Chartboard

Technical Analysis, Portfolio, Modelling, Automation
& Stock Scanning Software
Version 3.4.00



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1. Introduction

1.1 Installation

Chartboard has been packaged for either CD or web deployment. The following steps should be observed when installing from this deployment media.

Step 1. Uninstall any previously installed Chartboard version via Windows **Control Panel >> Add/Remove Programs**.

Step 2. Load the CD containing the Chartboard release, and from the Windows Explorer GUI select the CD drive, and then run the **Chartboard(n_n_nn).exe** file.

Alternatively download the Chartboard release from the www.ivyware.com.au web site and run.

Follow the installation prompts.

Step 3. Chartboard requires a CBDatastore from which trade prices and other associated data can be sourced. A starter CBDatastore can be downloaded from the www.ivyware.com.au web site or a data store from a previous installation can be used.

Depending data requirements at least 100Mb should be available in the short term, 2GBytes should suffice for medium users and large users are really only limited by disk space.

The Chartboard application has been developed to run on Windows 10 machines. As such system requirements for either of the above would be adequate for this application. Chartboard requires 40Mb of disk space for software installation.

The application consists of a VC++ MFC version 2022 based front end that manages Python version 3.8 scripts for Automation modelling back end. The whole application has been developed under Visual Studio.

1.2 File List

The default **C:\Program Files\Chartboard** path is usually specified for the installation directory. Installation file list includes.

- **Chartboard.exe**
  Chartboard application file.

- **Readme.txt**
  Release notes.

- **EULA.txt**
  End User License Agreement.

- **P2PmsgCharts(2022).dll, Msgcore(2022).dll,MsgcoreMFC(2022).dll, P2Pmsgcore(2022).dll, P2PmsgMFC(2022), P2PmsgraphDlgs(2022).dll,**

P2PmsgraphDStore(2022).dll, P2PmsgODBC(2022).dll, and **P2PmsgPython(2022).dll** application **DLL's.**

- **\Samples**
  Optional directory containing various sample **Chartboard** documents, Predictor.txt, Predictand.txt files and Eoffile.txt files.

- **\Scripts**
  Optional directory containing sample python advisor scripts for various trading strategies. These scripts are contained within **[.pyw]** files and have been allocated names that reflect their strategies.

The following Microsoft system DLL's that may or may not already exist in the **C:\Windows\System32** directory. For completeness, copies of these DLL's have been included on the release media.

- **\System32\mfc110.dll**
  Microsoft MFC system DLL, release version.

- **\System32\msvcr110.dll**
  Microsoft C runtime DLL, release version.

The following application configuration file is dynamically created under C:\Users\<user>\AppData\Local

- **Chartboard.P2Pconfig**
  Persistent user application state, designed to minimise registry interaction and may be exchanged between users.

A shortcut to the **Chartboard.exe** application may be created in the installation directory and subsequently dragged and dropped onto the desktop. Exercise care when dragging and dropping a copy of the **Chartboard.exe** application since a subsequently installed version will not override the original desktop copy.

1.3 Configuration

The **Chartboard** application requires consideration be given to the following configuration facilities.

- The Python Console Window can be toggled on and off via the **Ribbon Bar ► Home Tab ► Console Window** check box. Refer Python Console Window for further details.

- Application screen position, visibility of the Explorer Control Bar, Outputs Control Bar and the Properties Control Bar will persist between instances of the application.

- The **Ribbon Bar >> Home Category >> News Feeds** Panel buttons support configurable Broker and News Feed URL's. Chartboard is shipped with a default set that can be edited via the Workspace Explorer Configuration

Dialog.

- The **Ribbon Bar >> OHLCvs and PFigure Tabs >> External Reference URL's** Panel buttons support configurable Home Page, Wiki and Stock Web Reference URL's. Chartboard is shipped with a default set that can be edited via the CBDatastore Explorer Country-Market Configuration Dialog and individual CBDatastore Explorer-Country-Market-OHLCvs Dialog's.

- Chartboard can perform directory monitoring for downloaded End-of-Day market snapshots, single OHLCv stock updates and Shorts data. Such directory monitoring can be configured via the CBDatastore Explorer-Country-Market Configuration Dialog.

1.4 Start-up

Chartboard has been implemented as a standard workspace type Windows application with the following start-up sequence.

Step 1. Double click the Chartboard desktop icon.

Alternatively, using Windows Explorer, double click the **Chartboard.exe** file residing in the install directory **C:\Program Files\Chartboard\bin**.

Step 2. Clicking the Chartboard application button (top left corner) select the **[Open…]** menu item.

Sample Chartboard workspace files may be located in the **C:\Program Files\Chartboard\Data** directory. Additional personnel data stores may be attached to an existing workspace via the **Ribbon Bar >> Datastore Tab >> Personnel Group >> Attach…** item.

Step 3. Alternatively clicking the Chartboard application icon (top left corner) select the **[New…]** menu item.

Select the name and destination of your new workspace and add folders and charts via the explorer buttons and context menus.

New and or existing personnel data stores will need to be attached to the new workspace via the **Ribbon Bar >> Datastore Tab >> Personnel Group >> New…** and **Attach…** items respectively.

Double clicking any file with the **[.Msgraws]** extension from Windows Explorer automatically performs the above sequence and opens the selected file. Alternatively, a shortcut may be created with the workspace name as a command argument.

Multiple instances of the Chartboard application may be run on one machine. However, Chartboard workspaces may not be concurrently shared either on the same machine or across a network.

Previously serialised workspace shutdown state is restored at startup.

1.5 Operation

Chartboard application presents charts with large number of dynamically configurable properties, settings and format variants. This is achieved with transparent simplicity utilising the following context sensitive techniques and minimal configuration dialogs.

- Standard Ribbon bar UI implementation with both dynamic content and context. Numerous tab switchable charts may be active.
- Multiple dockable explorer bars for the organisation and management of both charts and data stores. Bar operations performed through dedicated toolbars and context menus not unlike Windows file explorer.
- Charts and data sets are managed through the UI Ribbon Bar and extensive context menus which always relate to the current viewed context.
- Charts support Yearly, Quarterly, Monthly, Weekly and Daily period intervals with unique serialisation. Charts can be completely restored to their previously serialised state. Each chart transparently maintains its own state.
- Extensive copy – paste facilities exist for both object transfer and format painting. Existing charts may be templated via a copy – paste sequence.
- Context sensitive grid properties are transparently exposed for the selected application item and/or chart objects.
- Supports numerous customisable URL's that may be displayed internally in a tabbed view or externally in the default browser.

In summary **Chartboard** is a point and click visual response to a complex requirement. Remember if in doubt left click item for grid properties and/or right click the item for context options. Use **Ribbon Bar ► [View] Panel ► Properties Bar** check box to manage visibility of Properties Grid.

1.6 Shutdown

Chartboard has been implemented as a standard workspace type Windows application with the following shutdown sequence.

Step 1. Clicking the Chartboard application icon (top left corner) selecting the **[Exit]** menu option to terminate the application.

Alternatively the **[X]** button in the top right-hand corner can be pressed, the **[Close]** item from the application system menu selected, or the **[Alt+F4]** accelerator used.

Should unsaved data or properties exist the application will be prompted to save file contents via the Unsaved Edits Message Box.

Current workspace state is serialised at shutdown and restored at startup.

1.7 Housekeeping

The **Chartboard** application requires consideration be given to the following housekeeping operations.

- Downloads directory clean-up.

- Flushing contents of CBDatastore to disk.
- Defragmentation of Explorers for Charts, CBDatastore, Modelling, Portfolio and Python Advisors.
- Validation of Explorers for Charts, CBDatastore, Modelling, Portfolio and Automation.

1.8 Backups

The **Chartboard** application requires consideration be given to the backup of the following workspace and Python Advisor files.

- Workspace file.
- CBDatastore directory hierarchy.
- Modelling Attachments.
- Portfolio Attachments.
- Automation Attachments and mapped Python Advisor Script files.

