THOMSON REUTERS EIKON

Introduction to DataStream

Document History

Version	Date	Authors	Changes
1.	15 July 2016	Chua Rui Ting Vincent Chia	First Issue for Eikon version 4.x

Contents

1. Overview

This short introduction will only serve as a simple guide to the DataStream feature available on Eikon Excel. For a more in depth understanding, please refer to the full **Thomson Reuters DataStream** User Manual instead.

To use DataStream for Microsoft Office Excel, use the **Thomson Reuters DataStream** menu in your Excel application.

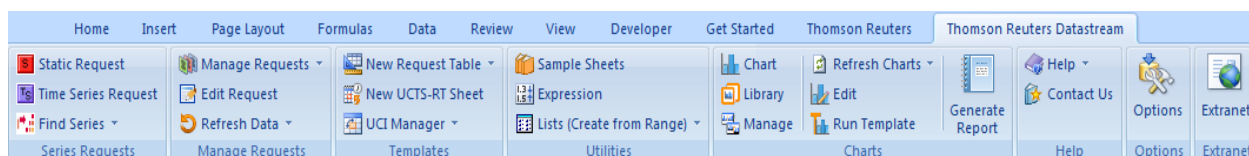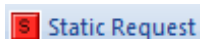In the Thomson Reuters tab, press on the [Offline] button to log in. Ensure that the button now shows [Online] before proceeding.

At the **Thomson Reuters DataStream** tab within Eikon Excel, the following options can be found.

We will only be looking at 4 of these options in detail.

1. Static Request

The static request function allows you to request data for a specific date. For example, the price, PE or dividend yield for Apple on 14/01/1994.

Static Requests are also mostly utilised to pull up information about an instrument, such as sector information, and other identifiers such as ISIN and Sedol Codes.

2. Time Series Request
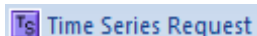
The time series request function allows you to request data over a specific data, defined by a start date, end date and frequency of data. For example, you can check the daily price of Apple from 14/01/1994 to 12/04/1994.

3. New Request Table
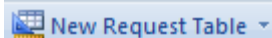
Users can consolidate their list of requests and organize them from here.

4. Chart
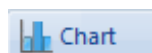
A visual representation of the time series data can be obtained. Economic indicators and their respective charts can also be generated.

2. Static Request

There are 5 main pieces of data that you would require to key in when using the **Static Request Function.**

1. Series/List

2. Datatypes/Expressions

3. Currency

4. Date

5. Options

Series/List

Here, you would need to specify the instrument that you wish to enquire about.

Other than typing in the name of the issuer, there are 3 ways for you to search for the instrument.

Firstly, you could key in the **RIC (Reuters Instrument Code)** if you are familiar with the shorthand.

E.g. If you know the RIC code for Apple (**AAPL.O**), you do the following.
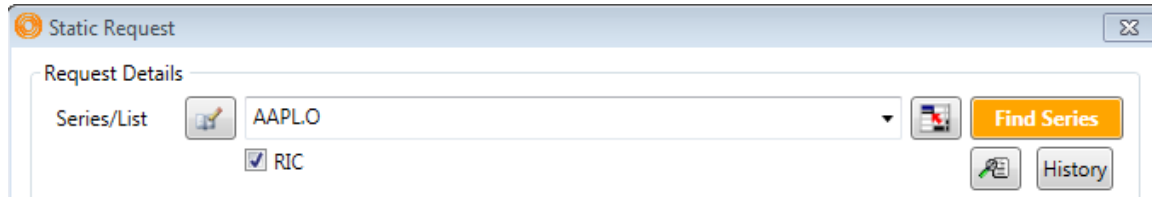
Tick the RIC box and type in the RIC of the instrument you require. Lists could be entered by separating RICs or DataStream codes with a comma. ","

