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Interest Rate Market  
(Central order Book)  
and  
Currency Derivatives  
InfoMax User Manual



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1.0

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## 1. Version Control

Version	Author	Date	Reason for Changes
1.0	Matthias Kempgen	20 May 2009	- Created document

## 2. Introduction

The aim of the Infomax End of Day Dissemination system is to provide users with relevant and useful reference and statistical data on the days trading activity via a standardised and stable platform. All information offered for dissemination is extracted from the relevant JSE systems, and held in a central database.

Data is provided in the form of data records which are made available via the JSE File Transfer Protocol (FTP) server which requires a direct network connection..

User can specify the type of records they require from the standard layouts available. To allow for full flexibility, each market has its own set of data records and each set of records will be made available in separate physical data files.

The filename standards will be as follows:

Interest Rate Central Order Book Products : ddap.sprd.alphacode.**IR**.zip

Where *alphacode* is the unique code assigned to each separate subscriber company

Prospective subscribers must contact the Information Products Sales Division in writing via [infoclients@jse.co.za](mailto:infoclients@jse.co.za) if they are interested in subscribing to any of the record types.

### 3. EOD PRODUCT LIST

Product Name	Market	Dissemination Frequency	Delivery channel	Associated Records
Daily Traded Statistics	IRM (COB)	Daily	FTP	DIR – Subtype 1
Daily Full Market Statistics	IRM (COB)	Daily	FTP	DIR – Subtype 2
Daily Traded Type Totals	IRM (COB)	Daily	FTP	SIR – Subtype 1
Daily Full Market Type Totals	IRM (COB)	Daily	FTP	SIR – Subtype 2
Daily Traded Overall Totals	IRM (COB)	Daily	FTP	OIR – Subtype 1
Daily Full Market Overall Totals	IRM (COB)	Daily	FTP	OIR – Subtype 2
Mark to Market	IRM (COB)	Daily	FTP	MIR – Subtype 1
Interest Rates	IRM (COB)	Daily	FTP	RIR – Subtype 1

## 4. Contracts vs. Instruments

A contract is defined as a tradable item on a market. A contract name can be made up of the following:

- Type of contract e.g. Future, Option or Spot.
- Instrument
- An expiry, valuation or maturity date (2009-06-21)
- A strike price
- And Option Type i.e. whether it is a Call or a Put.

**Each set/combination of the above elements makes up an individual contract name.**

- The **Contract Type** refers to the type of derivative that the contract represents and could comprise one of the following:

CHARACTER	CONTRACT
F	Future
Y	Option
S	Spot

- **Instrument** refers to the underlying commodity/asset/financial instrument on which a derivative is based.
- The **Date** refers to the expiry date, valuation or maturity date of the individual contract. This is the date essentially when the contract matures.
- The **Strike Price** is the price at which the buyer/holder of an option has the right to buy/sell the underlying For Futures, the Strike Price will zero whereas for Options, the strike price will be the strike value of the option.
- An **Option Type**, which could be :

A **Call** – which gives the buyer of the option the right, but not the obligation, to buy the underlying asset at a specified price (strike price) on or before a certain date. The seller of a call option is obliged to deliver the underlying asset at the strike price, regardless of the current market value of the asset at the time of option exercise.

or;

A **Put** - which gives the buyer of the option the right, but not the obligation, to sell the underlying asset at a specified price on or before a certain date. The seller of a put option is obliged to take delivery of the underlying security at the put strike price, regardless of the current market value of the asset at the time of option exercise.

## 5. Field Formats

A field descriptor will also be given that describes the contents:

- A: Alpha only
- N: Numeric only - fields which are definitely whole numbers (integers) will show N (I)
- AN: Alpha numeric
- DATE: 8 byte date field formatted as CCYYMMDD
- B: Boolean – Formatted 'T' for True; 'F' for False

Alphabetic fields where the data is shorter than the specified number of bytes will have the space character (ASCII value 32) appended to the data to fill the field to its fixed width.

