DATASTREAM ADVANCE FOR OFFICE 5

USING EXCEL
ISSUE 3

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SETTING THE EXCEL ADD-IN SYSTEM OPTIONS

System options are available for you to control the way you use the Excel Add-In and how data is presented. These options include:

- Request Format options
- Menu options
- Data options

For assistance on using Datastream's Excel functionality and content - use the **Contact Us** option on the menus.

To select these options:

1. Choose **Options** from the **Datastream** menu.

    The **Options** dialog is displayed.

2. Select the options you require by checking the boxes:
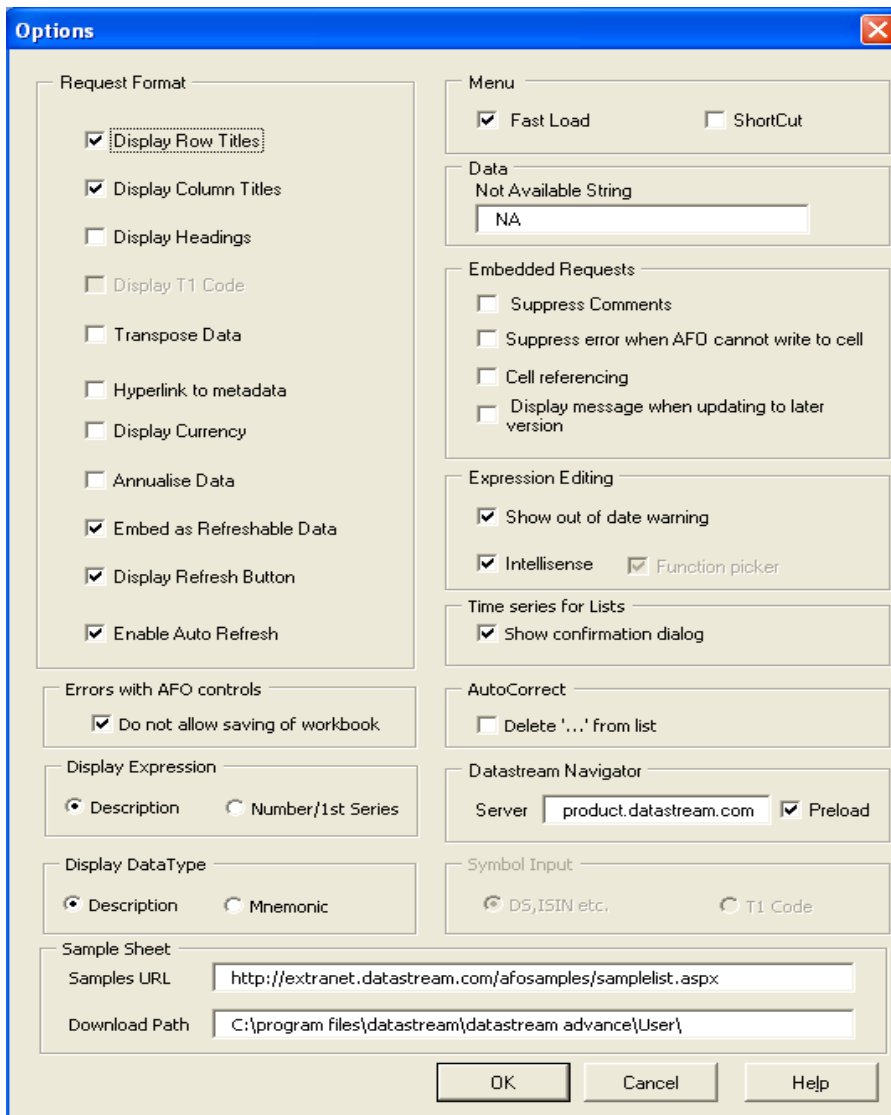
Request format options

These options define the default display options for data requests in Excel. They can be overridden by the request format options on the **Static Data Request, Time Series Request** and **Company Accounts Request** dialogs. Clicking the **Default Option** button on these dialogs returns the format options back to the default settings on the **Options** dialog.

Changes to the settings on the **Options** dialog will only take effect after Excel has been re-launched, or if the **Default Option** button on the request dialog is used.

The request format options are:

- Row Titles - displays the series code at the head of each row for each series.

- Col Titles - displays the datatype mnemonic at the top of each column.

- Headings - displays a general heading for row and column titles, for example, the date of the request.

- T1 code - displays Thomson ONE code for the requested series. It is available only when Datastream is embedded in the Thomson ONE workstation and currently applies to the Equities only.

- Transpose - displays individual time series data across the Excel spreadsheet in rows. This is particularly useful if you are requesting data over very short time periods or lower reporting frequencies, that is quarterly or yearly. The maximum number of columns that you can use in Excel 2003 and earlier is 255.

- Hyperlink to metadata - Adds a hyperlink to the series code to link to the classifications and metadata pages from Navigator for the series (also enable series that are now dead or inactive to be identified in your workbook)

- Currency - displays an additional column with the title Currency and with the traded currency of each selected series.

- Annualise Data - adjusts company accounts data over the time period for companies that have moved their end of year dates.

- Embed as Refreshable Data - ensures that the request is embedded in Excel as a dynamic, refreshable object when saved. If you do not select this option, the results of the request cannot be refreshed and will remain as plain text/numbers.

- Refresh Button - displays the **Refresh** button within the request result details. If you do not display this button, you can refresh or edit the request by using the **Request Manager** from the **Datastream** menu.

- Auto Refresh - enables you to refresh the embedded request automatically upon opening the spreadsheet.

Errors with AFO controls

Do not allow saving of workbooks **– where an error has been detected in the workbook**

Display Expression - According to the option selected, the Expression description or number is displayed in the Static and Time Series request results.

Display Datatype - According to the option selected, the Datatype description or mnemonic is displayed in the Static request results.

Menu options

Two menu options are available:

- **Fast Load** - enables you to launch the Datastream Advance for Office Add-In for Excel, only when a Datastream menu option has been selected. This option enables Excel to load more quickly upon start-up.

- **ShortCut** - makes the **Static Request**, **Time Series Request**, **Company Accounts Request** and **Request Management** options available from the Excel worksheet right mouse click menu.

Data options

The **Not Available String** field enables you to type the text that you want displayed in Excel when data is not available from Datastream. For example, **#N/A**.

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Embedded requests

Check this to suppress comments from being added to Data Channel requests.

- Suppress Comments - removes row headings e.g Date, Type, Currency etc.

- Suppress error when AFO cannot write to cell - error message is not displayed when AFO cannot write to a cell.

- Cell referencing - is a method by which you refer to a cell or series of cells in a formula. It can be applied only to embedded request.

- Display message when updating to later version – When you open a Request Table saved in a previous version of Datastream in a later version, an error message pops up.

Expression editing

- Select the **Show out of date warning** to warn you when expressions have not been refreshed.

- **Intellisense** – This option enables you to see the functions and parameters available for the functions with links to the help files.

- **Function picker** – This option enables you to search and pick the functions and parameters available.for the functions with links to the help files.

Time series for Lists

Show confirmation dialog – When this option is ticked - a message box is displayed when a series identified as a list is used and the time series for list tick box is not ticked.

Autocorrect options Delete "..." from the list is removed from Excel's default Autocorrect settings whereby "..." is replaced by the symbol "...".

Datastream Navigator options

The **Server** field enables you to define the location of the server from which you would like to run **Datastream Navigator**.

Symbol Input

Section **Symbol Input** helps to specify whether the series input codes being used are Datastream supported ones - DS, ISIN, SEDOL, etc or Thomson ONE codes. Click on the option buttons to specify the input.

Sample Sheet

- **Samples URL**: This specifies the URL from where AFO Samples can be downloaded.

- **Download Path**: The download path for the AFO Samples file can be specified here.

CREATING DATA REQUESTS IN EXCEL

Datastream Advance for Office (AFO) enables you to create and issue data requests from within Excel, rather than creating your data requests in Datastream and then embedding them in Excel. When you issue a request from Excel, it is passed directly to Datastream, bypassing Datastream. The results are returned as dynamic, refreshable objects. This means that your data requests can be saved and refreshed within Excel without having to launch Datastream. The breadth of Datastream's historical data is available for use in your spreadsheets. Any number of data requests can belong to a spreadsheet and be refreshed as a batch using the **Request Manager**. See Using the Request Manager.

The data request creation facilities available in Datastream are also available in Excel.

Static Data	Time Series Data	Company Accounts
Series selection – including Datastream equities, market indices, commodities, bonds, interest and exchange rates, investment and unit trusts, warrants and economic series.	Series selection – including Datastream equities, market indices, commodities, bonds, interest and exchange rates, investment and unit trusts, warrants and economic series.	Series selection – including Datastream equities, constituent lists and Local Lists (that contain equities)
Local List selection – including Datastream Local Lists, user created mainframe lists and constituent lists.	Local List selection – including Datastream Local Lists, user created mainframe lists and constituent lists.	Company account formats – including Datastream and Worldscope items.
Datatype selection – static datatypes for Datastream, MSCI, I/B/E/S and FTSE.	Datatype selection - time series datatypes for Datastream, MSCI, I/B/E/S and FTSE.	Local List selection – including Datastream Local Lists, user created mainframe lists and constituent lists.
Expression selection - including Datastream global and user created expressions.	Expression selection – including Datastream global and user created expressions.	
	Frequency of reported data - including daily, weekly, monthly, quarterly and yearly.	
Currency Convertor - including currency	Currency Convertor - including currency.	
Date of requested data.	Start and end dates for display period.	Start and end dates for display period with annualise option.
Format options - including selection of column and row title and headings.	Format options - including selection of column and row title and headings.	Format options - including row titles.

The Intellisense option enables you to see the functions and parameters available for the functions with links to the help files.

The Editor option enables multiple series or datatypes/functions/expressions to be easily reviewed, edited and extended with links to the metadata.

The hyperlink to Metadata option enables series codes to be linked to the Navigator classifications and metadata pages. This also enables series that are now dead or inactive to be identified in your workbook via the **Search For Dead Codes** menu options.

