PARTNER PASS

••• EXCLUSIVE REPORT

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Beaming Up Bonds

- This Satellite-Internet Bond Rises Above the Rest
- A Safe Bet in a Huge Pile of Debt

Beaming Up Bonds

This Satellite-Internet Bond Rises Above the Rest A Safe Bet in a Huge Pile of Debt

"What goes around comes around," there is no doubt, I don't rightly know who first said it, Let's keep that in mind as we find out about This satellite company's credit.

- Martin Fridson

Before he became a satellite-TV pioneer, Charlie Ergen was a potato-chip analyst with a gambling side hustle.

In the 1970s and early 1980s, when he wasn't busy running numbers for salty-snack purveyor Frito-Lay, Charlie and his buddy Jim DeFranco were winning small fortunes at blackjack casino tables throughout Nevada... and were successful enough to earn the side eye from pit bosses wherever they went.

As a result, Charlie's gambling career ended prematurely, when they were kicked out of – and banned from – a casino in Lake Tahoe for allegedly counting cards. With their reputations tainted, their gambling careers were kaput. Having left Frito-Lay, Charlie, with help from Jim, refocused his energies on a new, and very different, arena: satellite television.

Back then, only tech nerds and desert dwellers got satellite TV, which could access otherwise-unavailable programming and provide a clearer picture than fickle, bunny-ear antennas that ushered the three networks into Americans' living rooms. Satellite-TV technology was in its infancy – and Charlie saw an opportunity to get in early and profit.

With what remained of their gambling winnings, Charlie and Jim rolled the dice again, starting a company to be rooftop satellite-dish evangelists to the people living in the outskirts of Denver who had lousy TV reception. They sold the dream of getting shows from all over, via satellites orbiting Earth, into the living room idiot box.

By keeping up with technology and peddling rooftop dishes for the next decade, Charlie and Jim's \$60,000 startup prospered. In 1990, Ergen doubled down by tapping the debt markets so that they could move into the growing small-dish market – and move away from selling the more expensive and harder-to-install large dishes – and by buying orbital slots from satellites, which allowed them to sell TV service to customers with rooftop dishes.

The gambit worked, and in 1992, the Federal Communications Commission granted the company its own satellite orbit – which meant it could expand its TV service.

By 1995, Charlie's firm had put its own satellite into orbit. Less than five months later, that unit was beaming signals back to the company's satellite-TV network. Two years later, it signed up its millionth customer.

By now, Charlie's company was a major player in the satellite industry, increasing its number of satellites, expanding its customer base, and becoming a household name in the early 2000s.

As he grew both the satellite business and the pay-TV network, he used tricks to grab market share from his competitors. For example, to take customers from other providers, he offered satellite dishes to an entire town in Colorado as long as recipients of the free dish signed a long-term contract for his pay-TV service.

In 2008, Charlie spun the pay-TV network out of the satellite-communications company, creating two entities.

Now, as we will explore in this issue, he is bringing his two companies back together – in what might be the biggest gamble for an inveterate gambling man – and using a lot of debt to pull it off.

Of course, borrowing comes with huge risks. High levels of debt raise the odds of bankruptcy.

Bond at a Glance

With that in mind, we discovered one bond among the more than a dozen issued by these two combined companies that we consider to be very well protected. And because it is well protected, it has an extra-high yield. Plus, this bond will get paid regardless of how all of the other bonds perform issued by this company – even if Charlie Ergen says otherwise:

- It's issued by the company's consistently profitable satellite internet unit
- It's fully secured by almost all of the issuing company's assets
- The bond pays 5.25% interest and matures in 2.5 years
- At the current price of \$855, the annual yield is an impressive 12.4%
- If another bond held by this company's corporate sibling fails, the market could mistakenly sell off these bonds, creating an opportunity for extra profit
- The total face amount of the bond issue is \$750 million, which amounts to a very manageable 1.5x the \$494 million operating profit we expect the business to generate in 2024

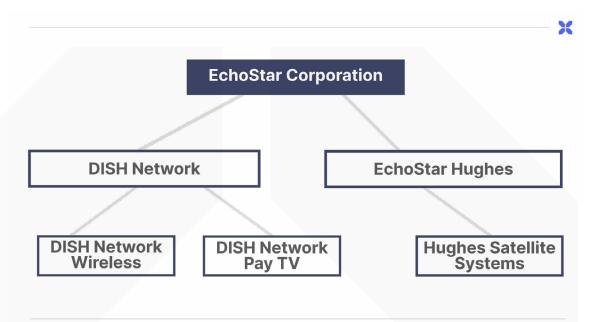
The EchoStar Corporation Today

In 1980, after getting kicked out of that Lake Tahoe casino, Charlie Ergen founded what became **EchoStar Corporation (Nasdaq: SATS)**, which sold rooftop dishes used to receive television signals from satellites. Later he launched his own satellites and created DISH Network to compete with rapidly growing cable companies. In 2008, he separated DISH Network from EchoStar. The business traded under the ticker symbol DISH for 15 years, until EchoStar re-acquired DISH in December 2023.

Now, the old EchoStar business – referred to as "EchoStar Hughes" in the chart below – and "DISH Network" are siblings. Parent company Echostar Corporation owns the siblings, which have both over the years borrowed money from bondholders.

