



# CREDIT MARKET LANDSCAPE

MAY 19, 2022

CHICAGO TRADING COMPANY CHICAGO / NEW YORK / LONDON

# AGENDA

- Corporate bond market overview (focus on Investment Grade)
- Dealer/client connectivity
- Future innovation and developments
- CTC's role in the corporate bond market ecosystem

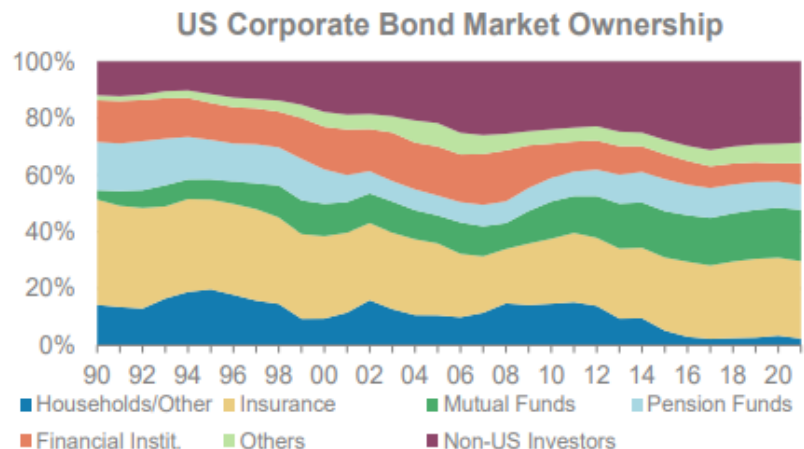
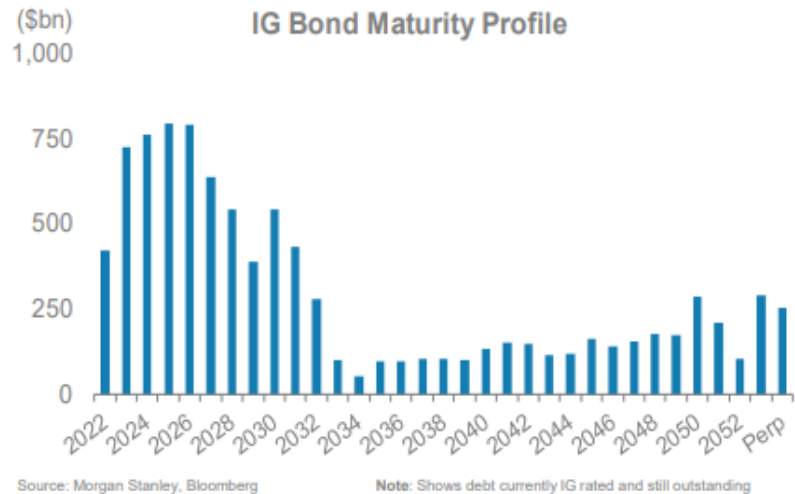
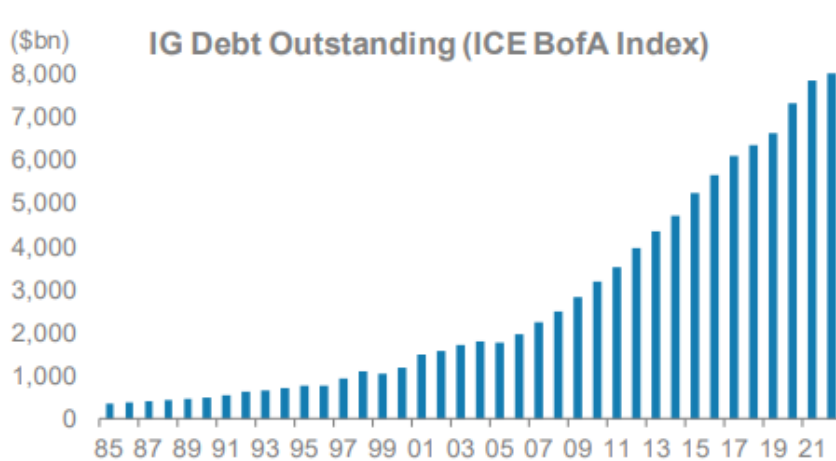


# IG STATS

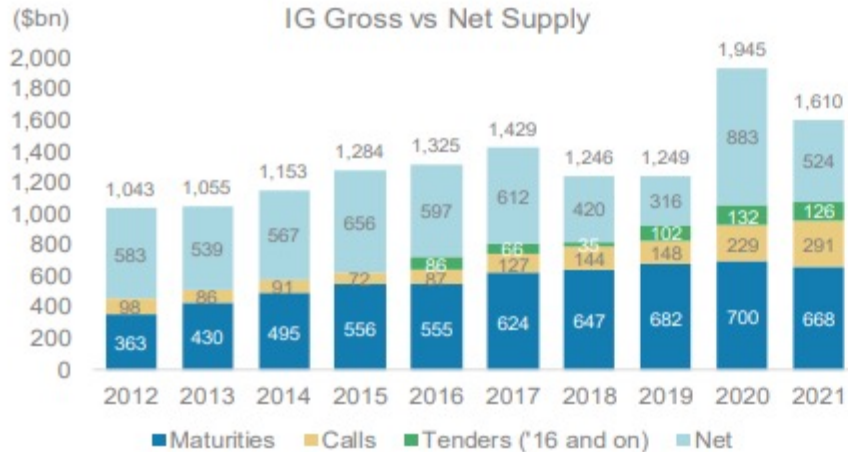
- US Corp bond market \$12t+, and has ballooned over last decade due to rapid build-up of debt since GFC, driven by easy/expansionary monetary policies
- Average annual issuance of USD\$ corporate bonds since 2008 ~1.8 trillion (IG+HY)
- Decline in overall Investment Grade bond quality (BBB's 51% of issuance in 2019, pre GFC was 39%)
- Extension of index duration (longer maturities and increased price sensitivity)
- Use of ratings-based, passive investments has ballooned over the past decade (holdings by corporate bond ETFs have increased 10-15x over past decade)
- Bloomberg/Barclays corp index duration, and LQD spread per unit of duration:



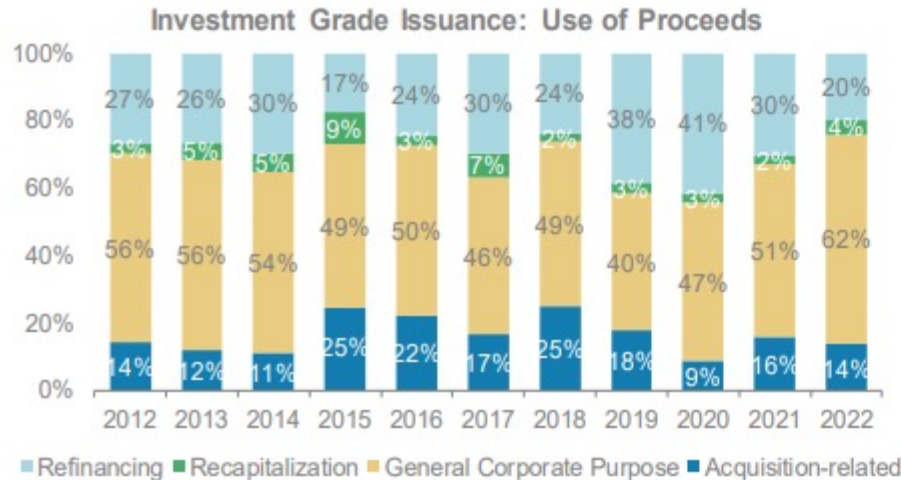
# INVESTMENT GRADE CORPORATE BOND MARKET PROFILE



# INVESTMENT GRADE NEW ISSUANCE TRENDS



Source: Dealogic, Bloomberg, Morgan Stanley Research Note: Excludes tranches <\$100MM