Numeric fields may be either integral or decimal depending on the nature of the data that is stored. For values that are decimal in nature, the decimal point will be present and in a fixed position, which will be indicated in the record type specifications. The decimal point will consume 1 byte of space.

Some amount of space has been left, both in the record headers and the record bodies for future expansion. This space is marked as “filler” and will be populated with the specified number of space (ASCII value 32) characters to fill the field until such time as that space is needed for other pertinent information.

## 6. Interest Rate (Central Order Book) Market

### 6.1 Leading Record Layout

Each record will begin with a header that contains fields common to all records. The data fields that make up each different record will be contained in the data sub-records.

Header					Sub Record 1
Common data	Record Type	Record Sub type	Run Date	Other common data	Data Fields

FIELD NAME	START POS	LENGTH	DATA TYPE	NUMERIC FORMATS	END POS
Market Number	1	1	N (I)	1	1
Contract Type	2	1	A		2
Instrument Type	3	10	A		12
Record type	13	4	A		16
Record Sub type	17	4	AN		20
Run Date	21	8	DATE		28
Filler	29	20	A		48

#### FIELD DESCRIPTIONS:

##### MARKET NUMBER

The different Derivatives markets are identified by a unique identifier and number, as per the below table:

Market Number	Market Identifier	Full Market Name
1	EDM	Equity Derivatives Market
2	APM	Agricultural Product Market
3	Yield-X	Interest Rate Market

##### CONTRACT TYPE

This indicates the type of the contract

**F** = Future, **Y** = Option and **S** = Spot

##### INSTRUMENT TYPE

This indicates the type of the instrument underlying the contract e.g.

IRM

Yield-X Spot (YXS)

Yield-X Future (YXF)

##### RECORD TYPE

The code indicating the type of information that is being disseminated e.g.:

DIR – Daily record type for the Interest Rate Market

##### RECORD SUB TYPE

The Sub Type related to a particular record sub type - e.g. Sub Type 01.

##### RUN DATE

The date of the dissemination runs, in the format CCYYMMDD.

FILLER

To cater for future expansion

DATA (LAYOUTS BELOW)

The fields that make up each relevant record type(s) are provided further down under the record sub-types.

## 6.2 Daily Traded Statistics

The Daily Yield-X Traded Statistics records are calculated at the close of each trading day. All daily Yield-X statistics (for spot and derivatives instruments) fall within record type **DIR - Daily Interest Rate (COB) Products**.

The statistics are grouped into various sub types, which allows you to select the type of data that you require. The different sub types and the relevant field layouts are listed below.

### 6.2.1 Record Type DIR Sub Type 01 - Daily Traded Statistics

The Daily Traded Statistics record only contains the contracts that were traded on the day on the Yield-X market.

FIELD NAME	START POS	LENGTH	DATA TYPE	NUMERIC FORMATS	END POS
Instrument	49	4	A		52
Date	53	8	DATE		60
Strike Price	61	17	N	10.6	77
Option Type	78	1	A		78
Spot Price	79	17	N	10.6	95
Closing Bid	96	17	N	10.6	112
Closing Offer	113	17	N	10.6	129
MTM	130	17	N	10.6	146
First Price	147	17	N	10.6	163
Last Price	164	17	N	10.6	180
High Price	181	17	N	10.6	197
Low Price	198	17	N	10.6	214
Number of deals	215	14	N (I)	14	228
Volume	229	14	N (I)	14	242
Value Traded	243	21	N	14.6	263
Open Interest	264	14	N (I)	14	277
Volatility	278	11	N	4.6	288
Filler	289	51	A		339

#### FIELD DESCRIPTIONS:

INSTRUMENT

**Instrument** refers to the underlying instrument that the contract is written on.

DATE

The **Date** refers to the expiry date or valuation date of the individual contract.

STRIKE PRICE

The **Strike Price** is the price at which the buyer/holder of an option has the right to buy/sell the underlying future.

For Futures, the strike price will zero whereas for Options, the strike price will be the strike value of the option

OPTION TYPE

An option can be a Put or a Call.

SPOT PRICE

The closing price of the underlying instrument.