2. Desk Top

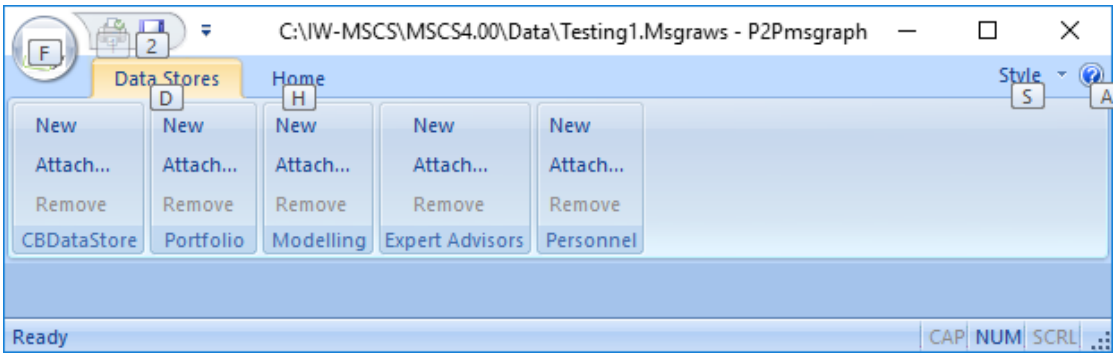
Chartboard is essentially a visual application built up from the following primary Windows components to form the complete desk top.

1. Title Bar across the top of the application.
2. Ribbon Bar beneath the Title Bar extending across the top of the application.
3. Status bar across the bottom of the application
4. Tabbed Views usually bounded by the Ribbon Bar above, Explorer Dockable Control Bar to the left, Properties Grid Dockable Control Bar to the right, Outputs Dockable Control Bar and Status Bar below.
5. Explorers Dockable Control Bar usually located down the left side of the desktop.
6. Properties Grid Dockable Control Bar usually located down the right side of the desktop.
7. Outputs Dockable Control Bar usually located immediately above the Status Bar
8. Windows Console in separate DOS Cmd style utilised for Python scripting.
9. Accelerators for condensed keyboard interaction.

These components are covered in the subsequent sections of this Chapter and some more expansively in subsequent Chapters.

2.1 Title Bar

Containing the selected workspace name **C:\Testing1.Msgraws – Chartboard** the title bar is located across the top of the application.



The content and context of each item contained within the title bar is summarised below.

1. Chartboard
   Program identification.

2. Testing1.P2Pmsgraws
   Name of the Workspace currently opened through the **Chartboard** application. Refer to **{Application Button} ► [New]** and **[Open...]** for creating a new and opening an existing Chartboard workspaces respectively. Refer **{Application Button} ► [Save]** and **[Save As…]** for saving the contents of an existing Workspace.

   New Chartboard workspaces are automatically assigned the name **Untitled**. The workspaces may be renamed as required via the **{Application Button} ► [Save As…]** menu item.

3. [_] - Button
   Minimises application. Restore by clicking Chartboard icon on the Windows Task Bar.

4. [ ] – Button.
   Maximises application. Restore previous size and position by button re-click.

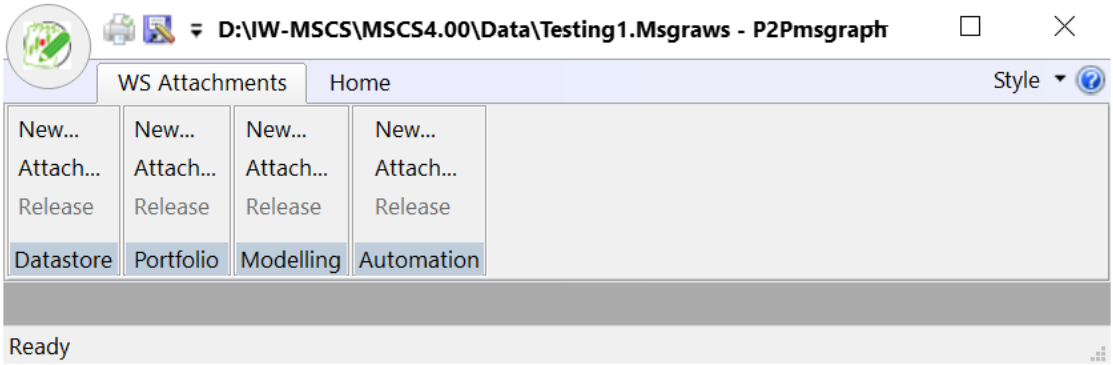
5. [X] - Button
   Quit the application; prompts to save document.

   Closes any opened files and terminates the application. The operator will be prompted to save any unsaved file contents edits via the Unsaved Edits Message Box.

   Refer **{Application Button} ► [Exit]** Button for further details.

2.2 Ribbon Bar

The Ribbon Bar is located across the top of the application immediately below the title bar.



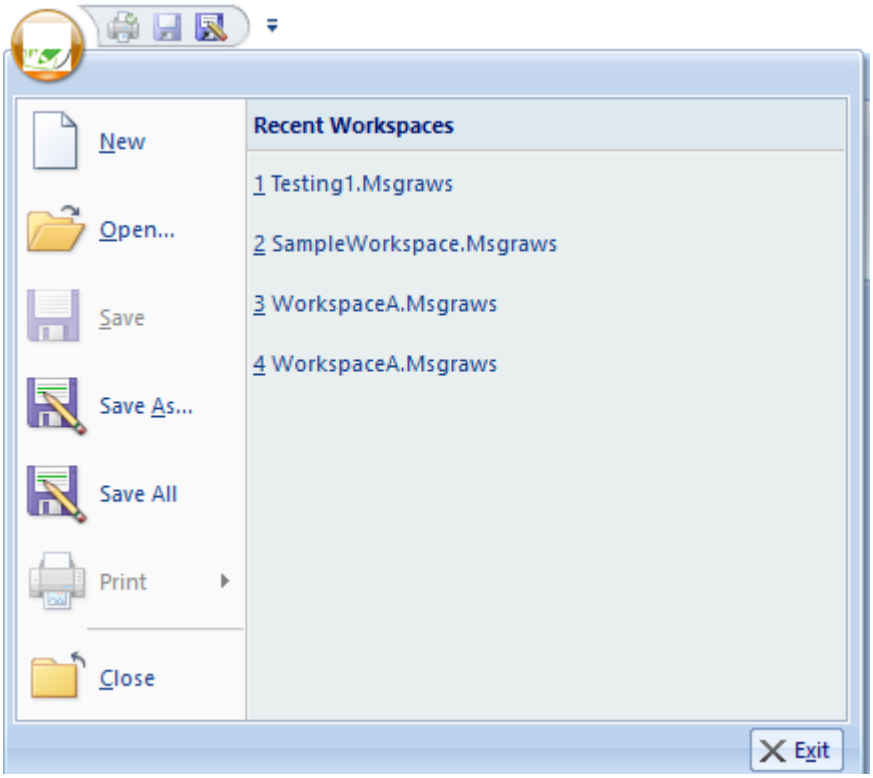
The following tabs and buttons, in left to right order, are located across the Ribbon Bar. Each item supports a tool tip that corresponds to the allocated name.

1. **[WS Attachments]** Tab
2. **[Home]** Tab
3. **[OHLCvs Chart]** Tab
4. **[PFigure Chart]** Tab
5. **[Modelling]** Tab
6. **[Portfolio]** Tab
7. **[Scanning]** Tab
8. **Ribbon Bar Context Menu.**
9. **{Style}** Drop Down Menu
10. **{About}** Button.
    Resolves to the Chartboard About Dialog.

The application toolbar may be toggled on and off via the **[View | Toolbar]** menu item.

2.2.1 Application Button

Application button is located in the top left corner of the desktop. A button press activates the following drop menu.



1. **{New}** Button
   Resolves to the **[File | New]** menu item.

2. **{Open…}** Button
   Resolves to the **[File | Open…]** menu item.

3. **{Save}** Button
   Resolves to the **[File | Save]** menu item.

4. **{Save As…}** Button
   Save the current Chartboard Workspace with a new name.

   Prompts the operator for new document name via the standard Windows File Selection Dialog. The operator will be prompted to overwrite document contents should an existing file be selected.

5. **{Save All}** Button
   Saves the Workspace and all Attachments currently marked as dirty.