Secondly, you could key in the **DataStream Instrument Code** as follows, (E.g. @AAPL)
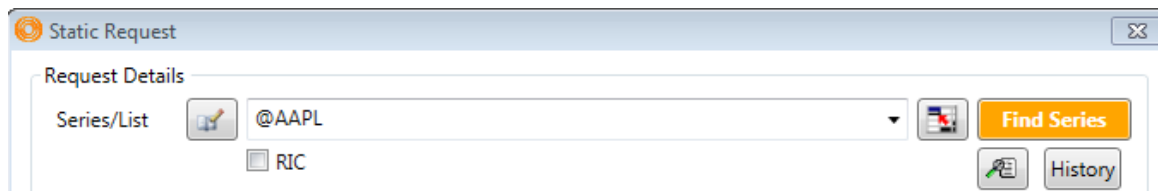
Thirdly, if you do not know either, you could search for it by pressing on the [Find Series] button.

Double click the symbol of the instrument or click on the box and press **Use**.

Datatypes/Expression

In this box, the specific type of data necessary could be selected.

By default, if the box is left blank, the default data (e.g. price) of the instrument would be provided.

However, you could instead enter the different datatypes if you know the code. Lists could also be entered by separating each datatype with a comma.

For example, commonly used datatypes include **PE** (Price-to-earnings ratio) and **EPS** (Earnings per Share).

Alternatively, you could similarly use the **DFO Navigator** by selecting the **Datatypes** button.
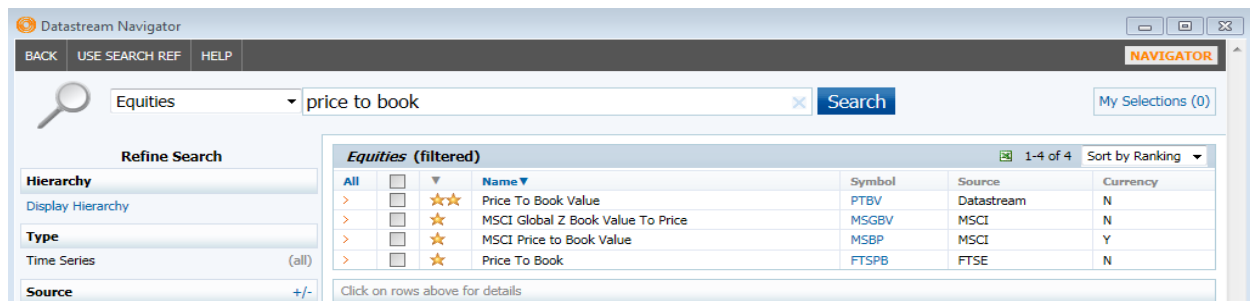
Type in the datatype that you wish to search for and double click on the symbol or click the box next to the name and press use.

Currency

Press on the **$** button in order to adjust the currency. By default, the currency would be set to the local currency.

Date
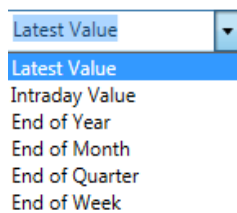
Choose the Date that you wish to obtain data for. For example, the latest available value is most commonly used.

Options

Here, you could choose what titles you would want to be generated. Typically, the row and column titles are used.

3. Time Series Request

In order to conduct a time series request, the steps 1-3 and 5 are the same as that of a static request, with the difference being in the 4th step (Start, End Date and Frequency)

1. Series/List

2. Datatypes/Expression

3. Currency

4. Start Date, End Date and Frequency

5. Options

Start Date, End Date and Frequency

When conducting a time series request, you would need to key in the start and end date as well as the frequency required.