CLOSING BID

The closing price at which a market participant

	is willing to buy.
CLOSING OFFER	The closing price at which a market participant is willing to sell.
MTM	The official closing price as determined by the Exchange
FIRST PRICE	The first execution price of a trade the specified day.
LAST PRICE	The last execution price of a trade the specified day.
HIGH PRICE	The highest execution price of a trade on the specified day.
LOW PRICE	The lowest execution price of a trade on the specified day.
NUMBER OF DEALS	The total number of deals traded on the specified day.
VOLUME TRADED	The total number of contracts traded on the specified day.
VALUE TRADED	The total value of the contracts traded on the specified day.
OPEN INTEREST	The amount of open interest on the specified contract
VOLATILITY	The extent to which the return of the underlying asset will fluctuate between now and the option's expiration. Only applicable to Options.
FILLER	To cater for future expansion

### 6.3 Daily Traded Type Totals

All contracts traded on the market are grouped according to the type of contract (e.g. Future or Option) and the underlying instrument type they represent e.g. Bonds, .

The totals for each grouping are calculated at the close of trading each day.

All the daily type totals fall within record type **SIR**. The statistics are grouped into various sub types, which allows you to select the type of information you require. The different sub types and the relevant field layouts are listed.

#### 6.3.1 Record Type SIR Sub Type 01 - Daily Traded Type Totals

FIELD NAME	START POS	LENGTH	DATA TYPE	NUMERIC FORMATS	END POS
Total number of contracts per Contract and Instrument Type	49	14	N (I)	14	62
Total number of Deals per Contract and Instrument Type	63	14	N (I)	14	76
Total Value of contracts per Contract and Instrument Type	77	21	N	14.6	97
Total Open Interest per Contract and Instrument Type	98	14	N (I)	14	111
Filler	112	51	A		162

#### FIELD DESCRIPTIONS:

TOTAL NUMBER OF CONTRACTS PER CONTRACT AND INSTRUMENT TYPE	The total number of Contracts that fall within the Contract and Instrument type for the specified day.
TOTAL NUMBER OF DEALS PER CONTRACT AND INSTRUMENT TYPE	The total number of Deals that fall within the Contract and Instrument type for the specified day.
TOTAL VALUE OF CONTRACTS PER CONTRACT AND INSTRUMENT TYPE	The total value of the Contracts that fall within the Contract and Instrument Type for the specified day.
TOTAL OPEN INTEREST PER CONTRACT AND INSTRUMENT TYPE	The total amount of Open Interest that fall within the Contract and Instrument Type for the specified day.
FILLER	To cater for future expansion

## 6.4 Daily Traded Overall Totals

The daily overall market totals are calculated at the close of each trading day. The record contains the key market statistics for the day's trade. It provides a view of the day's trade at a glance.

All the daily overall market totals fall within record type **OIR**, and the relevant field layouts are listed below

### 6.4.1 Record Type OIR Sub Type 01 - Daily Traded Overall Totals

FIELD NAME	START POS	LENGTH	DATA TYPE	NUMERIC FORMATS	END POS
Total number of contracts for day	49	14	N (I)	14	62
Total number of Deals for day	63	14	N (I)	14	76
Total Value of contracts for day	77	21	N	14.6	97
Total Open Interest for day	98	14	N (I)	14	111
Filler	112	51	A		162

#### **FIELD DESCRIPTIONS:**

TOTAL NUMBER OF CONTRACTS FOR DAY	The overall total number of Contracts for the specified day.
TOTAL NUMBER OF DEALS FOR DAY	The overall total number of Deals for the specified day.
TOTAL VALUE OF CONTRACTS FOR DAY	The total value of the Contracts for the specified day.
TOTAL OPEN INTEREST FOR DAY	The total amount of Open Interest for the specified day.
FILLER	To cater for future expansion

## 6.5 Daily Full Market Statistics

### 6.5.1 Record Type DIR Sub Type 02 - Daily Full Market Statistics

The Daily Full Market Statistics record contains all the contracts for the Interest Rate market, irrespective of whether they were traded or not.

