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ELECTRONIC DEBT TRADING SYSTEMS IN OECD COUNTRIES

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This document, prepared by Mr. Herwig Smitsaert of the National Bank of Belgium, is circulated under item 4) of the Agenda for the meeting of the Debt Management Working Party on 7-8 November 2000

For further information, please contact Mr. Herwig Smitsaert (Tel: +32 2 221 4328;
Fax: +32 2 221 3102; E-mail: herwig.smitsaert@nbb.be)

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Or. Eng.

ELECTRONIC TRADING IN GOVERNMENT DEBT IN OECD COUNTRIES

1. Electronic trading in government debt is rapidly gaining ground. In most OECD countries, electronic secondary market trading systems are already in place or are expected to be introduced in the near future. The purpose of the survey was to make an overview of what is going on in this field, with the exclusion of single-dealer systems. Indeed, single-dealer systems provide electronic trading facilities for end-investors but are in fact nothing but an electronic substitute for orders negotiated bilaterally over the phone. Because of the absence of direct competition between several dealers on a same platform, each single-dealer platform individually cannot be considered to operate as a "market".

2. For the various items of the questionnaire, the present paper describes the main developments and draws a number of conclusions. A compilation of the answers of the different delegations together with a synoptic table, which facilitates comparisons, are enclosed.

1. Statute

3. The regulatory status of the studied electronic trading systems is quite heterogeneous. Some systems are part of a stock exchange, others have applied for the statute of a regulated market, and a significant part has opted to be regulated as a broker. The choice between the status of official market (stock exchange or regulated market) or broker is not always obvious. MTS for example is currently operating as a broker in Belgium, France, the Netherlands and the UK while operating as a regulated market in Italy and Portugal. Due to the difference in regulatory approach (focusing on investor protection versus market integrity respectively), there is a need to level the playing field.

2. Type of market

4. Basically, electronic trading systems are structured as multiple-dealer markets or as cross-matching markets. In practice, the distinction is not always obvious.

5. Cross-matching markets (or order-driven systems) are predominant in stock-exchange environments. Some stock exchanges, however, have a more complex market structure. Denmark, for example, has a two-tier system with an order-driven (retail) segment going hand in hand with a price-driven (wholesale) segment, called electrobroker. In Korea and Turkey, on the other hand, primary dealers are obliged to quote two-way prices on the stock exchange's cross-matching system, and can therefore be assimilated with multiple-dealer markets.

6. A common characteristic of electronic multiple-dealer markets (or price-driven systems) seems to be that only an anonymous order book appears, since they do not disclose the identity of the market makers (primary dealers) on screen. Price takers are able to buy or sell what is in the order book but are generally not allowed to post an order on it. Only in Greece are non-primary dealers able to make proposals subject to certain conditions.

7. Electronic brokers such as Broker Tec, Garban-Intercapital and Instinet have also been included in the survey as they operate as cross-matching systems. Indeed, they allow dealers to post bids and offers on their screens and to trade electronically. No liquidity support is provided by market makers.

8. TradeWeb, finally, is a customer-to-dealer system which enables institutional investors to request bids and offers from multiple dealers and pick out the best.

3. Market access

9. Cross-matching systems which are part of a stock exchange normally target retail as well as professional investors. In general, market access is restricted to financial intermediaries, in particular stock exchange members; sometimes non-domestic financial intermediaries can become stock exchange members. As already mentioned before, a specific role is assigned to primary dealers in certain cases. Generally, the number of market participants is relatively important.

10. By definition, multiple-dealer markets assign a prominent role to market makers or primary dealers. As a rule of thumb, it can be stated that only domestic and foreign financial intermediaries have access to this kind of electronic markets, though not always in the same capacity (price taker and/or market maker). In Greece, Korea and the Czech RM System, market access is also granted to institutional investors. Korea, however, does not accept foreign membership. With the exception of MTS-Italy and Korea, the number of market participants is rather modest, but there seems to be an underlying tendency to widen the access, which should lead to an increased participation.

11. With regard to electronic brokerage, the situation in terms of market access is mixed. At present, Broker Tec allows trading only among its founding members (financial intermediaries). By contrast, Garban-Intercapital grants access both to domestic and foreign financial intermediaries and to institutional investors. In the latter case, this different approach is reflected in a larger number of market participants.

12. TradeWeb is only accessible to domestic institutional investors in the capacity of price takers, but non-domestic investors are expected to be added within the next few months.