The bonds we are recommending are Hughes Satellite Systems 5.25% secured bonds due 8/1/26. Hughes Satellite Systems, part of the "Echostar Hughes" company in the chart below, issued the bonds when it was its own company, prior to EchoStar re-uniting with DISH Network.

To avoid confusion, we'll refer to the siblings, once separate companies, as "Echostar Hughes" and "DISH Network." When we describe the new combined company, we'll call it "EchoStar Corporation."



DISH Network is by far the larger financial sibling – but not the most profitable or the most reliable when it comes to managing its debt. With 2023 revenue of \$15.2 billion that generated \$2.4 billion in operating profit (a 15% margin), it is nine times the size in terms of sales of EchoStar Hughes, at \$1.8 billion in 2023 revenue. But EchoStar Hughes produced \$494 million in operating profit, with a 27% margin.

And as we will explore more fully below, DISH Network has \$21 billion in debt and a very small supply of cash, while EchoStar Hughes has just \$1.5 billion in debt with an equal amount of cash. What's more, EchoStar Hughes' revenue and profitability are expected to increase in the coming years, while DISH Network's future is less certain (though this will not affect the issuer of the bonds we're recommending here).

Within the EchoStar Corporation, there are three main businesses. Two of them generate significant operating income. A third one is a question mark.

- 1. One business under DISH Network is DISH Network Pay TV, which generates roughly 75% of DISH Network's \$15-plus billion in revenue and all its operating profit.
- 2. The second Dish Network business and the big question mark is DISH Network Wireless, which is building an advanced 5G network to compete with the "big three" mobile telephone providers AT&T, Verizon, and T-Mobile. DISH Network Wireless has its work cut out, as we'll explain.
- 3. EchoStar Hughes owns and operates satellites. EchoStar Hughes provides internet access under the HughesNet brand and offers numerous security-related services to businesses and government. This business generates almost all of EchoStar's \$494 million (2023) in operating income and cash flow, and is the issuer of the Hughes Satellite Systems bonds we are recommending in this issue.

A Look at the EchoStar Hughes Business

The issuer of the bonds we are recommending, Hughes Satellite Systems, represents the biggest part of the \$1.8 billion in revenues of EchoStar Hughes' business. Hughes Satellite Systems owns and operates eight satellites in high orbit. Though the company does not disclose specifics, most of the company's revenue is from its satellite-based internet service provider ("ISP"), known in the market as HughesNet.

In addition to serving as an ISP to roughly 1 million home and business customers, HughesNet also provides:

- the backbone that brings internet and voice services to remote areas where it's too costly for companies like Frontier Communications to lay fiber-optic cable for their customers
- dedicated communication channels for the Department of Defense and other arms of government where the highest level of security is required
- internet service to airlines and ships
- a complete package of cybersecurity systems for businesses and government

The Hughes Satellite Systems ISP competes primarily with satellite ISPs Starlink, which is owned by SpaceX, and British company Viasat. Hughes and Viasat serve roughly 1 million subscribers each with satellites in high-earth orbit. Starlink has an estimated 2 million subscribers and uses a larger number of smaller satellites in low-earth orbit.



EchoStar Hughes Financials

	Revenue	Operating Profit	Interest Expense	Free Cash Flow
2021	\$1,995	\$787	\$118	\$366
2022	\$2,003	\$710	\$62	\$301
2023	\$1,756	\$494	\$40	\$206
2024E	\$1,883	\$494	\$70	\$138
2025E	\$2,018	\$539	\$90	\$163
2026E	\$2,202	\$629	\$90	\$275
2027E	\$2,324	\$684	\$90	\$342

Source: Bloomberg and company filings / Interest expense, and free cash flow estimated based on nine months available

While Hughes remains profitable and generates cash, operating profits have recently been declining. After hitting a high of \$787 million in 2021, the company's operating profit fell to \$494 million in 2023 – a 37% decline. During the same period internet subscribers declined 31% from 1.5 million to just over 1 million – for two main reasons.

- Hughes ran out of capacity on its Jupiter 1 and Jupiter 2 satellites over the last two years, making it difficult to add customers
- Because of this, the company lost customers to satellite competitors Viasat and Starlink – as well as to fiber providers like Frontier Communications, all of whom could provide better internet speeds.

In July 2023 EchoStar Hughes launched its Jupiter 3 ultra-high density satellite. Given its large size – with solar panels, its wingspan will be 130 feet, 35% larger than Jupiter 2 – Jupiter 3 well more than doubles EchoStar Hughes' broadband capacity. It will bring an *additional* 500 gigabytes per second (gbps) of broadband capacity to Jupiter 2's 200 gbps capacity.

Prior to the launch of Jupiter 3, EchoStar Hughes was near its limit of broadband capacity with Jupiter 2. In addition, the new satellite, which will be used exclusively by EchoStar Hughes, quadruples download speeds for Hughes's customers from an archaic 25 megabits per second to 100 megabits per second – a crucial upgrade given that industry speeds are rapidly increasing.

Given a few months of standard adjustment after getting into orbit, Jupiter 3 should be fully operational by mid 2024. With increased speed as a selling point and increased capacity as a runway to growth, the company expects operating profit to start rising again in 2025 to more than \$500 million.

