

## OTC Derivatives: Electronic Trading Solutions

**credit  
awards  
usa 2008  
Winner**

Best Multi-Dealer CDS Trading Platform

[www.marketaxess.com](http://www.marketaxess.com)

Member SIPC

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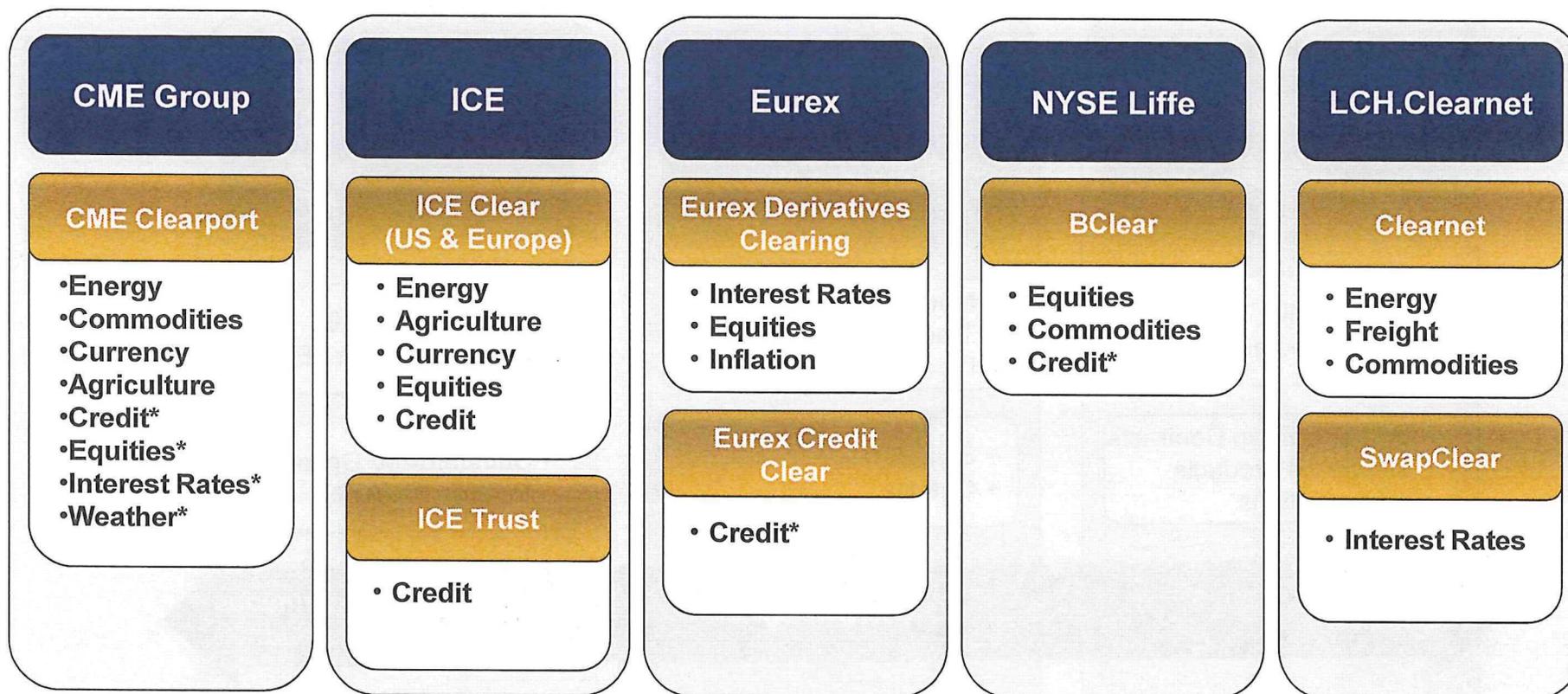
Page 1