13. It can be concluded from these developments that so far electronic markets have been far more focused on dealers than on (institutional) investors, who in most cases have no direct market access. The gap could be filled either by electronic broking systems providing access to institutional investors, or by customer-to-dealer systems, especially in Europe.

4. Trading

14. Generally speaking, trading on cross-matching systems operating in a stock exchange context is confined to domestic securities (in Norex, only securities from the participating countries are apparently traded) and the minimum trading size is quite small. In some cases, special market sections have been set up (e.g. Denmark and Germany) which enable professional investors to trade in substantial (minimum) amounts.

15. Electronic multiple-dealer markets are normally conceived for wholesale trading, which results in important minimum trading sizes. In Iceland and Turkey, where the electronic government securities market is part of the stock exchange, trading can also take place in small quantities. With the exception of EuroMTS, which has a Pan-European vocation, and MTS Italy, dealing is only possible in domestic securities.

16. Trading through electronic brokers has to be carried out in large minimum amounts. Domestic as well as non-domestic securities are being traded or, in the latter case, their addition is imminent.

17. At present, trading on the customer-to-dealer system TradeWeb takes place in domestic securities, but is expected to be extended shortly to Euro sovereign debt. The minimum denomination of the security is the minimum trading size.

18. The market share of total turnover shows important disparities between electronic trading systems. Moreover, some types of securities are traded on several platforms. As a result, it is not easy to assess the market penetration of electronic trading. It is quite clear, however, that the OTC-market still has an important market share. Impediments to access to electronic trading systems are no doubt part of the explanation. However, for large-size trades and complex transactions, institutional investors prefer to trade directly with dealers. Electronic trading platforms, on the other hand, seem more suitable for small- and medium-sized transactions.

5. Transparency

19. With the exception of TradeWeb and the ordinary market in Denmark, the identity of the counterparties is not disclosed to the other market participants, neither before nor after the trade. When a trade has been concluded, most electronic markets disclose the identity of the counterparty to the parties involved. Because financial intermediaries increasingly favour the settlement of transactions through a central counterparty, entirely anonymous trading will probably become widespread. Projects for implementing new electronic trading systems in Germany and United Kingdom confirm this assumption.

20. Market transparency for non-market participants varies. With the exception of Germany, stock exchange-based electronic trading systems (including market-making systems) give ample pre-trade and post-trade information to non-market participants. However, quite often the latter type of information is only available with a time lag. Wholesale electronic markets can be either completely nontransparent for non-market participants (e.g. EuroMTS, BrokerTec, TradeWeb) or provide pre-trade and /or post-trade information (e.g. MTS Italy, Senaf, Garban Intercapital). In some cases, real-time data should become available through data vendors.

ISSUES OF DISCUSSION

1. What could be the impact of a fragmentation of the market in domestic government debt on its liquidity?
2. Should institutional investors obtain direct access to electronic trading systems in government debt?
3. Will electronic trading in government debt affect the role of dealers, in particular of primary dealers?
4. Do electronic trading systems in government debt provide adequate transparency to non-market participants?

ANNEX

SURVEY ON ELECTRONIC TRADING IN GOVERNMENT DEBT IN OECD COUNTRIES

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2. Synoptic table
3. Compilation of answers to the questionnaire

1. Comments made by countries without electronic trading system to date

21. On the basis of their answers, following countries currently do not have an electronic trading system for government debt:

Australia
Canada
Finland
Hong Kong
Ireland
Luxemburg
New Zealand
Singapore
Sweden
United Kingdom.

22. The following remarks were made by some of these countries:

Australia

23. Electronic trading in government debt is currently being investigated by a number of parties and may commence in Australia in the not too distant future, although we think it unlikely that it would completely replace the phone-based market for some time.

New Zealand

24. There are developments in the New Zealand market Government securities market where intermediaries are seeking to utilise the internet for transactions:

- a domestic bank has launched a proprietary system targeting retail investors. Maximum transaction size is up to NZ\$ 1 mln.
- two domestic banks and two foreign banks have combined to launch a proprietary system that allows investors to request live prices and then trade on the basis of those prices. This system is not operational yet.

