Tenth Annual

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Secondary Market Liquidity in Domestic Debt Markets

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OECD

THE WORLD BANK

IFC International Finance Corporation World Bank Group

OCDE ORGANISATION DE COOPÉRATION ET DE DÉVELOPPEMENT ÉCONOMIQUES

A Comparative Study of US-EU Government Bond Market Liquidity

Trading systems, players and something else?

BANCO DE ESPAÑA
Eurosistema

10th Annual OECD/WB/IMF Global Bond Market Forum, 29 – 30 April, 2008, Washington, D.C.

OCDE

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A. No clear consensus about the drivers of liquidity

- **No consensus about the liquidity-enhancing roles played by :**
- **intermediaries**
- **trading platforms**
- **DMOs and other institutions**

B. Aim of presentation

- **(1) address key questions concerning debate about the drivers of liquidity;**
- **(2) US-European comparative analysis; and**
- **(3) lessons or implications forDMOs.**

Three key questions

I. **How do we assess the impact on liquidity of market infrastructure, the broader financial structure and the regulatory regime?**

II. **What are the policy implications of fast-moving changes in the architecture of trading platforms?**

III. **What can DMOs do in promoting secondary market liquidity?**

What is special about public bond markets?

- Liquidity crucially affected by “size”
- “Dark pools” of liquidity
- Features of up-stairs market
- Provision of liquidity by DMO has “public good elements
- “Customised” regulatory environment

The specifics of liquidity in secondary markets for government debt

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Size 'threshold' liquidity premiums

- ***Liquid issuance size (IS):*** **AAA-government bonds $ 2.5-3.7 billion (EUR 2-3 billion)**
- ***Liquid market size (MS)*****: $100- 200 billion (EUR 80-160 billion)**

Propensity to become “dark”

- **Intrinsic time-driven heterogeneity of instruments (the on-the-run/off-the-run cycle)**
- **Lock-in effects**
- **Fragmentation**

Fragmentation

European Bond Instruments (1)

	Bonds / Notes	Bills
Austria	Bonds (up to 50 years)	T-bills (7-365 days)
Belgium	OLOs (up to 30 years)	Treasury certificates (up to 1 year)
Cyprus	Development Stock (5-, 10-year)	T-bills (52-week)
Czech	Bonds (3-, 5-, 10-, 15-year)	T-bills (13-, 26-, 39-, 52-week)
Denmark	Bonds (up to 30 years)	T-bills (up to 12-months)
EIB	(In euro) EARNs (up to 30 years)	NA*; Commercial paper
Estonia	Bonds (5-year eurobond)	No T-bill program
Finland	RFGB (1 to 11 years)	T-bills (1 to 12 months)
France	OATs (7 to 50 years) OAT'i, OATi, BTANei (inflation-linked) BTANs (2 to 5 years)	BTFs (12 to 52 weeks)
Germany	Bunds (10-, 30-year federal bonds) Inflation-linked bonds Bobls (5-year federal notes) Schatz (2-year federal notes)	Bubills (6-month discount paper)
Greece	GGB-Greek Government Bonds (3-, 5-, 10-, 20-, 30-year)	T-bills (13-,26-, 52-week)
Hungary	HUF bonds (3-, 5-, 10-, 15-year) Foreign currency bonds (5-, 7-, 10-, 12-, 15-year)	Discount T-bills (3-, 6-, 12-month)
Ireland	Bonds (up to 15 years)	Exchequer Notes (1 day to 1 year)

Fragmentation

European Bond Instruments (2)

