Kenan–Flagler Business School

ALPHA CHALLENGE

The University of North Carolina

December 2rd, 2021

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Investment Opportunity

Ford is poised to continue its rebound following its downgrade

Thesis: Ford Motors has the potential to relative outperformance due to:

1. **Commitment to regaining HG by deleveraging and managing costs**
2. **Asserting additional control to manage global supply chain**
3. **Robust product pipeline to spur additional customer demand**

- Ford currently trades at a discount to its BBB- peers, including GM
- Management is committed to regaining HG status. Improved fundamentals and upgraded outlooks by the rating agencies provide the catalyst for a 20 bps yield compression

F 3.250 Sr Unsecured Notes 02/12/2032	
Recommendation	Buy
Current YTM	3.238%
Current OAS	167.6 bps
Target OAS	147.6 bps
Upside	20 bps

Company Overview

Ford is a leader in the automotive industry

- Founded in 1903
- Headquartered in Dearborn, Michigan
- Ford Motors is a storied American automotive company, commanding approx. 12% of domestic market share
- In 2021, announced Ford+ plan that detailed future strategy on integrated tech, commercial vehicles, and a pivot to electrical vehicles to increase profits

Ford Motors by the numbers

44
years F150 has been the #1 selling truck in US

190k+
pre-orders for Ford Bronco

$4.2M
wholesale vehicles sold in 2020

103
Number of F150 pick-ups sold per hour in the US

160k+
pre-orders for F150 EV

3,782
global patents issued

Source: Company Reports

Strengths

Ford is positioned well amidst a changing industry

Robust Pipeline	Following the pandemic, where economic uncertainty and production delays decreased auto sales, we've seen an increase in consumer demand. Ford is ready to meet that demand with new models already with a waitlist for the Ford Bronco and electric F150. Ford is looking beyond consumers to marketing the F150 to commercial fleets
Commitment to credit quality	Since being downgraded, Management has remained committed to regaining its IG status. In conjunction with the issuance of the 32 bonds, Ford has tendered $6.8b in high-cost debt that will result in significant interest savings.
Strategic Deployment of Capital	Ford willingness to review processes and cut costs, from focusing on models with higher margins, to shutting down a plant in Brazil, and moving to a made to order process to decrease cars sitting on lots and sales costs.
Technological Innovation	Ford has made strategic investments in emerging technology such as Argo AI, Blue Oval Intelligence, and Ford Pro. Blue Oval Intelligence and Ford Pro, better integrate the user with the car, making Ford cars an integrated consumer experience.

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Capital Structure

Ford issued its 3.250% Notes in conjunction with tendering $6.8b of high interest bonds

Capital Structure Description	Amount Out ($000)	Coupon or Base Rate	Maturity Date	Tendered Amount	Remaining
Senior Debt					
Senior Debt Not Tendered					
Total Senior Debt Not Tendered					**114,967,000.00**
6 5/8% Debentures Due February 15, 2028	104,000	6.6250%	Feb-15-2028	191,395.00	(87,395.00)
6 5/8% Debentures Due October 1, 2028	638,000	6.6250%	Oct-01-2028	58,908.00	579,092.00
7 1/2% Debentures Due August 1, 2026	193,000	7.5000%	Aug-01-2026	21,182.00	171,818.00
7 1/8% Debentures Due November 15, 2025	209,000	7.1250%	Nov-15-2025	32,602.00	176,398.00
7.45% Globls Due July 16, 2031 - Bond	1,794,000	7.4500%	Jul-16-2031	723,842.00	1,070,158.00
8.500% Notes Due April 21, 2023	3,500,000	8.5000%	Apr-21-2023	2,646,607.00	853,393.00
8.900% Debentures Due January 15, 2032	151,000	8.9000%	Jan-15-2032	43,555.00	107,445.00
9.000% Notes Due April 22, 2025	3,500,000	9.0000%	Apr-22-2025	2,442,405.00	1,057,595.00
9.625% Notes Due April 22, 2030	1,000,000	9.6250%	Apr-22-2030	568,042.00	431,958.00
9.980% Debentures Due February 15, 2047	181,000	9.9800%	Feb-15-2047	66,972.00	114,028.00
Total Senior Debt				**6,795,510.00**	**119,441,490.00**
Term Loans					
Total Term Loans					**3,442,000.00**
Revolving Credit					
Total Revolving Credit					**1,244,000.00**
Leases					
Total Leases					**1,489,000.00**
Other Borrowings					
Total Other Borrowings					**13,135,687.78**
Total				**6,795,510.00**	**138,752,177.78**
3.250% Notes Due February 12, 2032	2,500,000.00	3.2500%			2,500,000.00