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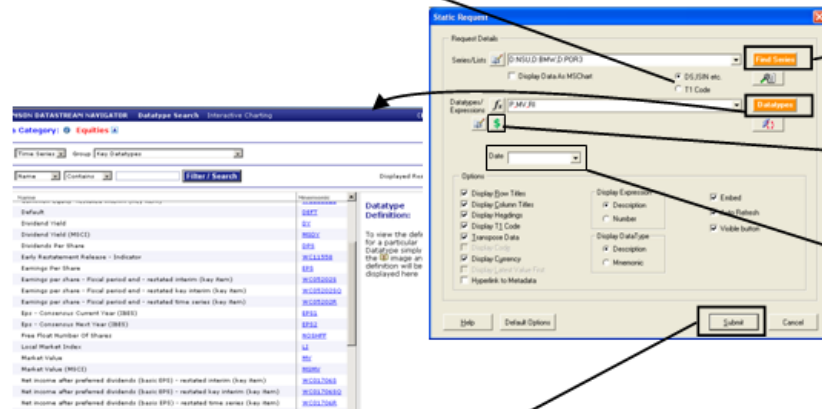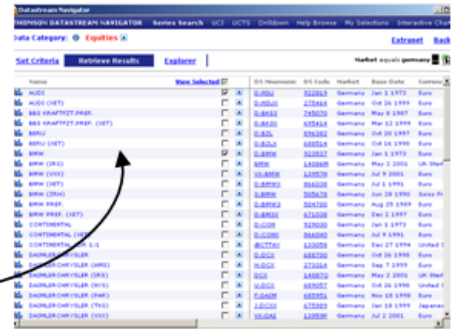
CREATING STATIC DATA REQUESTS

Static data requests are created using the **Datastream Static Request** dialog to enter your request parameters. Choose **Static Request** from the **Datastream** menu

The minimum you need to do to create a static data request is select a series, a datatype, and a start date on the **Datastream Static Request** dialog. You can then **Submit** the request to Datastream. The results are displayed directly in the spreadsheet with row and column headings (if selected). The **Refresh** button enables you to edit and refresh the embedded request.

Example - Three series and static datatypes

Specify the input to the series request: DS,ISIN etc or Thomson ONE code.

1 - Click the Series Navigation button to display Datastream Navigator. Here you can select a data category of interest (e.g., Equity) and browse through the displayed list or type a few letters to restrict the list.


4 - Click the Currency picker button to specify the required currency.

3 - Select the date that you want to retrieve.(Latest / Intraday Value)

5 - Click the Submit button to issue the request to Datastream.

6 - The results of your static data request are embedded in the worksheet at the current cell position. A Refresh button enables you to refresh the details on an ad hoc basis.
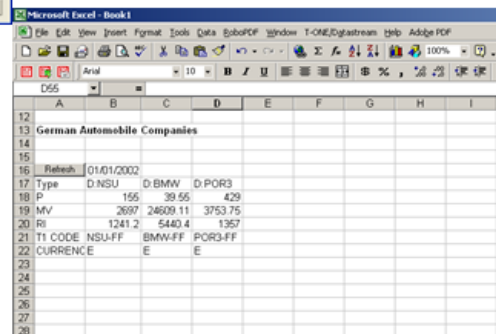
Selecting series

The Datastream Navigator, displayed by clicking the **Series Navigation** button, **Find Series** enables you to select individual series. When you select a series, the series mnemonic is copied to the Series field on the Request dialog. Multiple selections are automatically separated by commas.

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1 - Select a Category from the list.

2 - Type a Name, DS Code or Datastream mnemonic or in the Search field to list all series (for the chosen data category) beginning with that word or phrase. For example, entering FIAT lists all stocks that begin with FIAT. You can also use Contains to broaden your search. e.g. *BANK.
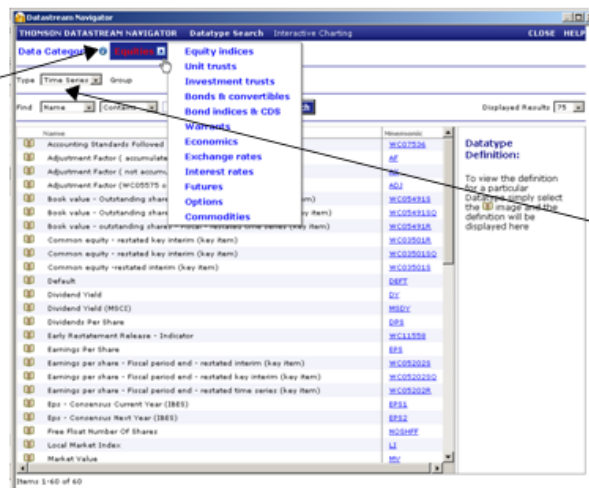
Selecting datatypes

The Datatype Mnemonic Picker, displayed by clicking the **Datatypes** button **Datatypes**, enables you to select individual datatypes per request. When you select a datatype, the Datastream mnemonic for the Datatype, for example, MV for Market Value, is copied to the Datatypes field on the Request dialog. Multiple selections are automatically separated by commas.

The following example shows you how to search and select the Datastream equity datatype EPS (earnings per share) by typing its mnemonic in the Datatype Mnemonic Picker.

1 - Select the Datatype Category from the list. You can choose from all the Advance data categories. If your series is an Equity series, (as in this example) you will need to select Equities.

2 - Select the type of datatype you want to use. In this instance it will be Time Series Datatypes, but you can select Static series datatypes from the dropdown list.

3 - When you have selected your Datatype Category and Datatype Type from the dropdown lists, select the criteria you would like to search by e.g. Mnemonic and type the Datastream mnemonic in the Search field; for example, eps. The datatype and its description is displayed for selection. Click the mnemonic to select it.

If you don't know the Datastream mnemonic for the required datatype but you know the general description, for example Price, choose to find by **Name** and type **Price** in the **Search** Field. This lists all datatypes for the chosen **Data Category** and **Datatype** with descriptions beginning with Price (e.g. Price (adjusted), Price (unadjusted), and so on).
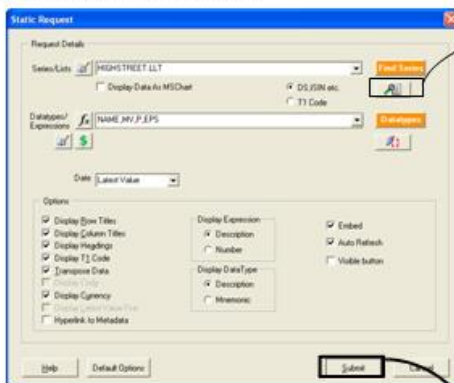
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Selecting lists

You can use lists stored on your PC (i.e. Local Lists) or remote lists stored on the Datastream host, rather than selecting a number of individual series. These lists include:

- Local Lists created in Datastream or Advance for Office, Datastream lists that have been downloaded onto your PC for use in Datastream.

- User lists (i.e. L#*xxxx* lists) that are stored on the Datastream host system.

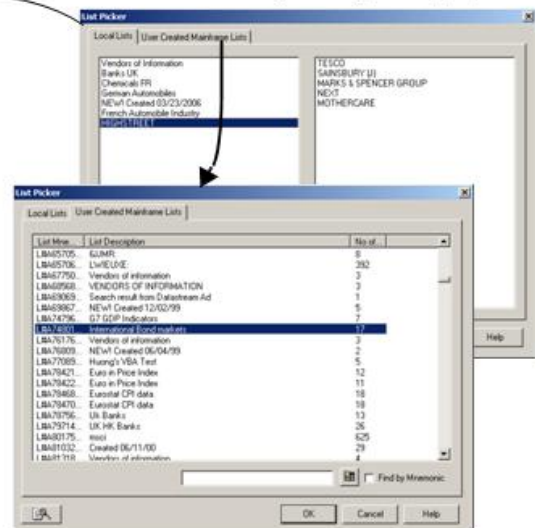- Constituent lists; for example, LFTSE100. See Creating local lists.

To select a list, click the **List Picker** button, on the **Request** dialog. When you use a list of series for a data request, data is displayed for the selected datatypes for every series in the list in the order that they appear in the list. Selecting a list from the **List Picker** copies the list code into the **Series** field. This could be a list file for Local Lists (e.g. LNSABANK.LLT), a list code for mainframe lists (e.g. L#A74953) or a list mnemonic for constituent lists (e.g. LNSABANK).

Example - User created list and 3 static datatypes

Selecting expressions

For static data requests, you can browse and select expressions stored on the Datastream host system. The Static Request Expression Picker, displayed by clicking the **Expression** button, on the Static Request screen, can display all user created expressions or Datastream global expressions, or both. See Using Expressions. A **Refresh Grid** button enables you to update the list of expressions held on your PC from the Datastream host system.

Expressions can be used for static data requests where only one symbolic variable is used. For example, PCH#(X,1Y) calculates the percentage change over one year where *X* is either a single series or a constituent of a list that you select.

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CREATING TIME SERIES REQUESTS

You can create time series requests for individual series (e.g. price indices, exchange rates, and expression, etc.) as well as for your Datastream Local Lists, User created lists, and Datastream constituent lists. Unlike static data requests, you can specify a time period which can start as far back as data is held for a specific stock right up to the latest value. A **Frequency** format option enables you to define periodicity of the data required.

Time series requests are created by using the **Time Series Request** dialog from the **Datastream** menu, supplying the required series (lists or expression), datatypes, time period, and frequency, and clicking **Submit**.
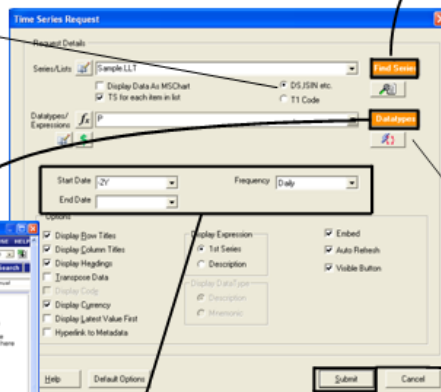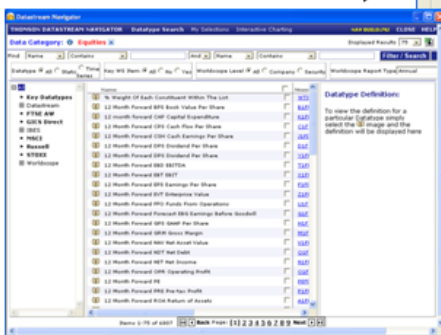
Example

1 - Click the List button, ensure the List Type is set to Local Lists, select the Local List from the left-hand window and click OK.

Specify the input to the series request: DS,ISIN etc or Thomson ONE code.

2 - Click the Datatype button, select Time Series Datatypes from the dropdown list, select a datatype (e.g. Price Adjusted) and click OK.
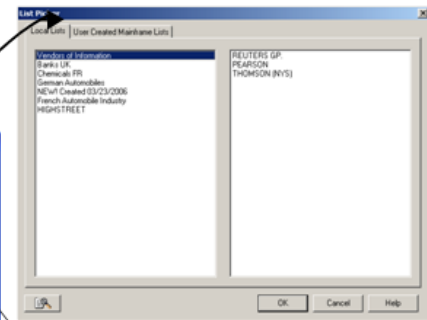
3 - Click the Currency picker button to specify the required currency.