The drop down tables are as follows,

Start Date	End Date	Frequency
-2Y	Intraday Value	Daily
Base Date	Display to Latest Value	Weekly
Start of Week	End of Year	Monthly
Start of Month	End of Month	Quarterly
Start of Quarter	End of Quarter	Yearly
Start of Year	End of Week	
End of Year		
End of Month		
End of Quarter		
End of Week		

Time Series Request

Request Details

Series/List   AAPL.O   ▾   Find Series

☑ RIC   ☐ TS for each item in list   History

Datatypes/
Expressions   fx   P, EPS, PE   ▾   Datatypes

Start Date   14/01/2016   ▾   Frequency   Weekly   ▾

End Date   20/04/2016   ▾

Alternatively, you could key in the actual dates in the DD/MM/YY format as shown above. This would generate the table of figures as follows.

Name	APPLE	APPLE - EARNINGS PER SHR	APPLE - PER
14/1/2016	99.52	9.22	10.8
21/1/2016	96.3	9.22	10.4
28/1/2016	94.09	9.22	10.2
4/2/2016	96.6	9.42	10.3
11/2/2016	93.7	9.42	9.9
18/2/2016	96.26	9.42	10.2
25/2/2016	96.76	9.42	10.3
3/3/2016	101.5	9.42	10.8
10/3/2016	101.17	9.42	10.7
17/3/2016	105.8	9.42	11.2
24/3/2016	105.67	9.42	11.2
31/3/2016	108.99	9.42	11.6
7/4/2016	108.54	9.42	11.5
14/4/2016	112.1	9.42	11.9

4. Request List

Constituent List of Equity Indices

Before discussing how to use the request list function on DataStream, let's explore how to view data for constituents of an index.

For example, the Hang Seng Index in Hong Kong trades with the DataStream code <**HNGKNGI>**. In order to generate the data for the list of constituents that make up the index, one can add an "**L**" in front of the DataStream code. Hence, the data for the constituents has the code <**LHNGKNGI>**

However, it would be good to note that DataStream cannot generate data for a time series constituent list (TS). Instead, utilise the TSL to create a list for constituent list.

Static Request (Constituent List)

Here are the steps in order to generate a request list as shown above.
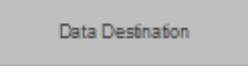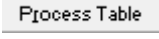
1. In the first column, press **Y** for **Yes** to automatically update the table with the live values. Alternatively, press **N** for **No**.

2. In the second column, indicate the type of request necessary, by pressing the buttons in grey

> S - Static request
> TS - Time series request
> TSL - Time series for lists
> L - List request
> C – Chart request

3. In the third column, indicate the format required. (i.e. Row, Column = **RC**)

> F - Custom Header
> R - Row Titles
> C - Column Titles
> H - Request Headings
> T - Transpose returned Data
> $ - Include currency
> X - Data only
> E - Display expression 1st series as title
> N – Display expression title as title
> K - Hyperlink to Series metadata
> B - Hyperlink to Datatype definition
> M - Display Code
> L - Latest Value First
> Y - Display dates in Yearly Format
> Q - Display dates in Quarterly Format

4. In the fourth column, indicate the datatype required. Use the Datatypes search if you are not sure what the shorthand is.

5. For a static request, the start date could be -1M or -1D or the specific date and no end date or frequency is required.

6. In order to generate the data in a separate sheet, create a new sheet, and highlight the data from the "Update" column to the "Data Destination Column". Next, press the [Data Destination] button.