## About MarketAxess



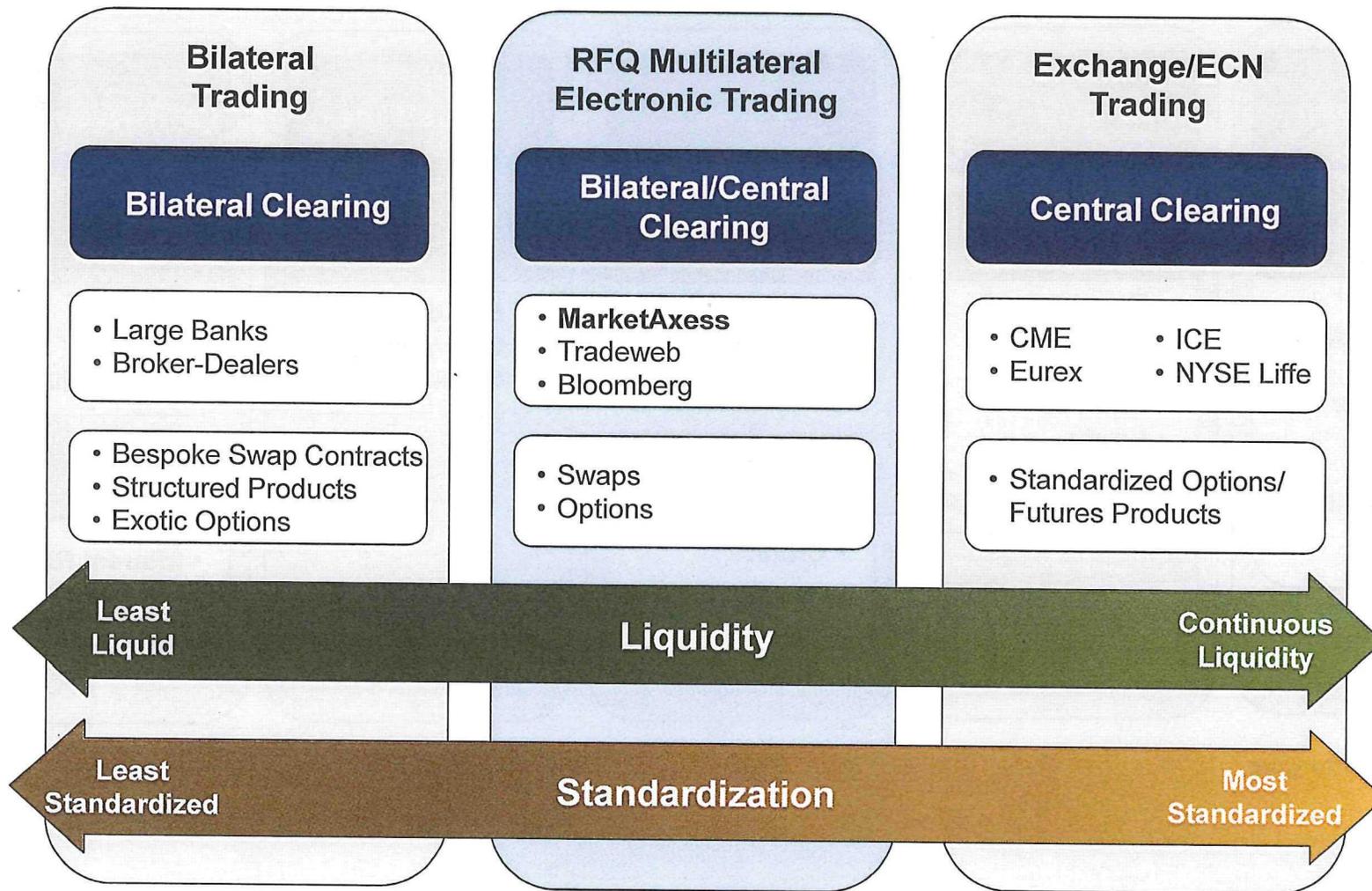
- MarketAxess formed in 2000 to build technology solutions to promote efficiency, transparency and liquidity in credit markets
- Patented electronic trading system is an institutional participant to multi-dealer trading platform
- SEC-registered broker-dealer and ATS operator; U.K. affiliate is FSA-registered Multilateral Trading Facility
- 750+ active institutional participant firms and 72 participating broker-dealers
- Current products traded include HG Corporate bonds, High Yield, CDS, Emerging Market debt, Agency debt, European credit
- Profitable since 2003 and completed an Initial Public Offering in November 2004 (NASDAQ: MKTX)
- Leading provider of pre-trade data (MarketAxess Corporate BondTicker™), electronic trading solutions, and post-trade reporting and straight through processing
- CDS product launched in late 2005

