

Electronic Bond Trading Review

Part 1: 'Electronification' of the old market structure

- *Market size and trends today*

Part 2: Structure evolution

- *where the life-cycle may lead*

Ingo Mainert

Thijs Aaten

Ciaran O'Flynn



Morgan Stanley

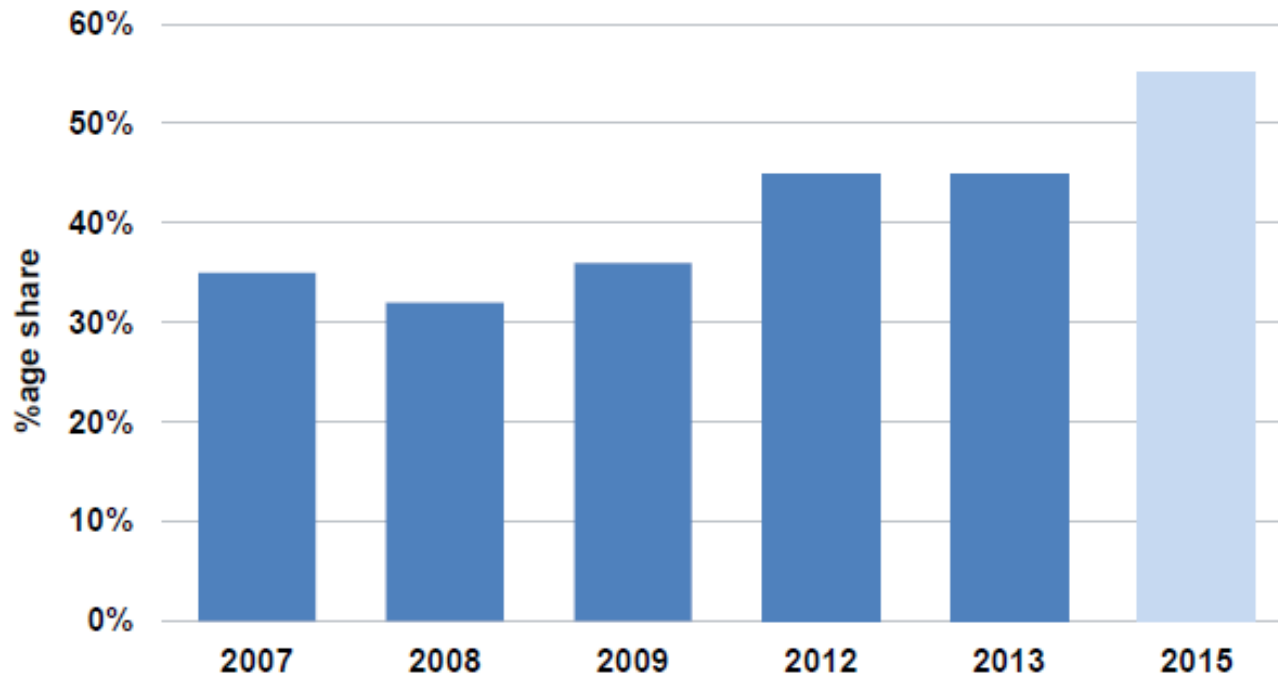
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Part 1: 'Electronifying' the old market structure