	Bonds / Notes	Bills
Italy	BTPs (3-, 5-, 10-, 30-year fixed-rate) BTP" i (inflation-linked bonds) CCTs (7-year floating-rate notes) CTZs (18-, 24-month zero coupon)	BOTs (90-, 180-, 360-day bills)
KfW	(In euro) Bonds (3-15 years)	N A*
Latvia	Bonds (1-5 year, >5-year)	T-bills (up to 1-year)
Lithuania	GS-government securities (3 to 11 year domestic and foreign market bonds)	T-bills (6-, 12-month)
Malta	MGSs-Government Stocks (5 to 20 years)	T-bills (28-, 91-, 182-, 273-, 364-day)
The Netherlands	DSLs-Dutch State Loans (3-, 5-, 10-, 30-year)	DTC-Dutch Treasury Certificates (3-, 6-, 9-, 12-month)
Poland	Bonds (2-, 3-, 5-, 10-, 20-, 30-year)	T-bills (1-52 weeks)
Portugal	OTs-Obrigações do Tesouro (1 to 30 years)	BTs-Bilhetes do Tesouro (up to 1 year)
Slovakia	Bonds (1 to 20 years)	T-bills (< 1 year)
Slovenia	SIT bonds (5-, 10-year) EUR bonds (15-year) Eurobonds (7-, 10-year)	T-bills (3-, 6-, 12-month)
Spain	Obligaciones (10-, 15-, 30-year) Bonos (3-, 5-year)	Letras (6-, 12-, 18-month)
Sweden		

Upstairs market: differences in market making regime?

US+ Germany

- Statistical arbitrage:
  - US: PDs formally counterparties of Fed; their performance in secondary markets indirect outcome
  - Germany: market making /smoothing by Finanzagentur/
  - Bundesbank

Other Europe

- Compulsory obligations w.r.t. secondary market making (+ other requirements)
- Until recently, close partnership issuers, market makers and platforms in some countries
- Partnership with some platforms as form of delegated regulation

