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# Role of trading and liquidity in bond markets

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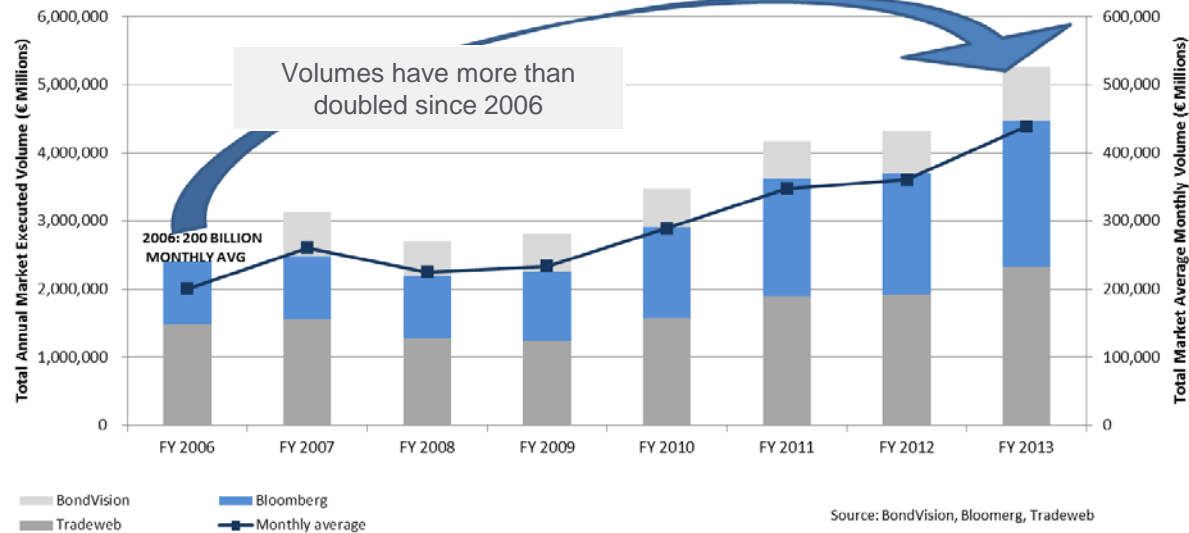
# Market Liquidity

## Liquidity Definition

- **Tightness:** bid – offer spread
- **Depth:** the size transacted without affecting prices
- **Immediacy:** speed of order execution
- **Resiliency:** ease with which prices return to “normal” afterwards

BIS\*

## Total Electronic Executed Customer Market Volume 2006 - 2013



## Liquidity Drivers

- **Number & breadth of participants**
- **Macro factors:** economic, currency, political risk, etc
- **Cost/availability of hedge:** broker, futures, swaps, CDS; & functioning of repo market
- **Market structure:** role of intermediaries in fixed income

\* BIS Study 2000, “Market illiquidity and stress: selected issues and policy implications”

# Market making principal model still valid?

Improved turnover **but**

...electronic flows **don't tell the whole story**

*"Electronic liquidity is... viewed as one part of the overall pool of liquidity that dealers access for supply or demand"*

**Security, size & scale- specific considerations to be made**

**1. Size of trade**

**2. Frequency of trade**

**3. Issuer Types**

**4. Risk-taking capacity**

\* TABBGroup July 2012: MiFID II and Fixed-Income Price Transparency: Panacea or Problem?

\*\* AFME Sep12: "An analysis of fixed income trading activity in context of MiFID II"

✦ ECB 3 Mar 14: "SURVEY ON MARKET MAKING & PROPRIETARY TRADING FOR BONDS"

- Average debt transaction is 845x size of the average equity order\*
- Average government bond transaction size on electronic platforms is below €4 MM

“Investors tend to use e-trading for smaller size orders and negotiate large orders over the phone”

Jan & Feb 2014

LSE Order Book	Trades	Value Traded €MM equiv	Avg trade size (€actual)
FTSE 100	19,582,469	182,664	9,328
FTSE 250	6,757,957	23,317	3,450
FTSE SmallCap	517,973	1,431	2,763
AIM	695,059	3,856	5,547
	<b>27,553,458</b>	<b>211,267</b>	<b>7,668</b>

