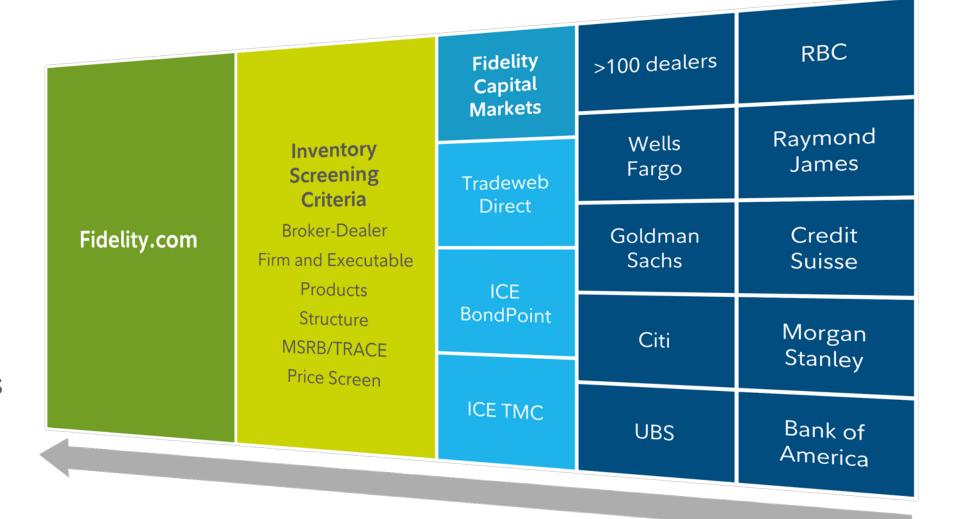


Live Pricing: Fidelity Bond Aggregation



~75K
Unique Bonds
Offered

~120K
Total Offerings



Live Pricing: Live Listing of Bonds Available



Corp	orate Bond Search Results						Help/Glossary					
View oth	er important information and risks of investing in fixed in	ncome securitie	es.									
Т	able View				Price/Y	ield Calculator	r Taxable Equi	ivalent Yield Cal	culator			
							YOUR KEY	Y SEARCH CRIT	ERIA Edit Sav	e		
							Search N	ame	CORP A1 to A3 A+ to			
Attribut	es Legend						Maturity I	Date	04/2025 to 04/2027	_		
-tti ibui	es Legend						Moody's I		A1 to A3 A+ to A-			
IF: Iss	uer Event CP: Call Protection SFP: S	inkina Fund Pr	otection ER: Ex	ctraordinary Rec	demption		Call Prote		A+ to A-	_		
	rvivor's Option D: Depth of Book Available		2111 27	,	2011.ptio11		Sinking F Protectio		Yes	;		
							Sector		Al	ī l		
otal Bo	nds Found: 166											
otal Bo	nds Found: 166 Select Action			Doti	na		id		Aok			
	OK			Rati	ng	В	id		Ask Vield to			3rd Party
	OK	Coupon	Maturity Date	Rati	ng S&P	B <u>Yield</u>	id Price Oty(min)	Price Qty(min)	Ask Yield to Worst/ Yield to Sink	Yield to Maturity	Depth of Book	3rd Party Price / Recent Trades
	Select Action OK						Price	Qty(min)	Yield to Worst/ Yield to	Yield to	of Book	Price / Recent

Live Pricing: Treasuries and Corporate Live Bid and Offer Prices



			Rating			Bid	Ask		
Description	Coupon	Maturity Date	Moody's	<u>S&P</u>	<u>Yield</u>	Price Oty(min)	Price Qty(min)	Yield to Worst	
UNITED STATES TREAS NTS NOTE 1.62500% 05/15/2026	1.625	05/15/2026	AAA		1.688	99.421 1,000(1)	99.469 1,000(1)	1.683	

