



MTS Time Series
Market and Data Description for
The European Bond and Repo Database



Version 5.0



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1 An overview of the MTS Time Series database

The MTS database contains daily cash and repo information and high frequency trade and quote data, for a large number of European sovereign bond markets. The coverage of the database is bound to increase along with the planned expansion of MTS into new markets. Therefore, for the sake of this introduction, we refer to the data contained in the first month of the database, April 2003.

As of April 2003, the first month of available data, the database includes sovereign trade data for the following countries: Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, The Netherlands, Portugal and Spain. Some quasi-government are also included. A cross sectional reference file contains the details of each bond issue.

MTS data is entirely provided by the MTS interdealer markets: EuroMTS, EuroCredit MTS and the various domestic MTS markets. **EuroMTS** is the reference electronic market for Euro benchmark bonds, or bonds with an outstanding value of at least €5 billion. In April 2003, the bonds traded on this market are from 15 government and quasi-government issuers, namely Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, The Netherlands, Portugal, Spain, Depfa, the European Investment Bank, Freddie Mac and Kreditanstalt für Wiederaufbau. **EuroCredit MTS** is the reference electronic market for benchmark covered bonds with an outstanding value of at least €3 billion. In April 2003, examples of the bonds traded on this market are Pfandbriefe, Obligations Foncières and Cédulas Hipotecarias. **MTS Domestic Markets** list the whole yield curve of the government bond market of the respective European country.

In April 2003, MTS Time Series covers 769 bonds approximately 88% of which are government bonds, 5% are quasi-government bonds and 7% are structured bonds. All the bonds included in the first month of the MTS Time Series are denominated in Euros, however, more recent data includes information on domestic currency Danish and Polish government bonds. Government bonds are issued by Treasuries and Local Governments (e.g. Länder bonds in Germany). Quasi-government bonds are issued by national (e.g. Caisse d'Amortissement de la Dette Sociale in France, Freddie Mac in the USA and Kreditanstalt Fur Wiederaufbau in Germany) and international public institutions (e.g. European Investment Bank). Structured bonds include asset back securities and covered bonds. Furthermore, the data contains also information on repo contracts traded on the MTS markets.



For each month the cash data is organised into three files and the repo data is arranged into two additional files. Monthly updates for each file are provided. To simplify the data archiving process, each file name ends with the first three letters of the month and the last two digits of the year that the data refers to.

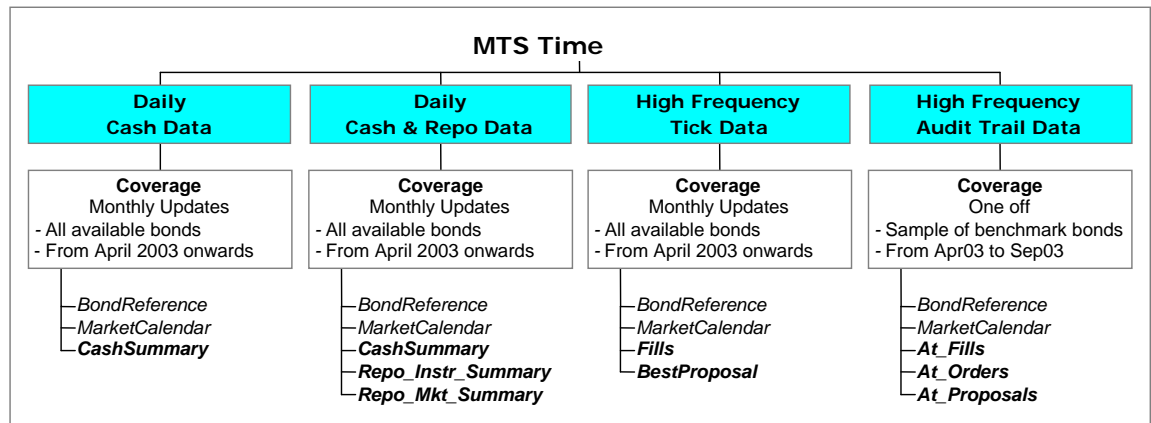
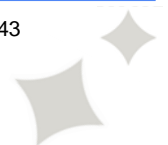


Figure 1. MTS Time Series database structure and file names.

For those interested in market microstructure issues the Fills and Best Proposals files contain information on the trades and the best three quotes that occurred throughout each day for all bonds in the database. In particular, the best proposals file records every submitted quote that improves price and/or size for the top three bid and offer prices in the market. Detailed information on how proposals and orders are matched into trades can be inferred from the Audit Trail files. These files cover the six-month period from April to September 2003 for a sample of benchmark bonds, which are representative of different national markets and of different maturity buckets. For those interested in traditional fixed income issues the Cash Summary file contains raw as well as processed daily data. It includes information on three price variables (trade price, mid-quote price, and yield), two risk variables (modified duration and convexity) and four liquidity variables (total traded volume, average trade size, average bid/ask spread and trade imbalance). The price variables provide the price for the last executed transaction and posted quote at or before 5pm Central European Time (CET) for each bond in the database. If a bond does not trade before 5pm CET the trade price observation is missing.

The MTS database also includes daily summary repo rates and repo transaction amounts in the Repo Instrument Summary file. An additional Repo Market Summary file contains daily information on the total value traded in Repo contracts and the total value traded for the two subcategories of General Collateral and Special Repo contracts.

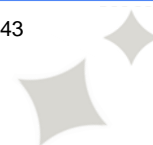




The tick-by-tick, daily and repo information can be cross-linked through a separate Cross Sectional file that contains the salient details of all bonds in the database. Furthermore, a Market Calendar file with market events including holidays, trading incidents and suspensions is provided. An overview of the structure of the MTS database is provided in "Figure 1".

In summary the MTS database allows for comparative studies of the microstructure, bond time series and repo markets of several large, mid-size and small European bond markets. In mid-June 2005 the old Telematico platform was replaced with a new TradeImpact system.

Currently, the source of all the cash market information is the Cash Market Facility (CMF) whereas all repo information comes from the Money Market Facility (MMF) of the TradeImpact system.





2 The TradelImpact System for Bonds

TradelImpact is a trading platform that enables trade negotiations and settlements for European Government and quasi-government bonds. Trading on this platform is anonymous, that is the counterpart is disclosed only after the trade is executed.

European (sovereign, quasi-sovereign and mortgage) bonds that satisfy certain requirements, in terms of principal amount outstanding and number of dealers available to act as market makers, are allowed to acquire the Euro benchmark status. Euro benchmark bonds are admitted to trading on the EuroMTS market. This means that some bonds trade on both the domestic MTS market and EuroMTS. The liquidity of these bonds is, therefore, fragmented between the Euro benchmark and the domestic markets. Because no explicit link has been built between these two markets, possible differences in prices and/or liquidity supplies across markets may emerge. MTS relies on the transparency of the systems to provide an effective informational link between the markets, so that arbitrageurs immediately eliminate any discrepancy. Market participants can subscribe to information systems, which provide timely updates on the best five quoted prices and about the aggregate quantity available at those prices on either side of each market. Furthermore, MTS provides timely updates of overall market statistics.