€Governments Customer Markets Electronic	Trades	Value Traded €MM	Avg trade size (€actual)
Bloomberg	171,475	423,015	2,466,917
BondVision	26,511	208,195	7,853,172
Tradeweb	94,073	414,849	4,409,867
	<b>292,059</b>	<b>1,046,059</b>	<b>3,581,671</b>

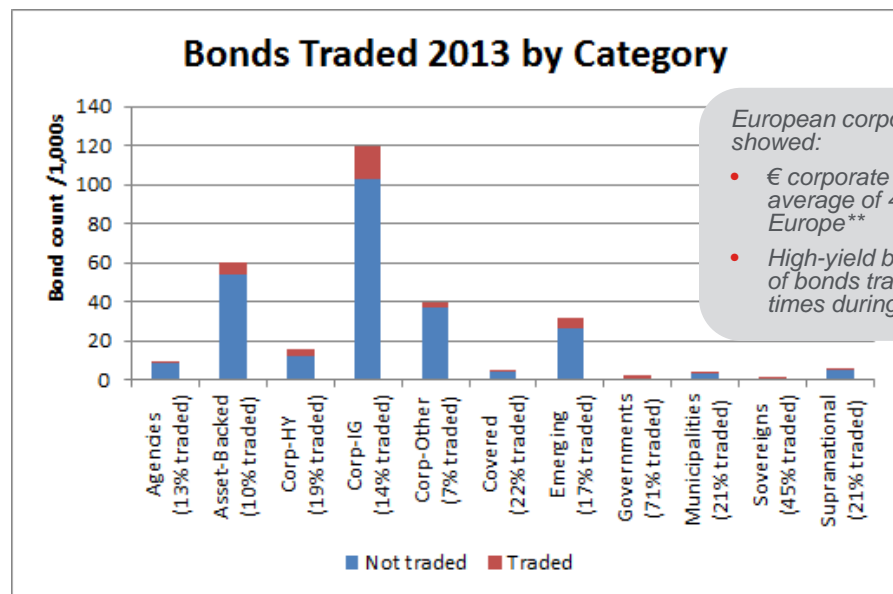
>450x avg trade size comparing to “small” clip size fixed income e-market

Source: London Stock Exchange, Bloomberg, Tradeweb, BondVision

\* TABBGroup July 2012: MiFID II and Fixed-Income Price Transparency: Panacea or Problem?

- Unlike equities or even USTs, European fixed income market
  - Consists of **tens of thousands of bonds of varying size, maturity, credit & liquidity levels**
  - Is **largely institutional & buy to hold**
- AFME\* → of a representative set of **govt bonds, 70% each traded < 20x per day**
- **Matching buying & selling interests easier in equities** where trading per share can exceed 40,000x\*\*\*\* a day

Of 293,302 Bonds, 14% had trades reported in 2013



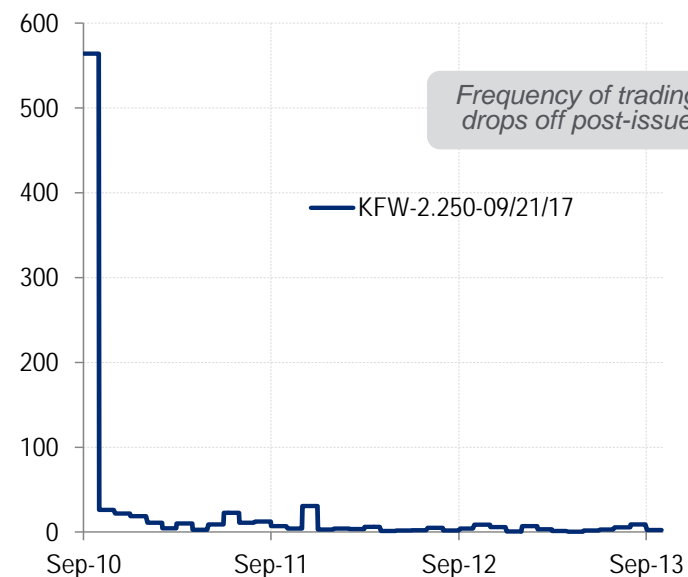
European corporate bonds study showed:

- € corporate bonds traded an average of 4x per day across Europe\*\*
- High-yield bonds trade: 60–70% of bonds traded only 50 or less times during past 2 years\*\*\*

Source: Xtracter, 2013 data

Frequency of trading drops post-issue

Total turnover of 7yr KfW (€MM per month)



Source: Citi Research, Bloomberg, ISMA

\* AFME Sep12: "An analysis of fixed income trading activity in context of MiFID II"

\*\* CFA Institute: "An Examination of Transparency in European Bond Markets"

\*\*\* <http://www.cfainstitute.org/learning/products/publications/ccb/Pages/ccb.v2011.n5.1.aspx>

\*\*\*\* TABBGroup July 2012: MiFID II and Fixed-Income Price Transparency: Panacea or Problem?