Putting a Valuation on EchoStar Hughes

Using the current and projected operating profitability of EchoStar Hughes (the issuer of the Hughes Satellite Systems secured bonds) and applying the multiples in the table below, we estimate sibling EchoStar Hughes' portion of the overall business is worth between \$2.25 billion and \$5.2 billion. That is, multiplying a low-valuation multiple of 5x by a very conservative operating profit of \$450 million produces a \$2.25 billion valuation. And using a higher-end valuation multiple of 8x and a more aggressive operating-profit number of \$650 million gets us to \$5.2 billion.



Operating \$450 Profit: million		\$500 million	\$550 million		
Multiple					
5х	\$2.25	\$2.50	\$2.75	\$3.00	\$3.25
6х	\$2.70	\$3.00	\$3.30	\$3.60	\$3.90
7x	\$3.15	\$3.50	\$3.80	\$4.20	\$4.55
8x	\$3.60	\$4.00	\$4.40	\$4.80	\$5.20

For comparison, the market currently values competitor Viasat at 6×2023 operating profit, and in May 2023 Viasat acquired another competitor, British satellite company Inmarsat, for roughly 9×2023 operating profits.

At the \$2.25 billion low end of this valuation range, the business is worth 3x the \$750 million total face amount of 5.25% secured notes due August 1, 2026. At the high end of this range, it's worth close to 7x the total amount due on these bonds. It is very comforting to know that the assets backing these bonds are worth at the very least three times what is owed for the bonds, and likely more.

An Overview of DISH Network - Pay TV and Wireless

EchoStar sibling DISH Network is nine times its size in revenue terms with nearly 15 times the debt load. While the EchoStar debt load is immune from any peril that DISH Network might experience, it's incumbent upon us to layout the landscape of its current financials and future path. So here are the two main businesses — DISH Network Pay TV and Wireless

DISH's Pay TV Business

Until recently, it was common for a household to pay DISH Network (or a competitor offering satellite-TV service) or a cable company \$50 to \$200 per month to receive the major networks, plus a long list of other channels offering movies, original programming, and syndicated shows. But the streaming options have led many of those customers to cancel that high monthly subscription, and instead sign up for, say, Netflix at around \$13.99 per month or Hulu for \$7.99 – which both offer movies, original programming, and syndicated shows.

The monthly subscription to DISH TV that provides this increasingly unpopular bundle of programming represents 90% of DISH Network's current business. The decline of linear television and decreasing demand for the traditional bundle of channels have hurt the company's financial results. DISH Network had 13.67 million subscribers in 2016 and 8.84 million at the end of 2023 – a 35% drop in subscribers that contributed to a 23% decline in overall revenue. The company competes against DIRECTV, which is a larger satellite-TV service, with 11.3 million subscribers, owned by AT&T and private-equity fund TPG.

DISH has been able to recapture some of this linear-TV business with its lower-priced Sling TV offering. For roughly \$35 per month, Sling subscribers can access, through an internet connection, more than 30 channels. This alternative does not require satellite antennas or set-top boxes. DISH incurs minimal installation costs for each new customer, but it receives lower revenue and profits compared with its traditional pay-TV offering.

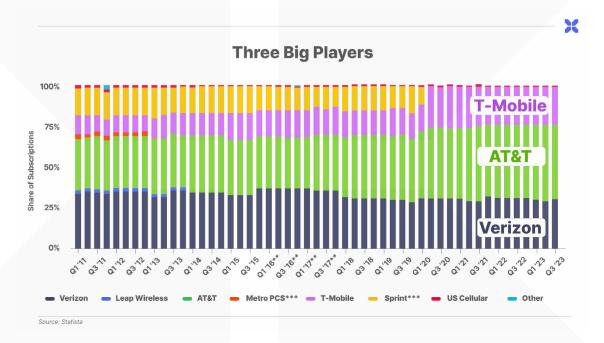
DISH's 5G Wireless Business

DISH Network purchased the Boost wireless brand from Sprint in 2019, when the Federal Communications Commission ("FCC") forced top-three wireless carrier Sprint to sell the business when it merged with T-Mobile. DISH has 7.5 million subscribers under the Boost Mobile (prepaid phone plans), Boost Infinite, and Gen Mobile (billed monthly) brands.

With the encouragement of the FCC – eager to get a wireless company to challenge AT&T, Verizon, and Sprint, which have a combined 500 million subscribers in the U.S. – Ergen's DISH business set out to build a superfast 5G nationwide network of its own.

By the time this network is completed (it's roughly 75% finished now), it will have cost more than \$40 billion (even before building cell towers and activating the service) - an amount that is more than 10 times the market value of EchoStar Corporation's stock. The big question is whether the completed 5G network will attract enough monthly subscribers and operating profit to recoup that enormous investment. Charlie Ergen and DISH have a lot riding on their wireless phone service.

Once the network is operational later this year, DISH is looking to gain market share with a low-priced \$25-per-month plan of unlimited 5G data, compared with the national average of about \$100 per month. According to the Journal of Consumer Research, 97% of the U.S. population already has cell phones – so DISH will need to take market share away from AT&T, Verizon, and T-Mobile, which together account for nearly all of the U.S. cellphone market.



Now let's look at the debt profile of the EchoStar Corporation.