FIELD NAME	START POS	LENGTH	DATA TYPE	NUMERIC FORMATS	END POS
Instrument	49	4	A		52
Date	53	8	DATE		60
Strike Price	61	17	N	10.6	77
Option Type	78	1	A		78
Traded Indicator	79	1	B		79
Spot Price	80	17	N	10.6	96
Closing Bid	97	17	N	10.6	113
Closing Offer	114	17	N	10.6	130
MTM	131	17	N	10.6	147
First Price	148	17	N	10.6	164
Last Price	165	17	N	10.6	181
High Price	182	17	N	10.6	198
Low Price	199	17	N	10.6	215
Number of deals	216	14	N (I)	14	229
Volume	230	14	N (I)	14	243
Value Traded	244	21	N	14.6	264
Open Interest	265	14	N (I)	14	278
Volatility	279	11	N	4.6	289
Filler	290	51	A		340

#### FIELD DESCRIPTIONS:

INSTRUMENT

**Instrument** refers to the underlying instrument that the contract is written on.

DATE

The **Date** refers to the expiry date or valuation date of the individual contract.

STRIKE PRICE

The **Strike Price** is the price at which the buyer/holder of an option has the right to buy/sell the underlying future.

For Futures, the strike price will zero whereas for Options, the strike price will be the strike value of the option

OPTION TYPE

An option can be a Put or a Call.

TRADED INDICATOR

This indicates if the contract was traded on the specified day.

SPOT PRICE

The closing price of the underlying instrument.

CLOSING BID

The closing price at which a market participant is willing to buy.

CLOSING OFFER

The closing price at which a market participant is willing to sell.

MTM	The official closing price as determined by the Exchange
FIRST PRICE	The first execution price of a trade the specified day.
LAST PRICE	The last execution price of a trade the specified day.
HIGH PRICE	The highest execution price of a trade on the specified day.
LOW PRICE	The lowest execution price of a trade on the specified day.
NUMBER OF DEALS	The total number of deals traded on the specified day.
VOLUME TRADED	The total number of contracts traded on the specified day.
VALUE TRADED	The total value of the contracts traded on the specified day.
OPEN INTEREST	The amount of open interest on the specified contract
VOLATILITY	The extent to which the return of the underlying asset will fluctuate between now and the option's expiration. Only applicable to Options.
FILLER	To cater for future expansion

## 6.6 Daily Full Market Type Totals

All contracts traded on the market are grouped according to the type of contract. The totals for each grouping are calculated at the close of trading each day.

All the daily type totals fall within record type **SIR**. The statistics are grouped into various sub types, which allows you to select the type of information you require. The different sub types and the relevant field layouts are listed.

### 6.6.1 Record Type SIR Sub Type 02 - Daily Full Market Type Totals

FIELD NAME	START POS	LENGTH	DATA TYPE	NUMERIC FORMATS	END POS
Total number of contracts per Contract and Instrument Type	49	14	N (I)	14	62
Total number of Deals per Contract and Instrument Type	63	14	N (I)	14	76
Total Value of contracts per Contract and Instrument Type	77	21	N	14.6	97
Total Open Interest per Contract and Instrument Type	98	14	N (I)	14	111
Filler	112	51	A		162

#### **FIELD DESCRIPTIONS:**

TOTAL NUMBER OF CONTRACTS PER CONTRACT AND INSTRUMENT TYPE

The total number of Contracts that fall within the Contract and Instrument type for the specified day.

TOTAL NUMBER OF DEALS PER CONTRACT AND INSTRUMENT TYPE

The total number of Deals that fall within the Contract and Instrument type for the specified day.

TOTAL VALUE OF CONTRACTS PER CONTRACT AND INSTRUMENT TYPE  
TOTAL OPEN INTEREST PER CONTRACT AND INSTRUMENT TYPE  
FILLER

The total value of the Contracts that fall within the Contract and Instrument Type for the specified day.  
The total amount of Open Interest that fall within the Contract and Instrument Type for the specified day.  
To cater for future expansion

## 6.7 Daily Full Market Overall Totals

The daily overall market totals are calculated at the close of each trading day. The record contains the key market statistics for the day's trade. It provides a view of the day's trade at a glance.