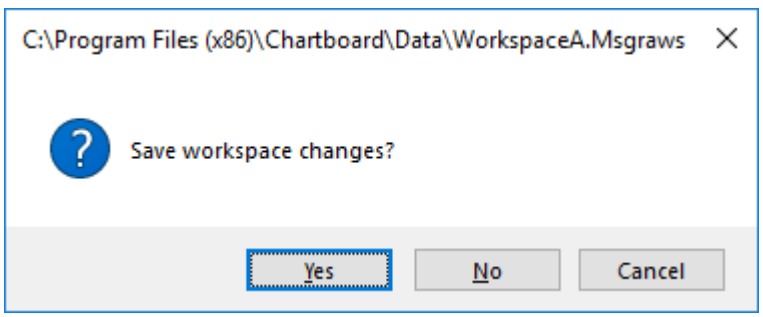
6. **{Print}** Button
   Resolves to the **[File | Print…]** menu item.

7. **{Close}** Button.
   Closes the current open Workspace and all attached Datastore, Models, Portfolio and Python Advisor maps. Operator will be prompted to save any unsaved file contents edits via the Unsaved Edits Message Box.

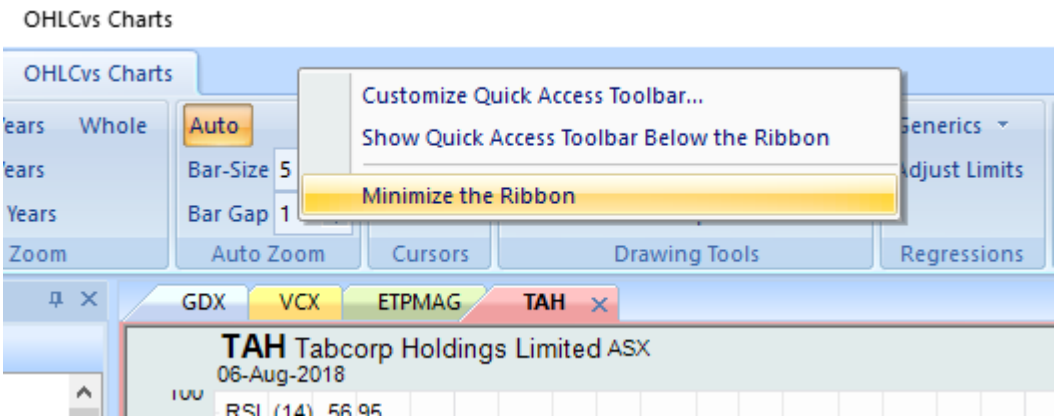
8. **{Recent Workspaces}** List
   Resolves to a list of recently loaded workspaces. Such Workspaces can be activated by clicking item in the list.

9. **{Exit}** Button
   Quit the application; prompts to save document.

   Closes any opened files and terminates the application. The operator will be prompted to save any unsaved file contents edits via the Unsaved Edits Message Box.



2.2.2 Ribbon Bar Context Menu.

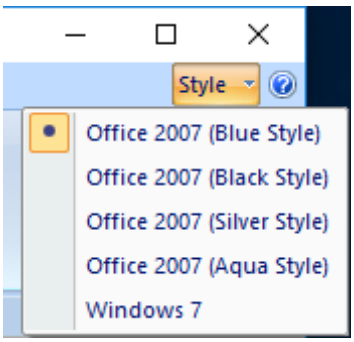


1. **[Customise Quick Access Toolbar...]** - Menu item
   Selects indicated style for Chartboard desktop.

2. **[Show Quick Access Toolbar Below the Ribbon]** - Menu item
   Activates to the modal Customise Quick Access Toolbar Dialog for further information.

3. **[Minimize the Ribbon]** - Menu item
   Minimises (checked) the Ribbon Bar showing only the primary tab labels.

2.2.3 Style Drop Down Menu Button



1. **{Office 2007 (Blue Style)}** - Menu item
   Selects indicated style for Chartboard desktop.

2. **{Office 2007 (Black Style)}** - Menu item
   Selects indicated style for Chartboard desktop.

3. **{Office 2007 (Silver Style)}** - Menu item
   Selects indicated style for Chartboard desktop.

4. **{Office 2007 (Aqua Style)}** - Menu item
   Selects indicated style for Chartboard desktop.

5. **{Windows 7}** - Menu item
   Selects indicated style for Chartboard desktop.

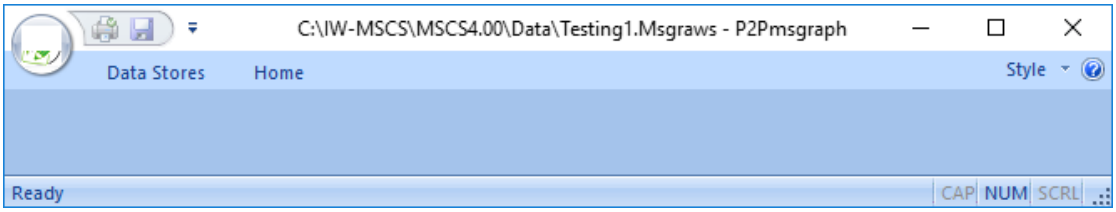
2.2.4 About Button

Display program information, version number and copyright.

Refer to the modal About Chartboard Dialog for further information.

2.3 Status Bar

The Status Bar is located across the bottom of the application.



The content and context of each item contained within the status bar is summarised below.

1. Context – Open an existing document
   Descriptive text summarising the current menu or toolbar item context.

2. CAP
   Keyboard CAP-lock key summary. Field contents toggled between CAP (on) and empty (off).

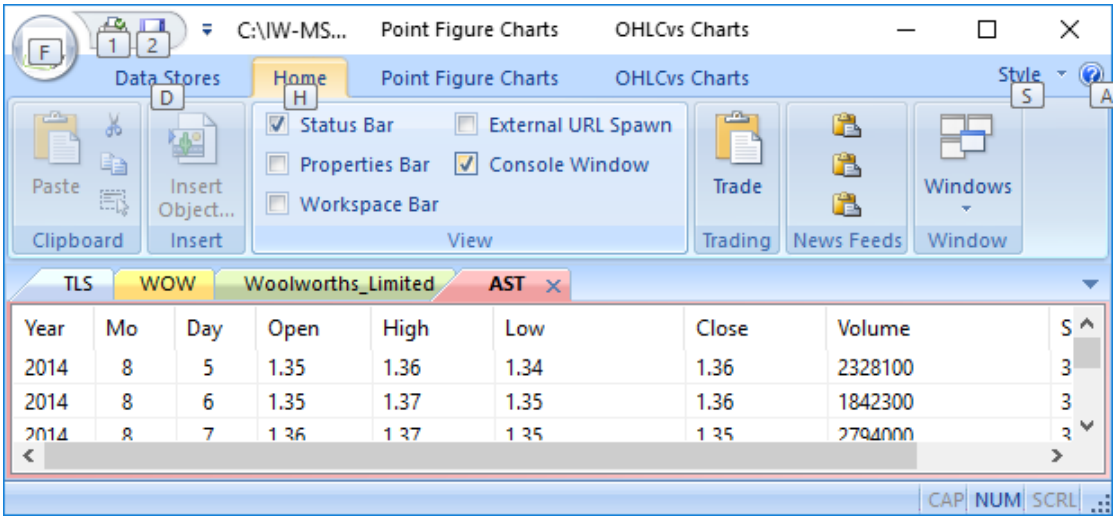
3. NUM
   Keyboard NUM-lock key summary. Field contents toggled between NUM (on) and empty (off).

4. SCRL
   Keyboard SCROLL-lock key summary. Field contents toggled between SCRL (on) and empty (off).

The Status Bar may be toggled on and off via the **[View | Status Bar]** menu item. The gripper located at the bottom left corner of the status bar may be used to resize the application frame.

2.4 Tabbed Views

The Tabbed Views are docked essentially in the centre application frame immediately above the Status Bar or the Outputs Control Bar depending upon their visibility.



The Tabbed Views host charts, lists, scanning results, automation scripts and embedded web pages via the following page types:

1. OHLCvs Chart Tabbed Views.
   Refer OHLCvs Chart Stack View for further details. Ribbon Bar OHLCvs tab is kept synchronised with selected OHLCvs Chart Tabbed View.