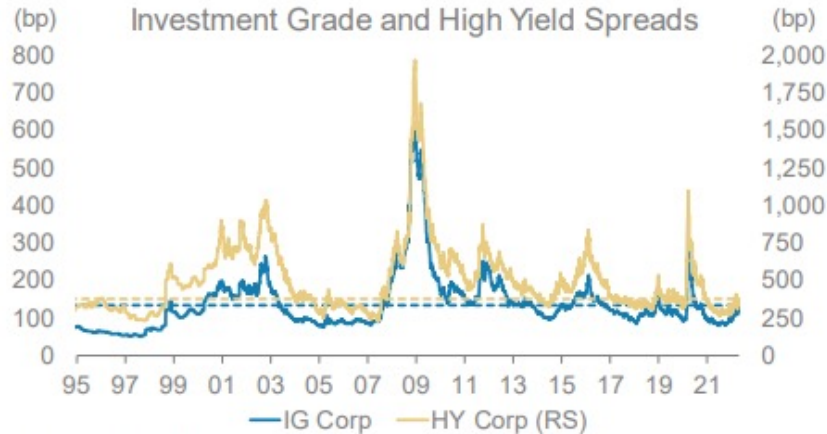


New Issuance Breakdown						
\$bn	2021YTD		2022YTD		YoY	
Sectors	% of Total		% of Total		Absolute	Share
Financials	260.5	42%	304.6	50%	17%	+7.9%
Consumer Discretionary	53.9	9%	41.1	7%	-24%	-2.0%
Consumer Staples	22.7	4%	19.8	3%	-12%	-0.4%
Energy	28.6	5%	17.3	3%	-39%	-1.8%
Materials	10.3	2%	10.3	2%	0%	+0.0%
Healthcare	22.1	4%	38.5	6%	74%	+2.7%
Industrials	28.7	5%	39.7	7%	38%	+1.9%
Information Technology	85.3	14%	33.1	5%	-61%	-8.3%
Media	5.6	1%	34.5	6%	516%	+4.7%
Telecom	39.6	6%	12.9	2%	-68%	-4.3%
Real Estate	17.2	3%	17.3	3%	1%	+0.1%
Utilities	46.6	7%	41.8	7%	-10%	-0.7%
US / Yankee						
US	398.4	64%	391.0	64%	-2%	-0.2%
Yankee	222.9	36%	220.2	36%	-1%	+0.2%
Coupon						
Fixed	580.8	93%	566.5	93%	-2%	-0.8%
Float	34.8	6%	42.2	7%	21%	+1.3%
SOFR	27.4	79%	41.9	99%	53%	+20.5%
Maturity Bucket						
3yr & In (1.5-3.5yr)	117.8	19%	121.5	20%	3%	+0.9%
5yr (3.5-6yr)	126.9	20%	153.0	25%	21%	+4.6%
7yr (6-8yr)	58.4	9%	36.7	6%	-37%	-3.4%
10yr (8-12yr)	153.4	25%	164.2	27%	7%	+2.2%
20yr (12-22yr)	52.5	8%	25.6	4%	-51%	-4.3%
30yr (22-32yr)	64.9	10%	80.8	13%	25%	+2.8%
>32yr (>32yr)	17.8	3%	18.0	3%	1%	+0.1%
Perpetual	29.6	5%	11.3	2%	-62%	-2.9%
Credit Quality (Median of M/S/F)						
AAA	4.4	1%	4.8	1%	10%	+0.1%
AA	53.6	9%	66.2	11%	24%	+2.2%
A	265.7	43%	277.7	45%	5%	+2.7%
BBB	249.5	40%	230.3	38%	-8%	-2.5%
Split	26.1	4%	17.1	3%	-35%	-1.4%
ESG Labeled Bonds						
All ESG Labeled	24.6	4%	30.2	5%	23%	+1.0%
Green	11.1	2%	16.8	3%	52%	+1.0%
Sustainability	11.0	2%	10.9	2%	0%	+0.0%
Social	2.6	0%	2.5	0%	-2%	-0.0%
Total	621.3		611.2		-2%	



# CREDIT VALUATIONS

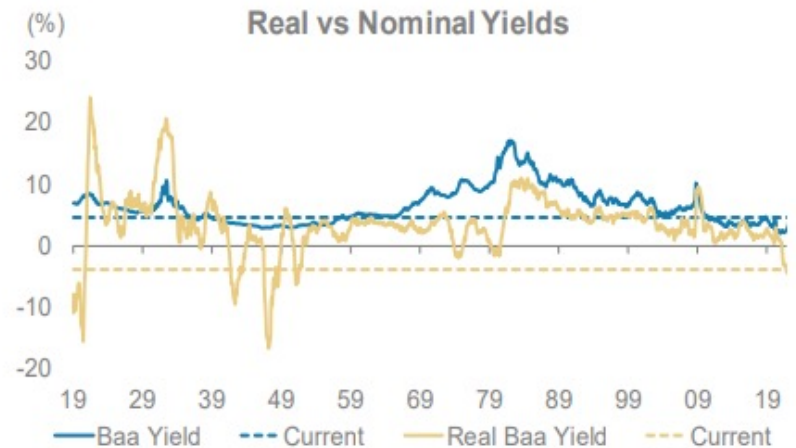
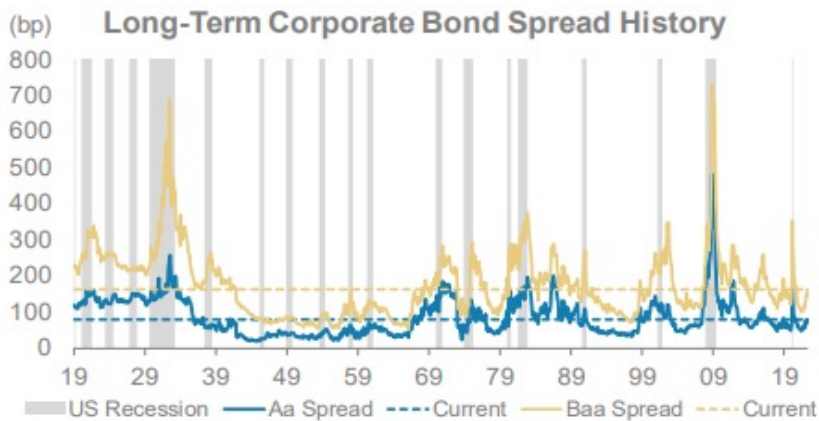
## Corporate Credit Spreads