Source: Capital IQ (Modified)

Catalysts

While an upgrade is not imminent in the near term, Ford is making significant progress back to IG status

Rating Agency	Moody's	S&P	Fitch
Rating	Ba2	BB+	BB+
Key Factors	▪ FCF <$2.5b ▪ EBITA 3-5%	▪ Debt / EBITDA < 2.5x ▪ FOCF / Debt > 10% ▪ EBITDA margins 5-6%	▪ FCF > 0 ▪ EBIT margin 1.5 – 3%

Current:

- Management is committed to regaining HG status through prudent financial policy (i.e., tender offer)
- Current Debt / EBITDA is 13.31, but is expected to continue declining below 10.0x
- EBITDA margin back to 8.25% and expected to remain in the 8 – 10% range
- EBIT margin above 3.75% for the last 12 months
- LTM free cash flow of $4.5b

Source: Moody's, S&P, and Fitch Rating Reports

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Projections

Ford – Main figures

$m	FY18	FY19	FY20	Base Case FY21E	Base Case FY22E	Base Case FY23E	Downside Case FY21E	Downside Case FY22E	Downside Case FY23E	Upside Case FY21E	Upside Case FY22E	Upside Case FY23E
Revenue	160,338	155,900	127,144	138,052	164,296	194,739	137,884	158,780	183,499	138,052	169,617	209,403
EBITDA	13,467	11,148	4,807	14,455	15,025	17,165	14,025	9,723	10,196	14,455	18,883	22,850
EBIT	5,054	2,658	(2,505)	8,349	8,081	10,521	7,595	1,689	2,398	8,349	11,700	15,678
EBT	5,024	2,620	(3,162)	7,958	7,291	9,783	7,204	899	1,608	7,958	10,909	14,940
Net income	**3,677**	**47**	**(1,279)**	**7,845**	**5,748**	**7,654**	**7,280**	**729**	**1,278**	**7,845**	**8,588**	**11,677**
EBITDA Margin	8.4%	7.2%	3.8%	10.5%	9.1%	8.8%	10.2%	6.1%	5.6%	10.5%	11.1%	10.9%
Cash flow from operations	**15,022**	**17,639**	**24,269**	**15,922**	**13,415**	**14,567**	**15,700**	**9,666**	**9,527**	**15,922**	**16,318**	**18,819**
Balance Sheet												
Cash	16,718	17,504	25,243	11,457	14,480	4,919	10,896	9,712	8,532	11,457	16,691	10,193
Debt	154,213	155,307	161,684	140,276	126,529	126,529	140,276	140,276	140,276	140,276	126,529	126,529
Credit Metrics												
Debt/EBITDA	11.5	13.5	30.7	9.7	8.4	7.4	10.0	14.4	13.8	9.7	6.7	5.5
CFO-Capex/Debt	4.7%	6.4%	11.5%	6.9%	4.5%	5.7%	6.4%	0.5%	0.6%	6.9%	6.6%	8.6%
Interest Coverage Ratio	11.11	3.22	5.97	36.9	19.0	23.2	35.8	12.3	12.9	36.9	23.9	30.9

- **Revenue**
  - Increased sales due to robust pipeline and new models spur additional demand
- **EBITDA margin**
  - Easing of supply chain pressures
  - Possible further efficiency through partnership with Global Foundries

- **EBITDA margin increase to 8 – 10% range**
- **Debt / EBITDA declines below 10.0x**
- **Increasing interest coverage and stable CFO – Capex / Debt**