4 - Type the Start Date for the reporting period. This can be a date in the format dd/mm/yy or a period relative to the End Date, for example -3Y, that is three years ago from the End Date. For time series requests, you can leave the End Date blank, this defaults to yesterday's closing values, or before yesterday depending upon the series selected.

USING LISTS WITH TIME SERIES REQUESTS

When you use a Local List, a Datastream list, or a constituent list with a static data request, between one and ten datatypes are returned for each series in the list. When you use a Local List, a Datastream list, or a constituent list with a time series request, a sequence of data (i.e. the time series datatype and frequency) is returned for each constituent. See Creating local lists.

To indicate that you want a time series on each datatype that you enter, you must click the **TS for each item in list** check box. This can be switched off in the options dialog.

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USING FUNCTIONS AND EXPRESSIONS WITH TIME SERIES REQUESTS

Selecting expressions

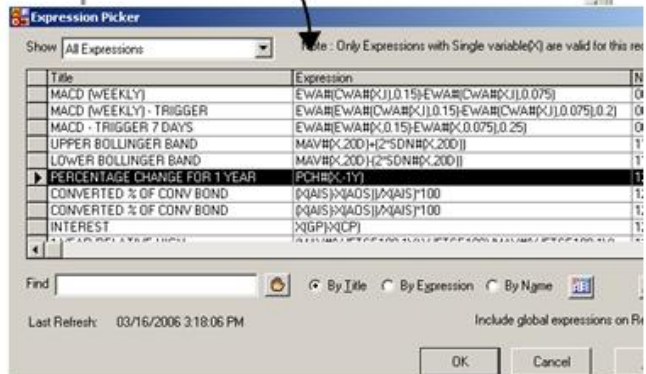For time series data requests, you can browse and select expressions stored on the Datastream host system.

The **Time Series Data Request Expression Picker**, displayed by clicking the Expression button, on the **Time Series Request** screen, can display all user created expressions or Datastream global expressions, or both. See [Using Expressions](#). A **Refresh Grid** button enables you to update the list of expressions held on your PC from the Datastream host system.

Expressions can be used for time series requests where only one symbolic variable is used. For example, PCH#(X,1Y) calculates the percentage change over one year where *X* is either a single series or a constituent of a list that you select.

Example - Percentage change over one year of market index constituents

1 - Click the Series button.

2 - Select a Constituent List from the list displayed and click OK

3 - Click the Expressions button, select an expression from the list displayed and click OK. Use the Show dropdown list and Find field to narrow down your search. Refer to the Definitions help option on the Advance Help menu for descriptions of the functions/expressions displayed here.
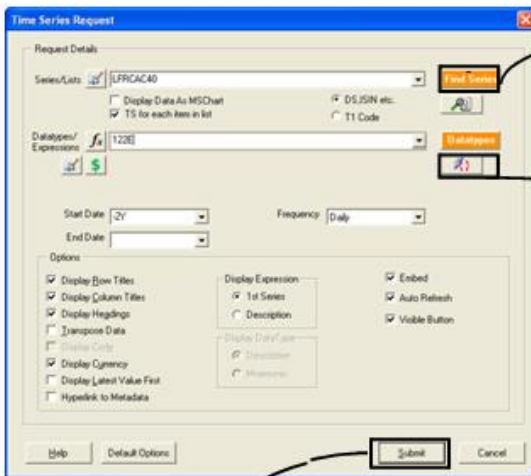
4 - Complete the Date field and click Submit to issue the static data request to Datastream.

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Selecting dates

Dates can be typed as either a fixed date format, that is *dd/mm/yy,* or as a number of days (D), weeks (W), months (M), quarters (Q), or years (Y) ago from today, for example -3D which is three days ago from today.

Note	If the Date field is left blank, the last value (which may be prior to the date of the request) will be retrieved. You can also enter **TODAY** in the **Date** field to retrieve the latest intraday values. Latest Intraday prices are only available for European equities and indices where real time prices are subscribed to.

CREATING EXPRESSION USING INTELLISENSE FEATURE

Intellisense automatically lists all the available Datastream functions. You can then select one by using the arrow keys and hitting a completion character when the correct member function is highlighted.

There are two ways you can create or select an expression with Intellisense:

1.   Using Function Selector / Help.

2.   Writing directly in Text field, and selecting expression.

Using Function Selector for expression creation

1.   Choose Time Series Request or Static Request from the Datastream menu.

2.   Click Function Selector fx button, The Function Help dialog is displayed.
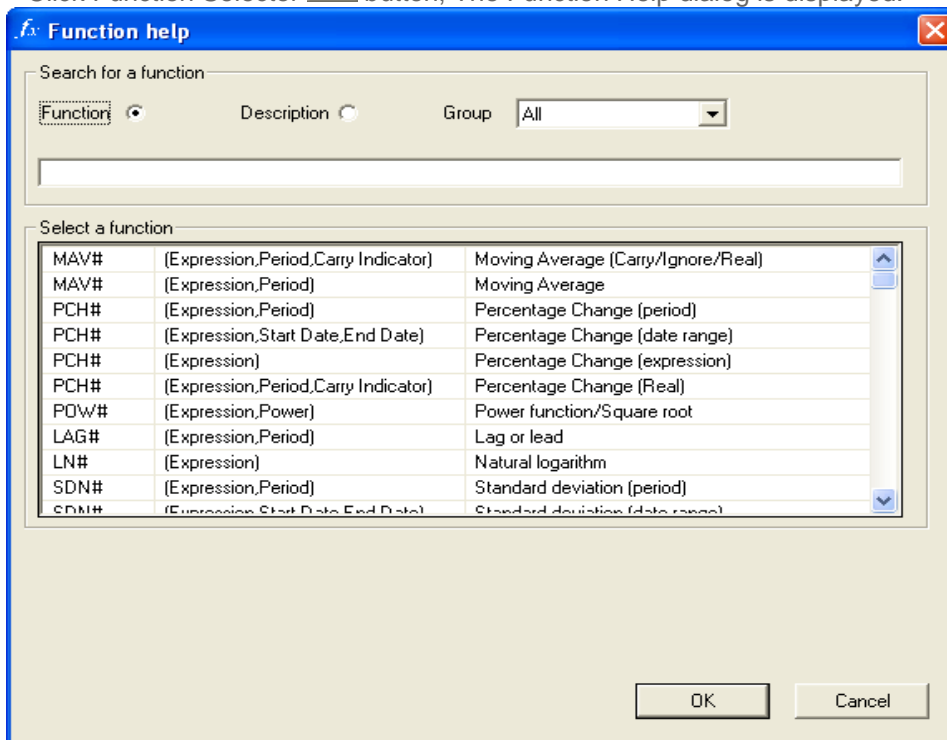
3.   Select a function from the list, for example ABS# and click **OK**. Function arguments dialog box is then displayed.

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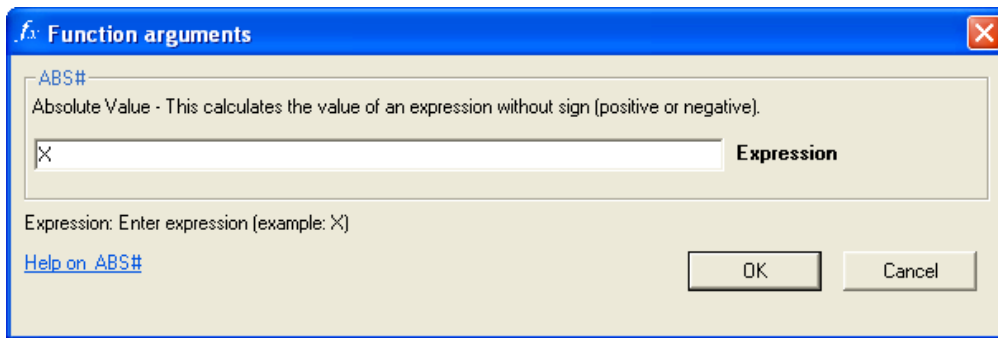
4.   Click **OK**, the expression is displayed in Datatypes / Expression text field

OR

If you know the function name already, then you can directly enter the function name in

Datatypes/Expressions text field, and can use button for completing the expression.

Note	You can use **Help on this function** link for more details.

Using dropdown feature

1.   Choose Time Series Request or Static Request from the Datastream menu.

2.   Enter a function name, a dynamic dropdown list opens, select and enter the function from the list, for example select and enter MAV#

3.   Expression parameter popup opens, as shown below

Note	Using these buttons you can see the details of different expression parameters overloaded.

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USING EXPRESSION EDITOR IN STATIC AND TIME SERIES DIALOGS

The Expression Editor helps you to edit long strings you have entered in the Series/Lists (Time Series dialog) or the Datatypes/Expressions (Static dialog) text boxes in Excel. The Expression Editor is available whether Intellisense is "on'" or "off".

Expression Editor launched from the Series/Lists (Time Series dialog)

In a **Time Series** request, you can enter series, datatypes and currency conversion combinations.

1. Click the **Editor** button next to the **Series/Lists** textbox in the **Times Series** dialog. **Edit Series/Lists** dialog is displayed.
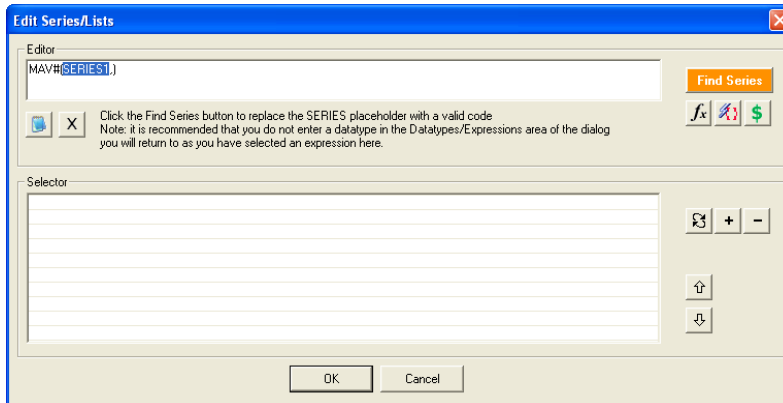
2. You can construct an expression in the Editor using the **Navigator** button and/or the Function/Expression/Currency pickers .