Sweden

25. There are ongoing discussions between market participants about electronic trading in government securities.

United Kingdom

26. At this moment, there is no electronic trading of UK government bonds (although some primary dealers do provide some automatic trading facilities direct to their customers via Bloomberg or the web ;

this is on a voluntary basis). However, we had a consultation exercise in the first quarter of 2000, to which we published our response in June. This will necessitate the introduction of some form of e-trading between primary dealers in the near future. We are hoping for the summer of 2001. It will probably have an interdealer-broker statute. The market will be a multiple dealer market. The primary dealers will provide firm quotes on a mandatory basis in a selected number of benchmark stocks (conventional, fixed-rate bonds). Mandatory quoting will only be required for a portion of the trading day; current thinking is that primary dealers will be required to provide firm quotes for any 5 hours out of a designated 8 hour period. Only the 17 primary dealers will have access to the market. The full range of government bonds including strips and index-linked securities is expected to be traded on the system on a voluntary basis. The possibility of basis trading (against futures) and switches (trading two bonds against one another) is also desired by primary dealers. The minimum trading size is expected to be £2 mln for long-dated bonds and £5 mln for short- and medium-dated bonds. The size will be subject to regular review and revision. Trading will be absolutely anonymous (outstanding orders and after execution). All trade information will be kept within the closed group of primary dealers.

27. Useful information in this field is available at the following internet address:

www.dmo.gov.uk/gilts/public/consdoc/index.htm

2. Synoptic table

ELECTRONIC TRADING IN GOVERNMENT DEBT

Name	GERMANY	ITALY		U.S.A.		
	Xetra Bond Trading	MOT	MTS	TradeWeb	Garban	Broker-Tec
Statute¹	X	X	M	B	B	B
Type of market²	C	C	M	M	M	M
Market access:						
- as market-maker ³	—	—	P	P	P F	n.a.
- as price-taker ³	—	—	P O	I (O)	P F I O	n.a.
- to cross-matching market ³	F N	F I D O	—	—	—	—
Number of participants	425	n.a.	270	15	50-100	13
Traded instruments⁴	DG	DB DG	DB DG FG DZ DR FR	DB DG DZ	DB DG	DB DG DZ
Minimum trading size⁵	1	1	3	1	2	2
Average daily turnover (million EUR or USD):						
- domestic T-bills	—	n.a.	n.a.	n.a.	n.a.	n.a.
- domestic T-bonds	50 EUR	n.a.	n.a.	n.a.	USD 5 000 to 7 000	n.a.
- domestic strips	—	—	n.a.	n.a.	—	n.a.
- repos on domestic securities	—	—	n.a.	—	—	—
Memo: all securities				USD 8 000		
Estimated market share in % of total turnover:						
- domestic T-bills	—	n.a.	n.a.	n.a.	n.a.	n.a.
- domestic T-bonds	5	n.a.	n.a.	n.a.	n.a.	n.a.
- domestic strips	—	—	n.a.	n.a.	—	n.a.
- repos on domestic securities	—	—	n.a.	n.a.	—	—
Memo: all securities				8		

¹ X=stock exchange; B=broker; O=OTC-market; M=other regulated market.

² M=multiple dealer market; C=cross-matching market.

³ —=not applicable; n.a.= not available; P=primary dealer; F= other domestic financial intermediaries; I= domestic institutional investors; D=other domestic investors; N=other foreign financial intermediaries; O=foreign investors.

⁴ DB=domestic Treasury bills; DG=domestic government bonds; DZ=domestic strips; DR=repos on domestic government securities; FB=foreign Treasury bills; FB=foreign government bonds; FZ=foreign strips; FR=repos on foreign government securities.

⁵ 1=less than 1 million EUR/\$; 2=between 1 and 5 million EUR/\$; 3=5 mln EUR/\$ and more.

	GERMANY	ITALY		U.S.A.		
Name	Xetra Bond Trading	MOT	MTS	TradeWeb	Garban	Broker-Tec
Trading hours	8.00-17.00	8.00-17.15	8.00-17.15	8.00-17.00	23 hours per day	2.00-17.30
Transparency:						
<i>1. Disclosure of identity of counterparties:</i>						
- of outstanding orders ⁶	N	N	N	Y	N	N
- after trade to the parties involved	Y	Y	Y	Y	N	N
- after trade to all market participants ⁷	N	N	N	N	N	N
<i>2. Information for non-market participants:</i>						
- dealer quotes or order-book ⁷	N	Y (0)	Y (0)	N	Y (0)	N
- prices, sizes of executed trades ⁷	N	Y (0-15)	Y (0)	N	Y (0)	N

⁶ Y=yes; N=no.

⁷ If yes, the delay of publication in minutes is mentioned between brackets.