Scenario Analysis

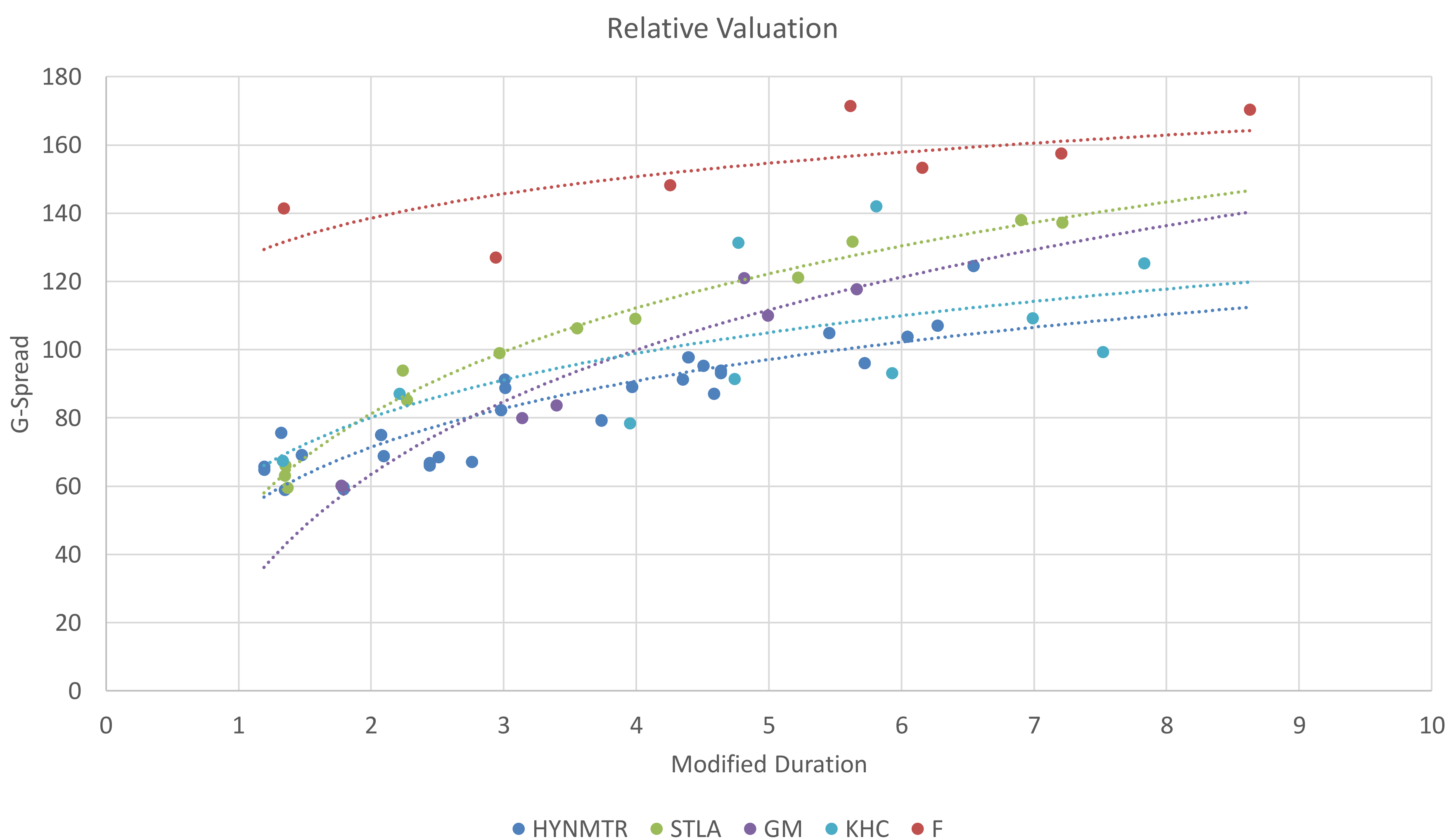
Ford's bonds have a greater potential for upside with limited downside risk

	Downside	Base	Upside
Spread Adjustment	+20 bps	-20 bps	-30 bps
Price	$98.65	$101.77	$102.56
Total 1-Yr Return	1.93%*	5.05%	5.85%
Assumptions	Lower than expected decline due to decline in economic environment.	Revenue grows due to robust pipeline and cost pressures ease due to easing of supply chain pressures.	Higher than expected demand and cost management due to managing lower inventory levels.

*Downside return assumes sale after a one-year holding period. YTM is 3.24% if held to the first call date rather than sold.