Bid Price: 99.421

Ask Price: 99.469

Yield Spread: 0.005%

			Rating			Bid	Ask		
<u>Description</u>	Coupon	Maturity Date	Moody's	<u>S&P</u>	<u>Yield</u>	Price Oty(min)	Price Oty(min)	Yield to Worst/ Yield to Sink	
WELLS FARGO CO MTN BE 4.10000% 06/03/2026 FR	4.100	06/03/2026	A3	Α-	3.398	105.904 75(10)	105.999 2(2)	3.387	

Bid Price: 105.904

Ask Price: 105.999

Yield Spread: 0.011%

Live Pricing: Municipal Bond Offerings



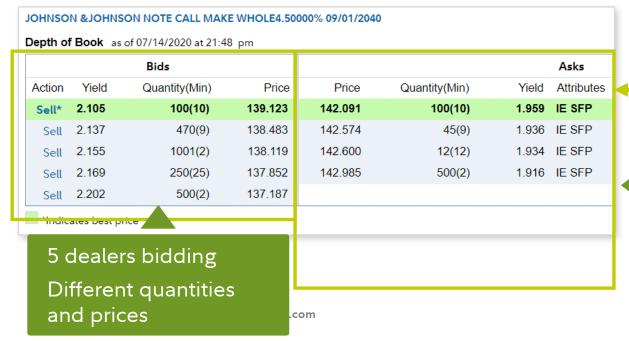
				Ratir	ng	Underlyin	ng Rating	Bio	(P)	Ask			
<u>State</u>	Description	Coupon	Maturity Date	Moody's	S&P	Moody's	<u>S&P</u>	<u>Yield</u>	Price Qty(min)	Price Qty(min)	Yield to Worst/ Yield to Sink	Yield to Maturity	
IL	KENDALL KANE & WILL CNTYS ILL CMNTY UNIT00.00000% 02/01/2027SCH DIST NO 308 GO SCH BDS OSWEGO SER.	0.000	02/01/2027	AA2	NR	AA2			No Bid ()	71.956 5(5)	3.120	3.120	
NJ	NEW JERSEY ST HIGHERED ASSISTANCE AUTH 05.10000% 12/01/2026STUD LN STUD LN REV BDS STATE OF NEW	5.100	12/01/2026	AA2	AA				No Bid ()	106.893 45(10)	2.990	4.276	
IL	COOK CNTY ILL CMNTY COLLEGE DIST NO 508 05.25000% 12/01/2026ULTD TAX GO BDS CITYCOLLEGE OF CHICAGO	5.250	12/01/2026		AA				No Bid ()	116.347 45(5)	2.807	3.382	
IL	COOK CNTY ILL CMNTY COLLEGE DIST NO 508 05.25000% 12/01/2025ULTD TAX GO BDS CITYCOLLEGE OF CHICAGO	5.250	12/01/2025		AA			-	No Bid ()	117.132 10(10)	2.700	3.143	
IL	PINGREE GROVE ILL SPL SVC AREA NO 2 03.50000% 03/01/2026SPL TAX REF BDS CAMBRIDGE LAKES PROJ	3.500	03/01/2026		AA				No Bid ()	106.578 10(10)	2.649	2.724	
IL	WILL CNTY ILL CMNTY UNIT SCH DIST NO 00.00000% 11/01/2026365-U VY VIEW GO SCHBDS SER.2007 B	0.000	11/01/2026	AA2	AA	AA2	AA-		No Bid ()	76.166 75(25)	2.640	2.640	
IL	UNIVERSITY ILL UNIV REVS AUX FACS SYS 03.62500% 04/01/2027REV BDS SER. 2011	3.625	04/01/2027	AA3	AA-	AA3			No Bid ()	105.191 15(5)	2.570	3.057	
IL	WILCO AREA CAREER CTR ILL DEBT CTFS 02.37500% 12/01/2025SER.2016	2.375	12/01/2025		AA-				No Bid ()	98.658 140(5)	2.535	2.535	
IL	WILL CNTY ILL CMNTY UNIT SCH DIST NO 00.00000% 11/01/2025365-U VY VIEW CAP APPREC BDS SER.2005	0.000	11/01/2025	AA2	AA-	AA2	AA-		No Bid ()	79.203 50(10)	2.501	2.501	
CA	SALINAS CALIF UN HIGH SCH DIST GO BDS00.00000% 10/01/20262002 ELECTION SER. 2003 A	0.000	10/01/2026	AA2	AA-	AA2	A+		No Bid ()	77.624 5(5)	2.475	2.475	