3. Click the *fx* button to select a function. Once you select a function and click **OK, Function arguments** dialog is displayed.
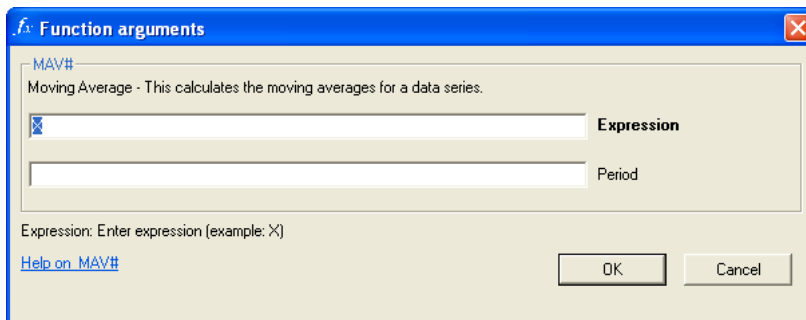
4. When you click **OK** in the dialog above, if "X", "Y", "Z", "A" is displayed the **Expression** field, then in the text returned to the Editor - Series1, Series2, Series3, Series4 are displayed depending on the number of substitutable variables in the function. In the example above, MAV#(X,1Y) is returned as MAV#(Series1,1Y).

5. The Series1 text is then highlighted when the expression is returned to the Editor. This should then be replaced by a series from the Navigator. Note there is a tip below which tells you what to do next. For example, you should not enter datatypes in the Datatypes/Expressions field in the static or time series dialog if a function or expression is used in the Series/List field.

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When you click the **Expression Picker** button in the **Edit Series/Lists** (**Time Series** dialog) the **Expression Picker** is displayed showing **All the expressions on the ID**. When you return the expression to the Editor it returns the name of the Expression with symbolic placeholders "X", "Y", "Z", "A" replaced by Series1, Series2, Series3 or Series4, as appropriate.
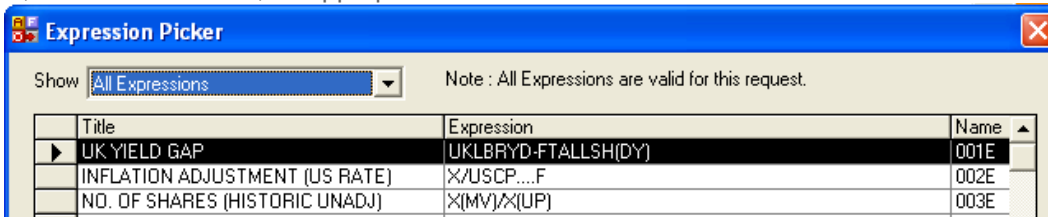
But, when you click the **Expression Picker** button in the **Datatypes/Expressions** (**both Static and Time Series** dialog) the **Expression Picker** is displayed showing only those expressions with 1 symbolic variable.
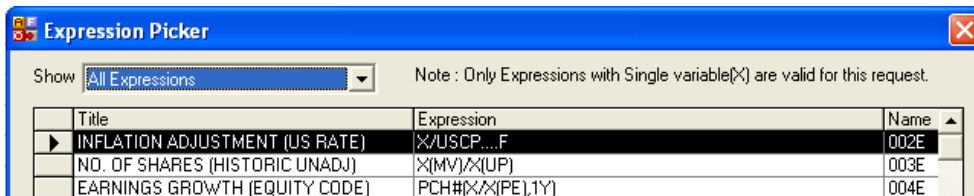
When you click the **Currency Picker** button available in the **Times Series** request, **Datatype Currency** dialog is displayed. Select a Currency and click **Apply Last/Selected** button to apply currency like: SERIES~Currency (Eg: BAY~AL).

Other functionalities in the Expression Editor (both Static and Time Series dialog)

 - Click this button to delete the text in the Editor area.

 - Click this button to view classifications and metadata displayed from the Navigator. For functions, this button is not enabled.

 - Click this button to replace the selected item in the Selector grid below the text in the Editor area.

 - Click this button to add Editor text as new item in Selector.

 - Click this button to delete item from Selector.

 - Click these buttons to move items in the Selector up and down.

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CREATING COMPANY ACCOUNTS DATA REQUESTS

In addition to static and time series data, Datastream and Worldscope company accounts data can also be requested and displayed within Excel. The request creation facilities specific to company accounts data enable you to retrieve company accounts data for equities, Local Lists, and constituents over a specified time period.

You can adjust the company accounts data over the time period, using the **Annualise** facility, for companies who have moved their year-end dates. You can also select from a list of company accounts formats, including Datastream and Worldscope preset formats. For example, financial ratios.

To create a company accounts data request, select **Company Accounts Request** from the **Datastream** menu. Select an equity series, local list or constituent list, select a format, specify a time period and click **Submit**. **Annualise** and **Format Options** are optional.

Example - Industrial company accounts for Alcatel

1 - Click the Series Navigation button to display the Datastream Navigator. Use the Category dropdown list to display Equity, Local Lists, or Constituents.

2 - Click the CA button to display the Format Code Picker, and select a Global or User format.
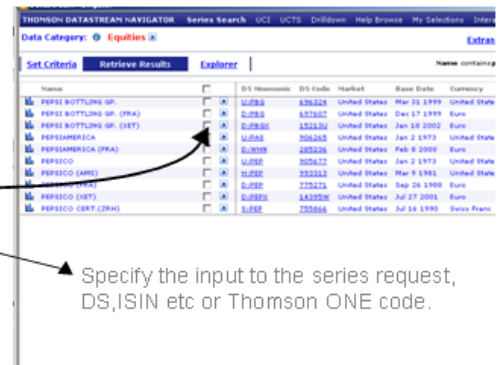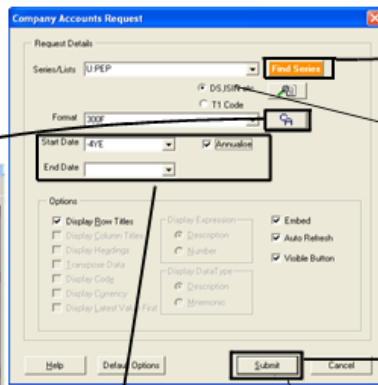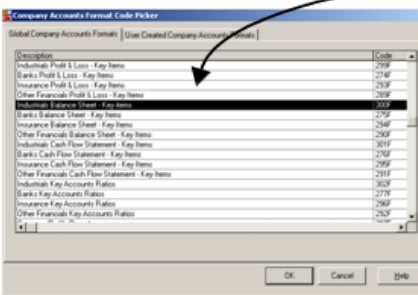
Specify the input to the series request, DS,ISIN etc or Thomson ONE code.

3 - Type the Start Date and End date. The Start Date can be typed in the form -nY to download accounts data for the period n years, or in the form -nYE to download accounts data for n year ends. -nY retrieves data for 12 month periods, whereas -nYE retrieves data for accounts year ends (which may be greater than 12 months). Leave the End date blank if you want to display the latest values stored on Datastream.
If an accounts year covers a period other than 12 months, click Annualise to convert the actual figures to an annualised basis.

4 - Click the Submit button to issue the request. The labels for the data are displayed in rows by default.

SHORTCUTS WHEN ENTERING REQUEST DETAILS

The data request dialogs have two features that enable you to speed up your typing of request parameters. These are:

- Series, datatype, and date dropdown lists

  This feature enables you to select from a dropdown list, under the **Series**, **Datatype** and **Date** field, series, datatypes and dates that you have previously used in one Excel session. Simply click on the dropdown list and select a series, datatype or date to copy it into the field.

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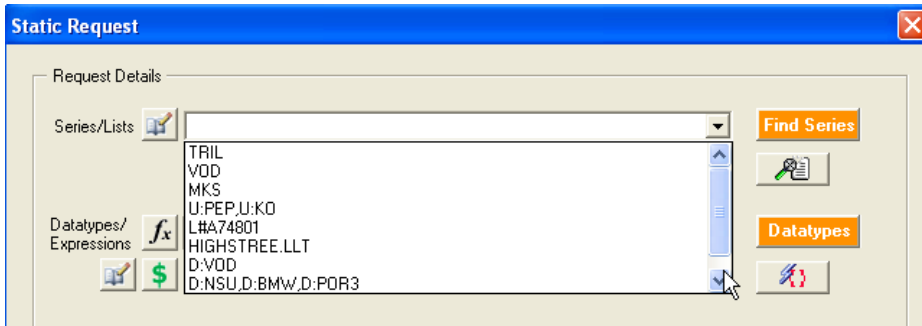
- Select last request parameters

  You can re-insert the parameters for any of your previously used requests by right-clicking the mouse over the Series Navigation button and selecting the request details from the displayed list, for example:
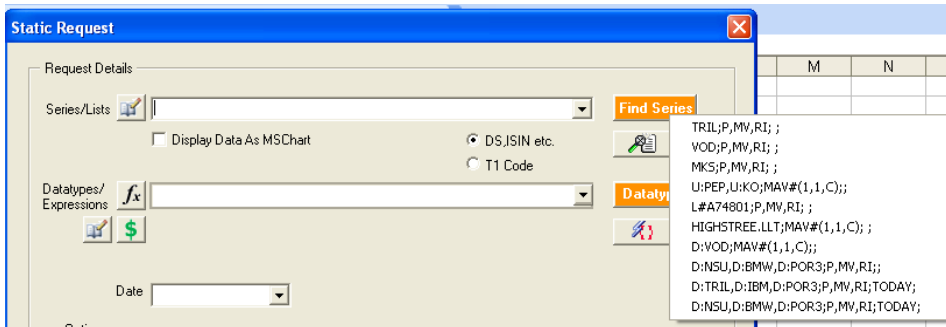
  Selecting the request details from this list inserts all the details in the relevant fields. Click **Submit** to issue the request.

FORMAT OPTIONS

Format options for static and time series requests

Format options are available on the **Static Request** and **Time Series Request** dialogs. These options enable you to choose how to display the data and what you can do with it. Check the check boxes to select the options.

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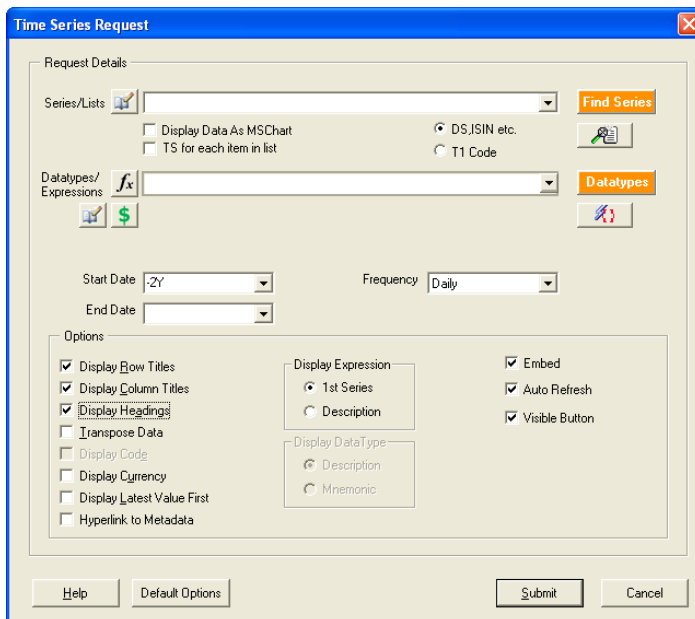
Select, or deselect, the required format options and click the **Submit** button. The selected options are displayed when you make a request.