# Current OTC Derivative Clearinghouse Activity



\*Not Currently Live

# Forward View of the Derivatives Market



- Enhanced market competition to drive down transaction costs
- Real-time transparency on derivative pricing and market participants
- Significant reduction in trade errors resulting in reduced overall market risk
- Improved audit trails to demonstrate compliance with best execution guidelines
- Automated confirmations and communication of trade details to clearinghouses and regulatory authorities

# Request-For-Quote (RFQ) Trading Protocol



## Key RFQ Features

- The RFQ trading protocol establishes discrete auctions for each instrument that a participant wishes to buy or sell.
- Enables the seller or purchaser of an instrument to simultaneously request competitive, executable bids or offers from multiple dealers, at the choice of the participant.
- Participant sets the time when he/she would like all of the dealers' prices or spreads returned to the participant, in order to have the ability to see all executable prices available at the same time.
- The entire process is managed electronically, is highly efficient and can be completed in minutes.
- The MarketAxess platform can run auctions on single instruments or simultaneously on lists of up to 40 instruments (and up to 150 CDS single-names).

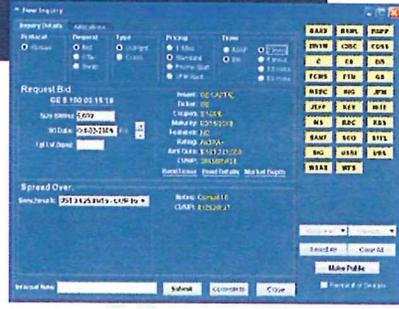
## Ideally Suited to Less Liquid Markets

- Creates a highly transparent and competitive process that is ideally suited to less liquid markets.
- Preserves the existing participant relationships, incentivizing dealers to commit capital and provide liquidity in less liquid markets.
- Allows for highly efficient price discovery with broad group of dealers.
- Very effective for more fragmented and less liquid markets that do not enjoy continuous two-way liquidity.
- Already adapted to multiple asset classes, including credit default swaps.
- Information on instruments and sizes traded could be reported in real time to trade repositories, clearing houses and regulatory authorities.

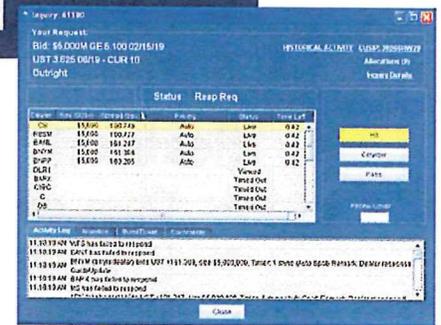
# MarketAxess eTrading Lifecycle: From Execution to Reporting in Minutes



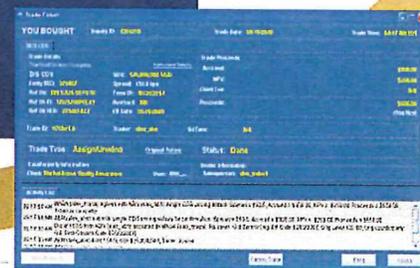
**0:00 Pre-trade**  
Participant Sends Trade Inquiry