7. Lastly, press the [Process Table] button for the table to be generated.

| Type	NAME	PE		Type	NAME	PB
HNGKNGI	HANG SENG	10.28		70899K	AIA GROUP	42.7
				26030V	BOC HONG KONG (HDG.)	22.2
				35968W	BANK OF CHINA 'H'	3.11
				951410	BANK OF EAST ASIA	24.25
				31203N	BANK OF COMMS.'H'	4.87
				50520M	BELLE INTERNATIONAL HDG.	5.41
				31988F	CHINA CON.BANK 'H'	4.82
				998511	CITIC	11.84
				9507UZ	CHEUNG KONG PR.HDG.	46.15
				930492	CK HUTCHISON HOLDINGS	97.85
				887014	CHEUNG KONG INFR.HDG.	71
				929593	CLP HOLDINGS	63
				256842	CNOOC	7.29
				729076	CATHAY PACIFIC AIRWAYS	12.98
				28201C	CHINA LIFE INSURANCE 'H'	20.95
				315805	CHINA MRCH.HDG.INTL.	21.65
				867874	CHINA MOBILE	81.25
				316071	CHINA OS.LD.& INV.	22.4
				887449	CHINA RESOURCES LAND	18.1
				27962U	CHINA RES.POWER HDG.	13.96
				31162D	CHINA SHENHUA EN.CO.'H'	11.36
				280949	CHINA UNICOM (HONG KONG)	8.64
				314060	GALAXY ENTERTAINMENT GP.	21.55
				929610	HONG KONG AND CHINA GAS	14.56
				280037	HONG KONG EXS.& CLEAR.	179.7
				923812	HSBC HOLDINGS	56.2
				951407	HANG LUNG PROPERTIES	15.68
				929594	HANG SENG BANK	133.7
				997697	HENDERSON LD.DEV.	42.9
				675810	HENGAN INTL.GP.	66.2
				41271W	INDL.& COML.BK.OF CHINA 'H'	4.15
				755101	KUNLUN ENERGY	5.74
				362033	LENOVO GROUP	6.72
				315769	LI & FUNG	4.55
				298493	LINK RL.EST.INV.TST.	44.85
				264718	MTR	36.4
				29042F	CHINA MENGNIU DAIRY	11.28
				930223	NEW WORLD DEV.	6.81
				280366	PETROCHINA 'H'	4.48
				29091W	PING AN INSURANCE 'H'	36.3
				929595	POWER ASSETS HOLDINGS	70.35
				929146	SUN HUNG KAI PROPERTIES	89.35
				68341V	SANDS CHINA	22.25
				997310	SINO LAND	10.2
				266578	CHINA PTL.& CHM. 'H'	4.22
				916546	SWIRE PACIFIC 'A'	76.75
				29061M	TENCENT HOLDINGS	137
				865347	TINGYI CYMN.ISLE.HLDG.	9.23
				51780L	WANT WANT CHINA HOLDINGS	4.91
				929597	WHARF HOLDINGS	38.75

A table as follows would then be generated, with the P/E ratio in one column and the list of constituents and the price in another.

Time Request (Request Table)

To perform a time request, similar steps could be taken. However, constituent lists cannot be generated for time request lists.
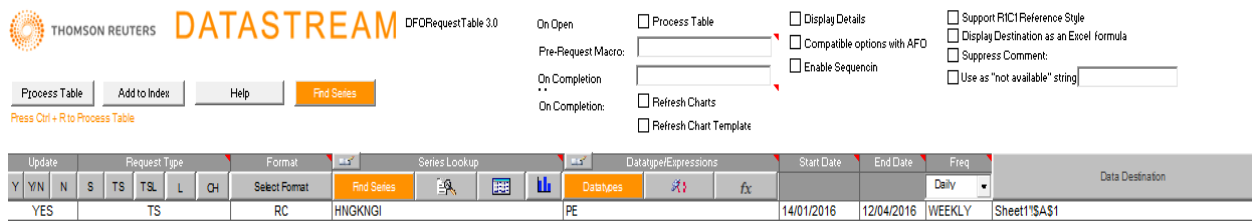
Take note that for a time request, the start date, end date and frequency must be entered.

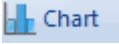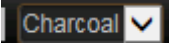As a result, a table as follows can be generated.

| Name	HANG SENG - PER
14/1/2016	8.01
21/1/2016	7.51
28/1/2016	7.78
4/2/2016	7.81
11/2/2016	7.55
18/2/2016	7.89
25/2/2016	7.77
3/3/2016	8.17
10/3/2016	8.27
17/3/2016	8.84
24/3/2016	9.31
31/3/2016	10.15
7/4/2016	9.9

A request list is useful for consolidating all the inputs of every request created on the file and can allow users to quickly locate the data that they are looking for.