Valuation (1/2)

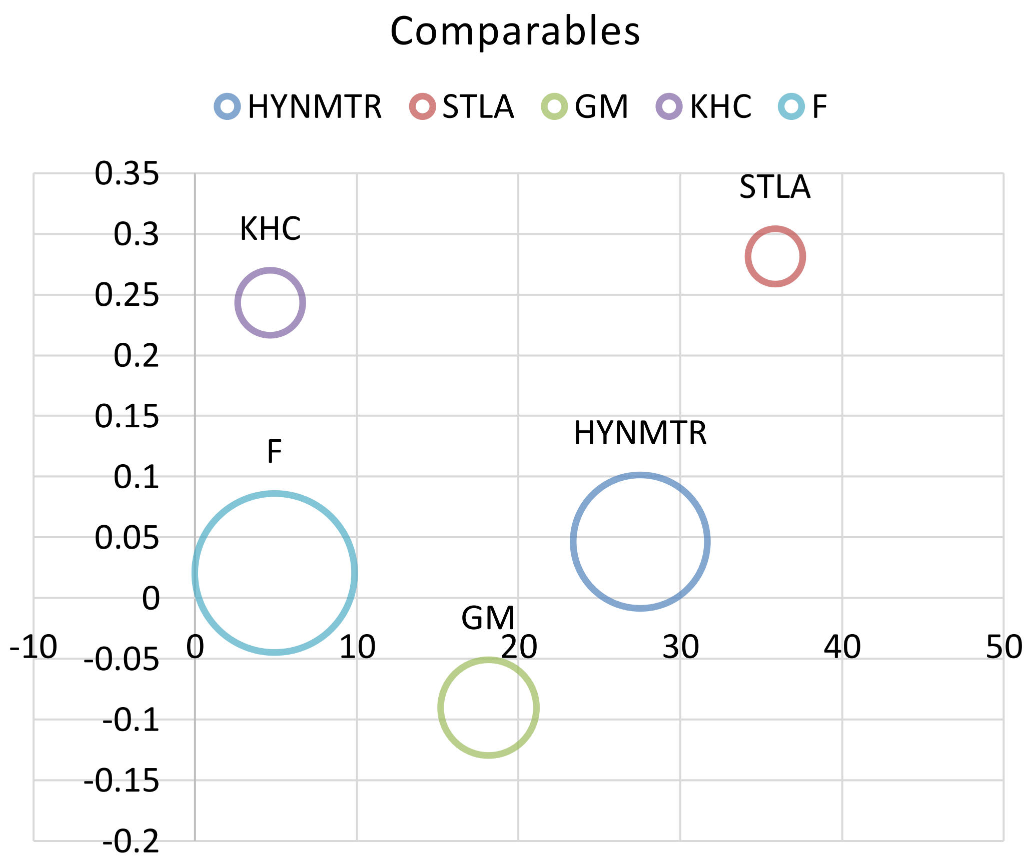
Ford's senior unsecured curve trades at least 20 – 40 bps wide of its peers, including GM



Source: Bloomberg

Valuation (2/2)

Ford will continue to close the gap between itself and its peers



<u>Key Takeaways</u>

- Ford is currently trading at a discount to each of the comparables above
- Ford has a superior EBITDA – Capex / Debt compared to GM
- While Ford currently has the largest Debt / EBITDA multiple, this metric is projected to improve in the near-term due to management's commitment to regaining IG status

Source: Capital IQ

Risks & Mitigants

There are some mitigated risks to our rating

Competition	**Risks**: Electric vehicle market is competitive as established brands increase production of EV while gas-powered cars are becoming more efficient, potentially cutting into market share. **Mitigants:** Rising fuel prices, environmental concerns, and commitments from companies to decrease emissions means EV will remain robust. In addition to new product line-up, Ford is debuting a suite of proprietary tech products that better integrate the car with the user, such as the cloud-based platform, Blue Oval intelligence, and Ford Pro- a commercial vehicle logistical platform.
Supply Chain	**Risks:** The supply chain disruption caused by COVID continues to cause production delays especially in the semi-conductor chip market. **Mitigants:** Transitioning to a made to order manufacturing process creates flexibility and certainty in production while lowering costs. Ford has also entered a JV to manufacture semi-conductors, simplifying and securing supply chain.
Costs	**Risks:** Higher than expected fixed costs as Ford pivots to EV market and enters JV to produce semi-conductor chips. **Mitigants:** Ford has demonstrated willingness to exit unprofitable ventures (i.e., Brazil manufacturing). There is also a current bill expected to pass Congress with federal funding to support domestic semi-conductor manufacturing.