Bid	②		Ask
<u>Yield</u>	Price Oty(min)	Price Oty(min)	Yield to Worst/ Yield to Sink
	No Bid	71.956	3.120
	()	5(5)	
	No Bid	106.893	2.990
	()	45(10)	

Live Pricing: Depth of Book



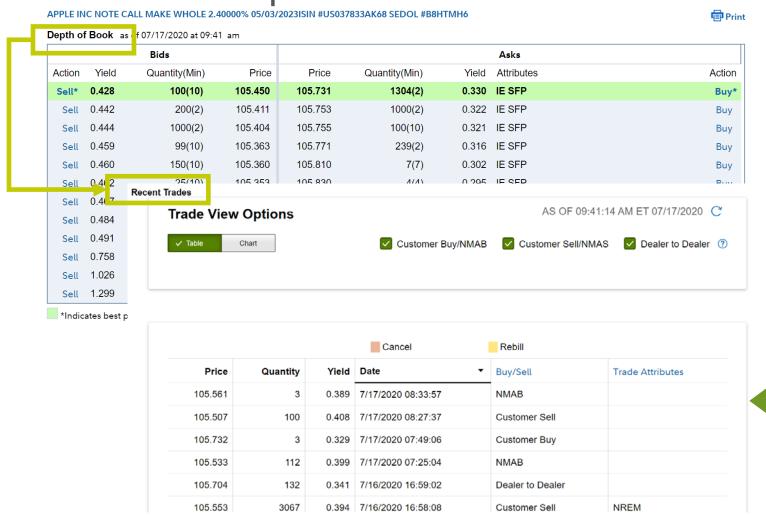
Trade Description Coupon Date Date Moody's S&P Yield Qty(min) Price Qty(min) Sink Depth of Boo Qty(min) Sink Depth of Boo Qty(min) Sell Depth of Boo Qty(min) Sell Depth of Boo Qty(min) Sell Depth of Boo Qty(min) Date Noody's S&P Yield Qty(min) Depth of Boo Qty(min) Sink Depth of Si						Rating		Bid		Ask			
WHOLE4.50000% 09/01/2040 100(10) 100(10)	Trade	<u>Description</u>	Coupon			Moody's	<u>s&P</u>	<u>Yield</u>			Worst/ Yield to		of Book
			4.500	09/01/2040	View	AAA	AAA	2.105				1.959	0



4 dealers offering
Different quantities and prices

Live Depth of Book and Historical Recent Trades for Corporate Bonds





Best Offer: 105.725
Best Bid: 105.436
Yield Spread: 0.098

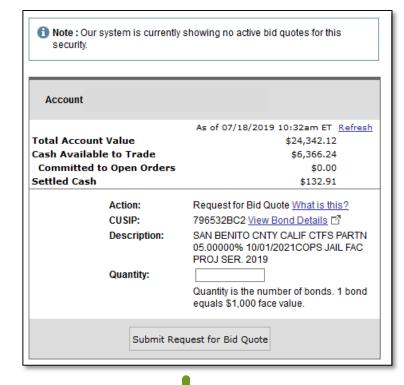
Recent Trades

Investor Bought earlier at 105.732
Investor Sold earlier at 105.553

Charting for Recent Trades







Live Pricing: Request for Bid Quote



Your request for bid quote has been received by Fidelity

Responses to your request will be emailed to you and posted on the <u>Bid Requests Page</u>.

Please check this page for your request's estimated response time. Depending on the security, responses may be posted between 30 minutes and 90 minutes.

Please note: your request is valid only until the close of the current trading day.