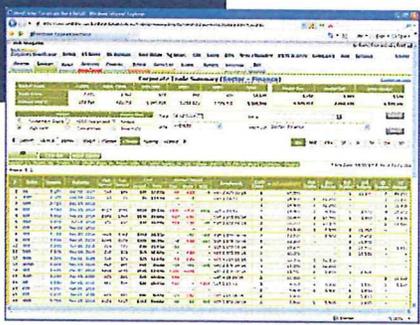
**+3:00**  
Dealer Responses Returned



**+3:05**  
Trade Executed



**+3:15**  
Executed Trade Appears on TRACE



**+3:06 Post-trade**  
Trade Details Reported to Both Counterparties

- **Pre-Trade**
  - Indicative CDS quotes, analytics, and dealer pricing runs
- **Trading Network**
  - 72 participating dealers system-wide including global, regional and diversity dealers
  - 12 dealers currently participating in CDS
  - Approximately 750+ active institutional participants on the system primarily trading corporate bonds today
  - Approximately 200 direct connections to institutional participant order management systems
- **Electronic Execution**
  - Open, competitive auction-based request-for-quote system
  - Live trading capabilities in both index and single name CDS products
  - Market leading electronic bid and offer list capabilities
- **Post-Trade**
  - Straight through processing, post-trade feeds and reporting
  - Automatically stored audit trails for compliance
  - Automated links possible to CCPs

- **Broad Based Index Products**
  - Investment Grade, Emerging Markets and European Indices
  - Seamless roll trading technology
  - ISDA-compliant calculations embedded in trading system
  - Auction and hit/lift cross-matching trading protocols
- **Single Name Credit Derivatives**
  - Investment Grade, Emerging Markets and European Credits
  - Market standard RED information
  - “Big Bang” calculations embedded in trading system
  - Auction and hit/lift cross-matching protocols
- **CDS Single Name Lists**
  - Ability to trade up to 150 single-name credit derivatives

## Appendix: Example Work Flow for a Corporate Bond Trade

# Trading Homepage



MarketAxess Workstation  
System Secondary Data/Services Help Notices Tools

Trade Bid/Offer List Inventory Portfolios Actives@ Market Lists Activity Blioter Messages Bond Ticker

H Home Page Staging Bond North America: (877) 638-0037 Name: Amanda Meatro  
Europe: (44) 020 7709 3105 Firm: M&I Client 1

Market Recap Market Flows Tech Services Dealer Rankings Last Updated: 09/28/2009 Preferences

High Grade High Yield All Client-Dealer Inter-Dealer

### Most Actively Traded Bonds

Issue	Est Vol (MM)	Mkt Vol%	Trade Count	Last	Chan
BACR 5.000 9/22/16	111,560	1.3%	28	159	
KFT 6.125 2/1/18	93,474	1.1%	42	166	
TIIM 4.950 9/30/14	75,884	0.9%	15	179	
C 8.500 5/22/19	71,485	0.8%	28	330	
WFC 3.750 10/1/14	68,513	0.8%		136	
NEM 6.250 10/1/39	68,015				
IIFC 4.625 9/15/10	65,560				
SPG 5.875 3/1/17	61,500				
COF 8.800 7/15/19	57,400				
DB 6.000 9/1/17	56,670				

### Big Movers

Top Spread Tightening (5yrs and out)

Issue	Last	Change
DDR 5.500 5/1/15	515	-3
C 6.125 8/25/36	315	-2
AGCK 5.500 9/14/15	155	-2
AGN 5.750 4/1/16	112	-1
	50	-1
	190	-1
	237	-1
	121	-1
	403	-1
BDN 7.500 5/15/15	415	-1

Top Spread Widening (5yrs and out)