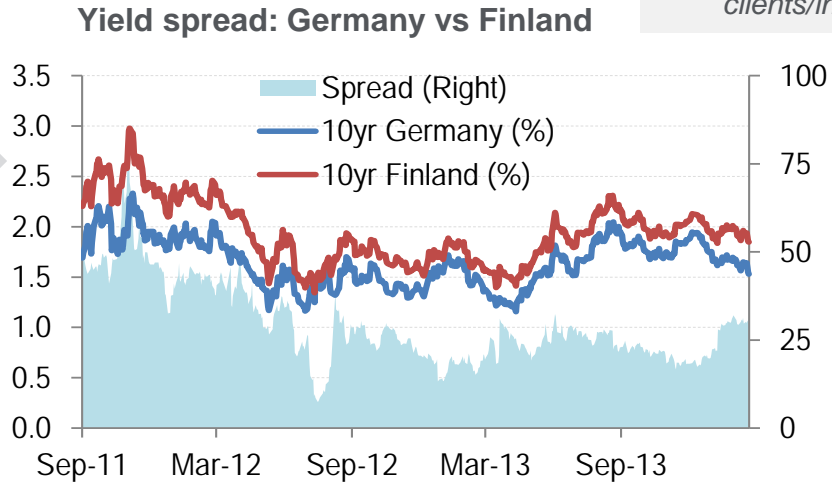
Unlike US Treasuries, large number of competing issuers of varying size and credit

Market making expertise required to attract international investors to smaller markets

“Cost reduction via automation [] has helped [] by providing lower maintenance market-making & therefore more systematic- activities to a broader pool of clients/investors”

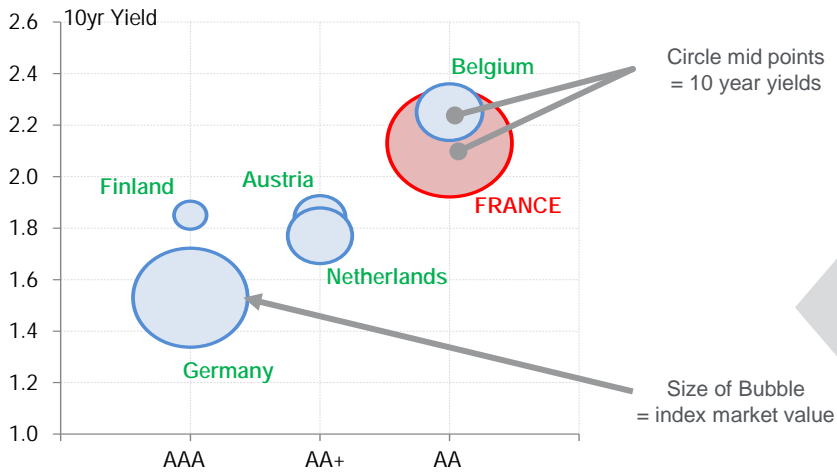
	Finland	Germany
<b>Outstanding (%)*</b>	2	20
<b>Unemployment (%)</b>	8.5	6.8
<b>Inflation (%)</b>	1.3	1.2
<b>Debt (%)</b>	54	78
<b>GDP (%)</b>	-0.5	1.4
<b>Foreign Holdings (%)**</b>	92	60