Cash liquidity as public good

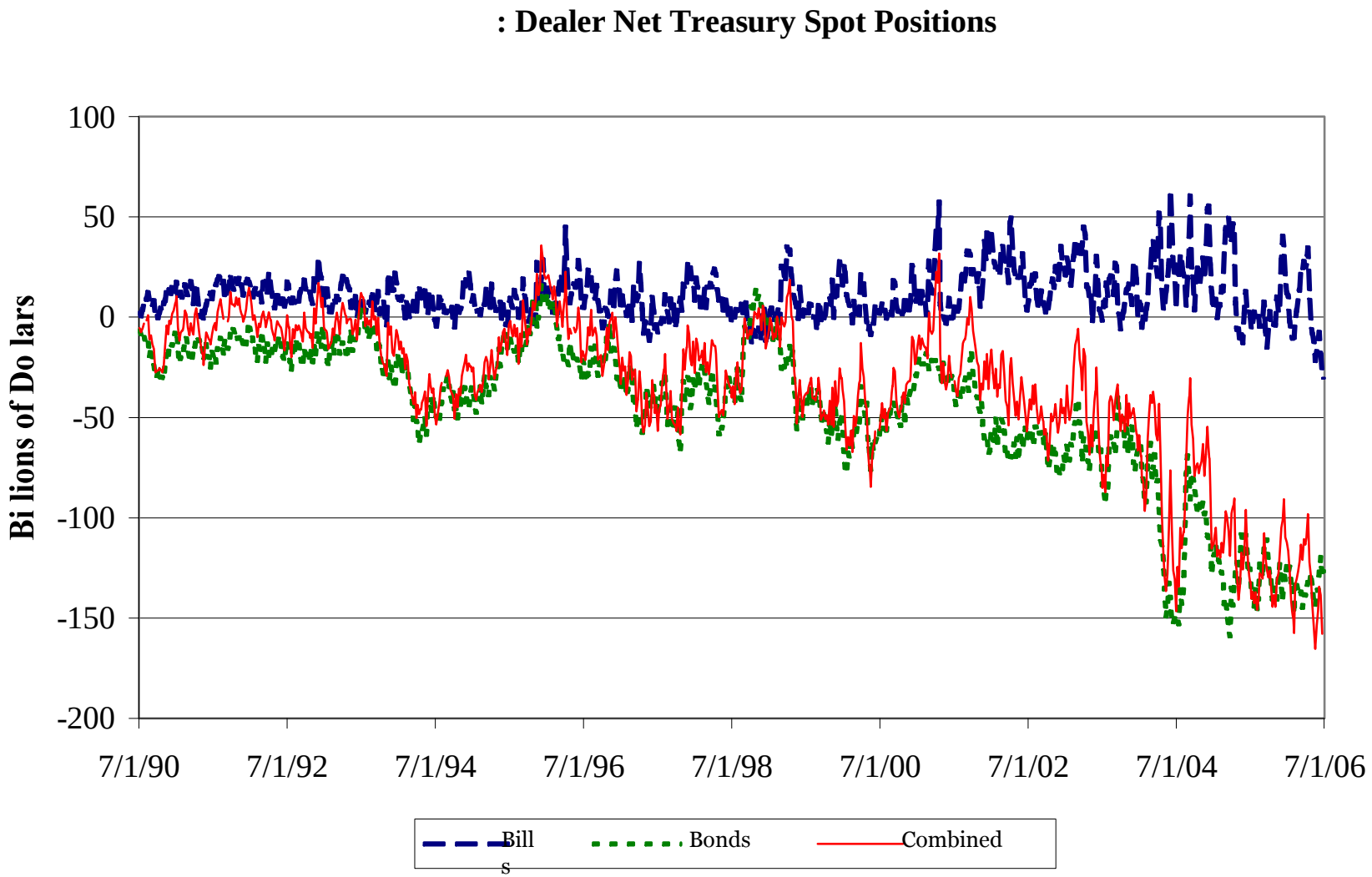
US

- Cash Treasuries extensively used as pricing reference
- Cash Treasuries extensively used as hedging tools

Europe

- Shared role of swaps and Bunds as pricing benchmark
- Bund future is main tool to short the market

US Treasuries play a different role



Recent trends affecting liquidity

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RECENT TRENDS AFFECTING LIQUIDITY

1. Impact of e-trading technology in US and EU
2. More prominent role of regulation in EU (also in US?)
3. In Europe: arbitrage-based market making OR "integrated fragmentation"
4. Dynamics of B2C consortiums & competition

Electronic Trading. Private incentives

Benefits

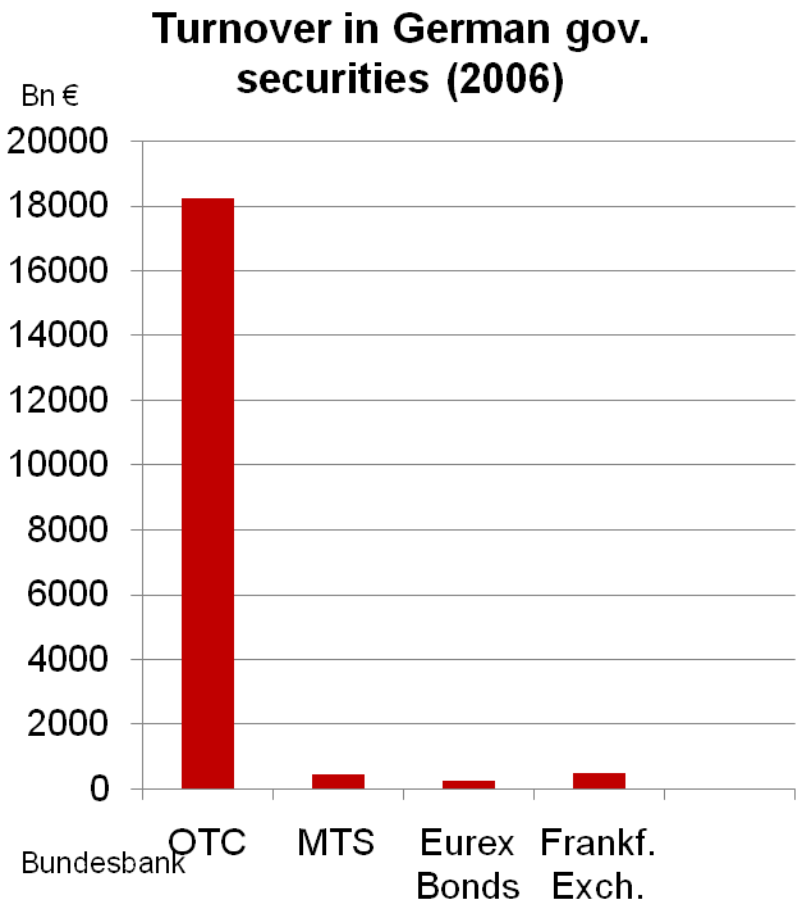
- Economies of concentration and easy access
- Recuction in search costs.
- Contribution to STP
- Reduction in wages