Summary & Recommendation

BUY Rating for F 3.25 Senior Unsecured Bonds (02/12/203)

- High anticipated revenue from a robust pipeline
- Strategic capital deployment to manage supply chain and control costs
- Trading at a significant discount relative to its BBB- comparables
- Management is committed to recapturing IG status with likely upgrade in the intermediate term
  - Potential for 20-30 bps yield compression

Questions?

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Appendix

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Primary Research

Kevin Wikholm-MBA intern at Rivian, charging network

- Ford made a strategic investment in Rivian, for potential joint venture in EV, however, Rivian is targeting an upscale sporty EV market while Ford is targeting a more cost sensitive consumer with a 32K price sticker
- The profit margin is higher on a pick-up trucks
- Rivian invested in developing a closed national charging network while Ford is instead leveraging existing public charging networks
- Where Rivian has differentiated itself with efficient manufacturing processes, their output will likely be hindered by supply chain issues and delays
- Rivian beyond the end consumer is looking to market electric vehicles for commercial fleet sales, they've already partnered with Amazon

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Primary Research Contd.

Henry Bard- Mechanical Design Engineer- Aeva, Inc.

- As Ford is moving into autonomous vehicles (Argo Ai) we wanted to get a sense how soon that technology will come online
- Ford has invested in Argo AI and has partnerships with Walmart and Lyft to debut self-driving cars as a ride and delivery service.
- Capital intensive space, a high hurdle for any new entrants
- Technological progress in the industry means we'll be seeing AV online in the next few years

Jong Yoon Park, former Strategic Manager at Hyundai Steel and strategic MBA intern at Flex

- In addition to semi-conductor shortage there will be constraints in raw materials to make EV batteries
- Battery accounts for majority of car cost. Both Ford and GM are in JV to produce batteries
- Vertical integration is easier to control supply chain but high fixed cost, Hyundai, Kia, Tata are rare vertically integrated company