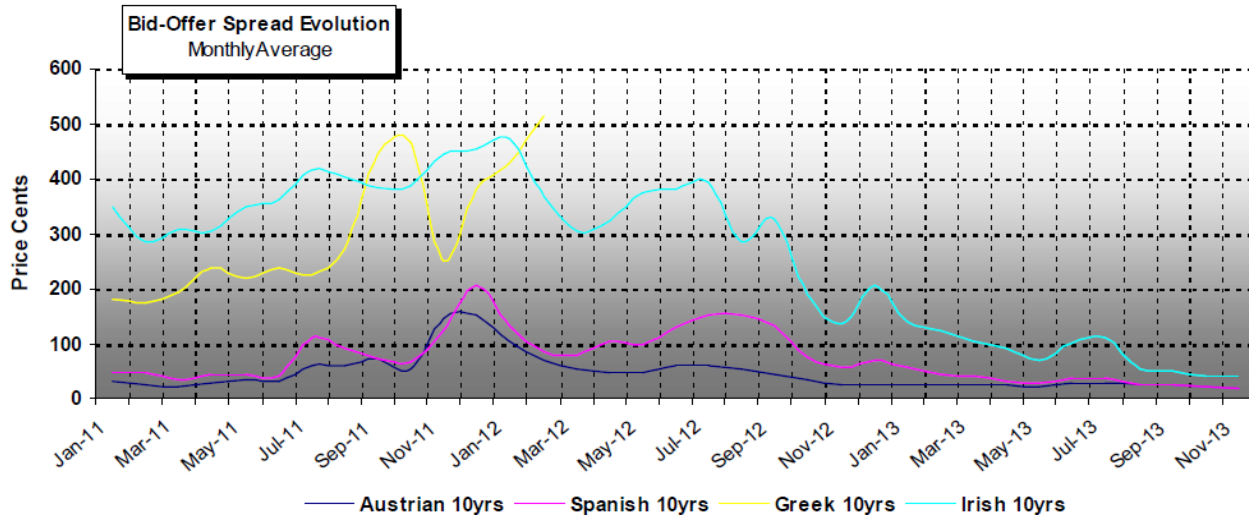
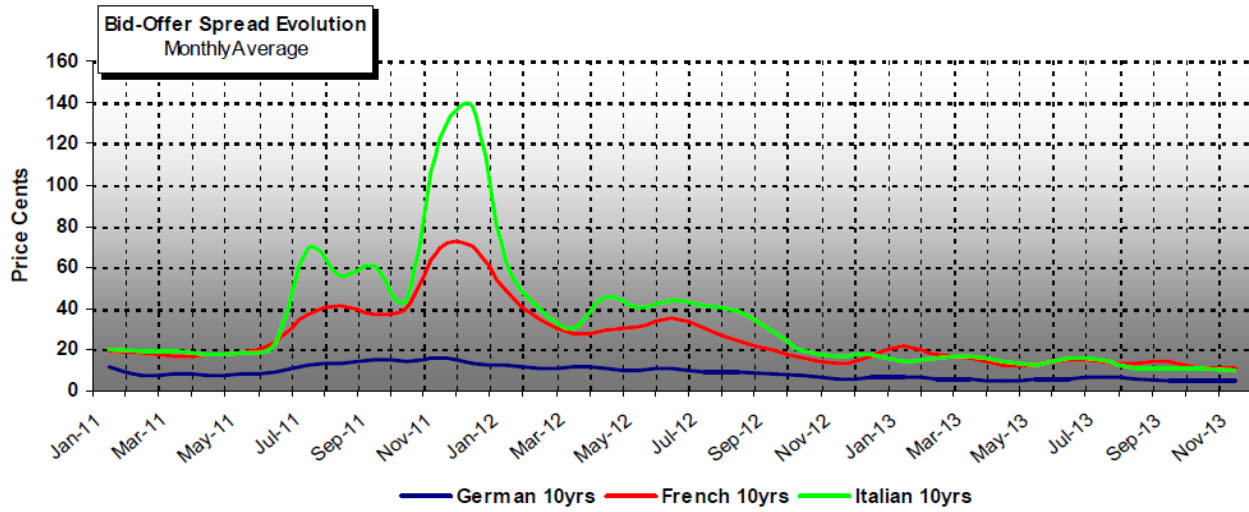
- *Market size and trends today*

Share of Electronic Trading in Overall Buy Side Fixed Income Volume



Source: SIFMA (Securities Industry and Financial Markets Association), Celent; 10/2013