There are two types of market participants: *primary dealers* and *dealers*. Primary dealers are required to continuously formulate two-way proposals on a given number of bonds for a pre-set minimum amount. These proposals remain valid for the whole day if they are not cancelled, updated, automatically matched or hit by an incoming order. Primary dealers may also formulate proposals on any other tradable product and issue orders for proposals formulated by other market participants.

Primary dealers have the option of rejecting orders with quantities lower than the minimum tradable quantity. When posting quotes, in addition to specifying price (and/or yield), primary dealer must specify also *block* and *drip* quantities. The block quantity is the overall size for the proposal whereas the drip quantity is the part of the proposal that must be made visible to the rest of the market. These are analogous to hidden orders or iceberg orders of electronic equity markets. The market establishes the maximum period during which primary dealers are allowed to suspend their quoting services. Primary Dealers are also allowed to post single-sided proposals which are called Fill-and-Store (FAS) orders. These are just limit orders and are executed at a price/yield which is not inferior to the specified price/yield with any residual unfilled size stored in the order book until either cancellation or full execution.

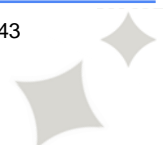


Dealers instead can only issue orders for proposals formulated by primary dealers. In summary, primary dealers can act as both price makers and price takers whereas dealers are price takers only.

We analyse a one-day sample of transaction data, 12 December 2002. With reference to trades for the Italian BTPs in the sample data, some dealers (8) are members of only the domestic market and quote only for the domestic market. Some other dealers (7) are members of the European market and post quotes only for the European market. The majority of dealers are members of both markets and are allowed to parallel quote, namely they post their quotes on both markets simultaneously. Parallel quotes have the same price although may specify different sizes on the domestic and Euro benchmark markets.¹ Primary dealers posting parallel quotes cannot be hit twice on the same proposal because whenever a proposal is aggressed in one market the dealer's position is immediately updated on both markets.

Interestingly, most of primary dealers use customised software to automatically post and update proposals. Always more sophisticated software programmes are becoming available. Dealers can programme in the type of spread they wish to maintain throughout the trading day and quotes change automatically based on prices taken elsewhere (for example from Reuters or Bloomberg). The introduction of electronic market systems has increased market-making competition leading to tighter spreads and, therefore, lower revenues from market-making activities. However, dealers still choose to offer market-making services as primary dealers because of the special relationship they acquire with the issuer.

¹ Most of the dealers that are allowed to parallel quote seem to have a preferred market for entering their parallel quotes. However, large dealing houses that have branches and traders both in and out of the local market may enter their parallel quotes on either the domestic or the European market.





In fact, they are often involved in primary auctions and receive market and policy information directly from the issuer.

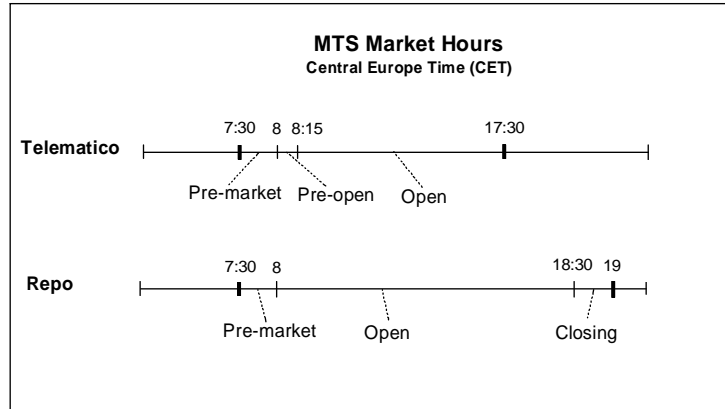
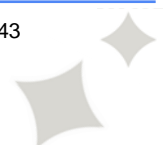


Figure 2. MTS market hours for the CMF and the MMF trading platforms.

The European MTS cash markets, which trade on the CMF platform, are characterised by four phases: *pre-market* (7:30am-8:00am CET), *pre-open* (8:00am-8:15am CET), *open* (8:15am-5:30pm CET) and *closed*. In the pre-market and pre-open phases members can post proposals and submit orders. The market ranks the best proposals applying price-time priority. However, during this phase, there is no automatic matching of proposals. Automatic matching of proposals is only active when the market is open. No trading is allowed when the market is closed.

The market aggregates the proposals available at the best five price levels on either side of the market. Aggregated drip quantities for these best five price levels are shown to the rest of the market. Because trading is anonymous, the identity of the primary dealers contributing to the best five price levels is not broadcasted. These best quotes are updated every time there is a new proposal that improves price and/or size at the top five price levels or when a proposal is changed (this includes cases when a proposal becomes temporarily unavailable by being suspended) or after a fill. Note that, during periods of high trading intensity the market may not update the best proposals after every specific event that affects the top 5 prices but updates are generated at least once every second for market participants. On the other hand, the process recording best prices from the market contains a throttling mechanism that may take only the last value of several proposals during market peaks.

Fills can be the result of either orders hitting standing proposals or automatic matching of marketable proposals. Orders will generate more than one fill when they are matched with more than one of the standing proposals. When matched proposals have different sizes, a fill is generated for the smaller quantity.





2.1 Cross-sectional data (BondReference)

The cross sectional file identifies the salient characteristics of each bond in the database. Variables are included in the cross-sectional file if the information contained in the variable does not change frequently. To handle updates of infrequently changing variables we include the effective date for each entry. Moreover, the same bond may trade on alternative venues, for example bonds that have acquired the Euro benchmark status may trade on both the domestic and the European market. Therefore it is possible for a single bond (i.e. the same bondcode) to have several entries, one for each update in the value of one of the variables as indicated by a new reference date or because the bond traded in multiple markets as indicated by different market codes. Each entry includes the bond's ISIN, a unique code for each bond in the MTS database, and a text abbreviation of the bond's type. These two variables serve as a master link to all other files so that this cross sectional information can be linked up to the daily cash and repo time series and intra-day data.

2.1.1 Table 1. Cross Sectional File (BondReference)

This table describes the variables that are included in the cross sectional file. Note that a single bond may have multiple entries for two reasons. First the value of a variable may need updating and second some bonds trade in more than one market. In the former case multiple entries would be characterised by multiple reference dates. In the latter case a bond has more than one market code.