Source: Morgan Stanley, Bloomberg



Source: Morgan Stanley, Bloomberg

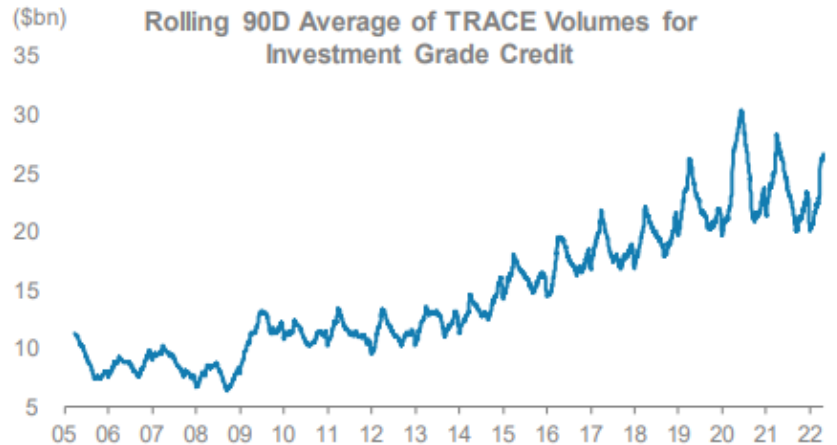




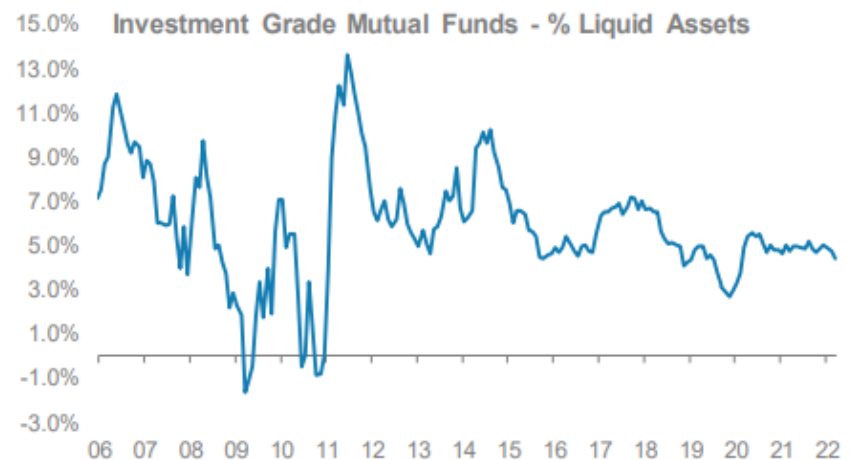
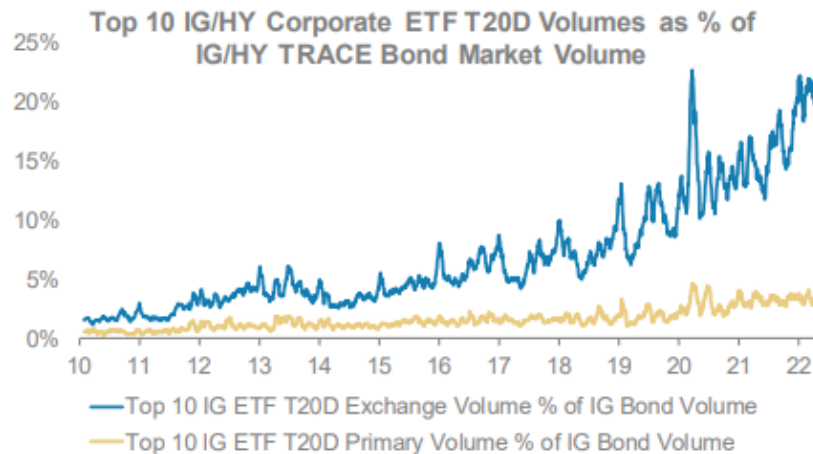
# LIQUIDITY METRICS



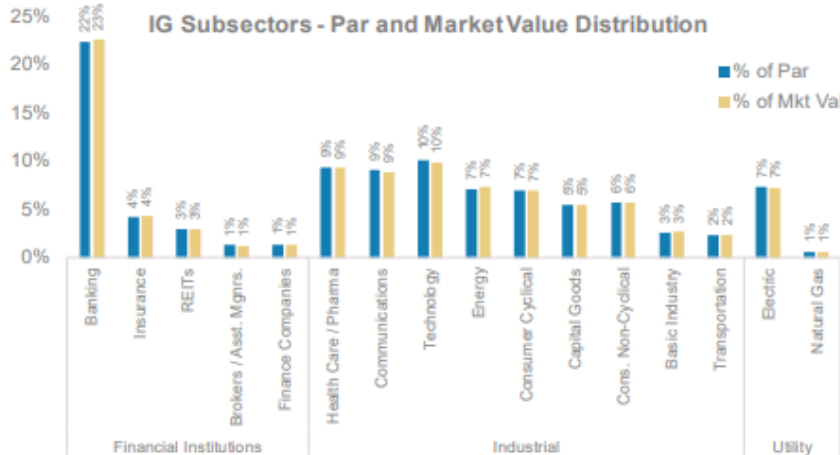
Source: Morgan Stanley Research, Bloomberg, FINRA Trace, ICE Bond Indices



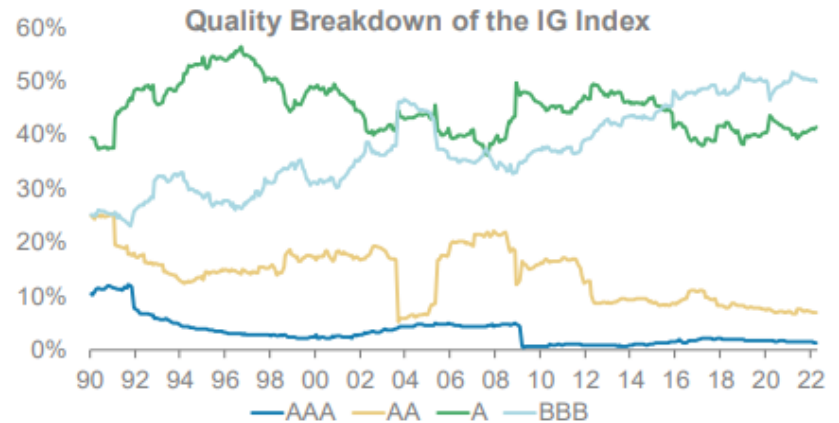
Source: Morgan Stanley Research, Bloomberg, FINRA Trace