Bid-Offer Spread Evolution



Source: MTS Group; 11/2013

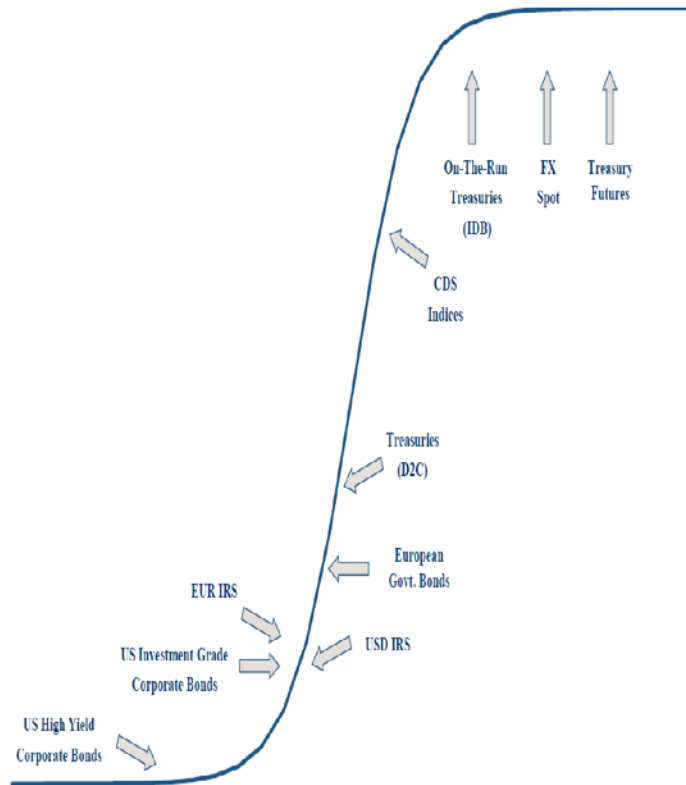
Part 2: Structure evolution

- *where the life-cycle may lead*

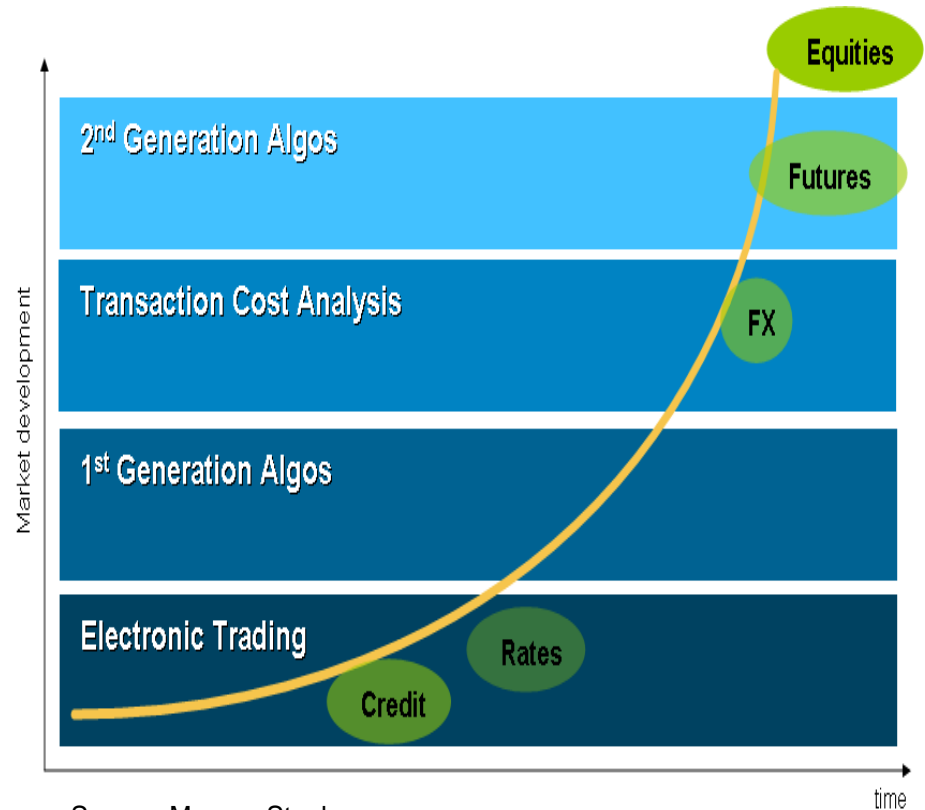
Global Fixed Income

Current State by Product Area

Source: Treasury Borrowing Advisory Committee Report on “Electronic Trading in the Secondary Fixed Income Markets”



We know where parts of the Rates and Credit markets are headed...