Variable	Type	Description	Notes	Example
RefDate	Date/Time	Date at which this entry pertains to.	Date format: DD/MM/YYYY	30/05/2003
BondCode	Text	ISIN code. This can be used as a master key to link cross sectional with daily and intra-daily data.	This code normally corresponds to the ISIN code. For bonds available on the same platform with different configurations (e.g. BuySellBack vs. Classic Repo), the last char of the ISIN code (that is a checksum char) is transformed into a letter.	BE0000282880
BondType	Text	3-letters text abbreviation of bond type	Please refer to Appendix B for a list of possible values.	OLO
Description	Text	Mnemonic text	Bond type, maturity	OLO 23 03/15



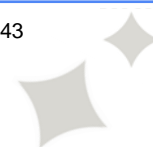


Variable	Type	Description	Notes	Example
	(Max 30 chars.)	description for the bond	date (MM/YY) and coupon (blank if zero).	8,00%
MarketCode	Text	Code for the market where the bond is traded Note: if the bond trades on the domestic and the European market there will be two entries for the same bond code.	Please refer to Appendix C for a list of possible values.	BEL
EuroBenchMarkFlag	Numeric	Indicates whether the bond has benchmark status.	Possible values are: 1 = yes, 0 = no.	0
EuroBondFlag	Numeric	Flag saying whether the bond is a EuroBond.	Possible values are: 1 = yes, 0 = no.	0
Issuer	Text	The body that issued the bond		BELGIAN TREASURY
IssuerCountry	Text	Two letter ISO code for originating country.	ISO 3166 values (please see http://www.iso.org/iso/en/prods-services/iso3166ma/02iso-3166-code-lists/index.html).	BE
IssuerType	Text	The general type of issuer.	Values are: Government, Quasi-Government, Structured.	Government
IssuerCategory	Text	Detail for category of issuer.	Possible values are: Asset backed securities, covered bonds (mortgage bonds), Domestic, Government agency, International, Local government, Supra national.	Domestic





Variable	Type	Description	Notes	Example
IssueDate	Date/Time	The date at which the bond was first issued.	Date format: DD/MM/YYYY	28/03/1995
MaturityDate	Date/Time	Date at which bond expires.	Date format: DD/MM/YYYY	28/03/2015
CouponRate	Double	The percentage annual coupon rate.	Missing value (.) if zero or floating rate.	8
CouponType	Numeric	The coupon type.	Possible values are: 0 = Zero 1 = Fixed coupon 2 = Floating rate 3 = Indexed Rate (value introduced from 02 Oct 06)	1
CouponFreq	Numeric	The periodicity of coupon payments	Possible values are: 0 = Zero 1 = Annual 2 = Semi-annual 4 = Quarterly	1
DatedDate	Date/Time	Date from which interest starts accruing.	Date format: DD/MM/YYYY	28/03/1995
FirstCouponDate	Date/Time	Date of first coupon.	Date format: DD/MM/YYYY Missing value (.) for zeros.	28/03/1996
LastCouponDate	Date/Time	Date of last coupon.	Date format: DD/MM/YYYY Missing value (.) for zeros.	28/03/2004
Currency	Text	Currency of the bond.		EUR
LotSize	Double	Lot size for the bond.		1,000,000
DCC	Numeric	Day Count Convention. The convention used to calculate accrued interest. This is also related to the settlement formula.	Possible values after 01 Oct 06 are: 0 = Zero Coupon 1 = Actual/Actual 2 = Actual/365 3 = Actual/360 4 = Actual/366 5 = 30/360	0





Variable	Type	Description	Notes	Example
			<p>6 = $30E+1/360$ 7 = $30E/360$</p> <p>Possible values before 01 Oct 06 are: 0 = Actual/Actual 1 = Zero Coupon 2 = $30E+1/360$ 3 = $30E/360$ 4 = Actual/365 5 = Actual/360 6 = Actual/366 7 = $30/360$</p>	
YieldFormula	Numeric	Yield formula. Only used when the instrument is yield-quoted.	<p>Possible values after 01 Oct 06 are: 0 = None 1 = ZC simple (Simple interest formula for Zero Coupons, Act/360, Act/365 or Act/366 convention) 2 = ZC Compound (Compound interest formula for Zero Coupons, Act/360, Act/365 or Act/366 convention) 3 = Fixed Rate (Interest formula for Spread Coupons, reserved for future users) 4 = One Year To Maturity (Price/Yield conversion formula for annual coupon bearing bonds of less than one year to maturity, currently used only for a few Danish Government bonds with residual maturity below 1 yr)</p> <p>Possible values between 15 Sep 03</p>	0



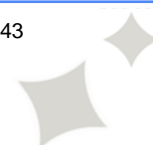


Variable	Type	Description	Notes	Example
			<p>and 01 Oct 06 are: 0 = None 1 = Strip+CTZ 2 = ZC simple 3 = JGB Yield 4 = ZC Compound</p> <p>Possible values before 15 Sep 03 are: 0 = None 1 = CTZ 2 = Strips + CTZ 3 = BOT365 4 = BOT360 5 = ZC Compound</p>	
MinPriceTick	Double	Price Precision (or yield precision, in the case of yield quoted instruments).	Possible values: 0.00001, 0.001, 0.005, 0.01.	0.001
StripFlag	Numeric	Flag indicating that a Bond originated from a Coupon-stripping program.	Possible values are: 0 = no 1 = yes	0
EndGreyMarketDate	Date/Time	If bond trades prior to issue, this is the date that the bond is first deliverable.	Date format: DD/MM/YYYY If no grey market, a missing value code (.) is given.	.
FirstSettlDate	Date/Time	First date that the bond settles	Date format: DD/MM/YYYY	28/03/1995
SettlDays	Numeric	Number of business days from trade to settlement date	Possible values are: 1, 2, 3, 4	3
StartAllocDate	Date/Time	Date at which bond is first allocated amongst primary dealers of the market specified above.	Date format: DD/MM/YYYY Data for this field is available from July 2003 onwards.	.
StopAllocDate	Date/Time	Date at which bond is deleted from	Date format: DD/MM/YYYY	.





Variable	Type	Description	Notes	Example
		allocation amongst primary dealers.	Data for this field is available from July 2003 onwards.	
StartTradingDate	Date/Time	First listing date. Date upon which the bond is first listed for trading.	Date format: DD/MM/YYYY	01/04/2003
StopTradingDate	Date/Time	This is either the last trading day of the month or the date upon which bond is de-listed.	Date format: DD/MM/YYYY	30/05/2003
PartNumber	Numeric	Market makers and Price Takers enabled to trade this instrument on this specific market.	See also Cash Summary file.	80
NumObligation	Double	Number of Market Makers having this bond allocated for this specific market.	See also Cash Summary File. Note: data for this field is available from July 2003 onwards.	.
ComplianceTime	Double	Quoting obligation features. Hours in a trading day that dealers must have an active quote.	Currently, quote obligations involve quoting a minimum quantity of a certain bond (e.g. 5 millions) within a bid offer spread (e.g. 4 price ticks), for a minimum cumulative amount of time (e.g. 5 hours). Note: data for this field is available from July 2003 onwards.	.
MaxSpread	Double	The maximum spread that can be quoted.		.
MinQuantity	Double	The minimum quantity that dealers can bid/offer.		.





2.2 Daily Cash Data (CashSummary)

The daily data, amongst other information, contains the clean price and some summary measures (e.g. daily average spread, total daily volume) for all the bonds in the database. Moreover as the same bond may trade domestically say via MTS Spain and European wide via EuroMTS. Therefore it is possible that a single bond may have two entries, one each for the domestic and European wide markets as indicated in the variable "marketCode". The last transaction (if any) that occurred at or before 5pm Central European Time (CET) is reported. As some bonds do not trade on a daily basis, mid-quote prices sampled at 5pm CET are also reported. Each entry includes the bond's ISIN and a text abbreviation of the bond's type. These two variables serve as a master link to all other files so that daily data can be linked up to the cross sectional, repo and tick-by-tick data files.