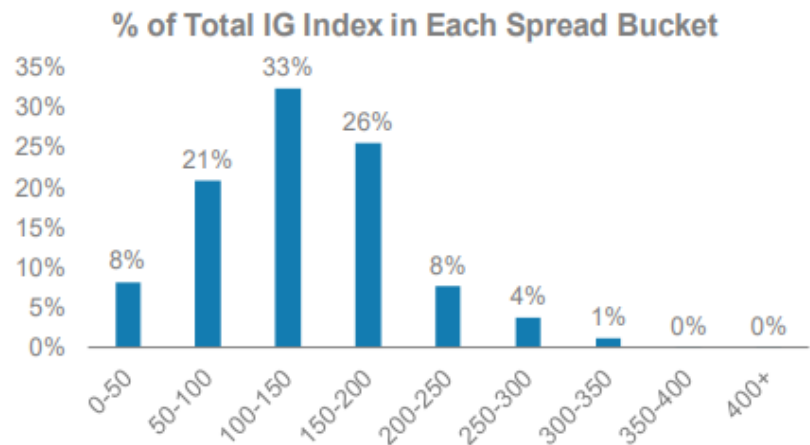
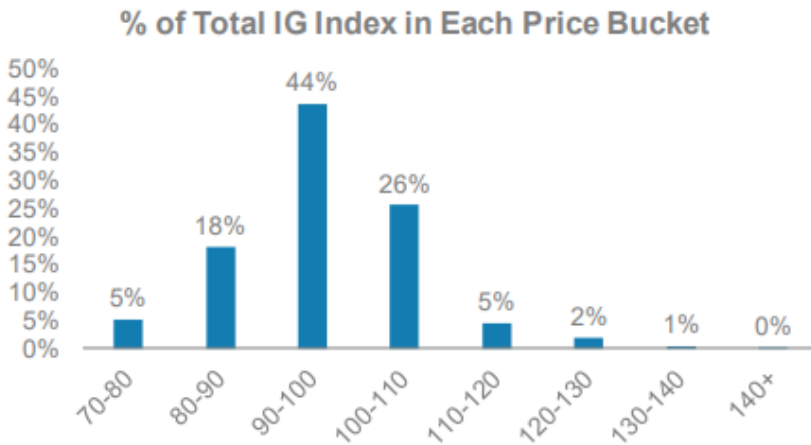
# IG MARKET DISTRIBUTION ACROSS SECTORS, RAITINGS, PRICES/SPREADS >> TREND TOWARDS LOWER AVERAGE QUALITY