Issue	Last	Change
WSTC 4.200 2/27/15	155	+1
COF 8.800 7/15/19	320	+36
POT 4.875 3/30/20	157	+1
WFC 6.450 11/1/37	160	+2
KEY 4.950 9/15/15	354	+2
COF 6.750 9/15/17	241	+2
PLD 5.625 11/15/16	420	+2
CMCSA 6.300 11/15/17	163	+1
GT 5.000 2/1/15	1,340	+1
JEF 6.250 1/15/36	406	+1

### Sector Rankings

Sector	Total Volume	Rank%
Banks-Brokers	2,047,166,066	24.9%
Finance	1,225,682,054	14.9%
Media Telecom Cable	773,210,000	9.4%
Oil-Gas-Exploration-Energy	613,493,000	7.5%
Healthcare-Pharmaceuticals	560,442,000	6.8%
Consumer Products	506,089,000	6.2%
General Industrial	477,668,000	5.8%
Insurance	389,920,000	4.7%
Utility	336,053,000	4.1%
Retail-Grocers	319,067,000	3.9%
Technology	208,236,000	2.5%
Aero-Defense-Transportation	204,279,000	2.5%
Emerging Markets	177,910,000	2.2%
Blgd Products-Home Bldrs-REITS	171,108,000	2.1%
Auto-Auto Parts	91,952,000	1.1%
Paper	67,377,000	0.8%
Chemicals	40,382,000	0.5%
Supra-Sov	50,000	0.0%
Gaming and Lodging	2,260,000	0.0%
Miscellaneous	1,100,000	0.0%

Central access to market data and information

### Top 10 Most Active Issuers (% of Total Market Volume)

Issuer	Percentage
WFC	3.5%
GE	4.2%
COF	1.6%
T	1.8%
MS	2%
BACR	2.4%
BAC	2.4%
GS	3.2%
C	3.4%
JPM	3.4%

Version 6.4.1 Inquiry Trading Open 07:38:37 AM EDT

# Instrument Search



**Instrument Search: Please select a bond**

Basic Search | Advanced Search

Instrument:  Bonds  CDS Index  CDS Single Names

Search by: Ticker, Issuer Name, Identifier

The following 1988 instruments matched your criteria. [Search Help](#)

Short Name	Ccy	Features	Moody's/S&P	Issuer	Ticker	Cpn	Maturity	Sector	Identifier
GE 4.460 06/15/18	EUR	NC	NA/AA+	GE CAP EURO FNDG	GE	4.460	06/15/2018	Finance	XS0256480566
GE 4.500 06/15/18 c...	USD	C	Aa2/AA+	GE CAPITAL	GE	4.500	06/15/2018	Finance	36966RFN1
GE 6.000 06/15/18	USD	NC	Aa2/AA+	GE CAPITAL	GE	6.000	06/15/2018	Finance	36966R3J3
GE 6.150 06/15/18	USD	NC	Aa2/AA+	GE CAPITAL				Finance	36966R3G9
GE 4.500 06/15/18 c...	USD	C	Aa2/AA+	GE CAPITAL				Finance	36966RFY7
GE 3.375 06/19/18	CHF	NC	Aa2/AA+	GE CAPITAL				Finance	CH0025633717
GE 6.670 06/25/18	NOK	NC	Aaa/NA	GE CAPITAL				Finance	XS0371764605
GE 6.670 06/25/18	NOK	NC	Aa2/AA+	GE CAPITAL	GE	6.670	06/25/2018	Finance	XS0371764605
GE 5.000 06/27/18 c...	USD	C	Aa2/NA	GE CAPITAL	GE	5.000	06/27/2018	Finance	36962GD35
GE 5.000 06/30/18 c...	USD	C	Aa2/NA	GE CAPITAL	GE	5.000	06/30/2018	Finance	36962GD50