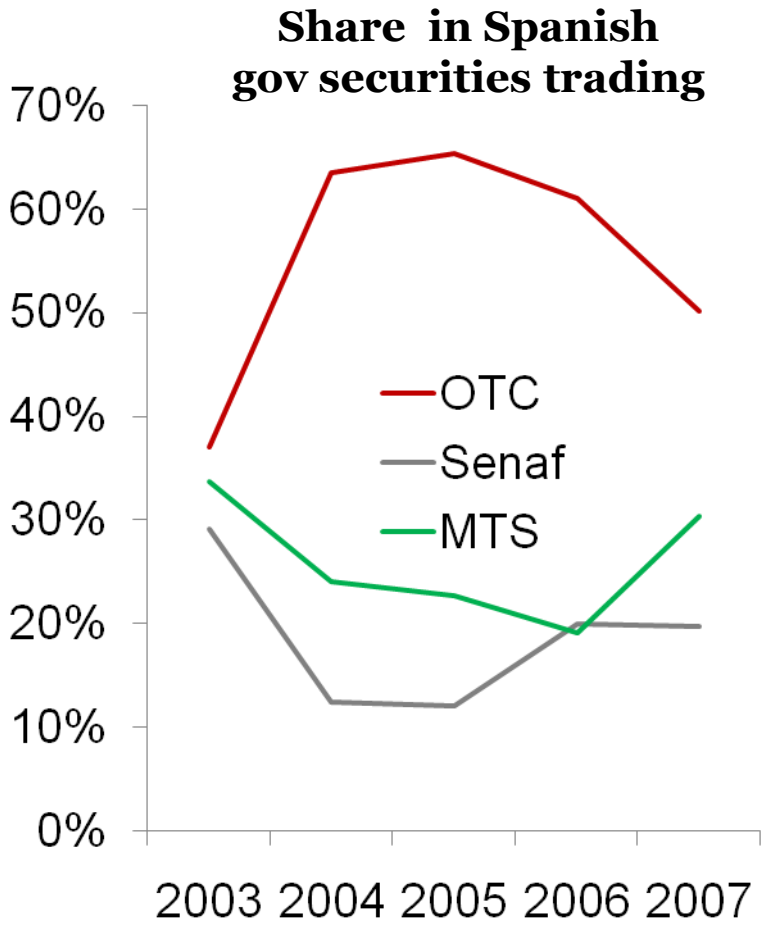
Costs

- More competition
- Bandwidth costs
- Costs of reducing latency
- Complex (tailored) trading and off-the-run is more difficult to implement
- Lower adaptability to volatile conditions

Transparency : public benefit but also a private one?

E-trading - A snapshot of revealed preferences in Europe





eTrading USA

	Inter-Dealer Brokers		D2C Systems		Exchange
	BrokerTec	eSpeed	Bloomberg	Tradeweb	CBOT
Price discovery method:	Order book	Order book	RFQ	RFQ	Order book
Visible order depth:	10	4	1	1	Unlimited
Price-making options:	1- or 2-way	1- or 2-way	1-way	1-way	1- or 2-way
Counterparty identification:					
- Pre-trade:	Anonymous	Anonymous	Disclosed	Disclosed	Anonymous
- Post-trade:	Give-up	Give-up	Disclosed	Disclosed	Anonymous
Sample Issue: (5-year benchmark)	UST 4% 15-Apr-10	UST 4% 15-Apr-10	UST 4% 15-Apr-10	UST 4% 15-Apr-10	5-year UST June 2005
Minimum bid-offer spread:	1/256	1/256	1/256	1/256	4/256
Maximum bid-offer spread:	-	-	-	-	-
Typical bid-offer spread:	2/256	2/256	2/256	2/256	4/256
Minimum size:	$1.000.000	$1.000.000	$1.000	$1.000	$100.000
Turnover	125%+				