	AUSTRIA	BELGIUM	CZECH REPUBLIC	FRANCE		
Name	EUROMTS	MTS Belgium	RM Systém	MTS France EUROMTS	Instinet	BrokerTec
Statute¹	B	B	O	B	B	B
Type of market²	M	M	M	M	C	M
Market access:						
- as market-maker ³	P F	P F N	P F N	P (F N)	—	F N
- as price-taker ³	P F	P F O	P F I D O	P (F)	—	n.a.
- to cross-matching market ³	—	—	—	—	P F	—
Number of participants	29	19	n.a.	18 (40)	n.a.	12
Traded instruments⁴	DG DR	DG DR	DG DR	DG	DG	DG
Minimum trading size⁵	3	2 (3)	n.a.	2 (3)	2	2
Average daily turnover (million EUR or USD):						
- domestic T-bills	—	—	—	—	—	—
- domestic T-bonds	n.a.	EUR 300	EUR 55	EUR 350 (EUR 400)	n.a.	EUR 60
- domestic strips	—	—	—	—	—	—
- repos on domestic securities	n.a.	n.a.	n.a.	—	—	—
Estimated market share in % of total turnover:						
- domestic T-bills	—	—	—	—	—	—
- domestic T-bonds	15	20	n.a.	50	n.a.	5
- domestic strips	—	—	—	—	—	—
- repos on domestic securities	n.a.	n.a.	n.a.	—	—	—

¹ X=stock exchange; B=broker; O=OTC-market; M=other regulated market.

² M=multiple dealer market; C=cross matching market.

³ —=not applicable; n.a.= not available; P=primary dealer; F= other domestic financial intermediaries; I= domestic institutional investors; D=other domestic investors; N=other foreign financial intermediaries; O=foreign investors.

⁴ DB=domestic Treasury bills; DG=domestic government bonds; DZ=domestic strips; DR=repos on domestic government securities; FB=foreign Treasury bills; FB=foreign government bonds; FZ=foreign strips; FR=repos on foreign government securities.

⁵ 1=less than 1 million EUR/\$; 2=between 1 and 5 million EUR/\$; 3=5 mln EUR/\$ and more.

	AUSTRIA	BELGIUM	CZECH REPUBLIC	FRANCE		
Name	EUROMTS	MTS Belgium	RM Systém	MTS France EUROMTS	Instinet	BrokerTec
Trading hours	8.30-17.30	8.15-17.30	n.a.	8.15-17.30	n.a.	n.a.
Transparency:						
<i>1. Disclosure of identity of counterparties:</i>						
- of outstanding orders ⁶	N	N	n.a.	N	N	N
- after trade to the parties involved	Y	Y	n.a.	Y	Y	Y
- after trade to all market participants ⁷	N	N	n.a.	N	N	N
<i>2. Information for non-market participants:</i>						
- dealer quotes or order-book ⁷	N	N	n.a.	N	N	N
- prices, sizes of executed trades ⁷	N	N	n.a.	N	N	N

⁶ Y=yes; N=no.

⁷ If yes, the delay of publication in minutes is mentioned between brackets.

	DENMARK		GREECE	ICELAND	KOREA	NETHERLANDS
Name	SAXESS ordinary	SAXESS electrobroker	HDAT	Stock exchange	KTS	MTS Amsterdam
Statute ¹	X	X	M	X	X	B
Type of market ²	C	M	M	M	C	M
Market access:						
- as market-maker ³	—	FN	PFN	P	—	P
- as price-taker ³	—		PFIOD	PF	—	PFO
- to cross-matching market ³	FO	—	—	—	PFI	—
Number of participants	25	11	33	27	78	27
Traded instruments ⁴	DB DG FG DR	DG	DB DG DZ DR	DB DG	DG	DB DG DR
Minimum trading size ⁵	1	2	1	1	2	3
Average daily turnover (million EUR or USD):						
- domestic T-bills	DKK 768 (EUR 103)	—	n.a.	USD 5	—	n.a.
- domestic T-bonds	DKK 14 615 (EUR 1 957)	n.a.	n.a.	USD 6	EUR 180	EUR 350
- domestic strips	—	—	n.a.	—	—	—
- repos on domestic securities	DKK 70 647 (EUR 9 461)	—	n.a.	—	—	n.a.

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² M=multiple dealer market; C=cross matching market.

³ —=not applicable; n.a.= not available; P=primary dealer; F= other domestic financial intermediaries; I= domestic institutional investors; D=other domestic investors; N=other foreign financial intermediaries; O=foreign investors.