2.2.1 Table 2. Daily Cash File (CashSummary)

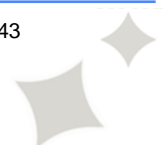
This table describes the variables contained in the daily cash file.

Variable	Type	Description	Notes	Example
Date	Date/Time	Trading date	Date format: DD/MM/YYYY	02/05/2003
BondCode	Text	ISIN code.	This code normally corresponds to the ISIN code. For bonds available on the same platform with different configurations (e.g. BuySellBack vs. Classic Repo), the last char of the ISIN code (that is a checksum char) is transformed into a letter. The bond code can be used as a master key to link daily with cross sectional and intra-daily data.	FR0100059601
BondType	Text	Abbreviation of bond type	Please refer to Appendix B for a list of possible	BTA



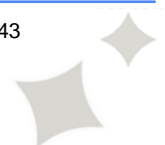


Variable	Type	Description	Notes	Example
			values.	
MarketCode	Text	Code for the market where the bond is traded.	Please refer to Appendix C for a list of possible values.	FRF
RefTime	Date/Time	Time stamp for the last executed trade at or before 5pm CET (blank if there are no trades for the day).	Trades close to 5 pm are chosen to avoid the closing period where volatility is very high.	16:57:00
RefVerb	Numeric	Indicator variable for the sign of the last trade at or before 5pm CET.	Possible values are: 0 = buy 1 = sell Missing value (.) if there are no trades for the day.	1
RefPrice	Double	Actual transaction price for the last trade at or before 5pm CET.	This field reports the flat price. If there is no trade for the day this field is blank.	100.53
MidPrice	Double	Flat Price Quote based on the average of best bid/offer prices at or before 5PM CET.	Price collected from a quote at or before 5PM CET having b/o spread within 3*Basis Point Value (BPV) where BPV can be calculated. If the spread is beyond such limit then the b/o couple is assumed to be non-tradable and a mid-price is thus deemed non-representative. For FRNs there is no such threshold.	100.515
MidYield	Double	Yield of the bond based on the mid-	Yield based on the last valid best	0.04883399





Variable	Type	Description	Notes	Example
		quote price.	proposals before 5pm CET.	
MaxPrice	Double	The highest transaction price for the day.		109.24
MinPrice	Double	The lowest transaction price for the day.		109.13
WgtPrice	Double	The weighted average transaction price for the day.		109.1881818
AccruedInterest	Double	Accrued interest reported on a one hundred par basis		4.764383562
settlDate	Date/Time	Date of payment of the bond	Date format: DD/MM/YYYY	6/2/2003
ModifiedDuration	Double	The modified duration of the bond based on actual mid-quote price at or before 5 pm CET.		2.807494259
convexity	Double	The convexity of the bond based on actual mid-quote price at or before 5 pm CET.		11.19724257
partNumber	Numeric	No. of market makers and price takers enabled to trade this bond on this specific market.	See also cross sectional data.	61
NumObligation	Numeric	Number of participants allocated for this bond for this specific market.	See also cross sectional data. Note: data for this field is available from July 2003 onwards.	6
TotVolume	Double	Sum of nominal value of fill volume on this day.		55,000,000
AvgSize	Double	Total fill volume in a day divided by the number of trades.		6,875,000





Variable	Type	Description	Notes	Example
Avgspread	Double	Average best bid/ask spread throughout the day.	Note that this measure is computed using only observations having b/o spread within 3*BPV where BPV can be calculated. If the spread is beyond such limit then the b/o couple is assumed to be non-tradable and an average spread is thus deemed non-representative. For FRNs there is no such threshold.	0.026669915
ImbTrade	Double	Aggregate buy initiated volume minus aggregate sell initiated volume	This corresponds to: SUM (fill side volumes where RefVerb=0) - SUM (fill side volumes where RefVerb=1)	15,000,000

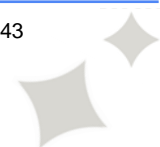
2.3 Tick-by-tick: Best Proposals (BestProposals)

Variable	Type	Description	Notes	Example
RefDate	Date/Time	Date of proposal update.	Date format: DD/MM/YYYY	5/2/2003
MarketCode	Text	Market in which best proposal update is posted.	Please refer to Appendix C for a list of possible values.	FRF
BondCode	Text	ISIN code for bond.	This code normally corresponds to the ISIN code. For bonds available on the same platform with different configurations (e.g. BuySellBack vs.	FR0100059601





Variable	Type	Description	Notes	Example
			Classic Repo), the last char of the ISIN code (that is a checksum char) is transformed into a letter.	
UpdTime	Date/Time	Time of calculation of best proposal. This is not always the time of proposal updates. Best proposals are updated at least every second during times of high market activity.	Time format: HH:MM:SS	16:56:43
TimeMSEC	Numeric	Milliseconds for the time of the proposal update. This information is essential for sorting quotes updated within the same second.	Time format: MMM	567
BidPrice1	Double	Best bid (BB) price.	Instruments on TradeImpact can be traded by price or by yield. In the first case the yield field is not populated.	100.51
BidYield1	Double	BB yield, when the instrument is yield quoted.		.
BidQty1	Double	Size available at BB price.		2,500,000
BidPrice2	Double	Second best bid (2BB) price.		100.49
BidYield2	Double	2BB yield, when the instrument is yield-quoted.	See above BidYield1	.
BidQty2	Double	Size available at 2BB.		5,000,000
BidPrice3	Double	Third best bid (3BB) price.		.
BidYield3	Double	3BB yield, when the instrument is yield-quoted.	See above BidYield1	.





Variable	Type	Description	Notes	Example
BidQty3	Double	Size available at 3BB price.		.
AskPrice1	Double	Best ask (BA) price.		100.55
AskYield1	Double	BA yield, when the instrument is yield-quoted.	See above BidYield1.	.
AskQty1	Double	Size available at BA price.		2,500,000
AskPrice2	Double	Second best ask (2BA) price.		100.59
AskYield2	Double	2BA yield, when the instrument is yield-quoted.	See above BidYield1.	.
AskQty2	Double	Size available at 2BA price.		7,500,000
AskPrice3	Double	Third best ask (3BA) price.		10.61
AskYield3	Double	3BA yield, when the instrument is yield-quoted.	See above BidYield1.	.
AskQty3	Double	Size available at 3BA price.		2,500,000

Note: that we can have more than one entry per bond code depending on market code.