Click the **Default Option** button to return the format options back to their default settings, which are made on the **Options** dialog from the **Datastream** menu.

Select **Display Data as MS Chart** to chart your data using Microsoft Chart - if the embed option is selected, a **Refresh** button is placed in the chart.

Format options for company accounts requests

As company accounts request formats dictate the layout of the presented data, you can only turn on/off the row titles. For example, the company account code numbers for each item. All data is presented as if **Transpose** is selected, that is, data is displayed for each item across the spreadsheet in rows.

EDITING AN EMBEDDED DATA REQUEST

There are two ways to edit data requests embedded in Excel. You can use the Request Manager to view the details of all data requests embedded in your worksheet, edit the details, and resubmit the requests that are of interest to you. See Using the Request Manager, for further details.

The quickest and most convenient method of editing an embedded data request in Excel is to right-click the mouse over the top left-hand corner of the request to display the edit menu. If you originally issued the request with the **Visible** format option turned on, you can right-click on the **Refresh** button to display the edit menu. If the **Visible** option was turned off, use the **Comments** option from the Excel **View** menu to locate the top left-hand corner of the request. For example:

When you have located the top left-hand corner of your embedded request, right-click to highlight the whole request and display the edit menu.

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Use the following options to edit the request:

Cut

Cuts the entire details of the embedded request to the Windows clipboard for pasting into other worksheets or workbooks. Note that when using the **Cut**, and subsequent **Paste** options, only a copy of the data is pasted into the new location or worksheet, not the underlying embedded request.

Copy

Copies the selected data request for pasting into other worksheets and workbooks. Note that only a copy of the actual data is taken when this option is selected.

Editor…

Edit the actual parameters that make up your static, time series, and company accounts data requests. When you select this option, a dialog is displayed for the type of request you are editing, with the details of the request. The following example shows the editing dialog for a company accounts data request.
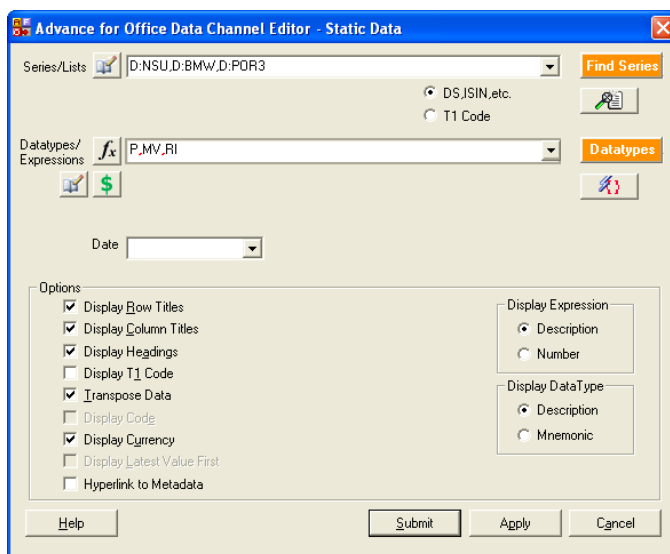
Make your changes and click **Apply** to save the changes without issuing the request, or click **Submit** to issue your changes to Datastream straight away.

Refresh

Refreshes the selected data request with the latest Datastream values and data. It is used for ad hoc refreshing of individual data requests.

AutoRefresh

This option switches on the **AutoRefresh** option for the selected data request. While **AutoRefresh** is selected, the data request is refreshed every time the worksheet is opened.

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2 USING LISTS

CREATING A LOCAL LIST FROM A SET OF CODES (DATASTREAM, ISINS, SEDOLS, ETC) IN EXCEL (FOR EXAMPLE FROM A BACK OFFICE SYSTEM)

To create a local list:

1. Select **Create List** from the **Datastream**>**Tools** menu.

2. The **Datastream List Creation** dialog is displayed.

3. Select the Code Range from the **Code Range** field.

4. Enter the list description in the **List Description** field.

5. Enter the file name in the **List File Name** field.

6. Select the **Store List Locally**, or create a **User Created Index** by selecting to upload as an X# list.

7. Click **OK**.

When you have saved your list, the list is held locally on Datastream, or on the mainframe system, and is available for immediate use.

Note	The local list facility in the Request Table enables a range of codes to be linked to a local or user list on the central system and to be regularly updated.

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3 USING EXPRESSIONS

THE EXPRESSION PICKER

You use the Expression Picker to select expressions. Click the **Expression Picker** button, to display the **Expression Picker** dialog.

The Expression Picker dialog

Show:

Use the **Show:** drop down box to display: all, local, or global expressions.

Search

Type either the first few letters of the title, or expression in the **Find:** field.

New Expression

Click the **New Expression** button to display the **Expression Builder,** which you use to create new expressions.

Edit

Click the **Edit** button to edit an expression you have created in the **Expression Builder**. You cannot edit a Datastream global expression, but you can use it as a starting point for making a new local expression.

Refresh

Click the **Refresh** button to up-date the list of expressions held on Datastream.

The Grid Last Downloaded: date and time tells you when the list was last downloaded.

A list of all the expressions available is displayed in the **Expression Picker** dialog. Each time you create a new expression this list is automatically updated. When new Datastream global expressions are created, you need to download them from Datastream using the Refresh facility.

USING THE EXPRESSION BUILDER

You can create and edit your own expressions using Datastream's Expression Builder, where you can select the individual components that make up your expressions.

The Expression Builder dialog

- The left window is the work area where you build your expression. Each element of the expression, for example, a series, is shown as an individual line, which you can edit. Each line element is described in the adjacent window.

- Use the buttons on the toolbar, left of the work area, to enter the individual elements (e.g. series, datatypes, numbers) that make up your expression.

- The work area cursor draws a rectangular box around line elements that are logically grouped. For example, inserting the function LAG# into the expression also inserts a symbolic series X and a time period. If you delete LAG#, you will also delete the series and time period that belong to it.

- As you build up an expression (max. 78 characters), the expression formula is displayed in the **Expression** field for checking.

- Expert users can type their expressions in the Expression field - pressing **ENTER** then expands the expression into the work area, which can then be edited.

- The description you type in the **Expression Title** field (max. 30 characters) will be saved along with the expression details and displayed in the **Expression Picker** for identification.

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Tools available in the Expression Builder

Function

The **Select a Function** dialog is displayed. Select a specific Datastream function, the function and its parameters (e.g., start and end dates) are inserted into the workspace area.

Existing expression

The **Expression Picker** dialog is displayed. Select an existing Datastream global expression or local expression to add to your expression. For example, if you want to nest one expression into another. Only expressions with no symbolic substitution are allowed.

Find Series

Datastream Navigator is displayed. Select a 'static' or 'symbolic' series to add to your expression. You can use the Change Filter facility to select a simple or an extended series filter.

Number

The **Enter Number** dialog is displayed. Add a number to your expression. A number occupies its own line in the workspace area, typically after a math operator. Double click the displayed number to enter another value.

Datatype

The **Datatype Selection** dialog is displayed. Add a datatype after a 'static' or 'symbolic' series. You can use the **Datatype** dropdown list and mnemonic search to select and add a specific datatype.

Currency

The **Currency** dropdown list is displayed. Select a different display currency for a 'static' or 'symbolic' series. The currency you select is used for the new expression until you modify it.

Dates

Edit the start and end dates for a selected function. The work space cursor must be positioned over a date variable line. You have the same start and end date options as you have for normal requests.

Math Operator

Add parenthesis or math operators to your expression. Position the workspace cursor at the insertion point and click an operator button.

Delete

Delete parts of your expression. For example, details contained within parenthesis. Position the workspace cursor at the point of deletion and click this button to logically delete expression details.

Undo

Undo your last action in the expression builder workspace. For example, undo the last series added to the workspace.

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4 USING THE REQUEST MANAGER

You can create and embed any number and type of data and chart requests in a single worksheet. For example, a worksheet could contain an embedded time series data request, a static data request, a company accounts data request, and an embedded Datastream chart all for the same series and time period. If you want to change the time period for one request, you would need to search through the worksheet to find the required request and use the right-mouse click **Edit** option. The **Request Management** facility, however, enables you to quickly pinpoint the required request and edit, refresh, autorefresh, or delete its details.

The **Request Manager** dialog, displayed by selecting **Request Management>Request Manager** from the **Datastream** menu, displays details of all embedded requests within an Excel workbook. To edit, refresh, or delete a request, click on the request's detail line and click the appropriate button.

Click a tab to view details and select options for either embedded data or chart requests.

Click the AutoRefresh button to turn On/Off autorefresh for individual or all selected requests.

Each line of the Request Manager dialog represents one request. The details include the mnemonics of the series, the cell/row location in the worksheet, the type of request and whether Autorefresh is turned ON or OFF.

Click the Select All button to select all the requests displayed on this screen. This is useful if you want to Refresh or Delete all requests.

Click the Goto button to locate the selected request within the worksheet.

Click the Edit button to display the Request type dialog with the details of the selected request for editing.

Click the Delete button to delete the selected request(s).

Click the Refresh button to refresh the values/data of the selected request(s).

EDITING AN EMBEDDED CHART

The charts embedded in Excel can be edited back in Datastream. All aspects of the chart can be changed. Here the series, time period and display can be changed. Line Styles, Text Styles and Fill Styles are a part of display properties of the chart. They can be customised and saved as schemes. When you create a chart next time, you can directly apply the saved scheme to the chart.