Total EchoStar Hughes and DISH Network Debt

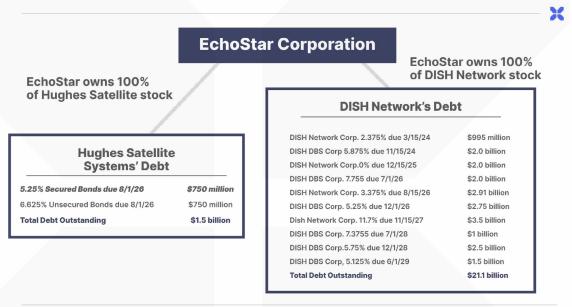
Before we dig specifically into the Hughes Satellite Systems secured bonds we are focusing on in this issue, let's get a picture of the overall debt profile of the EchoStar Corporation, which now owns 100% of the stock of both DISH Network and EchoStar Hughes, where our bonds were issued.

EchoStar Hughes has \$1.5 billion in debt and roughly the same amount in cash. EchoStar Hughes debt roughly equals 3x operating income of \$494 million expected in 2024. This is a manageable amount of debt – particular given that EchoStar Hughes has close to \$1.5 billion of cash on its balance sheet.

DISH Network owes \$21.3 billion to its bondholders, which is 10x its operating income of \$2.1 billion expected for 2024. This is an extremely high level of borrowing – even adjusting for roughly \$1 billion of cash on its balance sheet.

Both DISH and Hughes have debt coming due over the next two years. Together, they have \$6.5 billion that they will need to repay or refinance between now and the end of 2025. Adding in the company's bonds maturing in 2026, the total rises to \$14.2 billion.

Below is an overview of EchoStar Corporation's total debt profile – all of which was issued by either EchoStar Satellite Systems or DISH Network prior to EchoStar reacquiring DISH Network in December.



Note: Hughes Satellite Systems' Debt and Dish Network's Debt are not obligations of EchoStar Corporation

On January 12, EchoStar made an offer to the holders of DISH's \$2 billion of 0% coupon bonds due December 15, 2025, and holders of DISH's \$2.91 billion of 3.375% bonds due August 15, 2026, to exchange their bonds for \$2.7 billion in new bonds maturing in 2030 that would be secured by the \$9 billion in airwaves that EchoStar leases from the government.

Bondholders refused – as it would have meant taking a large loss in value. We believe that the company will present a new exchange offer to those bondholders over the next few months.

DISH's dickering with its bondholders has spilled over into investors' perceptions of the EchoStar Hughes debt. The overall impression of Echostar Corporation is of a financially troubled company, controlled by someone known for tilting the table in his own favor. As a result, even the Hughes Satellite Systems well-protected bond is trading at a yield (12.4%) that implies a high risk of default and principal loss.

Discussion of Bond Terms

The 5.25% secured notes we are recommending in this issue are backed by the assets of Hughes Satellite Systems – the biggest and most profitable part of EchoStar Hughes. Bondholders, owed \$1.5 billion in total, are entitled to full payment on these bonds before its 100% stockholder, EchoStar Corporation, is entitled to get anything.

And that's not the only bondholder protection associated with these bonds. Every time a new bond is issued, the borrowing company signs an agreement, called an indenture, with the purchasers of the new bonds. The terms of the indenture protect bondholders by preventing the company from 1) borrowing too much money, 2) paying other lenders anything more than scheduled interest payments are due, or 3) siphoning off money in any unauthorized way.

Some indentures don't provide much protection to bondholders. The indenture for the Hughes Satellite Systems 5.25% senior secured notes due August 1, 2026, provides a great deal of protection. It contains important limitations on the borrower's ability to:

- Borrow more money
- Pay dividends to EchoStar Corporation
- Repurchase any of its stock from EchoStar Corporation
- Invest in additional businesses
- Sell assets and then lease them back (which is like borrowing more money)
- Enter into transactions with any other company that Charles Ergen controls
- Combine with another company without offering to buy the bonds at their face value
- Transfer and sell a substantial portion of the company's assets.

In addition to these promises, the \$750 million in 5.25% notes are secured. That means the company has put up collateral. If Hughes doesn't honor the debt, the bondholders get the assets put up as collateral. The bond agreement states that these bonds are secured by "substantially all existing and future tangible and intangible assets" of the Hughes Satellite Systems business. Bondholders have the first lien. This means they have to be paid first and in full before any other bondholder gets anything.

Hughes's sibling DISH Network has more than \$21 billion in debt and significant bond maturities coming up starting in November 2024. Because of the size of this debt, we foresee that DISH might well need to file for bankruptcy at some point. Hughes is a separate business and would not have to file for bankruptcy, nor would it be infected at all by the travails of its corporate sibling.

Nothing can reduce the value of the collateral backing the 5.25% secured notes. Even if EchoStar Corporation, the parent of the Hughes Satellite Systems business, were itself to file for bankruptcy – and we don't think that is likely – it would be in all parties' interest to honor these bonds.

As we have made clear, the bonds issued by Hughes Satellite Systems that we are recommending are protected from any financial peril that the DISH Network side of EchoStar Corporation might experience. That said, the bonds do now reside under the EchoStar Corporation umbrella. So if the value of DISH bonds drops or are forced into bankruptcy proceedings, investors might get unduly nervous about the Hughes Satellite System secured bonds. If the market mistakenly sells off the Hughes bonds, we'd have an opportunity to buy them at a lower price.