**Fast and efficient tool to search for bonds and CDS to trade**

# Client Submits New Inquiry



**New Inquiry**

**Inquiry Details** | Allocations

**Protocol:**  Spread

**Request:**  Bid  Offer  Swap

**Type:**  Outright  Cross

**Pricing:**  1-Step  Standard  Phone Spot  3PM Spot

**Timer:**  ASAP  Bin  2 mins  5 mins  10 mins  60 mins

**Request Bid:**  
**GE 5.100 02/15/19**  
 Size (000s):   
 SII Date:  Fri  
 Tgt Lvl (bps):

**Issuer:** GE CAPITAL  
**Ticker:** GE  
**Coupon:** 5.100%  
**Maturity:** 02/15/2019  
**Features:** NC  
**Rating:** Aa2/AA+  
**Amt Outs:** \$ 191,731,000  
**CUSIP:** 36966RW28

**BondTicker** | Bond Details | Market Depth

**Spread Over:**  
 Benchmark:   
**Notes:** Current 10  
**CUSIP:** 912828LJ7

**Internal Note:**

Clients electronically send a request-for-quote (RFQ) to the dealers of their choice

TRACE data is integrated into the corporate bond trading system, giving users pre-trade transparency

**BondTicker**  
 GE 5.100 02/15/19

Size	Spnd	Benchmark	Price	Yield	Z-Sprd	I-Sprd	Execution Date	Source
5,000	+74	3.625 08/19	106.003	3.088	+103	+102	09/29/09 11:17 AM	TRACE
500	+75	3.625 08/19	106.000	3.092	+104	+102	09/25/09 02:46 PM	TRACE
1,500	+82	3.625 08/19	105.752	3.168	+113	+111	09/25/09 11:47 AM	TRACE
715	+77	3.625 08/19	105.915	3.116	+107	+106	09/25/09 10:01 AM	TRACE

Today's Trades: 0    Volume (000s): \$0

Refresh    BondTicker (last 30 prints)

Close

# Electronic Execution



- **Request Live and Executable Levels**
  - You select the pool of dealers to respond to trade inquiry
- **Electronically Execute at the Best Price**
  - Competitive bidding/offering
  - Streamlined for both Index and Single Name Protocols
- **Cash Flows and Trade Details**
  - Calculations occur within the Trading System
- **Compliance**
  - Instant access to demonstrate compliance with Best Execution

Inquiry: 61180

Your Request:  
Bid: \$5,000M GE 5.100 02/15/19  
UST 3.625 08/19 - CUR 10  
Outright

HISTORICAL ACTIVITY CUSIP: 36966RW28  
Allocations (0)  
Inquiry Details

Status: Resp Req

Dealer	Size (000s)	Spread (bps)	Pricing	Status	Time Left
CS	\$5,000	100.749	Auto	Live	0:42
RBBSM	\$5,000	100.777	Auto	Live	0:42
BAML	\$5,000	101.247	Auto	Live	0:42
BNYM	\$5,000	101.388	Auto	Live	0:42
BNPP	\$5,000	103.205	Auto	Live	0:42
DLR1					
BARX					
CIBC					
C					
DB					

Hit  
Counter

Dealer responses are released simultaneously from the 'holding bin' allowing investors to choose best level

Activity Log Analytics Bond Ticker Comments

11:10:19 AM WFS has failed to respond  
11:10:19 AM SANT has failed to respond  
11:10:19 AM BNYM (bnymdealer) bids UST +101.388, size \$5,000,000, Timer: 1 mins (Auto Spot) Remark: Dealer response QuoteUpdate  
11:10:19 AM BARX has failed to respond  
11:10:19 AM MS has failed to respond  
11:10:19 AM BNL (bnldealer) bids UST +101.247, size \$5,000,000, Timer: 1 mins (Auto Spot) Remark: Dealer response

Close

- **Straight Through Processing**
  - Trade details flow directly into your blotter and/or trading system
- **Post-Trade Feeds**
  - Experienced in building connections with all types of formats and endpoints
  - Fully capable of connecting directly to CCPs
- **Reporting**
  - Existing connectivity to TRACE
  - Experience with connectivity to DTCC