To edit an embedded chart in Datastream:

1.   Open the worksheet with the chart you want to edit.

2.   Right click on the chart and select **Edit Chart** option. The chart is displayed in Datastream.

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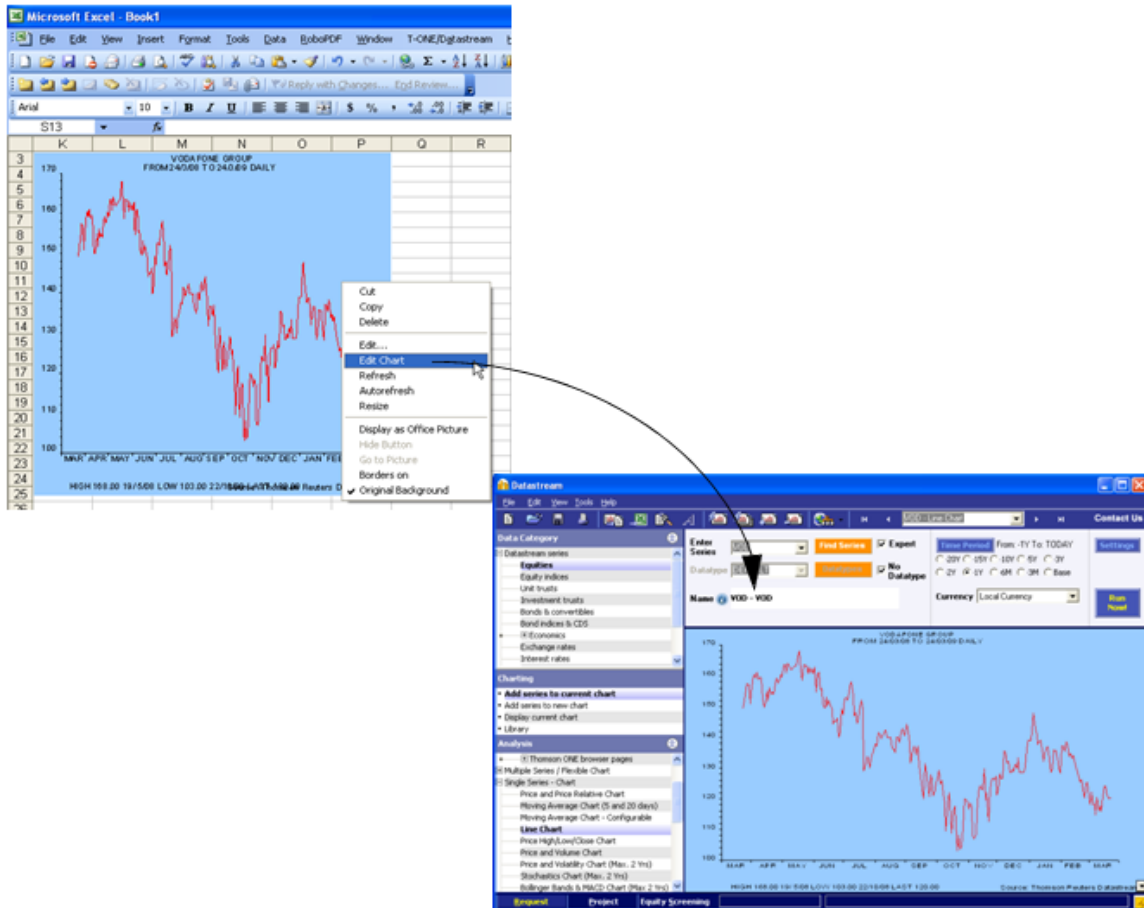
3.	To change the time period, click on **Time Period** button.
	To change display properties, Right click on the chart in Datastream and select **Properties** option. The Default Chart Properties dialog will appear. Customise the display for your chart by selecting the options available.
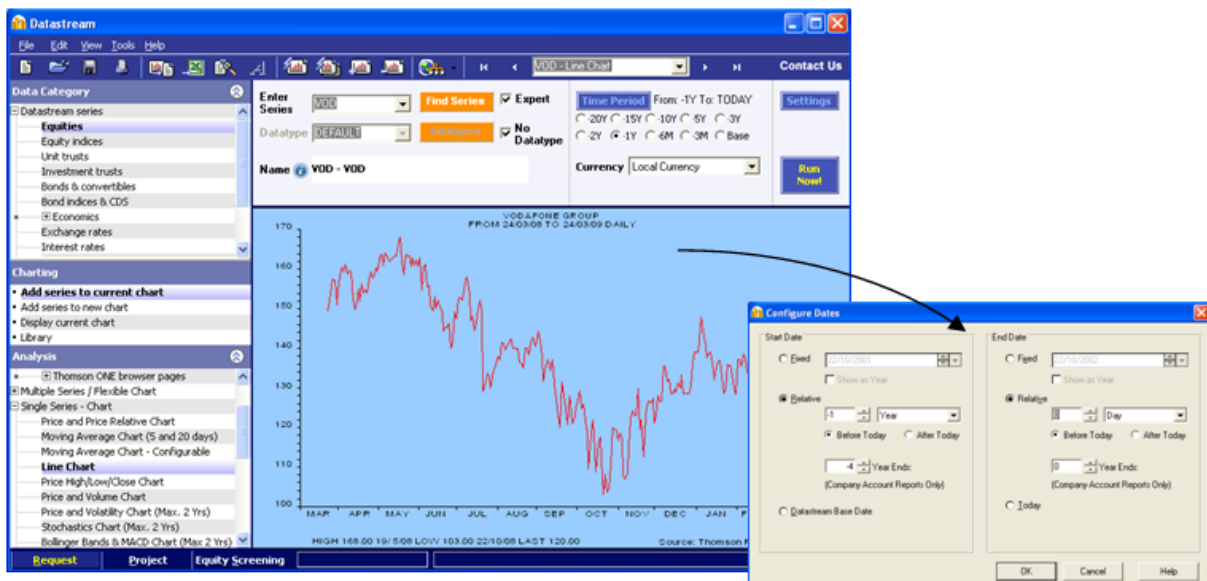
4.	Right click on the chart and click **Update Chart** to transfer the updated chart back to Excel in the same place.

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CHANGING THE PROPERTIES OF A CHART USING VBA

Experienced users can use Excel's VBA Design Mode to access and edit the properties of embedded charts the **Properties** dialog. On the **ChartControl Properties** dialog you can change the request description, request string, autorefresh selection and chart dimensions.

To change the properties of a chart using VBA:

1. Right-click on the **Excel** toolbar and select Visual Basic.

2. Click the **Visual Basic Design Mode** button on the **Visual Basic** toolbar.

3. Click on the chart that you want to edit.

4. Right-click on the chart to display the Excel menu and select the **DatastreamChart>Properties** option. The **ChartControl Properties** dialog is displayed:
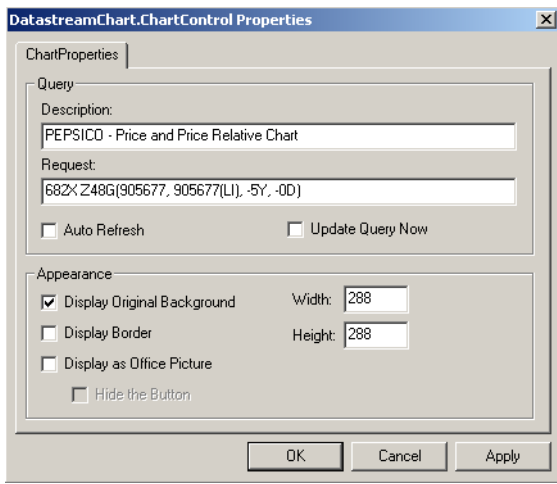
5. Change the properties as required, click **Apply** to confirm your changes and click **OK** to exit the **Properties** dialog.

Refresh the chart for the new properties to take effect.

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5 USING THE REQUEST TABLE

WHAT IS THE REQUEST TABLE?

If your use of Excel involves building models using several requests for data from Datastream, you can use the Request Table to administrate and edit these refreshable data requests. The request table is an Excel template with additional facilities for entering request parameters as individual Excel rows.

These parameters include:
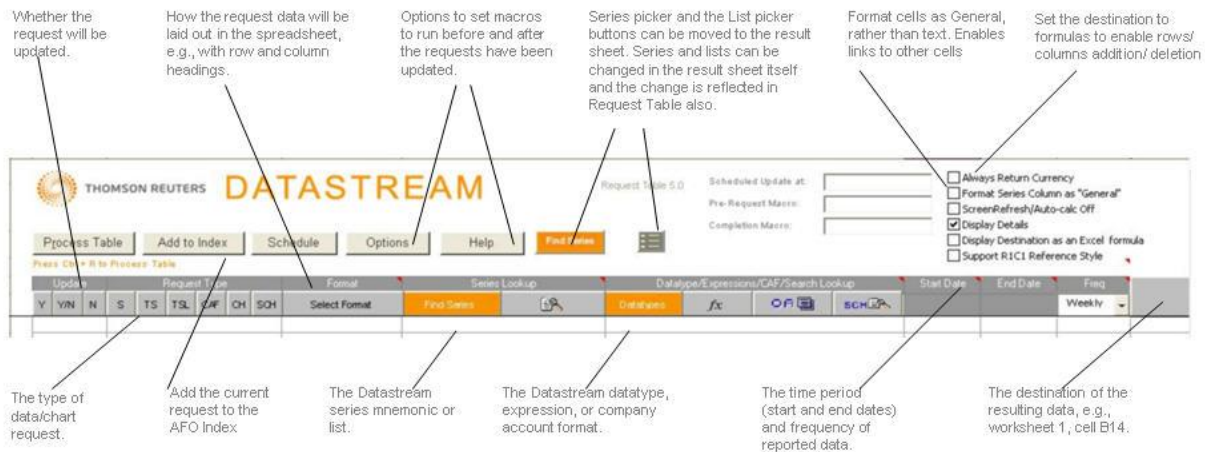
Creating and storing regularly used Datastream data or chart requests in the form of a table enables you to:

- Enable/disable individual requests when they are required/not required.

- View the details of all requests in one glance.

- Reference request input parameters from other worksheets.

- List requests in the table in the order they need to be processed (to use returned values as input parameters in subsequent requests).

- Specify different cell and worksheet references for individual requests.

- Schedule the request table to be processed in the future and 'out of hours'.

- Continue processing, even if a datatype within a list of datatypes is invalid.

- Add a description against each row in the table.

- Copy a code button onto work sheets to access the series/datatype lookup.

- Link to charts and data.

- YES or NO allow you to set request to YES or NO rather than toggle from Yes to No.

- Functionality to update mainframe L# lists in the same way as Datastream Equity Screening.

- Request Table and UCTS templates merged to allow existing RT sheets to be converted to merged template

CREATING A SET OF REQUESTS

To create a set of requests in a Request Table:

Note: You can insert the resulting data, using Data Destination, into several worksheets within the same or different workbooks.

1.   Select the New Request Table option from the Datastream >Request Table menu.

2.   You are now prompted to save the request table under a new name. Click Yes, supply the Request Table name and directory location, and click Save.

Note	It is important that you do not overwrite the default Request Table template (Adv_xl.xlt) as this will form the basis for all your Request Table generation. We recommend that you make a back up of the template which is installed with Datastream in the location: C:\Program Files\Datastream\Datastream Advance.

The next stage in creating a set of data or chart requests is to enter the request parameters as a single row in the worksheet labelled **Request Table**. To create other rows (i.e. data requests), repeat the following steps for each request you wish to add.

1.   Click on the worksheet tab labelled **Request Table**. An empty Request Table is displayed.

2.   Click the **Y**, **Y/N or N** button to select the **YES** option - that is, refresh this request. This option can be turned off by clicking the **Y/N** button again, where the cell contents will change to **NO**.