Source: Morgan Stanley

time

How the EU FI Cash Market Is Evolving



Going through a **similar path** that **equity markets** have before but **keeping its specificities**

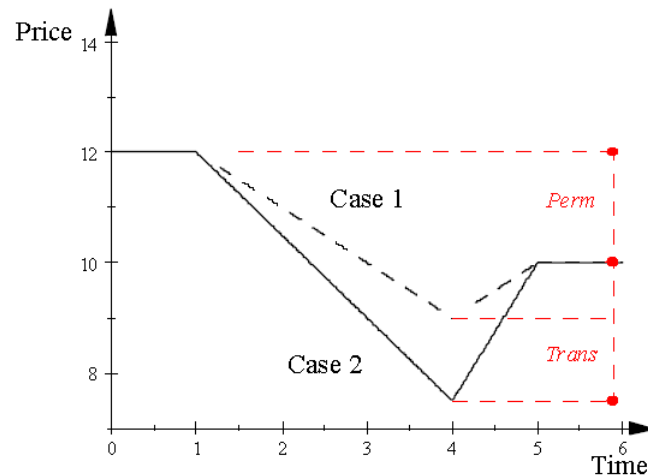
| | BONDS (CURRENTLY) | BONDS (POST NEW REGULATION) | EQUITIES |
|------------------|--|--|---|
| INVESTORS | <ul style="list-style-type: none"> Small retail presence Institutional | <ul style="list-style-type: none"> Still essentially institutional but growth of retail market share | <ul style="list-style-type: none"> Significant retail presence Institutional |
| MARKET STRUCTURE | <ul style="list-style-type: none"> Bilateral, quote-driven, RFQs Off-exchange, OTC (87% of total trading) | <ul style="list-style-type: none"> Firm prices models progressively overtake RFQ models More on-exchange / MTF trading Avoiding the BCN step | <ul style="list-style-type: none"> Multilateral, order driven Predominantly on-exchange |
| INTERMEDIATION | <ul style="list-style-type: none"> Dealers frequently put their own capital at risk to execute a trade | <ul style="list-style-type: none"> Only tier 1 dealers able to leverage their own capital Growth of agency trading models | <ul style="list-style-type: none"> Trades are typically matched via limit order books |
| AVG TRADE SIZE | <ul style="list-style-type: none"> Large Hundreds of thousands/millions of Euros | <ul style="list-style-type: none"> Decrease of average trade size But: it remains much bigger than on equities | <ul style="list-style-type: none"> Small Hundreds or thousands of Euros |
| LIQUIDITY | <ul style="list-style-type: none"> Varies depending on size of the issue, rating Concentrated mainly in the period immediately after the issue | <ul style="list-style-type: none"> Standardization of issuers' issuing policies Transition from on-the-run to off-the-run later in bonds' lives | <ul style="list-style-type: none"> High and Continuous |

IN BRIEF:

More electronic, more efficient, more transparent, more multilateral, more buy-side driven, more order-driven and more CCP centered
 Less discriminatory, less discretionary

Buy Side Trading, Sell Side Challenge

- Buy side trading is about minimizing Implementation Shortfall (IS) – implement exposure at the lowest possible cost..
- Liquidity is important to move large volumes....
- Sell side must learn to track and illustrate implementation shortfall/ transaction costs
- Pre- and post- trade tools to develop in next stage of growth cycle