Order Information

as of 07/18/2019, 10:40 AM

Account

Action Request for Bid Quote

CUSIP 796532BC2

Description SAN BENITO CNTY CALIF CTFS PARTN

05.00000% 10/01/2021COPS JAIL FAC PROJ

SER. 2019

Quantity 5

Price discovery for securities without an "active" bid quote available on Fid.com

Allows multiple dealers to competitively bid on the position

Next Steps

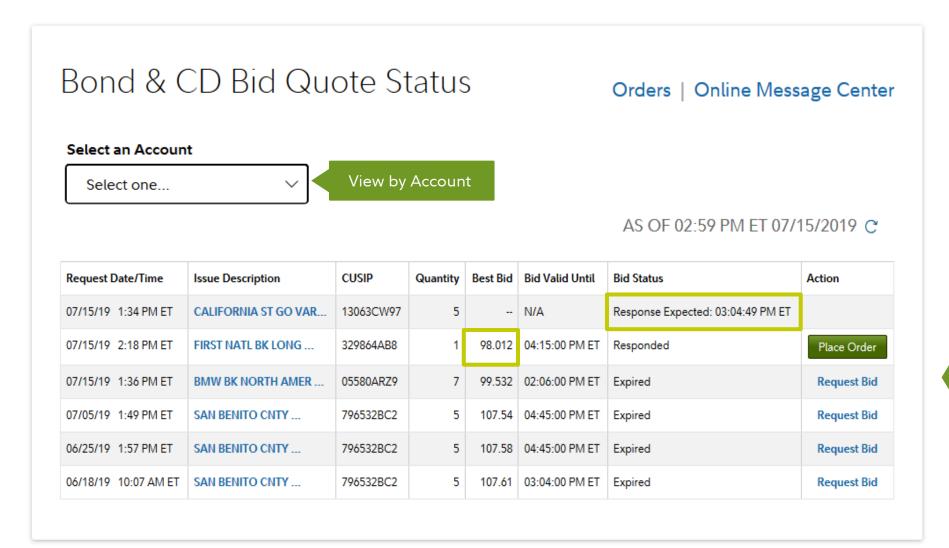
to your request.

- To place a sell order from a Bid Response, go to you Bid Requests page
- Check your email and/or your messages on the Portfolio Summary page for respon
- Go to <u>Find Bonds and CDs</u>.