eTrading in Europe

	Inter-Dealer Brokers		D2C Systems		Exchange
	BrokerTec	MTS	BondVision	Tradeweb	Eurex
Price discovery method:	Order book	Order book	RFQ	RFQ	Order book
Visible order depth	20	5	1	1	10
Price-making	1- or 2-way	1- or 2-way	1-way	1-way	1- or 2-way
Counterparty identification:					
- Pre-trade:	Anonymous	Anonymous	Disclosed	Disclosed	Anonymous
- Post-trade:	Give-up	Give-up	Disclosed	Disclosed	Anonymous
Sample Issue:	Bund 5.375%	Bund 5.375%	Bund 5.375%	Bund 5.375%	5-year Bobl
(5-year benchmark)	4-Jan-10	4-Jan-10	4-Jan-10	4-Jan-10	June 2005
Minimum bid- offer	0,01	0,01	0.005	0.005	0.005
Maximum bid-offer spread:	-	0,04	-	-	-
Typical bid-offer		0,02	0,01	0,01	0.005
Minimum size			$1.000	$1.000	$100.000
Turnover	around 5%				

More prominent role for (self-)regulation

EUROPE

Increased fragmentation

- **Mifid**
  - Automatic passport for MTFs decreases influence issuers on platforms
  - Impact 'best execution' on technology requirements?
- **DG Competition**
  - Pressure to open platforms where market makers comply with pd-obligations

USA

- **Will there be (semi-) regulatory actions to deal with systemic fails in the repo market?**

Arbitrage-based market-making and "integrated fragmentation" in Europe

- MTS decides to allow buy-side (hedge) fund investors in the B2B environment.
- What is going on?
  - Blurring of B2B and B2C?
  - A wrong business model for B2B?
  - Disciplining market-makers (MM)?

- Compulsory and arbitrage-based liquidity are for MM like oil and water
- Market makers do not feel linked to any platform.

Reinforced Fragmentation

New technological & policy challenges

Spanish case-study: 3 Principles for dealing with integration platforms

- **P #1: Freedom of platform choice** subject to adherence of the platform to minimum oversight reguirements.
- **P #2: Allocation of** both on-the-run and off-the run **baskets** (with designated bonds that need to be quoted)
- **P #3: Rule that allows platforms to specialise in different bonds**: only basket can be split across eligible platforms, but not individual bonds (with volume traded monitored) A coordination problem?

A continuous search for the 'ideal' electronic platform

- **Complicated corporate dynamics (dealers switch back and forth between platforms)**
- **Motive? Hedging bets on different platforms?**
- Integration of D2C/D2D seems to be an goal in the trading platforms industry.
- **Trilemma? → is it really possible to sustain: (1) a low search cost , (2) all purpose platform in an (3) innovative/ profitable trading environment? Would regulation help?**

POSSIBLE IMPLICATIONS FOR DMOs

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LESSONS FOR DMOs ? (1)

OUTSIDE THEIR SCOPE?

- **Market structure and technology largely exogenous**
- **General purpose regulations also largely exogenous**

WITHIN THEIR SCOPE?

- **Leadership over market associations**
- **Initiative or support improvements to basic infrastructure (repo, strips, clearing & settlement)**
- **Monitoring the evolution of lock-in liquididity effects**

IMPLICATIONS FOR DMOs ? (2)

OUTSIDE THEIR SCOPE?

- **Strict oversight of quoting obligations to clients?**
- **A more active role in supporting liquidity? (implication of credit crisis?)**

WITHIN THEIR SCOPE?

- **Prevention of one-sided market environments**
- **Primary liquidity management**