## Electronic Trade Ticket

**Trade Ticket**

**YOU SOLD** Inquiry ID: 61180 Trade Date: 09/29/2009 Trade Time: 11:10 AM EDT

SLD Response Summary

Corporate Trade Details		Instrument Details		Trade Proceeds	
GE 5.100 02/15/19	Size: \$5,000,000	Spread: 100.749 ...	Cvr: 100.777	Principal:	\$5,290,550.00
Issuer: GE CAPITAL	Benchmark: UST 3.625 08/19	Yield: 4.338%	Price: 105.811	Accrued:	\$33,291.67
Coupon: 5.100%				Proceeds:	\$5,323,841.67
Maturity: 02/15/2019				# Days:	47
CUSIP: 36966RWZ8					

Trade ID: 38626-0 User: ameatto... Portfolio: N/A SII Date: Fri 10/02/2009

Benchmark Spot Details  
UST 3.625 08/19 Spot Price: 102.14+ Spot Yield: 3.331% Status: Done

Counterparty Information  
Dealer: CS Cvr: RBSM Trader: csfbdealer Salesperson: N/A

Activity Log

- 11:11:01 AM MA Inc. (ameatto12) agrees to the final price of 105.811. Trade is complete
- 11:10:56 AM CS (csfbdealer) submits final price of 105.811 for confirmation
- 11:10:55 AM 102-14+ (3.331) spot on UST 3.625 08/19 - CUR 10 accepted by MA Inc. (ameatto12). Est. DW Hedge Is \$4,560,000. Awaiting price confirmation
- 11:10:47 AM CS (csfbdealer) (auto) provides 102-14+ (3.331) spot on UST 3.625 08/19 - CUR 10
- 11:10:41 AM Bid of +100.749 from CS (csfbdealer) accepted by MA Inc. (ameatto12). Cover UST +100.777. DONE - Awaiting

Allocations (0) Cancel Trade Amend Trade Print Close

Fully electronic audit trail from trade inquiry to settlement

BondTicker Corporate Bond Detail - Windows Internet Explorer

https://www.bondticker.com/bondticker/bondActivity.ma?tradeSize=6&issueId=10167606&fromDate=09/30/2008&toDate=09/30/2009

BondTicker Corporate Bond Detail

MarketAxess Corporate BondTicker

ISSUER US BONDS US AGENCIES EURO BONDS MUNIS CDS LOANS ETFs NEWS / RESEARCH MKTX ACTIVITY COMPLIANCE INFO SETTINGS LOGOUT

MONITOR SUMMARY **DETAIL** ANALYTICS CHARTING SEARCH WATCH LIST ALERTS REPORTS INVENTORY SQX

### Corporate Trade Summary (Sector - Finance)

Market Totals	<100K	100K-<1MM	1MM-5MM	5MM+	5MM+	Total	Dealer Buy	Dealer Sell	Inter-Dealer
Trade Count	7,431	1,562	675	392	139	10,199	2,112	3,889	4,198
Volume (000's)	153,788	422,752	1,545,526	1,528,800	1,709,700	5,360,566	1,820,975	2,080,330	1,459,260

Market:  Investment Grade  FDIC-Guaranteed  Spread  High Yield  Convertibles  Pricing View  Price/Yield

Date: 09/30/2009 Issue: [ ] Size: >=\$1MM Watch List: Sector - Finance

1 Aero-D 2 Auto-A 3 Banks- 4 Bldg P 5 Consum 6 **Finance** 7 Gaming 8 Genera

ALL NME FRN 2Y 3Y 5Y 10Y 30Y

Issues: 21, Issues: 56, Trades: 117, Dealer Buys: 38, Dealer Sells: 45, Inter-Dealer: 34, Est. Volume (000's): 459,690 for Watch List Sector - Finance Trade Date: 09/30/2009 As of 11:11:00a