Access Bid Wanted Dashboard

Live Pricing: Bid Wanted Dashboard

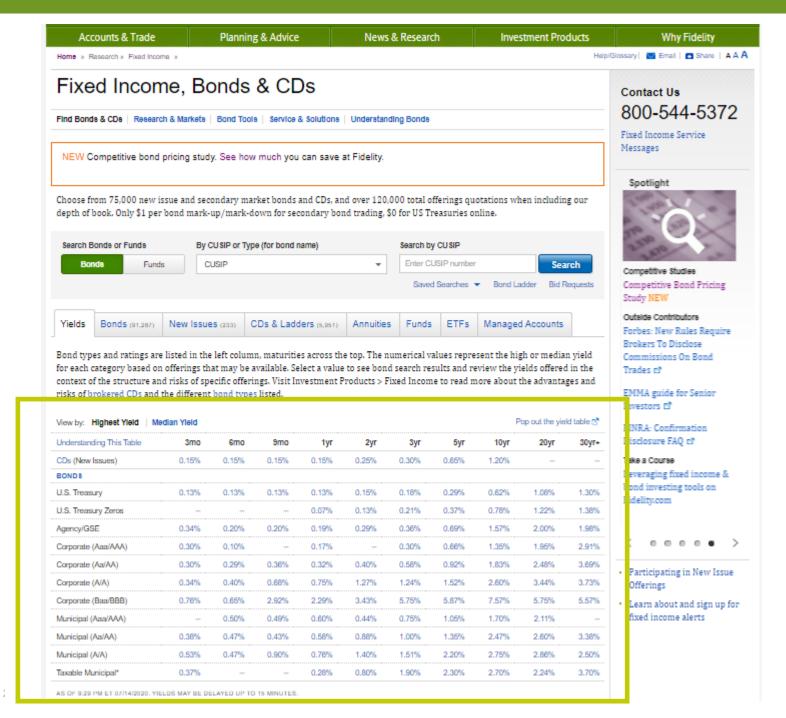




Easily see the Best Bid: 98.012

Clearly identify the exact time a bid response will be returned

Ability to Place Order directly from Dashboard





Live Pricing: The Yield Table

Fixed Income Bonds & CDs

Quick and easy scan of 120 comparative yield data-points

Derived every 15 minutes from live bond inventory

Immediate, one-click, access to search results for that category

Live Pricing: Using the Fidelity.Com Bond Yield Table

View by: Highest Yield Me	edian Yield		oy Highe dian yiel					Р	op out the yie	ield table ₫	
Understanding This Table	3mo		J. J	1yr	2yr	3yr	5yr	10yr	20yr	30yr+	
CDs (New Issues)	0.15%	0.15%	0.15%	0.15%	0.25%	0.30%	0.65%	1.20%			
BONDS											
U.S. Treasury	0.13%	0.13%	0.13%	0.13%	0.15%	0.18%	0.29%	0.62%	1.08%	1.30%	
U.S. Treasury Zeros				0.07%	0.13%	0.21%	0.37%	0.78%	1.22%	1.38%	
Agency/GSE	0.34%	0.20%	0.20%	0.19%	0.29%	0.36%	0.69%	1.57%	2.00%	1.98%	
Corporate (Aaa/AAA)	0.30%	0.10%		0.17%		0.30%	0.66%	1.35%	1.95%	2.91%	
Corporate (Aa/AA)	0.30%	0.29%	0.36%	0.32%	0.40%	0.58%	0.92%	1.83%	2.48%	3.69%	
Corporate (A/A)	0.34%	0.40%	0.68%	0.75%	1.27%	1.24%	1.52%	2.60%	3.44%	3.73%	
Corporate (Baa/BBB)	0.76%	0.65%	2.92%	2.29%	3.43%	5.75%	5.87%	7.57%	5.75%	5.57%	
Municipal (Aaa/AAA)		0.50%	0.49%	0.60%	0.44%	0.75%	1.05%	1.70%	2.11%	_ -	
Municipal (Aa/AA)	0.38%	0.47%	0.43%	0.58%	0.88%	1.00%	1.35%	2.47%	Click	on a yie	
Municipal (A/A)	0.53%	0.47%	0.90%	0.76%	1.40%	1.51%	2.20%	2.75%		ee offerin	
Taxable Municipal*	0.37%			0.28%	0.80%	1.90%	2.30%	2.70%	2.24%	3.70%	