Source: Morgan Stanley, Bloomberg



Source: Morgan Stanley, Bloomberg





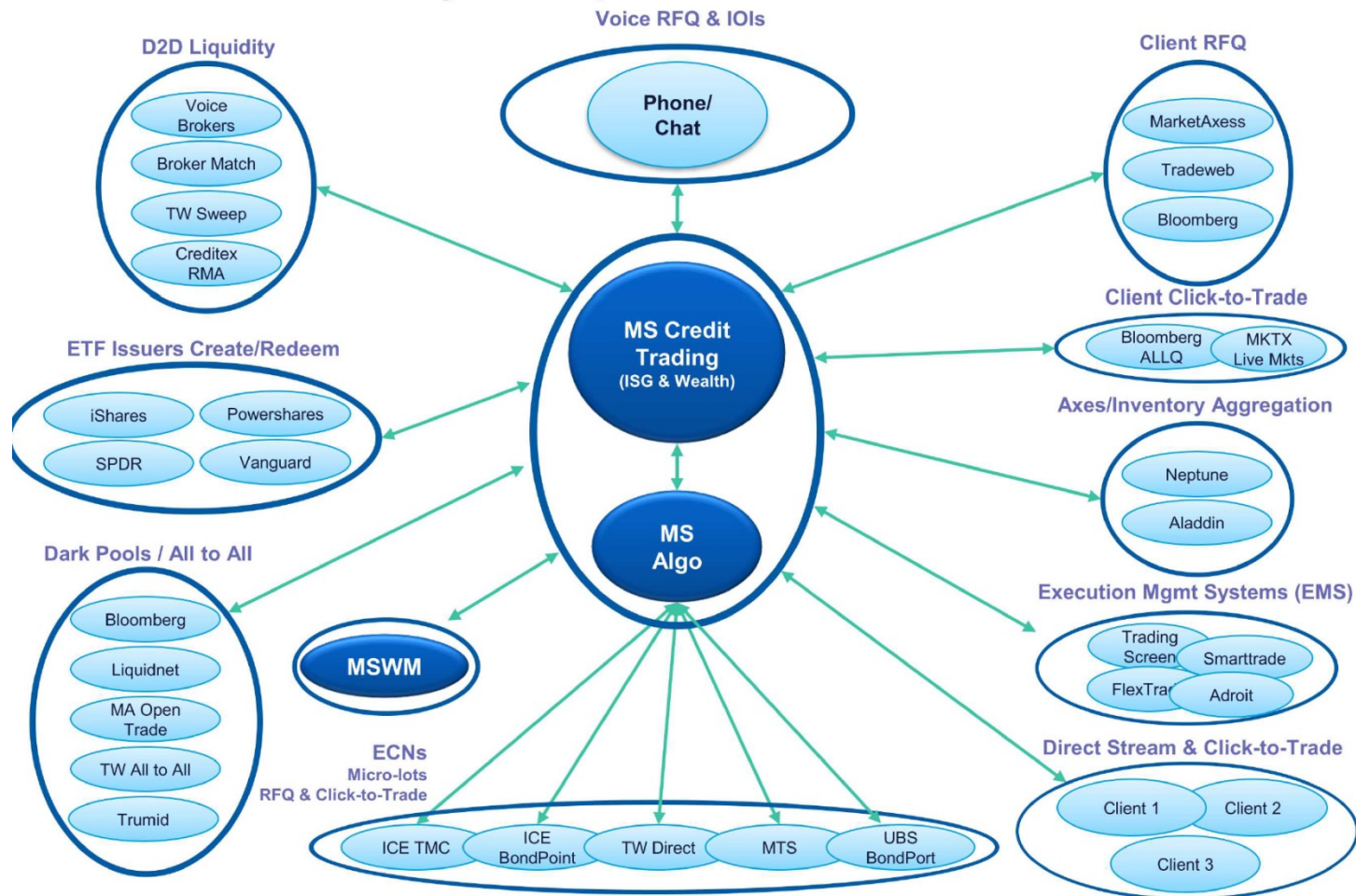
# CORP BOND PARTICIPATION AND SELL-SIDE ORGANIZATION

- Variety of investment mandates driving flows in credit:
  - Short duration: corporate cash management , mutual fund/money manager, P&C insurance, retail
  - Intermediate duration: P&C/Life insurance (domestic and overseas), mutual fund/money manager, retail
  - Long duration: Life insurance (domestic and overseas), pension, mutual fund
- Dealer community set up to provide liquidity in a duration-specific manner
  - <5yr traders
  - >5yr traders
- Investment mandates and line trader organization can drive inefficiencies and relative value opportunities in IG credit



# CREDIT CONNECTIVITY (DEALER PERSPECTIVE)

## A web of connectivity in Corporate Credit



# MARKETAXESS OWNS ~90% OF E-TRADING FLOWS IN CREDIT

Action	Size(000s)	Short Name/Description	Cpn	Maturity	Level	Time Left	Source	Time In	Watch List
Bid Wanted	\$5,000	AVGO 4.926 5/37 c37 (14)	4.926	05/14/2037		00:04	*****	11:49 AM CDT	DH 1, DELL
Offer Wanted	\$100	C 4.750 5/18/46	4.750	05/17/2046		00:18	*****	11:53 AM CDT	DELL
Offer Wanted	\$50	C 4.075 4/23/29 c28	4.075	04/22/2029		00:18	*****	11:53 AM CDT	DELL
Offer Wanted	\$100	CVS 3.875 7/20/25 c25	3.875	07/19/2025		01:01	*****	11:54 AM CDT	DELL
Bid Wanted	\$300	GM 3.550 7/8/22	3.550	07/07/2022		03:40	*****	11:57 AM CDT	DELL
Bid Wanted	\$11	VZ 2.625 8/15/26	2.625	08/14/2026		05:05	*****	11:53 AM CDT	VZ EXCHANGE
Bid Wanted	\$13	ROSLIN 2.500 9/1/26	2.500	09/11/2026		05:05	*****	11:53 AM CDT	DELL
Bid Wanted	\$2	BPLN 3.119 5/4/26 c26	3.119	05/03/2026		05:05	*****	11:53 AM CDT	DELL
Bid Wanted	\$9	AMZN 3.200 11/2/27 c27	3.200	11/01/2027		05:05	*****	11:53 AM CDT	DELL
Offer Wanted	\$110	TACHEM 3.200 9/23/26 c26	3.200	09/22/2026		05:21	*****	11:58 AM CDT	DELL
Offer Wanted	\$500	MS 3.950 4/23/27	3.950	04/22/2027		05:21	*****	11:58 AM CDT	DH 1, DELL
Offer Wanted	\$105	DISCA 2.950 3/20/23 c23	2.950	03/19/2023		06:21	*****	11:43 AM CDT	DELL
Bid Wanted	\$1,800	ENBSCN 2/17/23 (FRN)	1.194	02/16/2023		06:21	*****	11:43 AM CDT	DELL
Bid Wanted	\$6,400	*GM 6.800 10/1/27 c27	6.800	09/30/2027		06:21	*****	11:40 AM CDT	DELL
Bid Wanted	\$700	*AMZN 3.100 5/1/25 c50	3.100	05/11/2025		06:21	*****	11:40 AM CDT	DELL
Offer Wanted	\$15	BATSLN 1.749 8/10/30 c30	2.726	03/24/2031		06:21	*****	11:40 AM CDT	DELL
Offer Wanted	\$15	BPLN 1.749 8/10/30 c30	1.749	08/09/2030		06:21	*****	11:40 AM CDT	DELL
Offer Wanted	\$16	EX 2.250 6/1/30 c30	2.250	05/31/2030		06:21	*****	11:40 AM CDT	DELL