Why the Market Might Sell Off the Hughes Satellite Systems Bonds

- DISH's pay-TV service continues to lose subscribers. The company went from 13.67 million subscribers in 2016 to 8.84 million subscribers on September 30, 2023 – a 35% decline.
- It's impossible to know how DISH's 5G national wireless system estimated to cost more than \$40 billion – will perform financially.
- Under its two main entities, Echostar Corporation has \$9.3 billion of debt coming due between now and the end of 2026 (\$7.8 billion belongs to DISH Network and \$1.5 billion to Echostar bonds including the \$750 million in 5.25% secured debt in August 2026 that we are recommending). There's a significant risk that DISH will not be able to refinance the \$7.8 billion of bonds coming due.
- While Hughes Satellite Systems remains profitable and generates cash, operating profits have recently been declining. After hitting a high of \$787 million in 2021, the company is projecting operating profit to decline to \$494 million in 2024 a 37% drop. With the recent launch of the Jupiter 3 satellite, the company expects operating profit will start building up again in 2025.

Action to Take: Buy Hughes Satellite Systems 5.25% secured bonds due 8/1/26 CUSIP#444454AD4 up to a price of \$880.

Bond Box

ummary			
March 5, 2024	Amount Invested	\$860.25	
	Total Interest and Principal	\$131.25	
	Current Yield	6.14%	
	Total Return	31.5%	
	Term	Under 2.5 years	
	Issue Size	\$750 million	
	Credit Rating	Standard & Poor's B Moody's Caa1	
	Callable	No	
Details			
March 5, 2024: Purchase the bond \$855	Accrued interest*	\$5.25 per bond	
	Total Cost	\$860.25 per bond	
August 1, 2024	Receive interest payment	\$26.25 per bond	
February 1, 2024	Receive interest payment	\$26.25 per bond	
August 2025	Receive interest payment	\$26.25 per bond	
February 1, 2025	bruary 1, 2025 Receive interest payment		
August 1, 2026	Receive interest and principal payment	\$1,026.25 per bond	

How to Buy This Bond With a Live Broker

If you are putting in a phone call to your broker, here's a quick breakdown of the steps you'll go through.

- 1. Tell your broker the number of bonds you'd like to acquire.
- 2. Provide the name of the borrower, the coupon, and date of maturity.
- 3. Provide the CUSIP number.

CUSIP stands for "Committee on Uniform Securities Identification Procedures" and is a unique series of numbers and letters assigned to every traded security. Providing the CUSIP will ensure that you're buying the right security. The CUSIP of the bond we recommend in this issue is 444454AD4.

Specific Instructions for Buying Hughes Satellite System 5.25% 8/1/2026 Secured Bond

Now, the bond we are recommending today is generally not tradeable online, except at Schwab, Fidelity, and a few very high-end brokerages, so instead you will need to place your trade by phone. We've confirmed that the Hughes Satellite System 5.25% 8/1/2026 secured bond is available online and over the phone at Schwab, Fidelity, and at full-service brokerage firms.

Recall that the bond market is much less popular (and there's much less trading volume) compared to the stock market, so don't be surprised if you are dealing with a broker who knows little about the bond market. This is part of the reason why, in the bond market, there are fewer market participants and less overall interest, so it's easier to scoop up bargains when opportunities arise.

The instructions for placing an order are usually standard across the brokerage platforms mentioned above.

Here's an example of how the conversation with your broker might go:

Investor: "Hello. I am interested in buying Hughes Satellite Systems 5.25% 8/1/2026 secured bond. Can you get me the bond quote so I can decide whether or not I want to buy?"

Broker: "Yes, can you confirm with me the CUSIP?"

Investor: "The CUSIP is 444454AD4."

Broker: "We don't have these bonds in our inventory. However, we can place open market orders which allows for this bond to be traded and sold through an alternative trading system ("ATS"). We can get you a quote. How many of these Hughes Satellite Systems 5.25% secured bonds are you looking to purchase?"

Investor: "I'd like to purchase 25 of the Hughes Satellite Systems 5.25% 8/1/2026 secured bonds."

Broker: "Okay, I will get you a quote and call you back. Bye."

This is where the first conversation with the broker will come to an end... but within the next 24 to 48 hours of the next trading day, the broker should return your call and will give you the quote (the price) of the bond. This call is when you will place and confirm your order.

After your initial call to receive the quote, the broker will call you back in most cases and after he confirms he's speaking to the correct person, he can go ahead and place your order.

Here's how the second call might go:

Broker: "Hello, this is John Doe, the fixed-income specialist you spoke to earlier. I am calling to give you a quote for the 25 Hughes Satellite Systems 5.25% 8/1/2026 secured bonds you inquired about. The price for the size of your request to buy 25 bonds is \$85.50 plus accrued interest. Would you like to go ahead and place the trade?"

Note: The \$85.50 price he quoted is really \$855.0 for the cost of each bond. When quoting bonds, brokers will most likely drop the last zero, so \$85.50 becomes \$855.00. Now, if the investor decides to purchase 25 bonds, his total will be \$21,506.25 (\$855 \times 25 = \$21,275) plus \$131.25 for accrued interest (\$5.25 \times 25 = \$131.25) and any commission or service fee.

Investor: "Yes. The total comes out to \$21,506.25 plus the service fee. Is that correct?"

Broker: "Yes, it is correct. I will go ahead and make the transaction. You will get an email confirmation over the next 24 hours. Have a great day!"