Similar economic fundamentals



Source: Citi Research, Bloomberg

### Credit ratings vs. yield & market value



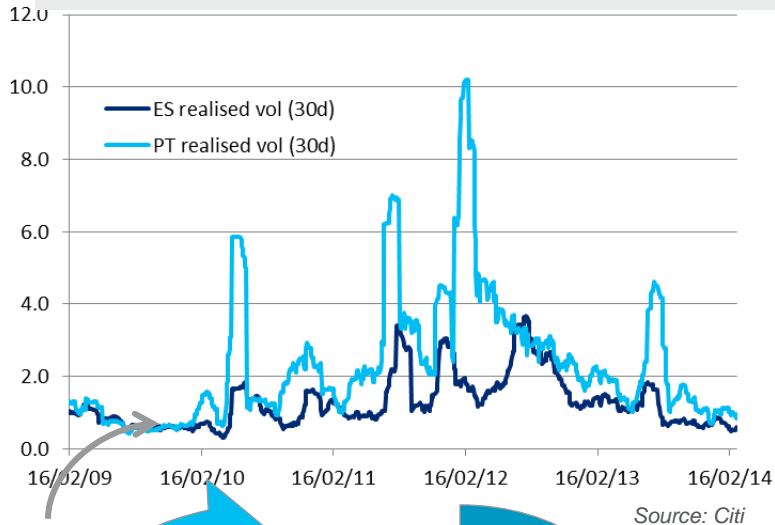
Source: Citi Research, Bloomberg, S&P

- For the same credit rating, smaller markets have a higher yield
- Market making expertise & reach to broad investor community
  - enables yields (& yield spreads) to be as low as possible
  - enables issuers' to meet future funding requirements

\* Citi's EGBI index

\*\* International Monetary Fund; Oct-2013

### Market making commitment is essential during times of stress



Source: Citi

### → Certainty of execution

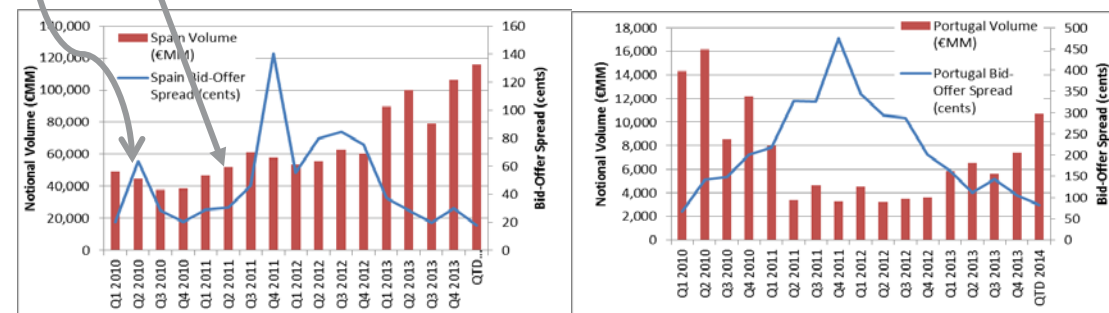
- Liquidity and lack of liquidity is self-perpetuating
- Continuity of markets is essential
- Bid-offer compensation required for costlier risk warehousing

“Market-making obligations in the sovereign debt market are effective in dampening short-term volatility in bond markets but can be ineffective in times of market stress”

- Higher realised vol
- Higher yields
- Wider B/O spreads

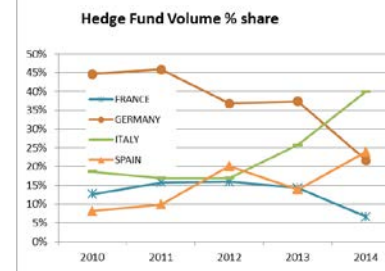
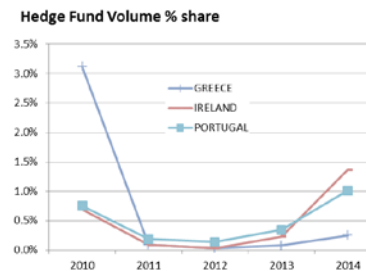
“Sensitivity of the market to shocks is seen to depend on... capacity of intermediaries to take on risk”

Bid-Offer spread  
Quarterly Volume



Source: Tradeweb, Bloomberg & BondVision  
b/o Tradeweb composite close at 16:15

### Hedge funds: fuel bubbles or add liquidity?



# Central Limit Order Books?

*“do not foresee any other type of participants (particularly investors) stepping into the role that traditional market-makers currently fulfil”*

**1. Size of trade**

**2. Frequency of trade**

**3. Issuer Types**

**4. Risk-taking capacity**

Given specific market characteristics,

## **Can Central Limit order books work for Fixed Income?**

**Buy side increasingly want access to each other’s market inventory;** (inventory seemingly moving away from dealers given capital restrictions especially during times of stress)

- **Can buy side trade with buy side** (usually on same side)?
- **Will model provide resiliency for larger tickets in illiquid bonds?**