All the daily overall market totals fall within record type **OIR**, and the relevant field layouts are listed below

### 6.7.1 Record Type OIR Sub Type 02 - Daily Full Market Overall Totals

FIELD NAME	START POS	LENGTH	FORMAT	NUMERIC FORMATS	END POS
Total number of contracts for day	49	14	N (I)	14	62
Total number of Deals for day	63	14	N (I)	14	76
Total Value of contracts for day	77	21	N	14.6	97
Total Open Interest for day	98	14	N (I)	14	111
Total Margin on Deposit	112	21	N	14.6	132
Filler	133	51	A		183

#### **FIELD DESCRIPTIONS:**

TOTAL NUMBER OF CONTRACTS FOR DAY	The overall total number of Contracts for the specified day.
TOTAL NUMBER OF DEALS FOR DAY	The overall total number of Deals for the specified day.
TOTAL VALUE OF CONTRACTS FOR DAY	The total value of the Contracts for the specified day.
TOTAL OPEN INTEREST FOR DAY	The total amount of Open Interest for the specified day.
TOTAL MARGIN ON DEPOSIT	The total amount of margin of deposit for the specified day.
FILLER	To cater for future expansion

## 6.8 Mark to Market

The closing Mark-to-Market value is calculated at the end of the day by the exchange.

### 6.8.1 Record Type MIR Sub Type 01

FIELD NAME	START POS	LENGTH	DATA TYPE	NUMERIC FORMATS	END POS
Instrument	49	4	A		52
Date	53	8	DATE		60
Strike Price	61	17	N	10.6	77
Option Type	78	1	A		78
Spot Price	79	17	N	10.6	95
Closing Bid	96	17	N	10.6	112
Closing Offer	113	17	N	10.6	129
MTM	130	17	N	10.6	146
High Price	147	17	N	10.6	163
Low Price	164	17	N	10.6	180
Volume	181	14	N (I)	14	194
Open Interest	195	14	N (I)	14	208
Volatility	209	11	N	4.6	219
Filler	220	51	A		270

#### FIELD DESCRIPTIONS:

INSTRUMENT

**Instrument** refers to the underlying instrument that the contract is written on.

DATE

The **Date** refers to the expiry date or valuation date of the individual contract.

STRIKE PRICE

The **Strike Price** is the price at which the buyer/holder of an option has the right to buy/sell the underlying future.

For Futures, the strike price will zero whereas for Options, the strike price will be the strike value of the option

OPTION TYPE

An option can be a Put or a Call.

SPOT PRICE

The latest trading price of the underlying share or index

CLOSING BID

The closing price at which a market participant is willing to buy.

CLOSING OFFER

The closing price at which a market participant is willing to sell.

MTM

The official closing price as determined by the Exchange

HIGH PRICE

The highest execution price of a trade on the specified day.

LOW PRICE

The lowest execution price of a trade on the

	specified day.
VOLUME TRADED	The number of contracts traded on the day
OPEN INTEREST	The total number of futures contracts or option contracts that have not yet been exercised, expired, or fulfilled by delivery
VOLATILITY	The extent to which the return of the underlying asset will fluctuate between now and the option's expiration. Only applicable to Options.
FILLER	To cater for future expansion

## 6.9 Interest Rates

This record presents the various rates that are relevant to the market.

### 6.9.1 Record Type RIR Sub Type 01 – Interest Rates record

FIELD NAME	START POS	LENGTH	DATA TYPE	NUMERIC FORMATS	END POS
Interest on Initial Margin	49	11	N	4.6	59
Filler	60	51	A		110

#### FIELD DESCRIPTIONS:

INTEREST ON INITIAL MARGIN

The interest earned on the amount of money determined by the clearing house on the basis specified by the JSE and held in respect of the aggregate position of a derivatives member or a client.

FILLER

To cater for future expansion