2. PFigure Chart Tabbed Views.
   Refer PFigure Chart View for further details. Ribbon Bar Scan tab is kept synchronised with selected PFigure Chart Tabbed View.

3. OHLCvs List Tabbed Views.
   Provides access to the raw OHLCvs data upon which the various charts are based. Refer OHLCvs List View for further details.

4. Embedded URL Tabbed Views.
   Refer Embedded URL View for further details.

5. Portfolio List Tabbed Views.
   Summarises and displays Portfolio positions in list form. Refer Portfolio List View for further details.

6. Modelling List Tabbed Views.
   Summarises and displays modelling positions in list form. Refer Modelling List View for further details.

7. Stock Scan Results Tabbed Views.
   Manages stock scans using Python Stock Scanning Scripts and displays results in annotated list control. Refer Stock Scanning View for further details. Ribbon Bar Scan tab is kept synchronised with selected Stock Scanning View.

8. Automation Script Tabbed Views.
   Provides viewing and editing facilities for automation scripts. Refer Automation Script View for further details.

Each tab supports its own single context menu for management of life cycle. Tabbed View are independent of each other order managed by dragging tab to the left or right with left mouse button depressed.

2.5 Explorers Dockable Control Bar

The Explorers Dockable Control Bar is usually docked to the left of the application frame immediately above the Status Bar and immediately below the Ribbon Bar.

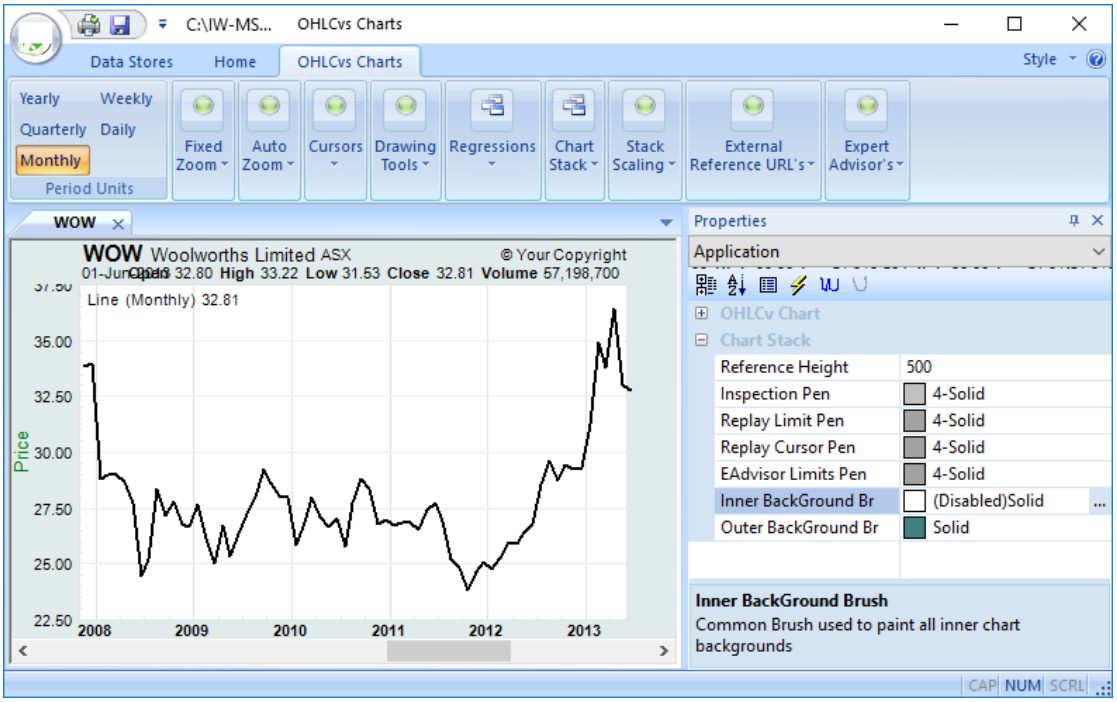


Tabs exist for the primary Workspace Explorer and associated Datastore, Portfolio, Modelling and Python Advisor tabs. All explorers and view windows have context and as such any left mouse click will activate Properties Grid for that context.

The visibility of the Explorers Dockable Control Bar is toggled on and off via the **Ribbon Bar >> Data Stores >> Workspace Bar** menu item. Control bar content is always synchronised with the currently opened Chartboard Workspace.

2.6 Properties Grid Dockable Control Bar

The Properties Grid Dockable Control Bar is usually docked to the right side of the application frame.



The visibility of the Properties Grid Dockable Control Bar is toggled on and off via the Ribbon Bar **[Home Tab] >> [View Panel] >> [Properties]** check box. Control bar content is always synchronised with the object addressed by the previous left mouse click.

2.7 Console Window

Activated via the **[Ribbon Bar >> Home Tab >> Toggle Views Panel >> Console Window]** check box.

Console Window primarily acts as a repository for application **stdout** messages in textural format. Such messages primarily originate from Python Advisor Python scripts.

2.8 Docked Outputs Window

Activated via the **[Ribbon Bar >> Home Tab >> Toggle Views Panel >> Output Bar]** check box.

Output Bar primarily acts as a repository for application activity messages in textural format. Such messages primarily originate from processing events.

2.9 Accelerators

The following forms a summary of the accelerators supported by the **Chartboard** application.

1. **Ctrl + N**
   [File | New] menu item.

2. **Ctrl + O**
   [File | Open…] menu item.

3. **Ctrl + S**
   [File | Save] menu item.

4. **Ctrl + P**
   [File | Print…] menu item.

5. **Alt + F4**
   [File | Exit] menu item.

6. **ESCAPE**
   Terminates Inspection, Replay and Python Advisor cursor mode and display.

7. **Alt + Alpha + [Alpha]** Ribbon Bar items
   Facility used to step through Category and Panel items. Refer Ribbon Bar Chapter for further details.

2.10 Drag and Drop

The following forms a summary of the "Drag and Drop" activities supported by the **Chartboard** application.

1. **OHLCvs** data sets onto **OHLCvs** and **PFigure** Charts.

   Such Charts MUST be checked for templating via the Workspace OHLCvs|PFigure Chart Configuration Dialog's respectively,

   Data sets originate from CBDatastore Attachments and are dropped over the active chart.

2. **OHLCvs** Data Sets onto **OHLCvs** Chart extra axis.

   Such Axis MUST be checked for templating via the Workspace OHLCvs|PFigure Chart-Axis Configuration Dialog's respectively,

   Data sets originate from CBDatastore Attachments and are dropped over the appropriate axis for the active chart.

3. **Python.pya** advisor scripts onto **OHLCvs** and **PFigure** Charts.

   Scripts originate from Script Map Attachments and are dropped over the active chart. Alternatively, such scripts may be dragged directly from Windows Explorer.

4. **Python.pys** scanning scripts onto scanner tabs.

   Scripts originate from Script Map Attachments and are dropped over the active scanner. Alternatively, such scripts may be dragged directly from Windows Explorer.

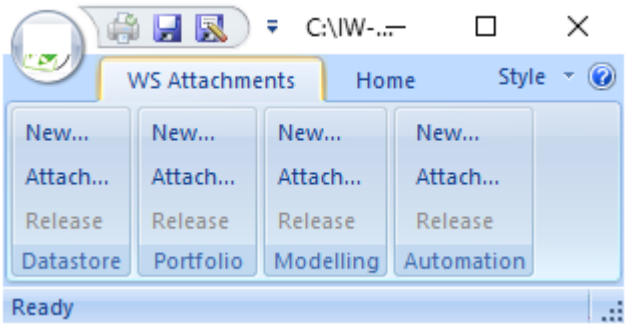
3. Ribbon Bar

The **Chartboard** application supports a ribbon bar with following tabs.

3.1 Attachments Tab

Additional to the primary Chartboard workspace file Chartboard supports the creation and attachment of the following four (4) types of files that contain supporting information.