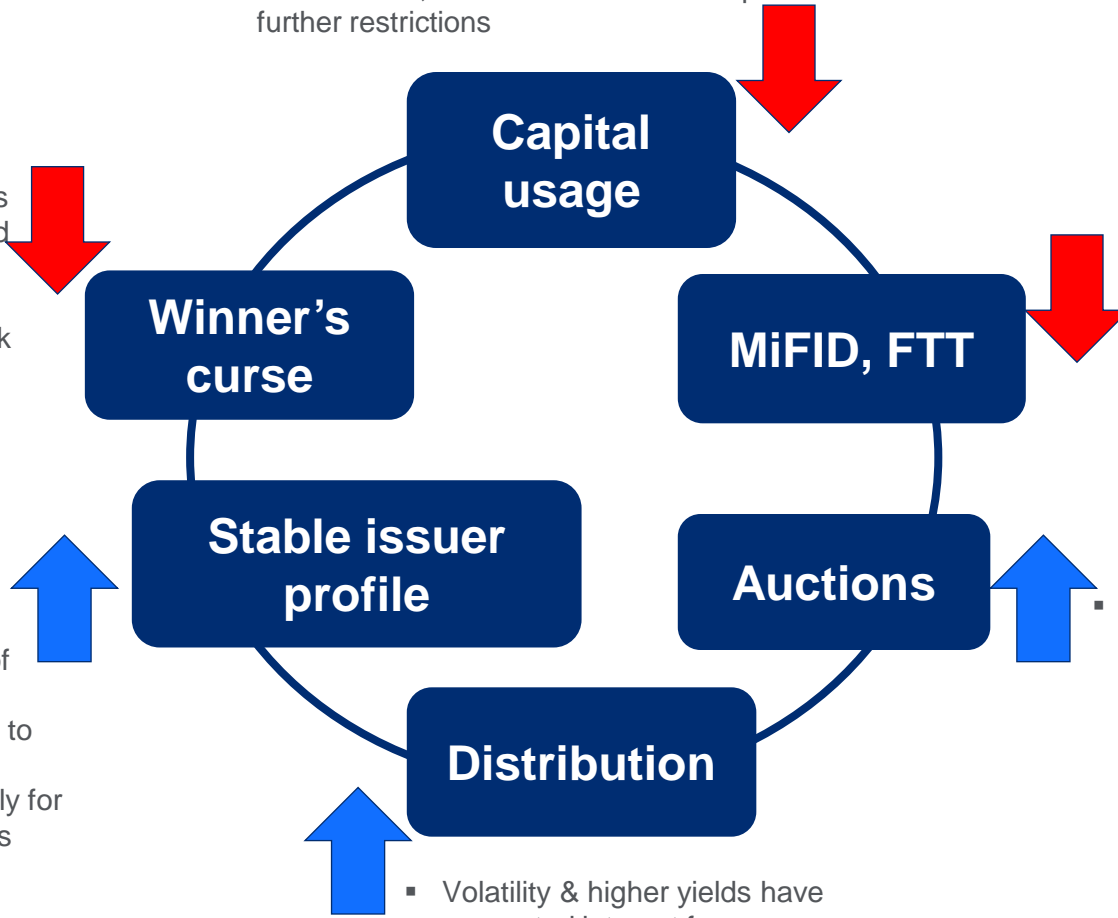
*“Investors tend to use e-trading for smaller size orders and negotiate large orders over the phone. The driver is less the price than the likelihood of executing a large or illiquid transaction (with potentially a large market impact)”*



# Liquidity Enablers

- Capital requirements are already restrictive for market makers; and limit ability of clients to trade out of risk
- Volcker rule, Basel III will serve to impose further restrictions

- In request for quote auctions, winning dealers will tend to have overpaid - the opportunity for moving the market against them is a real risk



- Requires **significant resource & investment** by all market participants
- Potential negative impacts to market depth & liquidity
- **Un-calibrated transparency requirements in MiFID and FTT** will increase the cost to buy side & issuers given additional risk to market makers

- Without regular trading of issuer's debt, the returns/premium needed to attract demand may be unsustainable, particularly for smaller sovereign issuers

- Issuers incentivise primary dealers for regional reach, knowledge and to ensure attractive take-up of new issues

- Volatility & higher yields have generated interest from more speculative shorter term players e.g. hedge funds

**Key**

↑ Enhances liquidity

↓ Withdraws liquidity

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