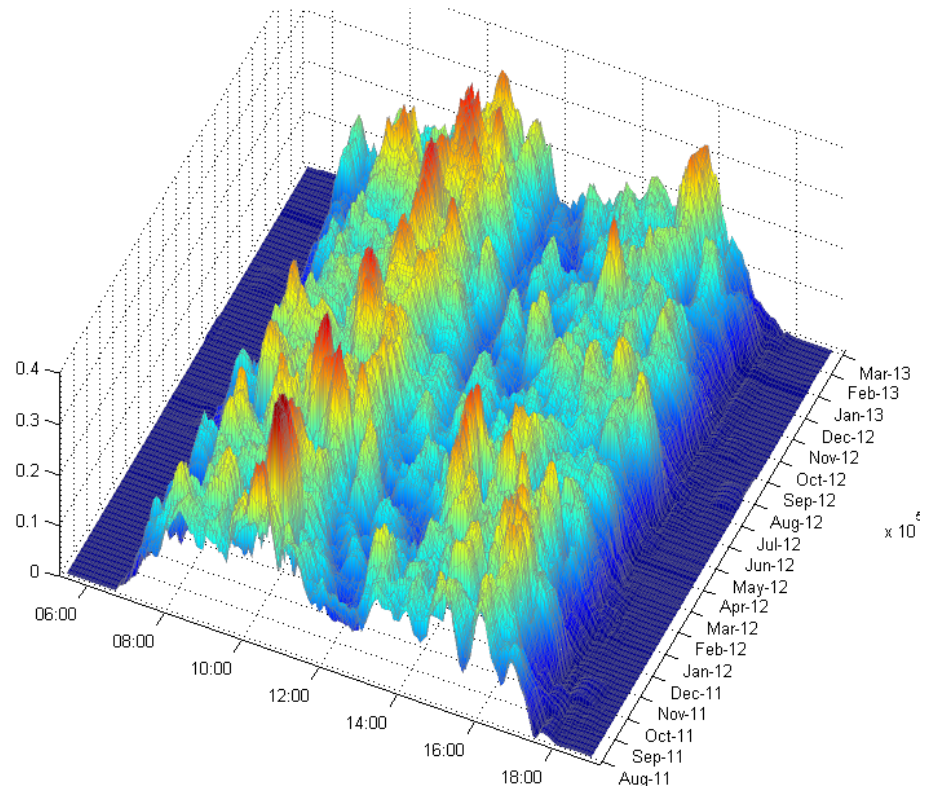


Source: APG

Transaction Costs for Fixed Income Markets

- Transaction Cost Analysis available in pre- and post-trade formats for all listed markets since the 1990's due to availability of trade data from exchanges
- Now also available for spot FX due to electronification of the market, resulting in rich data source of transaction data
- Combination of increasing electronification of liquid parts of Fixed Income markets, together with regulatory developments, means TCA becoming increasingly viable
- Initial step is to model and understand intraday liquidity and market structure

Liquidity Profile of Bunds (Maturity Bucket: 8 - 11 Years)



Source: Morgan Stanley QSI

Discussion points

- Is FI trading is becoming more expensive/difficult?
 - Smaller tickets
 - Less inventory
 - Less liquidity
- Electronic platforms - No viable alternative yet?
- Could the current situation lead to material gap risk?

Appendix

On Going Regulation Of Markets

MiFID 2

Bring bond trading on a **more regulated environment** by developing: pre-trade transparency, best execution, transaction reporting, post-trade reporting, clearing.

Current categories will remain:

- RMs and MTFs for multilateral trading
- OTFs becomes a **new trading venue category** to capture client-to-client trading currently internalized by banks
- SIs for bilateral trading
- OTC remains non-binding

Waivers currently being discussed

Basel 3

Modification of banks' ability to provide capital for **liquidity enhancement**: the **cost of trading credit** will nearly **double**.
A **change in business orientation**: from capital-intensive businesses and investments into flow and electronic businesses.

Solvency 2

Reallocation of insurance companies' capital preferentially to bonds with good credit rating and short maturities.

IMPACT

An **expected shift of power**:

From the **sell-side** - which is less likely to provide liquidity and moving towards a broker's model
To the **buy-side** - becoming more demanding regarding costs and services aligned with its needs

Existing concentration of trading venues in the RFQ multiproduct segment **creates opportunities** for **more innovative entrants**, which will have **different business models** or microstructures (including **buy-side functionalities** and **firm orders**).

Individual Platform Innovations

| Platform | Summary | Description | Primary Users | Instruments | Live |
|--|--------------------------|--|-------------------|-------------------------------|----------------|
| Bloomberg | ALLQ / ALLX | Dealer hit / rate slippage performance in ALLQ | B2C | Cash Credit Cash Rates | Yes |
| Bloomberg | TNT: Transaction Network | Crossing platform for corporate bonds | B2C C2C | Cash Credit | In Development |
| Market Axess / Aladdin Trading Network | Crossing platform | Tie up of the Aladdin / Blackrock Trading network with Market Axess bond trading platform. | B2C C2C | Cash Credit | Live in US |
| Borsa Italiana, EURO TLX, Stuttgarter Boerse, Swiss Exchange | CLOB | Order book aiming at retail market | Retail | Cash Credit Cash Rates | Yes |
| NYSE Bondmatch | CLOB | Order book aimed at institutional clients | B2C B2B C2C | Cash Credit | Yes |
| MTS Credit | CLOB | Order book aimed at institutional clients. Complimentary to MTS RFQ credit offering. | B2C C2C | Cash credit | Yes |
| Vega Chi | CLOB | Orderbook aimed at institutions. | B2C | High Yield, ABS, Convertibles | Yes |
| DealerWeb | Odd-lot auctions | Inter-dealer auctions – Sweep | B2B | Cash Credit Cash Rates | Yes |

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