- Datastore
  Raw stock data supporting the generation of charts.
- Portfolio
  Raw private Portfolio information for optional chart annotation.
- Modelling
  Generated and synthetic modelling data for analysis of trading strategies and annotation on charts.
- Automation Scripts
  Mapped automation scripts, in form of python Advisors and Scanners.



3.1.1 Datastore Panel

The **[Datastore]** Panel contains buttons for the creation, attachment and removal of Chartboard-Datastore folders flagged by the "**.Msgradsr**" file extension.

1. **{New…}** – Button.
   New Datastore.
   Create a new Chartboard-Datastore folder and attach it to the workspace.

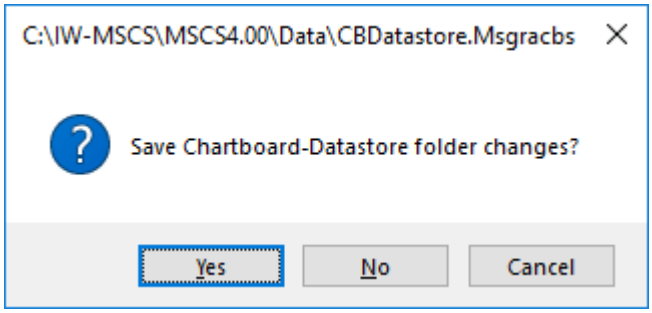
   Prompts the operator for the Datastore name via the standard Windows Folder Selection Dialog. Multiple Datastore's, up to a maximum of eight (8), may be concurrently attached.

2. **{Attach…}** – Button.
   Attach Datastore.
   Select an existing Chartboard-Datastore folder and attach it to the workspace.

   Prompts the operator for the Datastore name via the standard Windows Folder Selection Dialog. Multiple Datastore's, up to a maximum of eight (8), may be actively attached. Pressing button with Shift Key down activates the deprecated older style Personnel Data selection dialog.

3. **{Release}** – Button.
   Release Datastore.
   Releases the Chartboard-Datastore attachment folder with focus from the workspace.

   Should unsaved data exist Operator will be prompted to save prior to completion of operation.



   Released Chartboard-Datastore folders may be re-attached later via the **{Attach…}** button. Datastore's may be manually renamed and/or deleted externally via Windows File Explorer.

3.1.2 Portfolio Panel

The **[Portfolio]** Panel contains buttons for the creation, attachment and removal of Chartboard-Portfolio file flagged by the "**.Msgrapfo**" file extension.

1. **{New…}** – Button.
   New Portfolio.
   Create a new Chartboard-Portfolio file and attach it to the workspace.

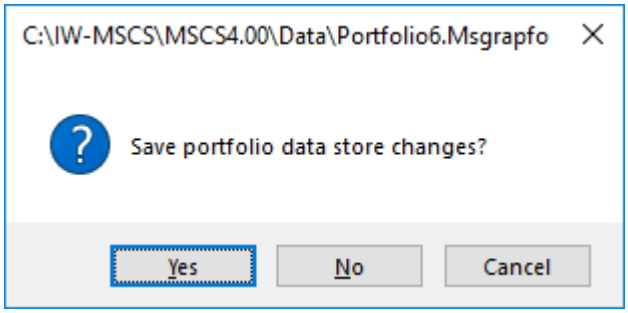
   Prompts the operator for the Portfolio name via the standard Windows Folder Selection Dialog. Multiple Portfolio's, up to a maximum of eight (8), may be concurrently attached.

2. **{Attach…}** – Button.
   Attach Portfolio
   Select an existing Chartboard-Portfolio file and attach it to the workspace.

   Prompts the operator for the Portfolio name via the standard Windows Folder Selection Dialog. Multiple Portfolio's, up to a maximum of eight (8), may be actively attached.

3. **{Release}** – Button.
   Release Portfolio.
   Releases the Chartboard-Portfolio attachment file with focus from the workspace.

   Should unsaved data exist Operator will be prompted to save prior to completion of operation.



Released Portfolio files may be re-attached later via the **{Attach…}** button. Portfolios may be manually renamed and/or deleted externally via Windows File Explorer.

3.1.3 Modelling Panel

The **[Modelling]** Panel contains buttons for the creation, attachment and removal of Chartboard-Modelling files flagged by the "**.Msgramod**" file extension.

1. **{New…}** – Button.
   New Model.
   Create a new Chartboard-Modelling file and attach it to the workspace.

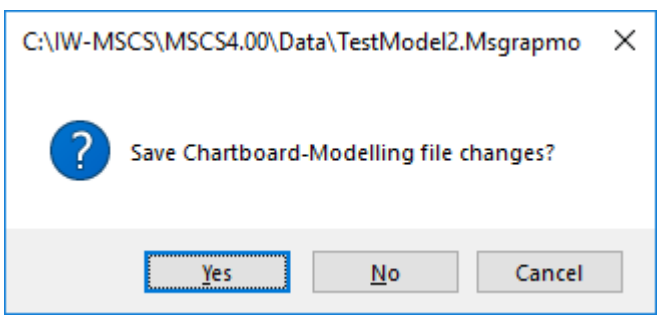
   Prompts the operator for the model store name via the standard Windows Folder Selection Dialog. Multiple Modelling files, up to a maximum of eight (8), may be concurrently attached.

2. **{Attach…}** – Button.
   Attach Model
   Select an existing Chartboard-Modelling file and attach it to the workspace.

   Prompts the operator for the Modelling file name via the standard Windows File Selection Dialog. Multiple Model's, up to a maximum of eight (8), may be actively attached.

3. **{Release}** – Button.
   Release Model.
   Release the Chartboard-Modelling attachment file with focus from the workspace.

   Should unsaved data exist Operator will be prompted to save prior to completion of operation.



Released Modelling files may be re-attached later via the **{Attach…}** button. Modelling files may be manually renamed/or deleted externally via Windows File Explorer.

3.1.4 Automation Panel

The **[Automation]** Panel contains buttons for the creation, attachment and removal of Chartboard-Automation script map files flagged by the "**.Msgrapym**" file extension. Python Script maps contain both Python Advisor (**.pya**) and Python Scanner (**.pys**) files.

1. **{New…}** – Button.
   New Automation Script map.
   Create a new Chartboard-Automation python scripts map file and attach it to the workspace.

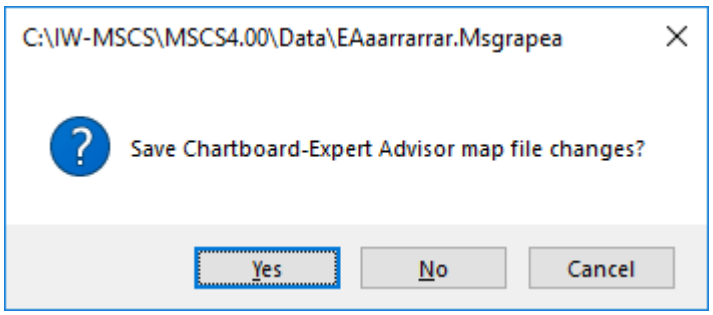
   Prompts the operator for the Automation Scripts Map name via the standard Windows File Selection Dialog. Multiple maps, up to a maximum of two (2), may be concurrently attached.

2. **{Attach…}** – Button.
   Attach Automation Script map
   Select an existing Chartboard-Automation python scripts map file and attach it to the workspace.

   Prompts the operator for the Automation Scripts Map name via the standard Windows File Selection Dialog. Multiple maps, up to a maximum of two (2), may be actively attached.

3. **{Release}** – Button.
   Release Automation Scripts map.
   Releases the Chartboard-Automation attachment file with focus from the workspace.

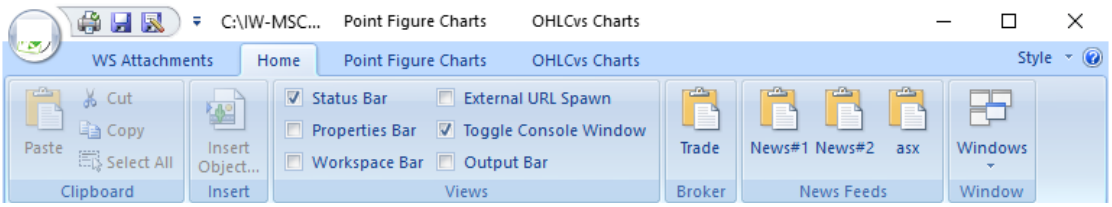
   Should unsaved data exist Operator will be prompted to save prior to completion of operation.



