



# Thomson Datastream Functions and Expressions

## Expression selection

When flexible chart is selected – click  to create an expression...

...or click  to select an existing expression.  
Note: if the focus is on an expression, that expression will be displayed in the Expression Picker.

Note: expressions with only a single variable (X) can be used in Static and Time Series requests, so only these will be shown if the Expression Picker is displayed from the AFO dialogs. Expressions with X, Y and Z variables can be used in flexible charts.

Select from your own expressions or the example 'Global' expressions set up by Thomson Financial. Global expressions end in an 'E'.

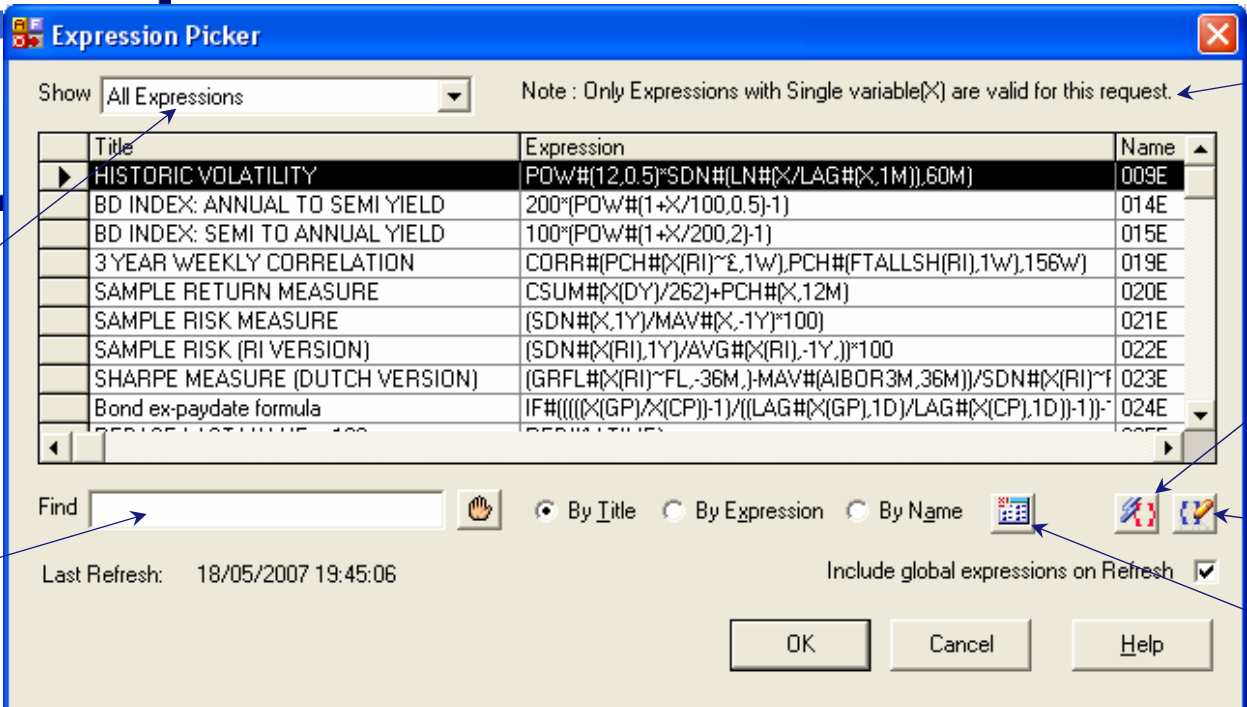
Use Find to look for an expression using a 'contains' search. Search by:

- Title
- Expression – specify a function used in the expression such as MAV#
- Name – specify the expression mnemonic such as 052E

Click to create a new expression.

Click to edit the selected expression.

Use the refresh option to update the local file holding the list of expressions. You will need to refresh if an expression has been created on the same ID by a user on another PC.



Title	Expression	Name
HISTORIC VOLATILITY	POW#(12,0.5)*SDN#(LN#(X/LAG#(X,1M)),60M)	009E
BD INDEX: ANNUAL TO SEMI YIELD	200*(POW#(1+X/100,0.5)-1)	014E
BD INDEX: SEMI TO ANNUAL YIELD	100*(POW#(1+X/200,2)-1)	015E
3 YEAR WEEKLY CORRELATION	CORR#(PCH#(X(RI))^E,1W),PCH#(FTALLSH(RI),1W),156W)	019E
SAMPLE RETURN MEASURE	CSUM#(X(DY)/262)+PCH#(X,12M)	020E
SAMPLE RISK MEASURE	(SDN#(X,1Y)/MAV#(X,-1Y))^100	021E
SAMPLE RISK (RI VERSION)	(SDN#(X(RI),1Y)/AVG#(X(RI),-1Y))^100	022E
SHARPE MEASURE (DUTCH VERSION)	(GRFL#(X(RI))^FL,-36M,)-MAV#(AIBOR3M,36M))/SDN#(X(RI))^f	023E
Bond ex-paydate formula	IF#( (((X(GP)/X(CP))-1)/((LAG#(X(GP),1D)/LAG#(X(CP),1D))-1)))-	024E

# Expression Creation

**Note**

- The limits for an expression are up to:
  - 78 characters
  - 8 functions (up to 78 characters in total)
  - 19 operands
  - 3 function 'blocks' (separated by mathematical operators)
- Longer expressions can be created by nesting one expression within another one, up to an overall limit of 198 characters.
- Entering an expression directly in a Static request: there is a limit of 45 characters before you need to create a stored expression.

Click to display functions available.

Select a function group, or to display all.

Display definitions for selected functions.

If you know the syntax of the functions you want to use, type them directly into the Expression field. When you press <Enter> the functions and operators of the expression are displayed in the cells above.

Click **Save** to save the expression with the next available Expression Number. Click **Save As** to save the expression with the number you specify.

**Tip**  
If you are sharing your Datastream ID with other users – adding your initials as a suffix to the expression title enables you to search for your expressions. Expression titles can have up to 30 characters.

Click to display an index of the functions from which you can select to display definitions.

Click to display more details on the different methods for displaying time periods.

You can copy and paste example expressions into the Expression field.

For more information call the Helpdesk on:

- UK: +44 (0) 870 458 1052
- Belgium (French): +32 (0) 2 548 98 78
- Belgium (Dutch): +32 (0) 2 548 98 77
- France/Luxembourg (French): +33 (0) 1 53 32 39 84

- Germany/Luxembourg (German): +49 (0) 69 714 05 333
- Italy: +39 (02) 86 39 11 99
- Netherlands/Luxembourg (Dutch/English): +31 (0) 10 424 6635
- Nordic: +46 (0) 8 566 196 10

- North America: +1 888 888 1082
- Spain: +34 (0) 91 745 2020
- Switzerland (Geneva): +41 (0) 44 225 1838
- Switzerland (Zurich): +41 (0) 44 225 1828