⁴ DB=domestic Treasury bills; DG=domestic government bonds; DZ=domestic strips; DR=repos on domestic government securities; FB=foreign Treasury bills; FB=foreign government bonds; FZ=foreign strips; FR=repos on foreign government securities.

⁵ 1=less than 1 million EUR/\$; 2=between 1 and 5 million EUR/\$; 3=5 mln EUR/\$ and more.

	DENMARK		GREECE	ICELAND	KOREA	NETHERLANDS
Name	SAXESS ordinary	SAXESS electrobroker	HDAT	Stock exchange	KTS	MTS Amsterdam
Estimated market share in % of total turnover:						
- domestic T-bills	0,8	—	n.a.	n.a.	—	n.a.
- domestic T-bonds	14,8	n.a.	n.a.	n.a.	25	25
- domestic strips	—	—	n.a.	—	—	—
- repos on domestic securities	71,3	—	n.a.	—	—	n.a.
Trading hours	9.00-17.00	8.30-17.00	10.00-17.00	10.00-16.00	9.00-15.00	8.15-17.10
Transparency:						
<i>1. Disclosure of identity of counterparties:</i>						
- of outstanding orders ⁶	Y	N	N	N	N	N
- after trade to the parties involved	Y	Y	Y	Y	N	Y
- after trade to all market participants ⁷	N	N	N	N	N	N
<i>2. Information for non-market participants:</i>						
- dealer quotes or order-book ⁷	Y (0)	Y (0)	N	Y (15)	Y (0)	N
- prices, sizes of executed trades ⁷	Y (0-20)	Y (0-20)	N	Y (15)	Y (0)	N

⁶ Y=yes; N=no.

⁷ If yes, the delay of publication in minutes is mentioned between brackets.

	PORTUGAL	SPAIN	SWITZERLAND	TURKEY
Name	MEDIP (MTS)	Senaf	SWX/EBS	ATS
Statute¹	M	M	X	X
Type of market²	M	M	M	C
Market access:				
- as market-maker ³	P F N	P F N	F	—
- as price-taker ³	P F	P F N	F I D O	—
- to cross-matching market ³	—	—	—	P F
Number of participants	12	33	30	173
Traded instruments⁴	DG	DG DZ	DB DG DR FR	DB DG DZ DR
Minimum trading size⁵	1 (2)	2	1	1 (2)
Average daily turnover (million EUR or USD):				
- domestic T-bills	—	—	n.a.	USD 200
- domestic T-bonds	EUR 150	EUR 1 583	CHF 300 (200 EUR)	USD 1 300
- domestic strips	—	EUR 26	—	n.a.
- repos on domestic securities	—	—	CHF 6 000 (EUR 3 930)	USD 3 500
Estimated market share in % of total turnover:				
- domestic T-bills	—	—	n.a.	1
- domestic T-bonds	n.a.	47,6	50	12
- domestic strips	—	81,4	—	n.a.
- repos on domestic securities	—	—	30	25

¹ X=stock exchange; B=broker; O=OTC-market; M=other regulated market.

² M=multiple dealer market; C=cross matching market.

³ —=not applicable; n.a.= not available; P=primary dealer; F= other domestic financial intermediaries; I= domestic institutional investors; D=other domestic investors; N=other foreign financial intermediaries; O=foreign investors.

⁴ DB=domestic Treasury bills; DG=domestic government bonds; DZ=domestic strips; DR=repos on domestic government securities; FB=foreign Treasury bills; FB=foreign government bonds; FZ=foreign strips; FR=repos on foreign government securities.

⁵ 1=less than 1 million EUR/\$; 2=between 1 and 5 million EUR/\$; 3=5 mln EUR/\$ and more.

	PORTUGAL	SPAIN	SWITZERLAND	TURKEY
Name	MEDIP (MTS)	Senaf	SWX/EBS	ATS
Trading hours	8.00-17.30	8.30-17.15	09.00-17.00	9.30-17.00
Transparency:				
<i>1. Disclosure of identity of counterparties:</i>				
- of outstanding orders ⁶	N	N	N	N
- after trade to the parties involved	Y	N	Y	Y
- after trade to all market participants ⁷	N	N	N	n.a.
<i>2. Information for non-market participants:</i>				
- dealer quotes or order-book ⁷	N	N	Y (0)	Y (0)
- prices, sizes of executed trades ⁷	N	Y (>10)	Y (0)	Y (0)

⁶ Y=yes; N=no.

⁷ If yes, the delay of publication in minutes is mentioned between brackets.