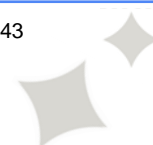
2.4 Tick-by-tick: Fills (Fills)

Variable	Type	Description	Notes	Example
RefDate	Date/Time	Date of trade	Date format: DD/MM/YYYY	5/2/2003
MarketCode	Text	Market View on which the trade occurs	Please refer to Appendix C for a list of possible values.	FRF
BondCode	Text	ISIN code for bond.	This code normally	FR01000596





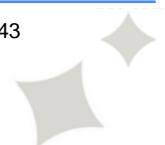
Variable	Type	Description	Notes	Example
			corresponds to the ISIN code. For bonds available on the same platform with different configurations (e.g. BuySellBack vs. Classic Repo), the last char of the ISIN code (that is a checksum char) is transformed into a letter.	01
Time	Date/Time	Time for the trade.	Time format: HH:MM:SS	16:57:00
TimeMsec	Numeric	Milliseconds for the time of the Trade. This information is essential for sorting trades executed within the same second.	Time format: MMM	561
Verb	Numeric	Buy/sell indicator.	<p>Possible values: 0 = buy trade 1 = sell trade.</p> <p>This refers to the market participant who is defined as the aggressor i.e. the participant that sent the order. Note that a trade can be executed when two different proposals specifying the best market prices are matching, i.e. when the bid (ask) price of a proposal is matching with the ask (bid) from another proposal. In this case, the proposal updated more recently will appear as the "aggressor" (i.e. the order side). In case of different overlapping prices, the execution price will be the one of the filler side.</p>	0
Price	Double	Price of the trade.		100.51
Quantity	Double	Size of the trade.		2,500,000





Variable	Type	Description	Notes	Example
Yield	Double	Yield of the trade.	Populated only when the instrument is yield quoted.	.
OrderSeqNo	Numeric	Sequence number of proposal/order that generated the trade (order side).	This field can be used to determine whether a same order /proposal originated one or more trades.	567
OrderStatus	Text	Indicates whether the originating order was completely filled or only partially filled (zero fills are not included).	Possible values are: PF = Partially Filled orders, CF = Completely Filled orders. This field is left empty for trades generated by the automatic matching of two proposals.	PF
AggProfile	Text	The profile of the aggressor member on that market.	Possible values: Primary (Market Maker) Dealer (Market Taker)	Primary
MultMarketFlag	Numeric	True if the aggressor is also member of another market for that bond.	Possible values: 0 = False 1 = True	0
ContractNo	Numeric	Unique sequence number for the generated trade.		678
CCPFlag	Text	True if the trade went through a central counterparty.	Possible values: FALSE TRUE	FALSE

Note: Cancelled trades are not included in the database.





3 The MMF Repo Market

A Repo contract is a financial agreement by which a party agrees to sell a bond at a given price with the understanding that it will be repurchased at an agreed price at a later date. The party that sells the bond via the repo agreement is said to “sell collateral” and is in effect borrowing to finance the original purchase of the bond. The party that buys the bond via the repo is said to “buy collateral” and is in effect lending money. Primary dealers and dealers, which have been authorised to trade on this platform, may post, change and cancel proposals or submit market orders for standing proposals.

These market participants are authorised but not obliged to quote any repo product. Members may choose to use a central counterparty or to trade bilaterally. Proposals by both members of a central counterparty and bilateral only participants are either named or anonymous and have to specify a minimum quantity and a fixed or variable rate. Automatic acceptance of orders will immediately generate trades only when the orders are between two members of a central counterparty otherwise the counterparties will have to manually confirm the terms of the trade. At the end of the day the central system cancels standing proposals.

Repo contracts vary because of the type of collateral, special or general repo and because of the type of contract, classic or buy/sell back repo. In a special repo the parties agree to trade a specific bond.

In a general collateral repo the member who sold collateral may define the bonds to be used as collateral at a later time – (up to 2 hours later). These bonds are chosen from a basket, which is defined by the exchange each trading day. For a buy/sell back repo the ownership of the bond is transferred to the cash lender whereas for a classic repo the ownership of the bond always resides with the original cash borrower.

On the new MMF orders for buy/sell back and classic repo contracts are consolidated on a single order book. The distinction between the two types of repo contracts is no longer dictated by the type of the bond which is used as collateral. Each member will declare whether he/she is willing to trade only buy/sell back, only classic or both repo contracts. The system will execute trades only between compatible members.

In addition, the MMF allows for flexible terms of the repo contract. That is, repo traders are no longer limited to trading standard repo term contracts (for example, Overnight, Tomorrow Next, etc.). Traders directly define the terms of the repo by providing Start and End dates for the repo contract.



The repo data contains the daily volume of collateral sold, daily measures of the repo interest rate and term agreed for all products in the database. This information is broken down into the bond used as collateral in the case of special repos and into the general category of the bond in the case of general repos so it is possible that the user can aggregate the volume, repo rate and maturity distribution of repos by national market and repo type. For special repos one can match the repo rate with the yield on the underlying bond since the repo file includes the ISIN and the repo rate collected at or before 5pm CET. For general collateral repo rates can be matched with the yield on the underlying instruments only approximately as the underlying instrument is not specifically identified. The data is also aggregated by total special and general collateral traded in all markets for the day.

The European MTS repo markets have four distinct phases: *pre-market (7:30am-7:45am CET)*, *open (7:45am-6:30pm CET)*, *closing (6:30pm-7:00pm CET)* and *closed*. Note that the timing provided is the maximum operational time for the market. However, the length of the open phase varies with the type of contract and the type of market. French overnight contracts, for example, trade until 12:15am. The closing phase starts from the end of the open phase and usually lasts for 15 minutes.

In the pre-market phase primary dealers and dealers may start posting proposals. These proposals will be visible to other market members only when the market opens. In the closing phase no trading is allowed. Members use this time to define the bonds to be delivered as collateral for the General Collateral contracts executed during the previous open phase.

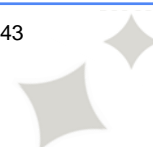
3.1 Instrument Summary

Variable	Type	Description	Notes	Example
RefDate	Date/Time	Trading date.	Date format: DD/MM/YYYY	01/07/2003
bondCode	Text	The ISIN number of the bond being repoed.	This code normally corresponds to the ISIN code. For bonds available on the same platform with different configurations (e.g. BuySellBack vs. Classic Repo), the last char of the ISIN code (that is a checksum char) is transformed into a letter. Use as a master key to link daily with cross-sectional and intra-daily data. If the repo is a general collateral	- Special: DE000113502I - GC: G.C. ITA



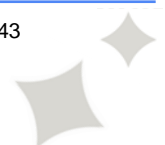


Variable	Type	Description	Notes	Example
			(GC), an alternative code is used (e.g. G.C. ITA).	
BondSegment	Text	Type of bond repoed.	Please refer to Appendix B for a list of possible values.	- Special: BSD - GC: GCI
Description	Text (Max 30 chars.)	Description of collateral. If general collateral, use alternative general collateral code.		- Special: DBR 04/01/07 6.00% -GC: G.C. ITALY
repoType	Text		Possible values: - G.C. = General Collateral repo; - Special = Special repo; - Special/General = special or General collateral repo; - General = General repo.	Special
repoClass	Text	Class of repo.	Possible values: - BuySellBack = Coupon belongs to buyer of collateral; - Classic = Coupon is retained by seller of collateral.	BuySellBack
repoTerm	Text (Max 4 chars.)	Duration of repo.	Please refer to Appendix A for a list of possible values.	SN
TermDescription	Text (Max 20 chars.)	Description of duration of repo contract.	Please refer to Appendix A for a list of possible values.	SPOT NEXT
startDays	Numeric	Number of days from current date to start date.		2
Enddays	Numeric	Duration of the loan expressed in days.		1
Currency	Text	Currency of the repo.		EUR