Released Automation Scripts Map files may be re-attached later via the **{Attach…}** button. Automation Script Maps may be manually renamed and/or deleted externally via Windows File Explorer.

3.2 Home Category

Selected parameters and settings are common across the Workspace and serialised in the Workspace file.



3.2.1 Clipboard Panel

The **[Clipboard]** Panel contains buttons for copying Chartboard images to the clipboard.

1. **{Copy Image}** – Button.
   Copy whole Chartboard image.
   Copy whole Chartboard image to clipboard from where it can subsequently be pasted to Word, Paint etc.

3.2.2 Insert Panel

3.2.3 Views Panel

The **[Views]** panel manages the visibility of the various Desk Top components and behaviour as described below.

1. **{Status Bar}** – Check Box.
   Toggle Status Bar
   Show or hide the status bar.

   Refer Status Bar Resource for further implementation details. The checked or non-checked status of the panel item summarises the selection status.

2. **{Properties Bar}** – Check Box.
   Toggle Properties Bar
   Show or hide the properties grid bar.

   Refer Properties Grid Dockable Control Bar for further implementation details. The checked or non-checked status of the panel item summarises the selection status.

3. **{Workspace Bar}** – Check Box.
   Toggle Workspace Bar
   Show or hide the workspace explorers bar.

   Refer Explorers Dockable Control Bar for further implementation details. The checked or non-checked status of the panel item summarises the selection status.

4. **{External URL Spawn}** – Check Box.
   Toggle URL Spawn
   Toggle URL spawn between internal tabbed views and external default browser.

   Chartboard supports numerous customisable URL's that may be displayed internally in a tabbed view or externally in the default browser.

5. **{Console}** – Check Box.
   Toggle Console Window
   Show or hide the console window used by python automation scripts.

   Refer Console Window for further implementation details. The checked or non-checked status of the panel item summarises the selection status.

6. **{Outputs Bar}** – Check Box.
   Toggle Outputs Bar
   Show or hide the outputs bar.

   Refer Workspace Explorer Configuration Dialog for further implementation details. The checked or non-checked status of the menu item summarises the selection status.

3.2.4 Broker Panel

The **[Broker]** Panel contains a single button for activating your broker's web page.

Spawned web pages may be instantiated with a [Tab View] or externally in your default browser according to the **Ribbon Bar [Views Panel} >> External URL Spawn** check box setting.

1. **{Broker}** – Button.
   Broker
   Activate configured trading broker URL.

   Refer Docked Outputs Window for further implementation details. The checked or non-checked status of the menu item summarises the selection status.

The broker web page URL used is managed through the Workspace Explorer Configuration Dialog.

3.2.5 News Feeds Panel

The **[News Feed]** Panel contains buttons for activating configured news feed pages.

Spawned web pages may be instantiated in a **[Tab View]** or externally in your default browser according to the **Ribbon Bar [Home]** Tab >> **[Toggle Views]** Panel **>> [External URL Spawn]** Check Box setting.

1. **{News Feed#1}** – Button.
   News Feed#1

Activate configured news feed #1 URL.

2. **{News Feed#2}** – Button.
   News Feed#2
   Activate configured news feed #2 URL.

3. **{News Feed#3}** – Button.
   News Feed#3
   Activate configured news feed #3 URL.

The **[News Feed]** web page URLs used are managed through the Workspace Explorer Configuration Dialog.

3.2.6 Tools Panel

The **[Tools]** Panel contains buttons for activating Chartboard application tools.

1. **{Resize Chartboard…}** – Command.
   Resize Chartboard
   Resize Chartboard from a list of standard presets.

   Activates the Chartboard Resizing and Presets Dialog.

3.2.7 Window Panel

3.3 OHLCvs Charts Category

Selected parameters and settings are unique to OHLCvs chart with focus. Each chart is serialised with its own unique set.



3.3.1 Period Units Panel

The **[Period Units]** Panel contains buttons for selecting OHLCvs chart display and calculation units. Currently selected units' button is hi-lighted.

1. **{Yearly}** – Button.
   Yearly Period Units
   Selects Yearly Period units for whole chart stack.

2. **{Quarterly}** – Button.
   Quarterly Period Units
   Selects Quarterly Period units for whole chart stack.

3. **{Monthly}** – Button.
   Monthly Period Units
   Selects Monthly Period units for whole chart stack.

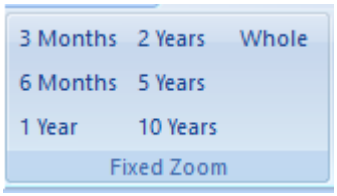
4. **{Weekly}** – Button.
   Weekly Period Units
   Selects Weekly Period units for whole chart stack.

5. **{Daily}** – Button.
   Daily Period Units
   Selects Daily Period units for whole chart stack.

Selection is applied and persists for current OHLCvs **{Tab View}** only, selections for other tabs remain unaltered. All calculations and zoom settings are kept synchronised with selected units. Button disabled if units not supported by data.

3.3.2 Zoom Period Panel

The **[Fixed Zoom]** Panel contains buttons and spin controls used for fixed sizing of OHLCvs chart display.



1. **{3 Months}** – Button.
   3 Months
   Use 3 months zoom interval.

2. **{6 Months}** – Button.
   6 Months
   Use 6 months zoom interval.

3. **{1 Year}** – Button.
   1 Year
   Use 1 year zoom interval.

4. **{2 Years}** – Button.
   2 Years
   Use 2 year zoom interval.

5. **{5 Years}** – Button.
   5 Years
   Use 5 years zoom interval.

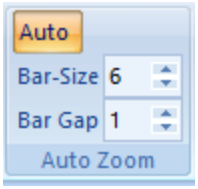
6. **{10 Years}** – Button.
   10 Years
   Use 10 years zoom interval.

7. **{Whole}** – Button.
   Whole dataset
   Use whole dataset zoom interval, no scrolling

Selection applied immediately for current OHLCvs {Tab View} only, selections for other tabs retain their current selection.

3.3.3 Auto Zoom Panel

The **[Auto Zoom]** Panel contains buttons and spin controls used for automatic sizing of OHLCvs chart display.



[Auto Zoom] group supports following items.

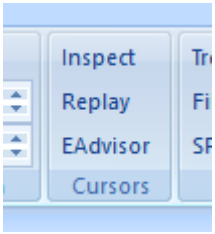
1. **{Auto}** – Button.
   Auto Size.
   Auto size according to current Bar-Size and Gap selections.

2. **{Bar-Size}** – Spin Control.
   Bar Width.
   Width of bars, in pixels, used for auto scaling calculation

3. **{Bar Gap}** – Spin Control.
   Bar Gap.
   Bar gap, in pixels, used for auto scaling calculations.

Selections are applied immediately for current OHLCvs **{Tab View}** only, selections for other tabs remain unaltered.

3.3.4 Cursors Panel



The **[Cursors]** Panel contains buttons for OHLCvs chart stack cursor selection. Buttons for currently selected cursors are hi-lighted.

1. **{Inspect}** – Button.
   Inspection Cursor
   Toggles chart inspection cursor on and off, alternatively use the ESCAPE key to cancel.

   Inspection tracks the mouse position as it moves over the chart stack. Position can be both frozen and re-activated via left mouse clicks. Chart data values are annotated to reflect inspection cursor position.

2. **{Replay}** – Button.
   Replay Cursor
   Toggles chart replay cursor on and off, alternatively use the ESCAPE key to abandon replay mode.

   Limits can simply be adjusted via the **[Market Replay]** menu items in any Chart Context Menu for OHLCvs Category charts. Replay cursor is moved backwards and forward via the left and right arrow keys.

3. **{Advisor}** – Button.
   Python Advisor Cursor
   Toggles python automation advisor limits on and off for chart, alternatively use the ESCAPE key to discard.