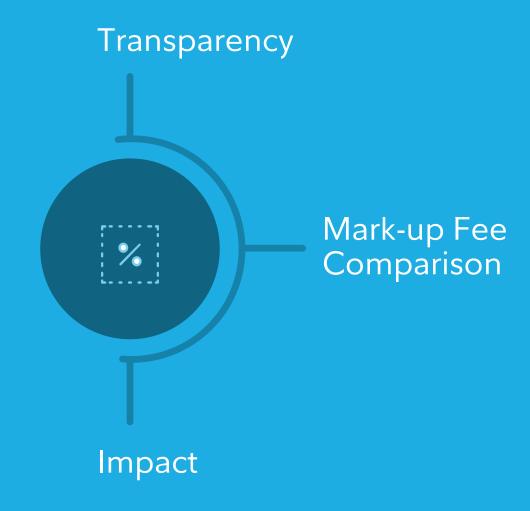
Fixed Income Market Data

Yield Curve | Key Rates | Market Benchmarks



Live Pricing: The Yield Curve

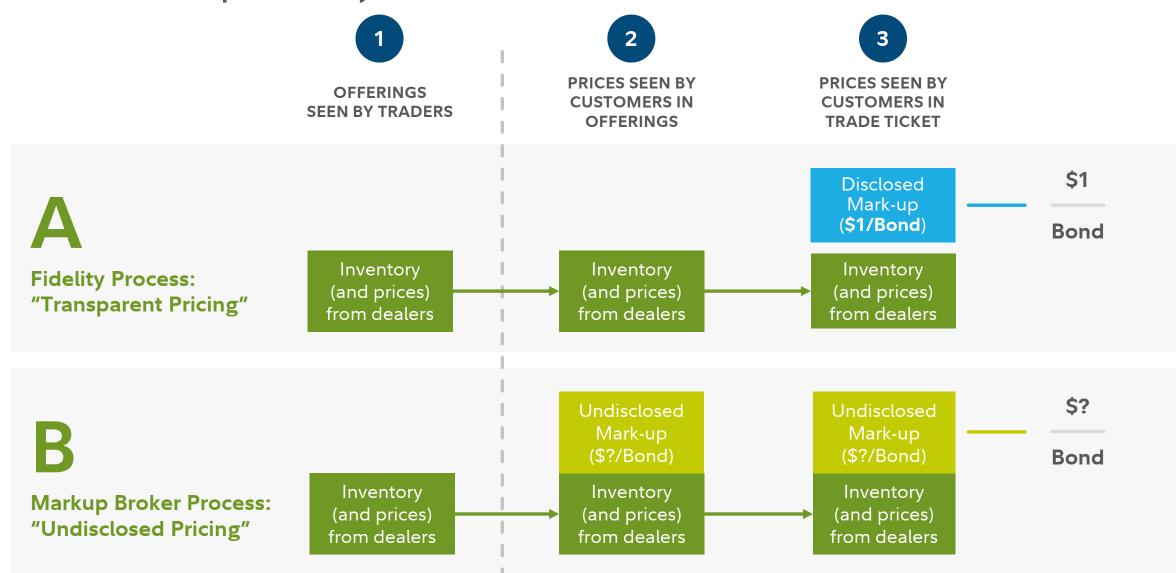
Understanding Trading Costs





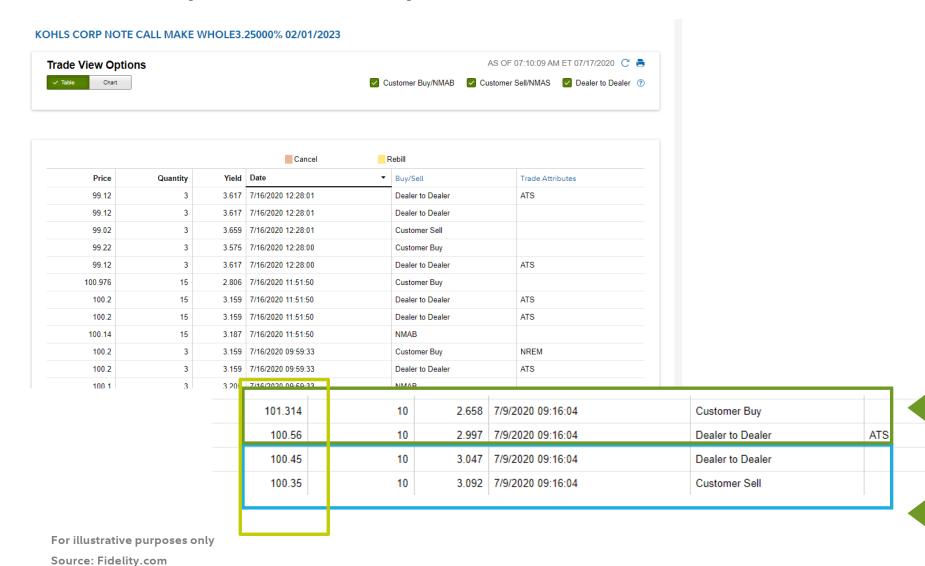
Cost Transparency





Mark-up Fee Comparisons





Another broker's **\$7.54 per bond Mark-up** (101.314 – 100.56)

Fidelity's **\$1 per bond**Mark-up
(100.45 – 100.35)