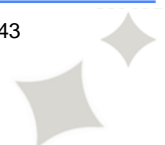


Variable	Type	Description	Notes	Example
RefVerb	Text	Specifies the side of the last trade before 5pm.	<p>Possible values are: 0 = BUY 1 = SELL</p> <p>For JULY 2003, possible values are: BUY SELL.</p> <p>This value is calculated from the point of view of the aggressor (this is either the side of the order or the side of the most recent proposal).</p>	0
RefRate	Double	Repo rate (interest rate charged on loan) of the last trade before 5:00pm. This rate can be positive, negative or zero.		2.08
refNomQty	Double	Nominal value of last contract traded before 5 pm.		5,000,000
EndRate	Double	Repo rate. This refers to the last trade before 6:30pm (closing time).		2.08
rateType	Text	Identification of the rate type.	Blank if not floating.	
DeliveryType	Numeric	Type of delivery	<p>Possible values are: 1 = Fixed Length; 2 = Fixed End Date; 3 = Fixed Start and End Dates.</p>	3
startdate	Date/Time	Date the loan is granted.	Date format: DD/MM/YYYY	03/07/2003
Enddate	Date/Time	Date the loan is paid off.	Date format: DD/MM/YYYY	04/07/2003
MinRate	Double	Minimum negotiated repo		2.08





Variable	Type	Description	Notes	Example
		rate for the day.		
avgRate	Double	Daily size-weighted average repo rate.		2.08
maxRate	Double	Daily max repo rate.		2.08
tradesNo	Numeric	Daily total number of negotiations.		1
nomQty	Double	Daily total value of negotiated contracts.		5,000,000
BuyNo	Numeric	Daily total number of buy-side contracts.	If there are no trades or only sell trades for the day this value is missing (.).	.
sellNo	Numeric	Daily total number of sell-side contracts.	If there are no trades or only buy trades for the day this value is missing (.).	1
buynomQty	Double	Daily total nominal value of buy-side contracts.	If there are no trades or only sell trades for the day this value is missing (.).	.
sellnomQty	Double	Daily total nominal value of sell-side contracts.	If there are no trades or only buy trades for the day this value is missing (.).	5,000,000





3.2 Repo Market Summary

Variable	Type	Description	Notes	Example
refDate	Date/Time	Trading date	Date format: DD/MM/YYYY	01/07/2003
gcQty	Numeric (Comma)	Total nominal cash volume of general collateral transactions for the refDate.		30,141,500,000
srQty	Numeric	Total nominal cash volume of special repo transactions for the refDate.		23,753,000,000
overallQty	Numeric	Total nominal cash volume of special and general collateral repo transactions for the refDate.		53,894,500,000

4 Audit Trail Files

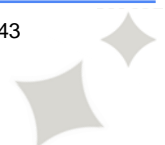
4.1 Audit Trail Fills (At_Fills)

Variable	Type	Description	Notes	Example
RefDate	Date/Time	Trade date.	Date format: DD/MM/YYYY	1/4/2003
MarketCode	Text	Market view on which the trade occurs.	Please refer to Appendix C for a list of possible values.	MTS
BondCode	Text	ISIN code for the bond.	This code normally corresponds to the ISIN code. For bonds available on the same platform with different configurations (e.g. BuySellBack vs. Classic Repo), the last char of the ISIN code (that is a checksum char) is transformed into a letter.	IT0001448619





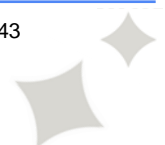
Variable	Type	Description	Notes	Example
BondType	Text	Three-letters identifier for the bond type	Please refer to Appendix B for a list of possible values.	BTP
RefTime	Date/Time	Trade time.	Time format: HH:MM:SS	15:26:36
RefTimeMsec	Numeric	Milliseconds for the trade time.	Time format: MMM	513
Verb	Numeric	Side of the transaction taken by the member who acts as the aggressor.	Possible values: 0 = buy trade, 1 = sell trade.	1
SettlDate	Date/Time	Date of payment of the bond	Date format: DD/MM/YYYY	4/4/2003
Price	Double	Trade price.		110.9
Quantity	Double	Trade size.		5,000,000
Yield	Double	Trade yield.	Populated only when the instrument is yield quoted.	.
OrderSeqNo	Numeric	Sequence number of proposal/order that generated the trade (order side).	This field can be used to determine whether the same order /proposal originated one or more trades.	95
OrderStatus	Text	Indicates whether the originating order was either completely or only partially filled (zero fills are not included).	Possible values are: PF= Partially Filled CF= Completely Filled This field is left empty for trades generated by the automatic matching of two proposals.	
ContractNo	Numeric	Unique sequence number for the generated trade.		204
CCPFlag	Text	True if the trade went through a central counterparty.	Possible values: TRUE FALSE.	TRUE
UpdateTime	Date/Time	Time of the edit for the trade.	These fields have different values from RefTime only when a change of status (e.g. a cancellation) happens to an edit.	15:26:36
UpdTimeMsec	Numeric	Milliseconds for the time of the edit for the trade.		524





4.2 Audit Trail Orders (At_Orders)

Variable	Type	Description	Notes	Example
MarketCode	Text		Please refer to Appendix C for a list of possible values.	BEL
RefDate	Date/Time	Date of the order.	Date format: DD/MM/YYYY	4/4/2003
RefTime	Date/Time	Time of the order.		10:51:02
RefTimeMsec	Numeric	Milliseconds for the time of the order.	Time format: MMM	793
BondCode	Text	ISIN number of the bond.	This code normally corresponds to the ISIN code. For bonds available on the same platform with different configurations (e.g. BuySellBack vs. Classic Repo), the last char of the ISIN code (that is a checksum char) is transformed into a letter. The bond code can be used as a master key to link to other files.	BE0000286923
BondType	Text	Segment of the traded bond.	Please refer to Appendix B for a list of possible values.	OLO
OrderSeqNo	Double	Sequence number of the order.		1000507
OrderStatus	Text	Processing status of the order.	Possible values: CF – Completely filled; PF – Partially filled; ZF – Zero Filled; ZA – Zero Filled (auto-application);	CF
Verb	Text	Sign of the order (referring always to the participant who submits the order).	Possible values: 0 = Buy, 1 = Sell.	1
Price	Double	Order price.		111.32





Variable	Type	Description	Notes	Example
Quantity	Double	Order quantity.		10,000,000
FillNo	Double	Number of contracts generated by this order.	Orders are requests to trade against a proposal. If they are matched, they generate one or more fills.	1

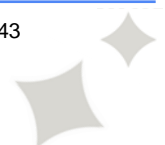
4.3 Audit Trail Proposals (At_Proposals)