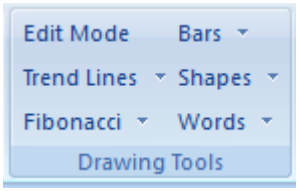
   Automation Advisor limits are observed by python scripts to define the chart periods over which they are effective. Limits can simply be adjusted via the **[Advisor ► Model Begin]** and **[Model End]** items in any Chart Context

Menu for OHLCvs Category charts.

Selections are applied immediately for currently active OHLCvs **{Tab View}** only, selections for other tabs remain unaltered. Multiple cursors may be active simultaneously, ESCAPE key cancels all active inspection cursors.

3.3.5 Drawing Tools Panel

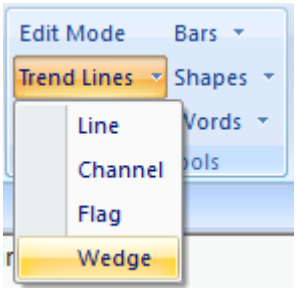
The **[Drawing Tools]** Panel contains buttons and drop-down menus for selection of various objects, subsequently dragged onto the OHLCvs chart stack.



1. **{Edit Mode}** – Button.
   Edit Mode
   Toggles drawing tool edit mode, alternatively ESCAPE key cancels limits adjustment.

   Drawing tool edit mode can also be toggled on (checked) via the **[Edit…]** menu item from the context menu for the drawing tool item.

{Trend Lines} - Button and drop-down menu.
Trendline Drawing Tools.
Select and move Trend-Line drawing tool onto chart stack, with left mouse click to fix or ESCAPE to abandon.



2. **[Line] -** Menu item.
   Line Tool
   Select and drag Line drawing tool onto chart stack, use left mouse click to fix or ESCAPE to abandon.

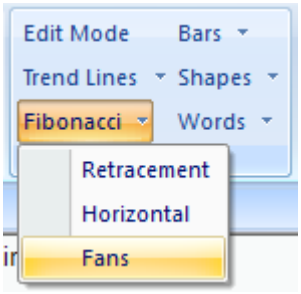
3. **[Channel]** - Menu item.
   Channel Tool
   Select and drag Channel drawing tool onto chart stack, use left mouse click to fix or ESCAPE to abandon.

4. **[Flag]** - Menu item.
   Flag Tool
   Select and drag Flag drawing tool onto chart stack, use left mouse click to fix or ESCAPE to abandon.

5. **[Wedge]** - Menu item.
   Wedge Tool
   Select and drag Wedge drawing tool onto chart stack, use left mouse click to fix or ESCAPE to abandon.

{Fibonacci} - Button- and drop-down menu.
Fibonacci Drawing Tools.
Select and drag Fibonacci drawing tool onto chart stack, use left mouse click to fix or ESCAPE to abandon.

6. **[Retracement]** – Menu item.
Fibonacci Retracement.
Select and drag vertical Fibonacci Retracement drawing tool onto chart stack, use left mouse click to fix or ESCAPE to abandon.

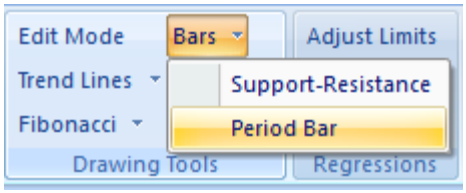


7. **[Horizontal]** – Menu item.
Fibonacci Time-Line
Select and drag horizontal Fibonacci time-line drawing tool onto chart stack, use left mouse click to fix or ESCAPE to abandon.

8. **[Fans]** – Menu item.
Fibonacci Fan
Select and drag Fibonacci Fan drawing tool onto chart stack, use left mouse click to fix or ESCAPE to abandon.

{Bars} - Button- and drop-down menu.
Bar Drawing Tools.
Select and drag Bars drawing tool onto chart stack, use left mouse click to fix or ESCAPE to abandon.

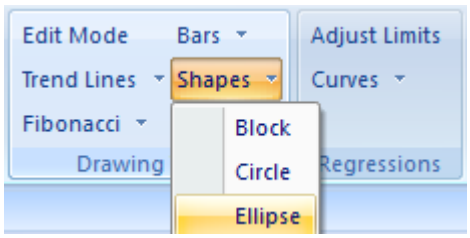
9. **[Support-Resistance]** – Menu item.
Support-Resistance Bar
Select and drag Support-Resistance bar drawing tool onto chart stack, with left mouse click to fix or ESCAPE to abandon.



10. **[Period Bar]** – Menu item.
Period Bar
Select and drag Period bar drawing tool onto chart stack, use left mouse click to fix or ESCAPE to abandon.

{Shapes} - Button- and drop-down menu.
Shape Drawing Tools.
Select and drag Shapes drawing tool onto chart stack, use left mouse click to fix or ESCAPE to abandon.

11. **[Circle]** – Menu item.
Circle Shape
Select and drag Circular shape drawing tool onto chart stack, with left mouse click to fix or ESCAPE to abandon.

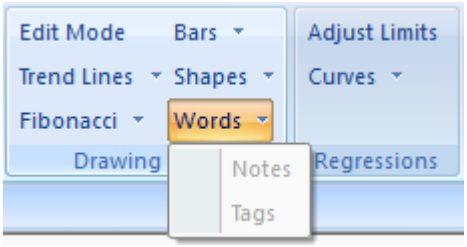


12. **[Ellipse]** – Menu item.
Ellipse Shape
Select and drag Ellipse shape drawing tool onto chart stack, use left mouse click to fix or ESCAPE to abandon.

13. **[Block]** – Menu item.
    Block Shape
    Select and drag Block shape drawing tool onto chart stack, use left mouse click to fix or ESCAPE to abandon.

{Words} - Button- and drop-down menu.
Word Drawing Tools.
Select and drag Words drawing tool onto chart stack, use left mouse click to fix or ESCAPE to abandon.

14. **[Tag]** – Menu item.
    Tag
    Select and drag Tag drawing tool onto chart stack, with left mouse click to fix or ESCAPE to abandon.



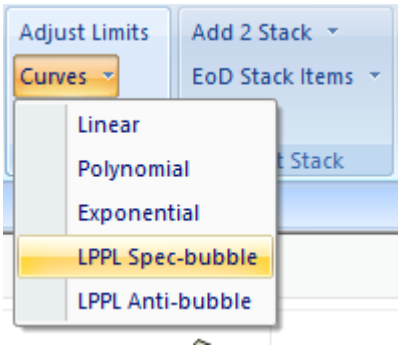
15. **[Notes]** – Menu item.
    Notes.
    Select and drag Notes drawing tool onto chart stack, use left mouse click to fix or ESCAPE to abandon.

Drawing Tool objects are managed and edited via the Drawing Tool Context Menu items and the Drawing Tool Properties Grid. Drawn objects are fixed to the Period Units under which they are originally created always ensuring visibility.

3.3.6 Regressions Panel

The **[Regressions]** Panel contains buttons and drop-down menus for selection of various curves, subsequently dragged onto the OHLCvs chart stack.

1. **{Adjust Limits}** – Button.
   Toggles regression limits edit mode, alternatively ESCAPE key cancels limits adjustment.



{Curves} - Button and drop-down menu.
Regression Curves.
Select and drag Regression Curve onto chart stack, use left mouse click to fix or ESCAPE to abandon.

2. **[Linear]** - Menu item.
   Linear Regression.
   Select and drag linear regression limits onto chart, use left mouse click to fix or ESCAPE to abandon.

3. **[Polynomial]** - Menu item.
   Polynomial Regression.
   Select and drag polynomial regression limits onto chart, use left mouse click to fix or ESCAPE to abandon.

4. **[Exponential]** - Menu item.
   Exponential Regression.
   Select and drag exponential regression limits onto chart, use left mouse click to fix or ESCAPE to abandon.

5. **[LPPL Spec-Bubble]** - Menu item.
   LPPL Spec-Bubble Regression.
   Select and drag LPPL Spec-Bubble regression limits onto chart, use left mouse click to fix or ESCAPE to abandon.

6. **[LPPL Anti-Bubble]** - Menu item.
   LPPL Anti-Bubble Regression.
   Select and drag LPPL Anti-Bubble regression limits onto chart, use left mouse click to fix or ESCAPE to abandon.