Confirms now display Mark-up/down



REFERENCE NO.	TYPE	REG.REP.	TRADE DATE	SETTLEMENT DATE	CUSIP NO.	ORDER NO.			•				
	1*	W##	06-06-18	06-08-18	89236TDU6				_				
You Bought	100,0	00		DISCLOSURES OR CREDIT CORP ED AS PRINCIPAL:	MTN	Principal Amoun	it	98,566.00 276.25					
at	98.56	60 -	04/17/2020 CURRENT YIE YIELD TO MAT TO VIEW SECU ACTIVITY, GO	'URITY 2.746% JRITY DETAILS AN TO s.finra.org/89236TD	D TRADE	Settlement Amou	int	98,842.25					
			MARK-UP/DO\ AND %) BETW	VN IS THE DIFFER EEN THE PREVAIL	JNG MÄRKET	REFERENCE NO.	TYPE REG.REP. 1* W##			CUSIP NO. 45471ANMO	ORDER NO.		
				IND TRADE PRICE. SINSTANCES WHE		You Sold at	105, 000 114, 3590		TH HOSP REV RE		Principal Interest Settlement		120, 076. 95 102. 08 120, 179. 03
			MARK-UP MOODY'S AA3	\$100.00 / 0.1016% STANDARD & PO ID SEMI-ANNUALLY			114. 3370	COUPON 5.00000 12/01/2026 CALLABLE NEXT CURRENT YIELD YIELD TO MATURY YIELD TO CALL 2 100.000 REVENUR SUBJECT TO EX CONTINUOUSLY TO VIEW SECURI ACTIVITY, GO TO	CALL 12/01/24 @ 4.372 RITY 3.064% 2.579% TO 12/01/2 E TRAORDINARY CACALLABLE FROM ITY DETAILS AND b.org/cusip/45471	24 @ ALL 112/01/24 TRADE	Setti Gillerit	ANOUNT	120, 177. 03

For illustrative purposes only

Source: Fidelity.com

MARK-DOWN \$105.00 / 0.0874% BOOK ENTRY ONLY

MARK-UP/DOWN IS THE DIFFERENCE (DOLLAR AND %) BETWEEN THE PREVAILING MARKET PRICE (PMP) AND TRADE PRICE. N/A

REPRESENTS INSTANCES WHERE TRADE PRICE

MOODY'S AA2 STANDARD & POOR'S AA

Don't get overcharged for bonds

Do you know how much your broker charges for bond trading? At Fidelity, our bond pricing is clear, transparent, and low. Explore our bonds, or learn more below.

Search for Bonds



Why pay more?

	Wells Fargo Price average higher vs Fidelity	Morgan Stanley Price average higher vs Fidelity	Merrill Lynch Price average higher vs Fidelity
1 Corporate bond	\$20.16	\$22.10	\$9.15
1 Municipal bond	\$10.96	\$16.14	\$13.81
Example trade of 22 bonds	\$240-\$440	\$355-\$485	\$200-\$300

The average price differentials per bond in the table are taken from a March 2020 study by Corporate Insight,* which was commissioned by Fidelity. This illustrates how you could save an average of \$15 per bond by choosing Fidelity versus potentially spending more elsewhere.

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.

Markup - For secondary market bonds and CD purchases, the difference (dollar and %) between the Prevailing Market Price (PMP) and the trade price. Mark-up is calculated as: Mark-up / Total initial price x 100. The mark-up includes, but may not be limited to, Fidelity's \$1 per bond pricing. Details available on our fee schedule.