Variable	Type	Description	Notes	Example
MarketCode	Text	Market on which the proposal is updated.	Please refer to Appendix C for a list of possible values.	BEL
RefDate	Date/Time	Trading date	Date format: DD/MM/YY	1/4/2003
UpdTime	Date/Time	Time of proposal update.	Time format: HH:MM:SS	15:10:59
UpdTimeMsec	Numeric	Milliseconds for the update time.	Time format: MMM	985
EndTime	Date/Time	End Time for the proposal (i.e. a proposal is valid only between its UpdTime and its EndTime).	Time format: HH:MM:SS	15:12:16
EndTimeMsec	Numeric	Milliseconds for the end time.	Time format: MMM	67
BondCode	Text	ISIN code of the bond.	This code normally corresponds to the ISIN code. For bonds available on the same platform with different configurations (e.g. BuySellBack vs. Classic Repo), the last char of the ISIN code (that is a checksum char) is transformed into a letter.	BE0000286923



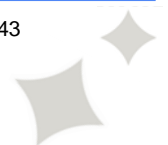


Variable	Type	Description	Notes	Example
BondType	Text	Segment of the bond.	Please refer to Appendix B for a list of possible values.	OLO
Check_Logon	Numeric	The status of the operator.	Possible values: 0 = Active, 1 = Suspended. If the Operator is suspended then the proposal is suspended and not visible to the market.	0
SettleDate	Date/Time	Settlement date.	Date format: DD/MM/YYYY	4/4/2003
SettleDays	Double	Days for the settlement.		6
Status	Numeric	Status	Possible values: 0 = Active, 1 = Suspended. If the status is suspended, then the proposal is suspended and not visible to the market.	0
BidPrice	Double	Bid price.		111.84
BidQty	Double	Hidden (block) bid quantity.		10,000,000
BidEbmQty	Double	Visible (drip) bid quantity in the EuroMTS market.		5,000,000
BidDomQty	Double	Visible (drip) bid quantity in the domestic market.		5,000,000
AskPrice	Double	Ask price.		111.88
AskQty	Double	Hidden (block) ask quantity.		10,000,000
AskEbmQty	Double	Visible (drip) ask quantity in the EuroMTS market.		5,000,000





Variable	Type	Description	Notes	Example
AskDomQty	Double	Visible (drip) ask quantity in the domestic market.		5,000,000
BidYield	Double	Bid yield as calculated.	Populated only when the instrument is yield quoted.	.
AskYield	Double	Ask yield as calculated.	Populated only when the instrument is yield quoted.	.



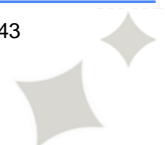


5 Appendix A

Repo Terms and Description

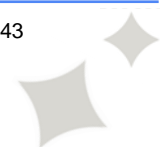
This table lists and describes the repo terms. For each term, it also provides details on trading times and days to settlement for the spot and forward legs of the repo contract. The last column indicates whether business days or calendar days are considered when computing the number of days. The collateral for each repo contract can be either special or general. Note that CLE is Clearnet, LCH is the London Clearing House and ESP is the Bank of Spain, which acts as the Spanish depository.

Term	Term Description	Days to Settlement	Trading Days	End of Trading Day	End of GC Cut-off Time	Date Type B= Business Days C= Calendar Days
OP1	POLISH	0	1	12:00:00,00	12:15:00,00	B
OS1	SPANISH	0	1	12:45:00,00	13:00:00,00	B
ON1	OVERNIGHT 1	0	1	15:30:00,00	15:45:00,00	B
TNL	TOMORROW NEXT	1	1	13:00:00,00	13:15:00,00	B
TNP	TOMORROW NEXT	1	1	16:45:00,00	17:00:00,00	B
TNS	TOMORROW NEXT	1	1	17:15:00,00	17:30:00,00	B
TN	TOMORROW NEXT	1	1	18:30:00,00	18:45:00,00	B
SNP	SPOT NEXT PLN	2	1	16:45:00,00	17:00:00,00	B
SNS	SPOT NEXT ESP	2	1	17:15:00,00	17:30:00,00	B
SNL	SPOT NEXT LCH	2	1	18:00:00,00	18:15:00,00	B
SN	SPOT NEXT	2	1	18:30:00,00	18:45:00,00	B
CNS	CORPORATE NEXT	3	1	17:15:00,00	17:30:00,00	B
CNL	CORPORATE NEXT LCH	3	1	18:00:00,00	18:15:00,00	B



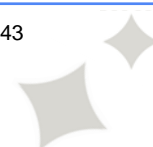


Term	Term Description	Days to Settlement	Trading Days	End of Trading Day	End of GC Cut-off Time	Date Type B= Business Days C= Calendar Days
CN	CORPORATE NEXT	3	1	18:30:00,00	18:45:00,00	B
OP2	POLISH	0	2	12:00:00,00	12:15:00,00	B
ON 2	OVERNIGHT 2	0	2	15:30:00,00	15:45:00,00	B
OP3	POLISH	0	3	12:00:00,00	12:15:00,00	B
ON 3	OVERNIGHT 3	0	3	15:30:00,00	15:45:00,00	B
T1WP	TOM ONE WEEK	1	7	16:45:00,00	17:00:00,00	C
T1WS	TOM ONE WEEK	1	7	17:15:00,00	17:30:00,00	C
S1WP	SPOT ONE WEEK	2	7	16:45:00,00	17:00:00,00	C
S1WS	SPOT ONE WEEK ESP	2	7	17:15:00,00	17:30:00,00	C
S1WL	SPOT ONE WEEK	2	7	18:00:00,00	18:15:00,00	C
S1W	SPOT ONE WEEK	2	7	18:30:00,00	18:45:00,00	C
1WS	ONE WEEK ESP	3	7	17:15:00,00	17:30:00,00	C
1WL	ONE WEEK LCH	3	7	18:00:00,00	18:15:00,00	C
1W	ONE WEEK	3	7	18:30:00,00	18:45:00,00	C
T2WP	TOM TWO WEEKS	1	14	16:45:00,00	17:00:00,00	C
T2WS	TOM TWO WEEKS	1	14	17:15:00,00	17:30:00,00	C
S2WP	SPOT TWO WEEKS	2	14	16:45:00,00	17:00:00,00	C
S2WS	SPOT TWO WEEKS ESP	2	14	17:15:00,00	17:30:00,00	C
S2WL	SPOT TWO WEEKS LCH	2	14	18:00:00,00	18:15:00,00	C
S2W	SPOT TWO WEEKS	2	14	18:30:00,00	18:45:00,00	C