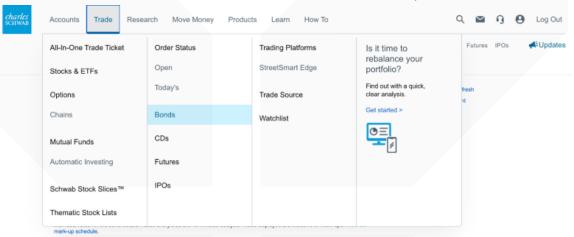
As always, if you have questions, please call Lance, your personal Porter & Co. Concierge, at his team at (888) 610-8895, or internationally at +1 (443) 815-4447. We do not endorse any specific brokerage and are offering this guide for informational purposes only.

How to Buy This Bond Online

For readers who prefer to purchase bonds online or who have Interactive Brokerage accounts, we've taken screenshots to walk you through what to expect. We do not endorse any specific brokerage and are offering this guide for informational purposes only.

For Schwab Users

- 1. Log in to your account as you usually would access your equity portfolio.
- 2. Go to the "Bonds" section under the "Trade" tab at the top menu.



3. When you land on the bond page, enter the CUSIP in the bar that asks to "Search by CUSIP" (as seen below). The Hughes Satellite Systems 5.25% 8/1/2026 secured bond's CUSIP is 444454AD4.

Select a rate from above for additional information.

Invest in Bonds at Schwab You're in the right place for bonds Visit Find Bonds & Fixed Income Access listings from over 200 dealers, offering over 36,000 daily CUSIPs, including more than 20,000 municipal bonds¹. The rates shown below are the best available for each maturity range and product based on \$25,000 face value amount. Click on the individual rates for the bond details. Rates and yields are 15 minutes delayed. Yields displayed are inclusive of mark-ups. View our mark-up schedule. **Fixed Income Offerings** POWERED BY BondSourceTh 3 Yr 4 Yr 2 Yr 5.35 5.16 5.08 5.00 5.10 5.00 5.00 5.00 U.S. Treasuries 5.39 5.33 5.15 4.79 4.65 4.41 4.33 4.29 4.45 5.02 4.28 4.59 U.S. Treasury Zeros 4.87 5.01 4.55 4.74 4.63 4.58 4.38 4.30 4.28 4.41 4.77 4.29 Government Agencies 4.89 4.97 5.23 5.29 6.00 5.04 4.61 4.56 Corporates (AAA) 4.91 4.69 4.39 4.36 4.29 4.98 5.21 Corporates (AA) 4.78 5.10 4.91 4.74 4.61 4.62 4.36 4.54 4.56 4.99 5.67 Corporates (A) 5.13 5.32 5.32 4.81 4.92 5.83 2.39 3.49 3.06 3.24 3.19 3.32 3.91 4.21 Municipals (AAA) 3.70 3.10 3.63 Municipals (AA) 3.35 3.51 3.26 3.88 3.72 3.35 3.81 3.51 3.95 4.11 4.48 4.69 3.35 3.71 3.30 3.88 3.72 3.61 4.77 3.95

Or Search by CUSIP

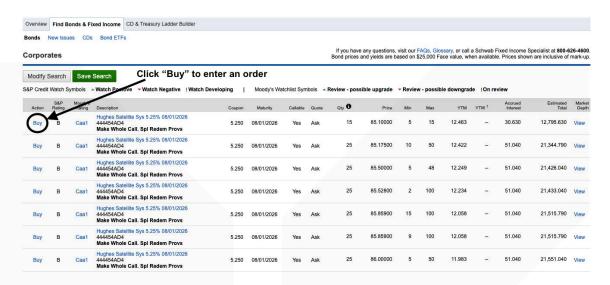
444454AD4 This notification is to inform you of certain information which municipal securities dealers must provide their clients per the Municipal Securities Rulemaking Board (MSRB).

Charles Schwab & Co., Inc. is registered with the MSRB and the Securities and Exchange Commission (SEC).
 You can learn more about the MSRB online #.
 The MSRB offers the MSRB Investor Brochure #.
 which includes information about how to file a complaint.

Treasury Auctions | New Issue Municipal Calendar | Retail Notes | Mortgage-Backed Securities

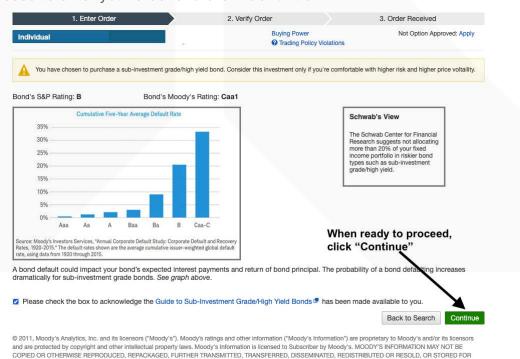
Insert CUSIP here

4. Then select to "Buy" the specified bond.



Note: Multiple bonds with slightly different quotes may appear.