#	Ticker	Coupon	Maturity	High Spread	Low Spread	Last Spread	Last Time	Spread Change Day	Spread Change Week	Spread Change MTD	Benchmark	Trade Count	Est. Vol. (000's)	Buy Trades	Buy Volume	Sell Trades	Sell Volume	ID Trades	ID Volume
1	GE	5.250	Dec 06, 2017	148	144	147	11:02a	+7	+13	-8	UST 3.625 08/19	8	61,550	-	-	1	12,300	7	49,250
2	AXP	3.150	Dec 09, 2011	33	33	33	11:01a	-2	-7	-	UST 1 09/11	2	24,600	1	12,300	-	-	1	12,300
3	COF	5.750	Sep 15, 2010	-	-	-	-	-	-	-	-	2	24,600	1	12,300	-	-	1	12,300
4	CIT	4.750	Dec 15, 2010	4027	3799	4027	-	+718	-1039	-	UST 1 09/11	7	24,400	2	4,900	1	3,900	4	15,600
5	CIT	5.000	Feb 13, 2014	1596	1469	1530	-	-	-	-	UST 2.375 09/14	6	23,400	3	11,700	1	3,900	2	7,800
6	COF	8.800	Jul 15, 2019	331	-	-	-	-	-	-	-	1	12,300	-	-	-	-	2	10,000
7	CIT	5.475	Mar 12, 2010	-	-	-	-	-	-	-	-	2	7,800	3	11,700	-	-	-	-
8	CIT	5.125	Sep 30, 2014	1468	-	-	-	-	-	-	-	1	3,900	4	15,600	-	-	-	-
9	CIT	5.000	Feb 01, 2015	1345	-	-	-	-	-	-	-	-	-	5	19,500	-	-	-	-
10	CIT	5.200	Jun 01, 2015	809	-	-	-	-	-	-	-	-	-	3	11,700	1	3,900	-	-
11	COF	7.375	May 23, 2014	215	-	-	-	-	-	-	-	-	-	1	12,300	-	-	-	-
12	NEM	6.250	Oct 01, 2039	225	-	-	-	-	-	-	-	1	12,300	-	-	-	-	-	-
13	SLMA	5.375	May 15, 2014	947	-	-	-	-	-	-	-	1	12,300	-	-	-	-	-	-
14	CIT	5.400	Mar 07, 2013	1866	-	-	-	-	-	-	-	1	3,900	2	7,800	-	-	-	-
15	AXP	8.150	Mar 19, 2038	222	-	-	-	-	-	-	-	-	-	-	-	-	-	2	10,000
16	MI	5.350	Apr 01, 2011	880	-	-	-	-	-	-	-	1	3,000	1	3,000	1	3,000	1	3,000
17	CIT	4.250	Feb 01, 2010	-	-	-	-	-	-	-	-	1	3,900	1	3,900	-	-	-	-
18	CIT	6.000	Apr 01, 2036	680	-	-	-	-	-	-	-	-	-	2	7,800	-	-	-	-
19	HXN	9.750	Nov 15, 2014	1124	1117	1117	10:08a	-90	-22	-304	UST 2.375 09/14	2	7,800	1	3,900	1	3,900	-	-

Pages: 1 2

Internet 100%

Once the trade is executed and reported to TRACE, it appears on MarketAxess Corporate BondTicker™

BondTicker provides professional market participants with the most robust corporate bond price information available today

## A COMPLETE ELECTRONIC PROCESS

- Pre-Trade analysis and electronic request-for-quote auctions
- Electronically execute at the best level, complete with audit trail
- Trade details electronically flow into your blotter/trading system
- TRACE/TRACE-like reporting automatically occurs
- MarketAxess maintains an electronic audit trail for the trade from inquiry to settlement
- Post-trade connectivity available to a variety of OMS systems
- Instantaneous post trade message could link to CCPs