3.   Select a Request Type by clicking the appropriate button. The buttons are:

   ○ **S** = Static data request

   ○ **TS** = Time series data request

   ○ **TSL** = Time series list data request

   ○ **CAF** = Company accounts data request

   ○ **CH** = Chart request

   ○ **SCH =** Search list format

4.   Select a Format layout type from the dropdown list. You can select:

Format options	Worksheet codes
No headings	**X**
Row and column headings	**RC**
Titles with row and column headings	**RCH**
Titles with row headings	**RH**
Row and column data transposed with no headings	**T**
Row and column data transposed with row headings	**TR**
Row and column data transposed with column headings	**TC**
Row and column data transposed with row and column headings	**TRC**
Data annualised for company accounts data items	**A**

In addition to the above formats, you can display the currency of the series selected in your request table. This format option is selected by clicking the **Always Include Currency** check box on the **Options** dialog. See

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[Request Table options.](#) This feature is primarily intended to provide compatibility with earlier versions of the Request Table. If the **Always Include Currency** option is selected, any format options selected will have the currency symbol ($) appended to the worksheet code; for example **RC$**.

5.   Select series or lists (i.e. Local Lists, Datastream mainframe lists and constituent lists) using the Series Lookup buttons. If the Request Type you selected is S or TS, click the Series Navigation button to display the Series Selection screen (see [Selecting Series](#)). You can select any number of series. If the Request Type you selected is TSL, click the List Picker button to display the List Picker (see [Selecting lists](#)).

6.   Select a datatype, expression, company accounts format or search format (created in the Datastream interface) by clicking the appropriate button. If you have selected Request Type S, you can select datatypes (see [Selecting Datatypes](#)) and expressions (see [Selecting Expressions](#)). If you have selected Request Types TS and TSL you can only select datatypes. If you have selected Request Type CAF, you can select company account formats (see [Creating company accounts data requests](#)). If you have selected Request Type SCH, you can select the search format (see Datastream Getting Started Guide).

7.   Place the cell cursor in the next adjacent cell, e.g., G7, and enter either a fixed start date in the form dd/mm/yy, a relative start date in the form -nY (that is n years ago from the End Date), or -nYE to retrieve accounts data for n year ends. For static data requests, this field is used to specify the date for which the data is to be requested. When requesting latest values for static data for company accounts items (i.e. 104) and economic codes, you must enter a space in the Start Date field.

8.   Place the cell cursor in the next adjacent cell, e.g., H7, and specify an End Date in either a fixed date or relative end date format. This date is only needed for time series and company accounts requests and can be left blank to specify previous day values.

9.   Place the cell cursor in the next adjacent cell, e.g., I7, and select a data frequency from the dropdown list. The options are:

  o   Daily

  o   Weekly

  o   Monthly

  o   Quarterly

  o   Yearly

10.   Place the cursor in the next adjacent cell, e.g., J7. The next step is to specify where the result of the data request is to be inserted. This can be a specific cell location in any new worksheet within the same workbook, or a specific cell location in a different workbook. To specify a cell location in a worksheet within the same workbook:

  o   Insert a new worksheet from the Insert menu.

  o   Click on the **Request Table** tab

  o   With the cell cursor at J7, click the **Data Destination** button. The **Create Destination Reference** screen is displayed. Click on the required worksheet tab and then click on the required cell location to automatically paste the cell reference into the dialog, for example:
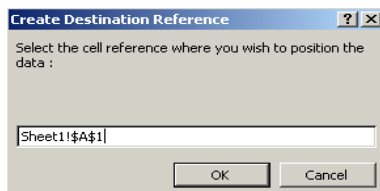
  o   Click **OK** to insert the cell reference into the request table.

    If you want to specify a cell reference in another workbook, simply click the **Data Destination** button, open the required workbook, activate the required cell and click **OK** on the **Create Destination Reference** screen.

11.   You must now choose whether you want the data destination cell location to be displayed as either plain text reference or as a dynamic Excel formula. If you select the Display Destination as Excel Formula option, this enables the position of the data results to be moved in the worksheet (e.g. after inserting a

new row or column). If you select this option, any future processing of the Request Table will take into account the new cell location. If you do not select this option, the data will always be inserted at the same cell location.

If the destination reference is to a closed external workbook, you must ensure that the Display Destination as Excel Formula check box is selected to enable the request table to open the workbook. This is particularly important if you are scheduling the Request Table to be refreshed 'out of hours' and the Request Table contains references to external workbooks that will be closed when the process is run.

12. Skip the cell column for Status as this is used by Datastream to inform you of the status of the latest update of this request. OK indicates the update has been successful.

13. Place the cursor in the next adjacent cell, e.g., L7, and enter a short (optional) description for the request.

14. To add a chart request to the table, click the CH button. This displays all charts in open workbooks. Select the chart required and the request string will be entered in the Series Lookup cell and the nearest cell entered in the destination cell. Note the series used in the request string can be linked via a cell reference.

15. From the Excel File menu, select Save to save the details of your Request Table.

The request is now ready to be processed.

REQUEST TABLE OPTIONS

The Request Table can be configured to always display the currency of the selected series and show your own entered text (e.g, N/A) where data is not available from Datastream. The **Always Include Currency** option is provided to ensure compatibility with data tables created with previous versions of the Request Table, i.e., DSDDE tables. Selecting this option makes it possible to use DSDDE tables where the currency is always returned. You are also able to define which AFO Index you would like to add your table to.

To configure these options, click the **Options** button to display the **Options** dialog.

Select your Request Table options and click **OK**.

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UPLOAD LIST BUTTON

The **Upload List** button in the request table can be copied to a sheet that has back office codes to upload. There are two modes that can be configured by right clicking on the button and selecting the **list option.**
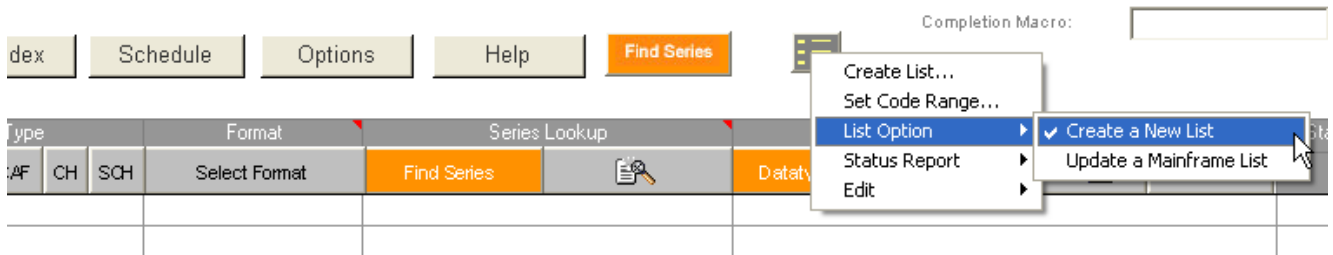
You can create either local or mainframe lists using the **Create a new list** option, Click here for more details.

Or you can use the same mainframe user list (L#XXXX) each time the back office list in the spreadsheet is amended by using the **Update a Mainframe List** option.

Double click the button to display the list details and to update the list.

THE SERIES NAVIGATION BUTTON

You can link the **Series Navigation button** **Find Series** to a cell in the Request Table, giving you access to the Datastream series selection dialogs (for all series including user lists). Double click on the **Series Navigation button** on the spreadsheet to select a different series.
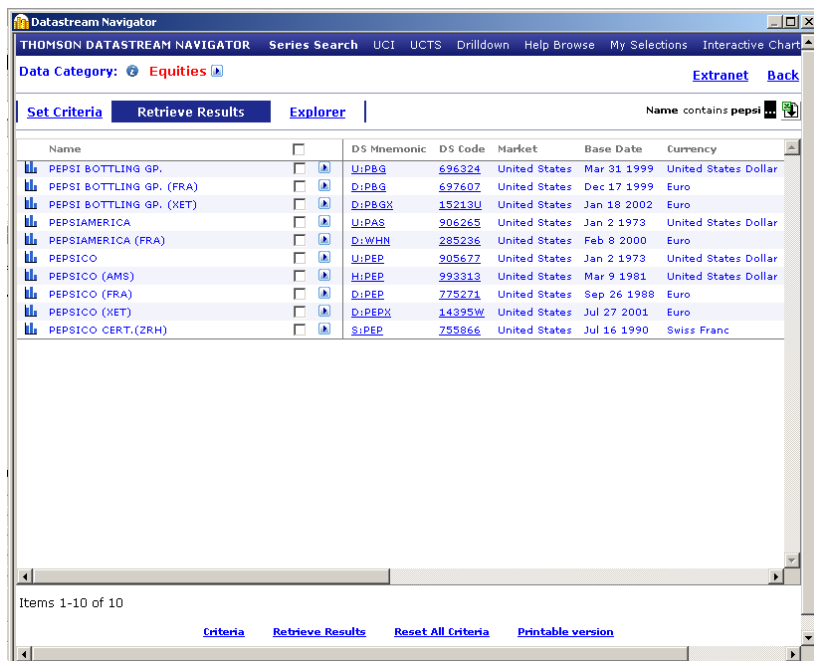
PROCESSING AND SCHEDULING REQUESTS

You can choose to either process your Request Table straight away or schedule the processing at some date and time in the future.

To process your Request Table straight away, click the **Process Table** button. This will launch the DSAPI which will pass the request details to Datastream in the order that they appear in the list. Requests that fail, for example the datatype is not suitable for the request, will not prevent the whole batch of requests from being processed. Only the **Status** field will be updated for failed requests.

The progress of the update process can be monitored via the **DS Access Monitor**. You can set up the **DS Access Monitor** to be automatically displayed during processing by using the **Configure Communications**, accessed by right-clicking the lightning symbol in the system tray. Refer the *Reference* chapter of the *Datastream User Guide* for more details.

To schedule the Request Table for processing out of hours, click the **Schedule** button. The **Request Table Scheduler** dialog is displayed. Enter a date and time in an Excel date format, for example:
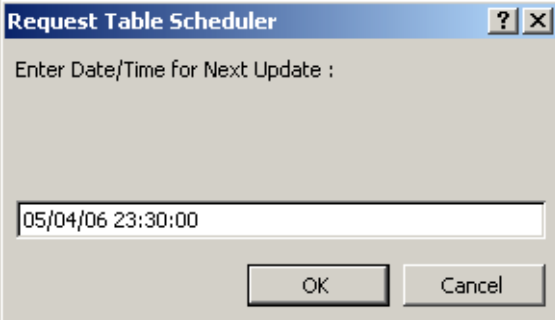
You can process the Request Table later TODAY by entering just a time. Click **OK** to confirm the scheduled date and time. The **Scheduled Update** display window in the request table is automatically updated to indicate that the Request Table has been scheduled.