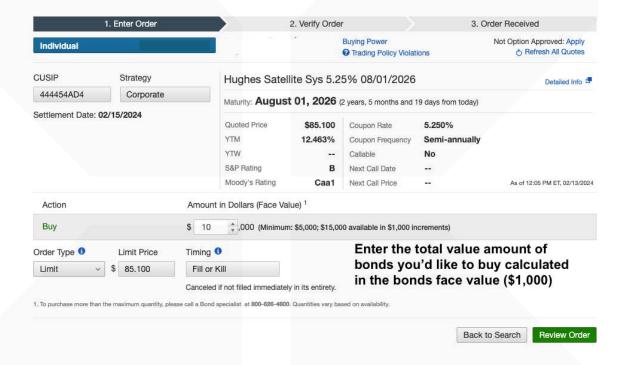
5. Next, you will need to confirm the bond's rating before you enter your order. Schwab will display the rating and may ask you to acknowledge the risks of investing in high-yield bonds. (Schwab may not ask for this if you have already purchased a high-yield bond through Schwab in the past). When ready to proceed to enter your order and click "Continue".



MOODY'S PRIOR WRITTEN CONSENT.

SUBSEQUENT USE FOR ANY SUCH PURPOSE. IN WHOLE OR IN PART, IN ANY FORM OR MANNER OR BY ANY MEANS WHATSOEVER, BY ANY PERSON WITHOUT

- 6. Here is where you will enter your order and specify your position size. You will need to specify an amount in dollars, as seen in the image below. Remember, the amount of bonds you enter is based on the face value of the bond. So, if you want to purchase 1 bond, the face value is \$1,000 and you'd be purchasing one bond for the price of \$851.00. If you'd like to purchase 10 bonds, enter 10, and your order will come out to \$8,510.00 based on the quote below.
- 7. You will also need to specify what type of order to place. Either a Limit order which is the "limit" price you will pay to place an order or a market order. A market order will place your trade based on the price of the market at the time of the trade. We recommend placing limit orders.



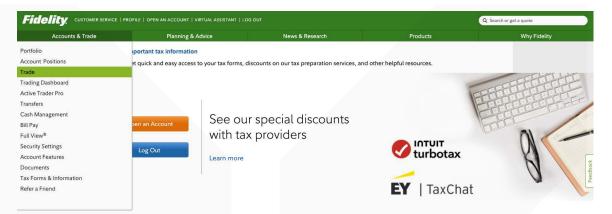
(Note: the price quoted \$85.10 really means \$851.00. It is standard that bonds are quoted out of \$100 but the face value is really \$1,000.)

8. Click "Review Order" on the bottom right-hand corner when ready to proceed. Now, you're almost ready to buy the bond. Read over the disclosure notes for the bond, confirm the CUSIP (444454AD4), and click "Continue" to buy the bond.

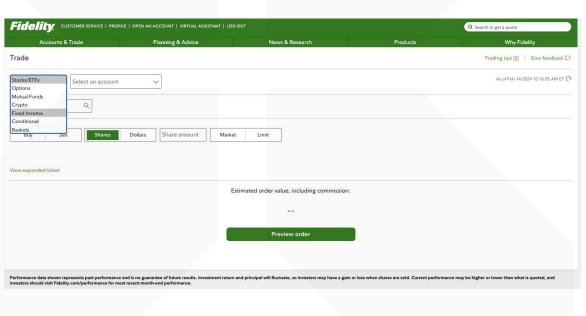
	1. Enter Order		2. Verify Order		3. Order Received
Disclosure	Note for CUSIP: 44445	4AD4			
Date	Note				
05/11/2017	\$ 749,891,000 Exchanged from 08/01/2019, Equity Call for 35%			hole Call anytime at	US Treasury plus 50 basis points. Until
05/11/2017	senior to any of HSS and the su Notes and related subsidiary gu subsidiary guarantees). The Sec secured by assets that do not of	ubsidiary guaranto uarantees (which (cured Notes will ra constitute Collater 0 million of debt a	ors future senior unsecured Collateral also secures the ank effectively junior to obl al, to the extent of such co and other obligations secured	debt to the extent of 2011 Secured Notes igations of HSS and Illateral. As of Decen	e Collateral and will rank effectively of the Collateral securing the Secured s, the Old Secured Notes and related the subsidiary guarantors that are nber 31, 2016, the Old Secured Notes instituting Collateral or assets that
05/11/2017	In addition, prior to August 1, 20 equal to 103% of the principal a		4. C.	이 아름이 있었다면 하게 하는데 그리고 하다고 있다.	med per year at a redemption price
05/11/2017	2-PT USD 1.5BLN TTL. MWC T	+50BPS. PRIOR	TO 08/01/2019 ECB UPTC	35% AT 105.250%	. BKS:DB
05/11/2017	The Notes will be fully and unco	onditionally guarar	nteed, on a joint and sever	al basis, by the same	e subsidiaries that currently guarantee
05/11/2017	when due of interest on the Old Secured Notes and the Secured described under Change of Cor Covenants Taking and Destruct Covenants Limitation on Restrict uncured for 30 days, or the bred delivered by us pursuant to the 25% in principal amount then o comply with any of our other agany mortgage, indenture or inst Indebtedness for money borrow our Restricted Subsidiaries), why grace period provided in such lithe principal amount of any other more; (g) default under any more videnced any Indebtedness for by us or any of our Restricted Sand the principal amount of any there has been a Payment Defa any acceleration (other than an outstanding Deferred Payments acceleration pursuant to this claipidgment as to which a reputably judgments are not stayed within Corporation that beneficially ow the Equity Interests of such sub Law: (i) commences a voluntary	Secured Notes at Motes at Motes at maturity of Motes and Motes and Motes at Mo	and the Secured Notes; (b) y, upon repurchase, redem in Covenants Transactions in Covenants Transactions in Covenants Transactions in Covenants Limitat entation or warranty, or the re; (e) failure by us for 60 d. Old Secured Notes and the Secured Indenture or the Och there may be issued or off our Restricted Subsidiar sed by a failure to pay whe ayment Default), and the phess under which there has or instrument under which d by us or any of our Restricted Subsidiar instrument under which default results in the accept of the second of the seco	default in payment of a price of the price o	(c) failure to comply with the provisions in Covenants Asset Sales or Certain Devisions described under Certain Indebtedness which default remains us statement, in any certificate in the Trustee or the holders of at least used under the Secured Indenture to individual to the Secured Indenture to individual to the Secured Notes; (f) default under the secured or evidenced any of which is guaranteed by us or any of interest on such Indebtedness within the inny such Indebtedness, together with efault, aggregates \$100.0 million or it or by which there may be secured or or the payment of which is guaranteed debtedness prior to its express maturity other such Indebtedness under which is \$100.0 million or more; provided that se (f) above) of Indebtedness under the all be deemed not to constitute an pay final judgments (other than any excess of \$100.0 million, which Dwinde Subsidiary of EchoStar Corporation beneficially owns 100% of within the meaning of any Bankruptcy an involuntary case; (iii) consents to teneral assignment for the benefit of