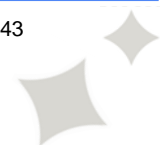


Term	Term Description	Days to Settlement	Trading Days	End of Trading Day	End of GC Cut-off Time	Date Type B= Business Days C= Calendar Days
2WS	TWO WEEKS ESP	3	14	17:15:00,00	17:30:00,00	C
2WL	TWO WEEKS LCH	3	14	18:00:00,00	18:15:00,00	C
2W	TWO WEEKS	3	14	18:30:00,00	18:45:00,00	C
T1MP	TOM ONE MONTH PLN	1	31	16:45:00,00	17:00:00,00	C
S1MP	SPOT ONE MONTH PLN	2	31	16:45:00,00	17:00:00,00	C
S1MS	SPOT ONE MONTH ESP	2	31	17:15:00,00	17:30:00,00	C
S1ML	SPOT ONE MONTH LCH	2	31	18:00:00,00	18:15:00,00	C
S1M	SPOT ONE MONTH	2	31	18:30:00,00	18:45:00,00	C
1MS	ONE MONTH ESP	3	31	17:15:00,00	17:30:00,00	C
1ML	ONE MONTH LCH	3	31	18:00:00,00	18:15:00,00	C
1M	ONE MONTH	3	31	18:30:00,00	18:45:00,00	C
2MS	TWO MONTHS ESP	3	62	17:15:00,00	17:30:00,00	C
2ML	TWO MONTHS LCH	3	62	18:00:00,00	18:15:00,00	C
2M	TWO MONTHS	3	62	18:30:00,00	18:45:00,00	C
S2MS	SPOT TWO MONTHS ESP	2	63	17:15:00,00	17:30:00,00	C
S2ML	SPOT TWO MONTHS LCH	2	63	18:00:00,00	18:15:00,00	C
S2M	SPOT TWO MONTHS	2	63	18:30:00,00	18:45:00,00	C





Term	Term Description	Days to Settlement	Trading Days	End of Trading Day	End of GC Cut-off Time	Date Type B= Business Days C= Calendar Days
3MS	THREE MONTHS ESP	3	90	17:15:00,00	17:30:00,00	C
3ML	THREE MONTHS LCH	3	90	18:00:00,00	18:15:00,00	C
3M	THREE MONTHS	3	90	18:30:00,00	18:45:00,00	C
S3MS	SPOT THREE MO. ESP	2	91	17:15:00,00	17:30:00,00	C
S3ML	SPOT THREE MO. LCH	2	91	18:00:00,00	18:15:00,00	C
S3M	SPOT THREE MONTHS	2	91	18:30:00,00	18:45:00,00	C
S6MS	SPOT SIX MONTHS ESP	2	182	17:15:00,00	17:30:00,00	C
S6ML	SPOT SIX MONTHS LCH	2	182	18:00:00,00	18:15:00,00	C
S6M	SPOT SIX MONTHS	2	182	18:30:00,00	18:45:00,00	C
6MS	SIX MONTHS ESP	3	182	17:15:00,00	17:30:00,00	C
6ML	SIX MONTHS LCH	3	182	18:00:00,00	18:15:00,00	C
6M	SIX MONTHS	3	182	18:30:00,00	18:45:00,00	C

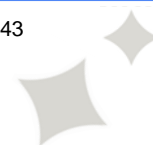




6 Appendix B

Possible Bond Types:

ABS	Corporate Bonds
ACS	Irish Covered Bonds
ATS	RAGB Austria
BBB	Buy Back Belgium
BNI	Inflation Linked BTA
BON	Bono Spain
BOT	Italian Zero Coupon
BPL	Bel. Philippe Loan
BPO	Belgium Strip
BRA	Rep. of Brazil
BSD	Buy Sell Back Ger
BTA	France
BTC	Belgian Zero Coupon
BTP	BTP
BTi	BTP-Indexed
BUE	Bulgarian Republic
CAL	Cades
CBM	Corporate Benchmarks
CC	Italian Concambio
CCA	Italian Conc. (Back)
CCB	Italian Conc. (Back)
CCT	CCT
CDL	Cedulas (Eurocr ESP)
CFI	Corporate Financials
CRH	CRH
CRO	Rop. Of Croatia
CTZ	Italian Zero Coupon
CUP	Coupon ESP
CYP	Republic of Cyprus
CZE	Czech Republic
DBB	Danish Buy Back
DCB	Dutch Covered Bonds





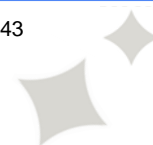
DEL	Depfa Liquid
DEM	German Bonds
DEP	Depfa
DKB	Danish Benchmark Sec
DKL	Danish Liquid Sec
DKT	Danish Zero Coupon
DSL	Dutch Bonds
DTC	Dutch Zero Coupon
EIB	EIB
EIL	EIB Liquid
EMB	Emerging Markets Bonds
ERL	ERAP
FBB	Finland Buy Back
FCO	French Coupon
FPO	French Principal
FRD	Freddie Mac
FRL	Freddie Mac Liquid
FTB	French Zero Coupon
GBI	Greek Indexed
GCA	G.C. Austria
GCB	G.C. Belgium
GCD	G.C. Germany
GCE	G.C. Spain
GCF	G.C. France
GCF	G.C. France BSB
GCG	G.C. Greece
GCH	G.C. Germany BS
GCI	G.C. Italy
GCL	G.C. Ireland
GCN	G.C. Netherlands
GCP	G.C. Portugal
GCR	G.C. Finland
GCZ	G.C. Poland
GGB	Greece
GIL	German Inflation Lin
GTC	German Treasury Cert
HUN	Republic Of Hungary



ICB	Italian Covered Bond
INT	INT Coup. Stripping
IRL	Irish Bonds
KFL	KFW Liquid
KFW	KFW
KOD	Kingdom Of Denmark
LAN	Lander Bonds
LET	Letras-Spanish Bills
LIT	Rep. Of Lithuania
MEX	U.S.Of Mexico
NBB	Buy Back Netherlands
NBD	New Bond Denmark DKK
NRW	NRW Bank
OAI	France
OAT	France
OBE	OBLE Spain
OBF	Foncier Fr
OLO	Belgian OLOs
ONS	Franc.Non Governativ
PBB	Portuguese Buy Back
PCB	Polish Conversion B.
PFI	Polish Fixed Rate
PFL	Polish Floating Rate
PFN	Pfandbrief
PFX	Polish Inflation Lin
POL	Poland
PRI	PRI Coup.Stripping
PRL	Principal ESP
PTB	Polish Treasury bills
PTC	POR Treasury Certificate
PTE	Portugal
PTV	Portugal T.V.
PZC	Polish Zero Coupon
QSI	Quasi Government
QSL	Quasi Govt Liquid
RFG	Finland Bonds
ROM	Rep. Of Romania



RSL	Republic Of Slovenia
SAF	Rep Of South Africa
SHA	Israel Gov Bond
SVK	Slovak Republic
SWL	Swedish Liquid
TEC	France
TND	Taps Nether. DSL
TUR	Rep. Of Turkey
UKC	UK Covered Bonds
UNL	Unedic
USA	Dollar Agencies
USQ	Dollar Quasi
UST	UST Treasury
VNZ	Venezuela





7 Appendix C

Possible Market Codes:

ATS	MTS Austria
BEL	MTS Belgium
CDL	MTS Cedulas
DKK	MTS Denmark
EBM	European Bond Market
ESP	MTS Spain
FIN	MTS Finland
FRF	MTS France
GEM	MTS Deutschland
GGB	MTS Greece
IRL	MTS Ireland
ISR	MTS Israel
MTS	MTS Italy
NEU	NewEuroMTS
NLD	MTS Amsterdam
PLN	MTS Poland
PTE	MTS Portugal
RSL	MTS Slovenia
TRS	Treasury operations
XEU	EuroGlobalMTS