TICKER	SECTOR	MATURITY	WATCHLISTS	SIZE	ALL	VIEW	PRINT	RESET	ROWS
ORCL	All Sectors	All Maturities	All Watchlists	All Sizes	CLEAR ALL				11
Shortname	CUSIP	RTS Buy Order (M)	Addl Bid (s/1MM)	Bid Size (M)	Bid Level	Offer Level	Offer Size (M)		
ORCL 2 400 9/15/23 c23	66389XGL8	-	-	-	-	-	-		
ORCL 2 950 11/15/24 c24	66389XGB3	-	-	-	-	-	-		
ORCL 2 500 4/1/25 c25	66389XBT1	-	-	-	-	-	-		
ORCL 1 650 3/25/26 c26	66389XCC7	-	-	-	-	-	-		
ORCL 2 950 11/15/27 c27	66389XGN4	-	-	-	-	-	-		
ORCL 2 950 4/1/30 c30	66389XGV6	-	-	-	-	-	-		
ORCL 2 875 3/25/31 c30	66389XCC3	-	-	-	-	-	-		
ORCL 3 600 4/1/40 c39	66389XGW4	-	-	-	-	-	-		
ORCL 3 600 4/1/50 c49	66389XGX2	-	-	-	-	-	-		
ORCL 3 950 3/25/51 c50	66389XCA1	-	-	-	-	-	-		
ORCL 3 850 4/1/60 c59	66389XY0	-	-	-	-	-	-		

MarketAxis Workstation: David Hernandez(dhernann3), CTC Alt

Trade Single

Trade List

Manage Axes

WatchLists/Alerts

Price Discovery

Live Markets

Connect Us | [New!](#) | [Settings](#) | [Corp](#) |

Activity

Blotter

Open Trading

Inventory

Portfolios

MKTX Actives

ETFs

Dealer Status

Market Recap

BondTicker

Credit

Alerts

Market Lists

Public Axes

Private Axes

Markets

MKTX-IG Actives

MKTX-IG New Issues

+

-Hide Filters

Cur: All

Product: All

Status: All

Filter: Ticker

Go

Clear

BT Watch List

Refresh

BT Alerts

Min Size (M)

Offers Requested

Bids Requested

All

Cpty Rating: All

WatchList: None

Create Watch List

Cross: All

Maturity

SHORT

2 Yr

3 Yr

5 Yr

10 Yr

30 Yr

Action	Size(000s)	Issuer	Ticker	Coupon	Maturity Date	Identifier	Cpty Rating	Due at	Time Left	Status	Level	Benchmark	Spot Type	Price	Inquiry ID	Trade TL	MKTX	Watch List	Cross	Partials	Bond Ratings	Coupon
Bid	\$255	MORGAN S.	MS	2.750	05/19/2022	61744YAH1	5	--	--	DNT	N/A		1-Step		84189344				No	No	A1/A-	Fixed
Bid	\$200	OPYRITYSP.	OPBANK	2.500	05/20/2022	XS1234804	5	--	--	DNT					84183815				No	Yes	Aa3/A-	Fixed
Bid	\$4,300	BNP	BNP	2.950	05/23/2022	09659W2A1	5	--	--	Traded	0.571%	N/A	1-Step	100.020	84188283	07:11 A...			No	Yes	Baa1/A-	Fixed
Bid	\$8,551	VEQUA EN.	VEIEP	5.125	05/24/2022	FR0010474	5	--	--	DNT					84207845				No	Yes	Baa1/BBB	Fixed
Bid	\$3	CZECH REP.	CZCH	3.875	05/24/2022	XS0705894	5	--	--	Traded		N/A	Standard		84207573	09:32 A...			No	Yes	Aa3/NR	Fixed
Bid	\$8,551	VEQUA EN.	VEIEP	5.125	05/24/2022	FR0010474	5	--	--	DNT					84207318				No	Yes	Baa1/BBB	Fixed
Offer	\$2,100	MCDONALD.	MCD	1.125	05/26/2022	XS1237271	5	--	--	Traded			Standard		84211832	09:58 A...			No	No	Baa1/BBB+	Fixed
Offer	\$185	TOYOTA MO.	TOYOTA	1.150	05/26/2022	89236TG22	5	--	--	DNT	N/A		1-Step		84196804				No	Yes	A1/A+	Fixed
Offer	\$20,000	SOCIETE G.	SOOCEN	0.000	05/27/2022	FR0013422	5	--	--	DNT					84213011				No	Yes	A1/A	Fixed
Offer	\$20,000	SOCIETE G.	SOOCEN	0.000	05/27/2022	FR0013422	5	--	--	DNT			Standard		84212745				No	Yes	A1/A	Fixed
Bid	\$400	SOCIETE G.	SOOCEN	0.000	05/27/2022	FR0013422	5	--	--	Traded			Standard		84210519	09:56 A...			No	Yes	A1/A	Fixed
Offer	\$150	AMERICAN	AAL	5.000	06/01/2022	02376RAC6	2	--	--	DNT	N/A				84221107				No	Yes	Caa1/CCC	Fixed
Bid	\$10	RYDER	R	2.875	06/01/2022	78355HHM0	5	--	--	DNT	N/A		1-Step		84216564				No	Yes	Baa2/BBB	Fixed
Offer	\$150	AMERICAN	AAL	5.000	06/01/2022	02376RAC6	2	--	--	DNT	N/A				84202724				No	Yes	Caa1/CCC	Fixed
Bid	\$150	AMERICAN	AAL	5.000	06/01/2022	02376RAC6	2	--	--	DNT	N/A				84202044				No	Yes	Caa1/CCC	Fixed
Offer	\$190	CTRPLLR FL.	CAT	2.850	06/01/2022	14912L5F4	5	--	--	DNT	N/A		1-Step		84196603				No	Yes	A2/A	Fixed
Offer	\$200	GREENLAN.	GRNLHK	9.625	06/03/2022	XS2346930	3	--	--	DNT	N/A		Standard		84182913				No	Yes	NANA	Fixed
Bid	\$10	KRAFT HEI.	KHC	3.500	06/06/2022	50076QA29	5	--	--	DNT	N/A		1-Step		84226487				No	Yes	Baa3/BBB-	Fixed
Bid	\$500	DATANG G.	DTGRHO	12.500	06/06/2022	XS0339781	5	--	--	DNT			Standard		84185386				No	Yes	NANA	Fixed
Offer	\$500	LUKOIL INT.	LUKOIL	6.656	06/07/2022	XS0304274	5	--	--	Traded	92.000	N/A	Standard	92.000	84222032	11:02 A...			No	Yes	NR/NR	Fixed
Offer	\$500	LUKOIL INT.	LUKOIL	6.656	06/07/2022	XS0304274	5	--	--	DNT	N/A		Standard		84209094				No	Yes	NR/NR	Fixed
Offer	\$500	LUKOIL INT.	LUKOIL	6.656	06/07/2022	XS0304274	5	--	--	DNT	N/A		Standard		84192669				No	Yes	NR/NR	Fixed
Bid	\$550	FREDDIE M.	FHLM	0.250	06/08/2022	31340VU66	5	--	--	Traded	0.765%	N/A	1-Step	99.978	84212399	10:06 A...			No	Yes	Aaa/N/A	Fixed
Bid	\$40	DEERE & C.	DE	2.600	06/08/2022	2441998E4	5	--	--	Traded	3.110%	N/A	1-Step	99.965	84195239	08:12 A...			No	No	A2/A	Fixed