For Fidelity Users

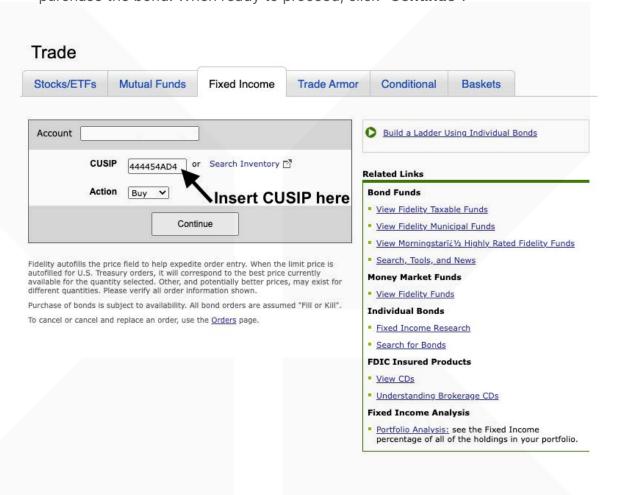
- 1. Log in to your account as you usually would access your equity portfolio.
- 2. Go to the "Trade" section under the "Accounts & Trade" tab at the top menu.



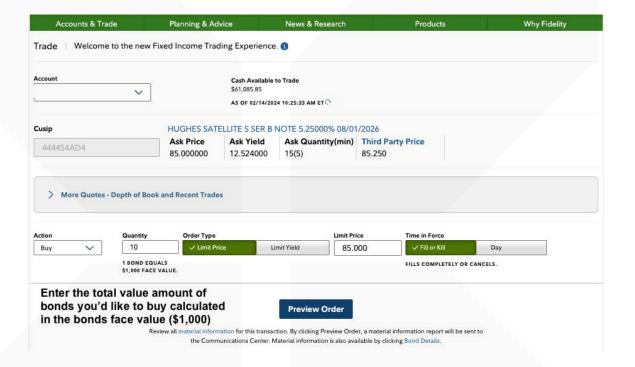
3. On the next page, select "Fixed Income" on the "Trade" dropdown menu as seen below.



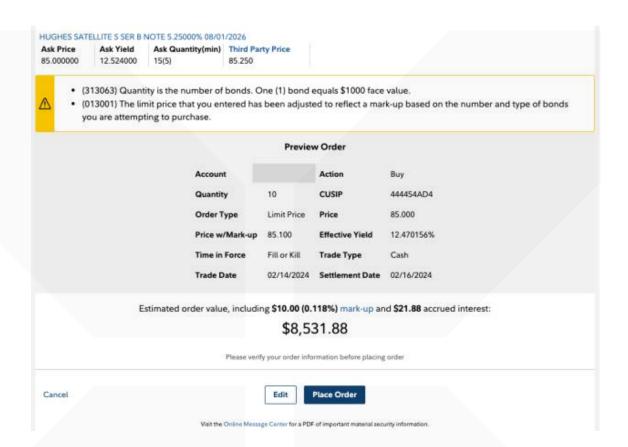
4. When you land on the trade page, enter the CUSIP and select "Buy" for the "Action" box. The Hughes Satellite Systems 5.25% 8/1/2026 secured bond's CUSIP is 444454AD4. You will also need to select the account you'd like to purchase the bond. When ready to proceed, click "Continue".



5. Here is where you will enter your order and specify your position size. You will need to specify an amount in dollars, as seen in the image below. Remember, the amount of bonds you enter is based on the face value of the bond. So, if you want to purchase 1 bond, the face value is \$1,000 and you'd be purchasing one bond for the price of \$850.00 (not including any fees). If you'd like to purchase 10 bonds, enter 10, and your order will come out to \$8,500.00 based on the quote below. Then select "Preview Order".



Once you've reviewed and confirmed the details for the order, click "Place Order" to purchase the bond.





MartintRidson

Porter & Co.

Stevenson, MD

P.S. To read more about bankruptcy and how it plays out in the bond world, check out "Learning to Love Bankruptcy."



mailbag@porterandcompanyresearch.com