The message **Next Update Scheduled for:** DD/MM/YY HH:MM:SS will also appear on the Excel status bar. Note, you must ensure that Excel is running and the relevant Request Table is open prior to the scheduled date and time, for the requests to be processed. The destination workbooks do not need to be open as the main table will open all relevant worksheets provided **Display Destination as Excel Formula** has been selected for the relevant requests.

THE AFO INDEX

The AFO Index spreadsheet enables you to schedule several request tables to run at a preset time and date. These tables are opened, updated, and closed when the AFO Index is run.

Using the AFO index with a 3rd Party scheduler

You can use a 3rd party scheduler to run the requests in the AFO index. For example, **Schedule Tasks** installed with Internet Explorer 5.

To use the AFO Index:

- Click the **Run on startup box** and **Close down after processing** box. This opens the AFO index at the preset time, runs the requests, and closes the table on completion.

    If you want to stop the AFO index from updating the specified request tables after you have opened it, you have 5 seconds to uncheck the **Run on startup** box.

Note	The AFO Index only works with request tables.

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USER CREATED TIME SERIES

This workbook also includes a Request table to enable series to be downloaded manipulated - and then uploaded these series back to Datastream to be charted.

A user time series is a series of values (data) for different points in time created by you and uploaded for storage on Datastream. The values can be daily, weekly, monthly, quarterly, or yearly and you can save the series in management groups to help you organise them. You can use these series in Datastream and AFO charts and reports. You can combine them with Datastream maintained series and use functions and expressions to manipulate them. An Excel template is used to create and edit your time series. You can download an existing series to form the basis of a new one.

THE USER CREATED TIME SERIES TEMPLATE:

Name   The series name (up to 64 characters).

Code   The series code. Use this to retrieve your series in Datastream and AFO.

This must start with TS followed by 6 characters, eg TSUKRPI1.

Mgmt. Group   Management group. 1 - 10 characters. You can have up to 200 series in a group, eg UK.

Decimals   The number of decimal places for your values.

As %   No indicates the series are actual values. Yes indicates the series are expressed as percentages.

Freq. Conv.   Determines the adjustment to make when you use a series at a lower frequency than it is stored. For example, using series stored with daily values in a request for weekly values.

Sum   Sum all values for a calendar period. Avg - Average all values for a calendar period. End - The value at the end of a calendar period. Act - The actual value at the calendar intervals.

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Date align.	For data adjusted for frequency, select where in the calendar period to align the data for plotting.
	1st - Plot data from the beginning of the calendar period.
	Mid - Plot data from the middle of the calendar period.
	End - Plot data from the end of the calendar period.
Carry ind.	For null values. You can leave the values blank or carry forward the previous value.
	Yes - carries the previous value. No - leaves the value at null.
Upload type	When editing a series, you can upload only the values that have changed.
	Full - uploads all the values in the series.
	Partial - uploads the values that have changed.
Set date range	This is used to set the start and end dates, and the frequency for new series. Use this to change the end date when extending the series.

Optional:

Units	A qualifying unit for your data. For example: tons, U$ millions, index.
Currency	Select a currency for series with monetary values.

Other fields:

Start date	The start date for the series data.
End date	The end date for the series data. Note, you can change this for **Partial** uploads - only data after the end date is uploaded.
Frequency	The frequency of values: daily, weekly, monthly, quarterly, or yearly.

CREATING A USER CREATED TIME SERIES

To create a time series:

1. Select New UCTS table from the Datastream menu>User created time series menu and save the workbook.
2. Type a name for the series.
3. Type the series code. This must start with TS followed by 6 characters, example TSUKRPI1.
4. Type the management group you want the series to belong to (up to 10 characters) example UK.
5. Select the number of decimal places for display. Type the number, or select from the drop down box and click the Add button.
6. Type the units, (optional). This is a qualifying unit for your data. For example: tons, U$ millions, index.
7. Select As %. No indicates the values are actual values. Yes indicates the values are expressed as percentage. Used in the Latest Values and % change over 3 periods report.
8. Select the type of Frequency conversion. This determines how the series is handled if you use it a lower frequency than it is stored.
9. Select the Date alignment for data adjusted for frequency.
10. Select a Currency for monetary values (optional).

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11. Select the Upload type. Select Full to upload all the values.
Use Partial to upload only the values that have changed when editing a series.

12. Set the date range. Click the Date range button and type the start and end dates.
Select the frequency of the data: Daily, weekly, monthly, quarterly, or yearly.
The dates are displayed in the date range column, ready for values to be added.

13. Type your values against the dates displayed.

14. Click the Upload button to save your series. Note the cursor must be in the Code field to upload the series. You can highlight more than one series to upload several series at the same time.

You can now use this series in Datastream or AFO requests.

EDITING AN EXISTING USER CREATED TIME SERIES

To edit a user created time series:

1. Select **New UCTS table** from the **Datastream** menu>**User created time series** menu and save the workbook.

2. Click the **Select code** button. Note the cursor must be in the **Code** field.
Datastream navigator is displayed with the series set up on your Datastream ID.

3. Search for and select the series you want to edit.
The selected series mnemonic is displayed in the Code field.

4. Click the **Download** button. Note the cursor must be in the **Code** field.

5. If you want to add new values, click the Set **date range** button and type a new end date.

6. Make your changes and select the **Upload** type.
Use **Full** upload to overwrite all existing values.
Use **Partial** upload to update only the new values and change the date in the **End date** field to indicate the new values to upload.
Note: see tick box in Options dialog.

7. Click the **Upload** button to save the series. Note the cursor must be in the **Code** field.

To delete a time series:

1. Place the cursor in the **Code** field of the series you want to delete.

2. Click the **Delete** button to delete the series.

To add a new worksheet to the workbook:

If you want to download or upload a series with an earlier start date or a different frequency, add a new worksheet.

1. Click the **New sheet** button.

   A new worksheet is displayed.

To configure the template:

1. Click the **Options** button.

   The **Options** dialog is displayed.

2. Tick the **Overwrite all values if series already exists** box to overwrite existing values.

Note	The server for Navigator is configured via the **Datastream** >**Options** menu.

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6 USING RIBBON BASED UI FOR AFO (IN MS-OFFICE 2007 AND ABOVE)

When you install **Datastream.xlam** component, **Datastream** is available as an Add-In tab. Datastream provides following facilities in the form of seven separate groups.
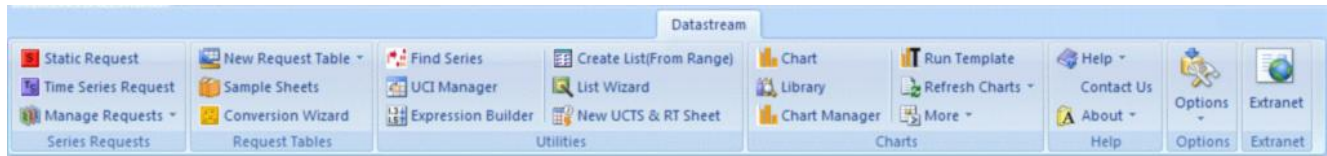

Figure: Datastream.xlam

Note	AdvanceOffice.xlam is also available in the installation folder. However, it is not the preferred Office 2007 add-in as it does not contain links to Datastream Charting which provides extensive interactive charting functionality.

Series Requests:
This group consists of three buttons.

 Create a one off or embedded request for a series or list and datatype/expressions at one point in time.

 Create a one off or embedded request for a series or list and datatype/expressions over time.

 Create requests for fundamentals information and view, update and edit your embedded requests. This drop-down list contains following buttons:

1. **Company Account Request:** Request company fundamentals information using a pre-specified format.
2. **Request Manager:** View, update and edit all requests in your workbook.
3. **Refresh Workbook:** Refresh all the data and chart requests in your workbook.
4. **Resize Embedded Charts:** Enable the resizing of embedded charts in your workbook.
5. **Datachannel Buttons - Hide:** Hide all Datachannel buttons in your workbook.
6. **Datachannel Buttons – Show:** View all Datachannel buttons in your workbook.
7. **Search for Dead Codes – Active Sheet**: Search dead codes in active sheet.
8. **Search for Dead Codes – Workbook**: Search dead codes in active workbook.
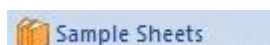
Request Tables:
This group consists of three buttons.

 Open a new Request Table to create, manage and update spreadsheets effectively with multiple Datastream requests. This drop-down list contain following button:

1. **Office 2003 Request Table:** Open an Office 2003 Request Table in Office 2007 from the New Request Table drop down.

 Access a library of spreadsheets illustrating how the Datastream content sets can be used in different range of workflows.

 Upgrade spreadsheets with old DSDDE links, embedded requests or earlier version request tables to the latest version.

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Utilities:
This group consists of six buttons.

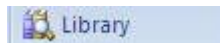|	
Find Series	Find the series and datatype you require, using the extensive facilities available in Navigator and return these values to your spreadsheet.
UCI Manager	Create, calculate and select User Created Indices on your Datastream ID.
Expression Builder	View and create the saved expressions on your Datastream ID.
Create List(From Range)	Create a local, central system (I#), or User Created Index (x#) list from Datastream, SEDOL or ISIN codes in a range of cells.
List Wizard	Create local lists using series from Navigator or Datastream lists or edit your lists.
New UCTS & RT Sheet	Open a new User Created Time Series Sheet to upload your own series to commingle with Datastream series.

Charts:
This group consists of six buttons.
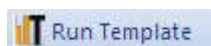Note: This add-in tab is valid only for Datastream.xlam

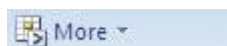|	
Chart	Open new chart window.
Library	Open new library window.
Chart Manager	Open Chart Manager to refresh, edit, apply style, remove links, delete and upload charts.
Run Template	Get the latest charts associated to particular Templates in your current spreadsheet.
Refresh Charts	Refresh selected / all charts with the latest data.
More	Open more chart pages (Key Indicators, Overview, Reports) in a new window. This drop-down list contains following buttons:

- **Key Indicators**: Open the Key Indicators page in a new window.
- **Overview**: Open the Overview page in a new window.
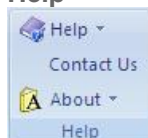- **Report**: Open the Report page in a new window.

Options   Configure a range of settings and defaults to reflect your preferences.

Extranet   Access the Extranet for information on Datastream content and functionality including details of the latest changes.

Help   Access Online help contents, Definitions, Contact Us link and Version details.

Help:
- **Help Contents:** View Datastream Advance for Office - Online help.
- **Help Definitions:** View the syntax for Datastream functions and expression language.
- **User Guide:** View Datastream for Advance using Excel manual.

Contact Us: Access Thomson Reuters contact details.

About:
- Advance for Office: View Advance for Office version details.
- Charting for Office: View Datastream Charting version details.

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