Pricing:

Fidelity's \$1 Per Bond Transaction Costs Are Very Competitive

Online:

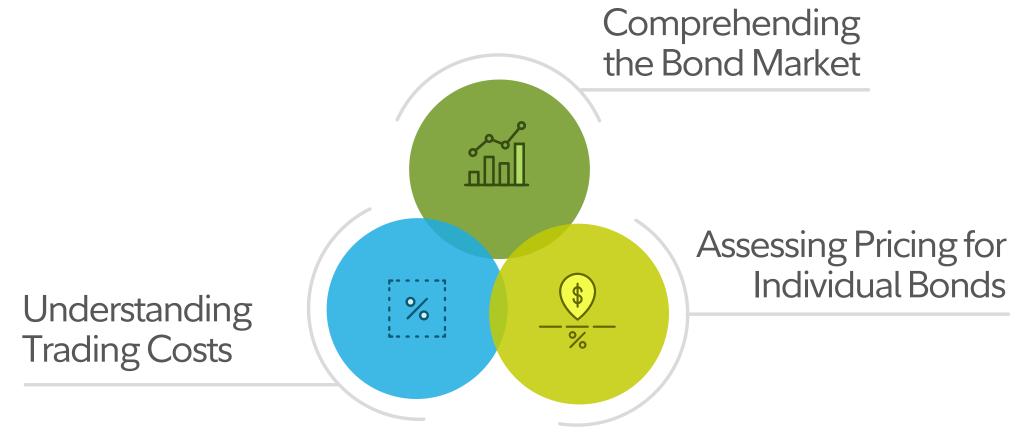
<u>Fidelity Viewpoint: How much am I paying for my bonds?</u>

For illustrative purposes only

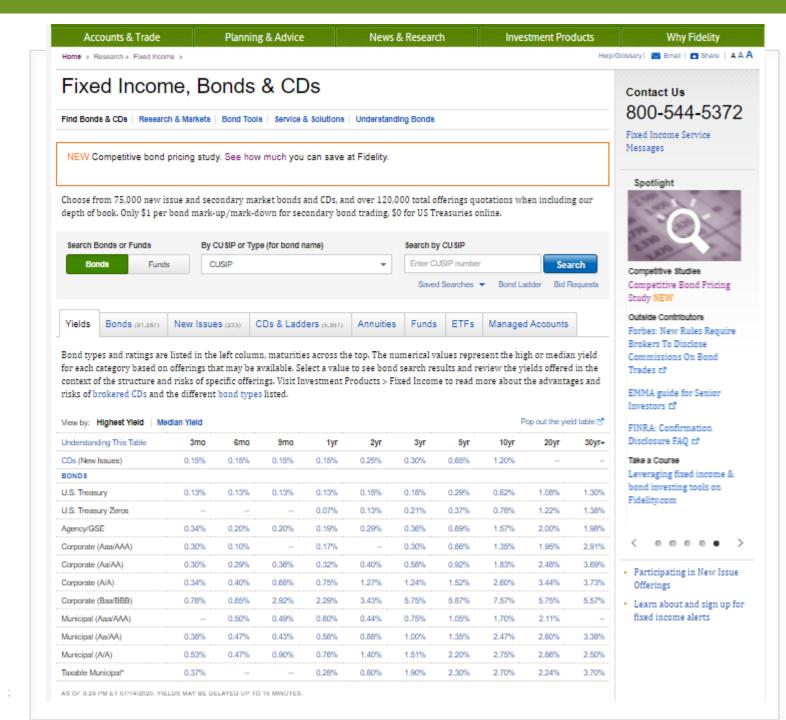
Source: Fidelity.com, June 2020

See disclosure on page 37 for details on this study





In Review





Where to start: Fidelity.com > Research > Fixed Income, Bonds & CDs





How Fidelity Can Help



Meet with a Fidelity investment professional

Further understand your current bond holdings

Explore how you may improve your portfolio with bonds

See if you're currently paying additional mark-ups on bond transactions

Disclosures



1. (from pages 33) 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 27,000 municipal and corporate inventory matches from January 28 through March 2, 2020. 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 \$15.41 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. An order size of 22 bonds was selected to illustrate the hypothetical trade because this is the average for Fidelity's retail brokerage account holders who purchased individual municipal or corporate bonds during 2019. The analysis included investment grade corporate and municipal bonds only, as the three brokers in the study do not offer non-investment grade bonds for purchase online.

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.

Disclosures



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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