Ford 2021/2022 Product Line-Up

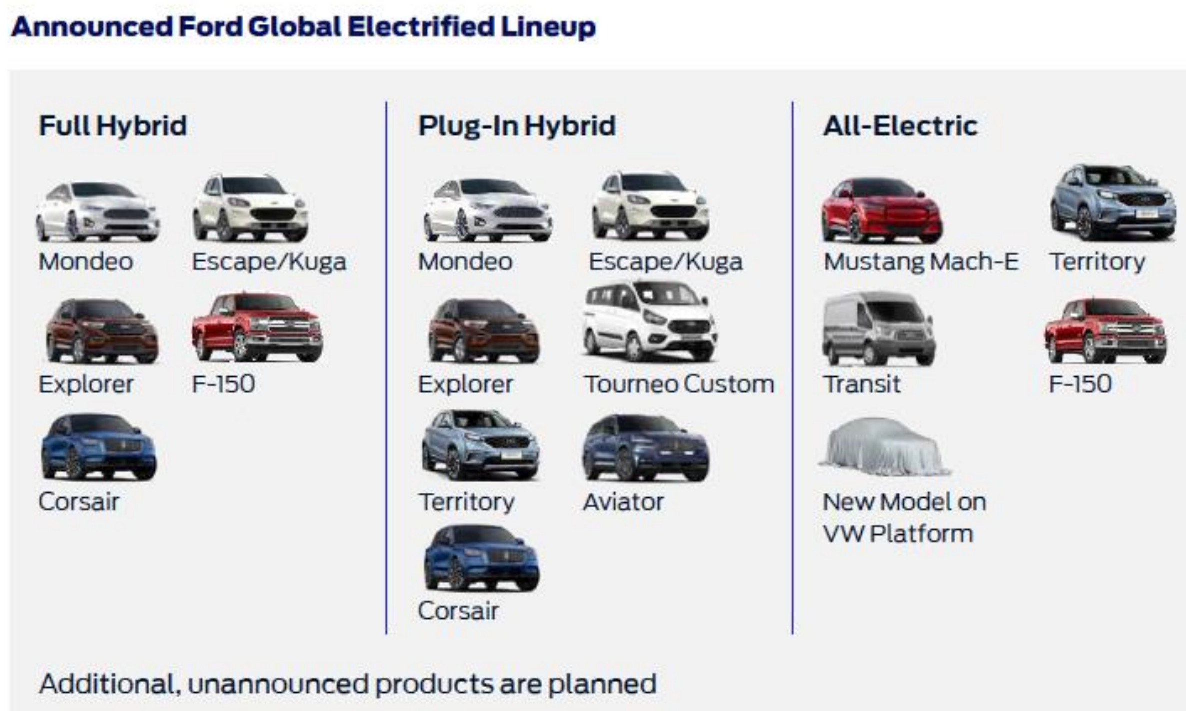
Gas powered Line-up Highlights

2022 Bronco Sport

2022 Ford Expedition

2022 Ford Edge

2022 Ford Transit Connect



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Industry Overview

Porter's 5 Forces	Description
Competition	Medium-little movement in market share between the top 4 auto manufacturers. Ford and GM also tend to act in sync, but all four large auto manufacturers are balancing cost, with new products, and tech investment
Threat of New Entrants	Medium- Barriers to entry are high, this is a capital-intensive industry. However, there are newer entrants trying to capture segments of the EV and AV market.
Bargaining Power of Consumers	Low- with the auto shortage from Covid there is an elevated demand for new and used vehicles from consumers that will likely continue for the coming few years
Bargaining Power of Suppliers	High- currently with the supply disruption auto companies are looking to secure a steady semi-conductor supply. Ford has partnered with global Foundries in a JV to simplify the semi-conductor supply and ensure supply for the years to come. Likewise with the transition to EV there has been a spike in demand for nickel, lithium, and cobalt. Ford has partnered with SK Innovation. Ford has decreases in battery costs due to increases in scale.
Substitutes	Medium- Although there are no feasible alternatives for transportation in the U.S outside of the auto market, consumers will shop around auto brands, although integrated platforms such as Blue Oval Intelligence might make it easier for a consumer to stay in the Ford family

Source: Company Reports

Snapshot of Ford Sales

- 2.8M Wholesale sales YTD
- Growth spring loaded with an order bank up over 50% from Q2 to 111K orders, excluding Bronco
- Doubled annual F-150 Lightning production to 80K to meet growing demand
- Auction values up 27% YoY reflecting continued strong demand for used vehicles including impact of lower new vehicle production due to

Indenture Key Provisions

Term	Description
Notes	3.25% Notes due Feb. 12th 2032
Issuer	Ford Motor Company
Principal Amount	$2,500,000,000
Coupon Rate	3.25% paid semi-annually
Maturity Date	Feb. 12th 2032
Optional Redemption	The Notes offered hereby will be redeemable prior to maturity, in whole or from time to time in part. Prior to November 12, 2031(which is the date that is three months prior to the maturity date of the Notes), the Notes may be redeemed at a redemption price equal to the greater of: 100% of the principal amount of the Notes to be redeemed; and as determined by the Quotation Agent (defined below), the sum of the present value of the Remaining Scheduled Payments (defined below) of principal and interest on the Notes to be redeemed that would be due if the Note matured on the Par Call Date (defined below), discounted to the redemption date on a semi-annual basis assuming a 360-day year consisting of twelve 30- day months at the Adjusted Treasury Rate (defined below) plus 30 basis points
Covenants	1) Limit of Indebtedness 2) Certain Sales of Assets 3) Merger Restrictions 4) Limitation on Sale and Leaseback 5) Collective Action Clause
Events of Default	The Indenture defines an “Event of Default” as being any one of the following events: failure to pay interest for 30 days after becoming due; failure to pay principal or any premium for five business days after becoming due; failure to make a sinking fund payment for five days after becoming due; failure to perform any other covenant applicable to the debt securities or 90 days after notice; certain events of bankruptcy, insolvency or reorganization; and any other Event of Default provided in the prospectus supplement.