Lives: 2207

Vol (000s)

View Totals

Trade

y11.58.0.2

Trading Open

11:58:38 AM CDT



# DATA AGGREGATION, EXECUTION MANAGEMENT FOR BUYSIDE FUTURE INNOVATION

## EMS GUI example: TradingScreen/TradeSmart

The screenshot displays the TradeSmart GUI interface, which is divided into several functional panels:

- Top Panel:** Contains navigation tabs (Main, Markets, Trading, Monitoring, Communication, Analytics, Post, Windows, Help) and a status bar indicating the current workspace (TS FI EMS).
- Left Panel (Market View):** A table listing various bond instruments with columns for Action, Bid Type, Bid Source, Bid Size, Bid Level, Ask Level, Ask Size, and Ask Dealer. The table shows a list of bonds with their respective bid and ask prices and sizes.
- Center Panel (Liquidity Viewer):** A table showing the order book for a specific instrument, with columns for Action, Timer, Broker, Side, Size, Platform, Description, and Spread. It displays a list of orders with their respective prices and sizes.
- Right Panel (Watchlist):** A table listing various bond instruments with columns for LocalDescription, CUSIP, Bond Category, CCY, Country, IssuerCount, DTM, and Bond Tenor. It shows a list of bonds with their respective details.
- Bottom Panel (My Bond Orders):** A table listing the user's bond orders, with columns for Owner, Side, State, Order Qty, Description (Details), and Isin. It shows a list of orders with their respective details.
- Bottom Right Panel (Past Trades):** A table showing the user's past trades, with columns for Products, From Selection, TimeRange, and Last 6 Months. It displays a list of trades with their respective details.



# CTC CORPORATE BOND STRATEGIES (FUNDAMENTAL/QUANTAMENTAL)

- Cover the universe of IG/XO/HY/Distressed credit
- HY/Distressed – Fundamental credit work (bottoms up)
- IG/XO/EM – Quant focused, relative value, macro (top-down)
  - Full duration spectrum of corporate bond issuance in IG allows us to dig into relative value across an issuer curve.
  - The size of the market relative to the amount of intermediation creates dislocations in value across issuer curves
  - CTC has a short, medium, and long horizon approach to investing for absolute returns in IG/XO/EM credit
- Strategies include: ETF vs CDX basis, Convexity trading/credit curve relval (DM/EM), sector specific/directional trading, event-driven trading (corporate actions)
- Systematic (black box), quasi-systematic (grey box), and fundamental/non-systematic strategies
- Benefit from thinking about the credit market holistically, working with dealer counterparties, and evolving with the market





# CREDIT MARKET OVERVIEW

MAY 19, 2022

CHICAGO TRADING COMPANY CHICAGO / NEW YORK / LONDON