Even though there are additional functions for the different request types, we will not cover it in the course of this short introduction.
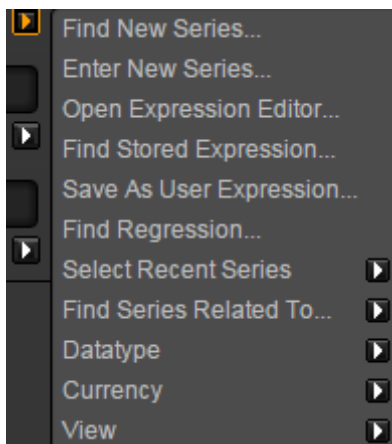
5. Charting

On DataStream, you would be able to plot charts of economic indicators and different datatypes of different instruments.

1. Press the ▮▮ Chart button in the Thomson Reuters DataStream tab. Alternatively, in the Eikon Toolbar, search **<CBOOK.**

2. Press the ▢ to open a new chart

3. Change the colour scheme Charcoal ▾ if necessary (Charcoal or Pearl)

4. In the following box, type the DataStream code, or a keyword to search for the instrument required.

> ▸ Line 1 ▫
>
> [Type expression or hover over arrow]   ▸
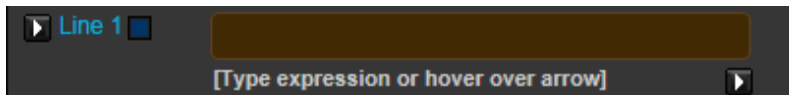
5. If the DataStream code is not known, press the small arrow at the bottom right of the screenshot, and press on **Find New Series**. Search for the necessary series as you have done for "Series/Lists" in the Static and Time Series Request.

6. To change the datatype for individual instruments, click on the arrow located next to the line in the formula

> ▸ Find New Series...
> Enter New Series...
> Open Expression Editor...
> Find Stored Expression...
> Save As User Expression...
> Find Regression...
> Select Recent Series   ▸
> Find Series Related To...   ▸
> Datatype   ▸
> Currency   ▸
> View   ▸

7. Select "Datatype" to change the specific instrument's datatype.

If you wish to change the datatype(s) for multiple instruments, you could do the following.
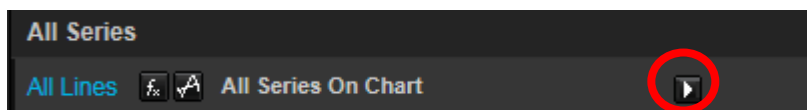
1. Firstly, press on the arrow and select **Datatypes**. After which, you could either manually enter the Datatype or use the **find new datatype** function.

2. Next, if you want to change the data of the charts, do it in the boxes as follows. You can either insert the period of time or type in the date in the DD/MM/YY format.

3. If you wish to view the data for the chart plotted, select the button at the top right hand corner of the page.
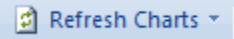
4. Sometimes, the data follow different axis (i.e. different currency or one being in absolute price and the other being in percentage). Hence, double click on the line in order to change the details of the line. Here, you can change the colour and weight of the line as well as the name in the legend.

5. If you wish to plot different information, such as the percentage year-on-year change, or the moving average, you could do so by pressing the button below each line.

6. After plotting the line, save the chart by pressing the button. (Note that unless you save the chart, you would be unable to export the chart)

7. After which, you are now free to export the chart to different Microsoft Office Applications (Word, Excel, and PowerPoint)

8. If you wish to update the charts in your report or presentations, you could go to the button in the Thomson Reuters tab to update all the charts or individual charts every time you open the file.

For example,

Plot the Year on Year change of the Price-to-Book Value of Apple and Samsung for the last 10 years.

Hence, you would key in the following and the chart will be produced.