Regression curves are managed and edited via the Regression Curve Context Menu items and the Regression Curve Properties Grid. Curves are fixed to the Period Units under which they are originally created ensuring visibility.

3.3.7 Chart Stack Panel

The **[Chart Stack]** Panel contains buttons and subsequent drop-down list for the maintenance of chart stack items.

3.3.7.1 Add to Stack – Drop down list.

{Add to Stack} button and drop-down menu.
Append Chart to Stack
Activates list of charts that can be appended to the stack, summarises current selections.

1. **[Aroon]** – Menu item.
   Add Aroon
   Add Aroon chart to bottom of chart stack.

2. **[ADX]** – Menu item.
   Add ADX
   Add Average Directional Index (ADX) chart to bottom of chart stack.

3. **[ATR]** – Menu item.
   Add ATR
   Add Active True Range (ATR) chart to bottom of chart stack.

4. **[CCI]** – Menu item.
   Add CCI
   Add Commodity Channel Indicator (CCI) chart to bottom of chart stack.

5. **[Chaikin]** – Menu item.
   Add Chaikin
   Add Chaikin chart to bottom of chart stack.

6. **[CMF]** – Menu item.
   Add CMF
   Add Chaikin Money Flow (CMF) chart to bottom of chart stack.

7. **[Coppock]** – Menu item.
   Add Coppock
   Add Coppock chart to bottom of chart stack.

8. **[EFI]** – Menu item.
   Add EFI
   Add Elder Force Index (EFI) chart to bottom of chart stack.

9. **[EhlerFT]** – Menu item.
   Add EhlerFT
   Add Ehler Fisher Transform (EhlerFT) indicator chart to bottom of chart stack.

10. **[DPO]** – Menu item.
    Add DPO
    Add Detrended Price Oscillator (DPO) to bottom of chart stack.

11. **[KST]** – Menu item.
    Add KST
    Add Pring's Know Sure Thing (KST) chart to bottom of chart stack.

12. **[MACD]** – Menu item.
    Add MACD
    Add Moving Average Cumulative Distribution (MACD) chart to bottom of chart stack.

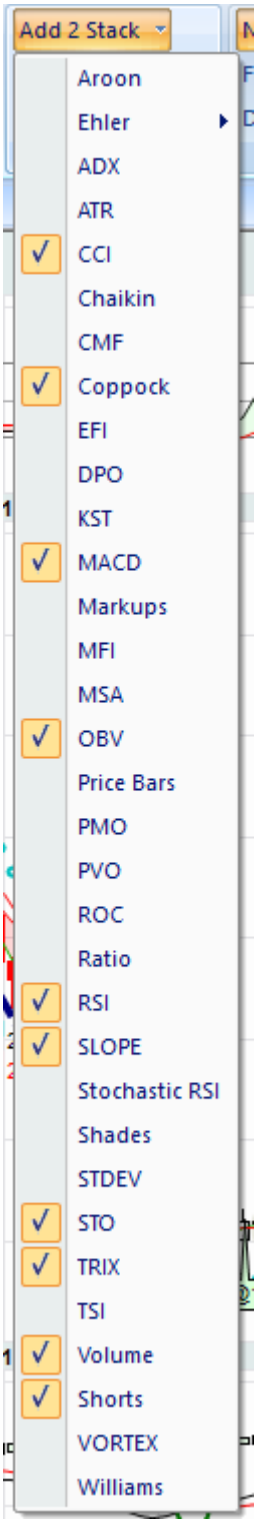
13. **[Markups]** – Menu item.
    Add Markups
    Add Markups chart to bottom of chart stack.

14. **[MFI]** – Menu item.
    Add MFI
    Add Money Flow Index (MFI) chart to bottom of chart stack.

15. **[MSA]** – Menu item.
    Add MSA
    Add Momentum Structural Analysis (MSA) chart to bottom of chart stack.

16. **[OBV]** – Menu item.
    Add OBV
    Add On-Balance Volume (OBV) chart to bottom of chart stack.

17. **[Price Bars]** – Menu item.
    Add Price Bars



Add Price Bars chart to bottom of chart stack.

18. **[PMO]** – Menu item.
    Add PMO
    Add Price Momentum Oscillator (PMO) chart to bottom of chart stack.

19. **[PPO]** – Menu item.
    Add PPO
    Add Percentage Price Oscillator (PPO) chart to bottom of chart stack.

20. **[PVO]** – Menu item.
    Add PVO
    Add Percentage Volume Oscillator (PVO) chart to bottom of chart stack.

21. **[ROC]** – Menu item.
    Add ROC
    Add Rate of Change (ROC) chart to bottom of chart stack.

22. **[Ratio]** – Menu item.
    Add Ratio
    Add Ratio chart to bottom of chart stack.

23. **[RSI]** – Menu item.
    Add RSI
    Add Relative Strength Index (RSI) chart to bottom of chart stack.

24. **[SLOPE]** – Menu item.
    Add SLOPE
    Add Linear Regression SLOPE oscillator chart to bottom of chart stack.

25. **[Stochastic RSI]** – Menu item.
    Add Stochastic RSI
    Add Stochastics RSI chart to bottom of chart stack.

26. **[Shades]** – Menu item.
    Add Shades
    Add Shaded intervals chart to bottom of chart stack.

27. **[Shorts]** – Menu item.
    Add Shorts chart to bottom of chart stack.

28. **[STDEV]** – Menu item.
    Add STDEV
    Add Standard Deviation or Volatility (STDEV) chart to bottom of chart stack.

29. **[STO]** – Menu item.
    Add STO
    Add Stochastics Oscillator (STO) chart to bottom of chart stack.

30. **[TRIX]** – Menu item.
    Add TRIX
    Add Triple Smoothed Exponential (TRIX) oscillator chart to bottom of chart stack.

31. **[TSI]** – Menu item.
    Add TSI
    Add True Strength Indicator (TSI) chart to bottom of chart stack.

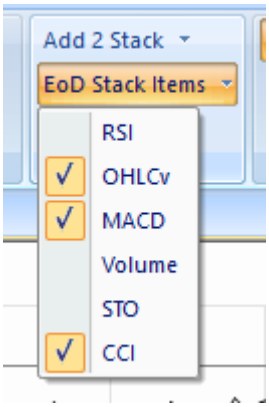
32. **[Volume]** – Menu item.
    Add Volume
    Add Volume chart to bottom of chart stack.

33. **[VORTEX]** – Menu item.
    Add VORTEX
    Add VORTEX indicator to bottom of chart stack.

34. **[Williams]** – Menu item.
    Add Williams
    Add Williams's % R indicator to bottom of chart stack.

Hidden charts retain configuration properties and may be re-activated in place. Deleted charts when re-activated receive a default set of parameters.

3.3.7.2 EoD Stack Items – Drop down list



{EoD Stack Items} button and drop-down menu.
Enable or Disable chart in list of selected chart stack items\nEoD Chart Stack Item.

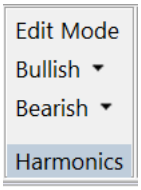
Drop down list contains all charts, both active and hidden, that currently exist in the chart stack for the active OHLCvs View Tab.

List contents are ordered by position within the chart stack with visible (enabled) charts checked.

Items are added to the list via the **{Add 2 Stack}** button and removed from the list via the **{Delete…}** from the relevant Chart Context Menu.

3.3.8 Harmonics Panel

The **[Harmonics]** Panel contains buttons and subsequent drop-down menu lists for the maintenance of bullish and bearish harmonic items.



1. **{Edit Mode}** – Button.
   Edit Mode
   Toggles harmonic tool edit mode on and off, alternatively ESCAPE key cancels limits edit mode.

   Harmonic limits edit mode can also be toggled on (checked) via

the **[Edit…]** menu item from the context menu for the harmonic tool item.

2. **{Bullish}** – Button- and drop-down menu
   Bullish Harmonics
   Select and drag Bullish Harmonic drawing tool, from drop down menu, onto chart stack, use left mouse click to fix or ESCAPE to abandon.

   Harmonic edit mode can also be toggled on (checked) via the **[Edit…]** menu item from the context menu for the harmonic tool item.

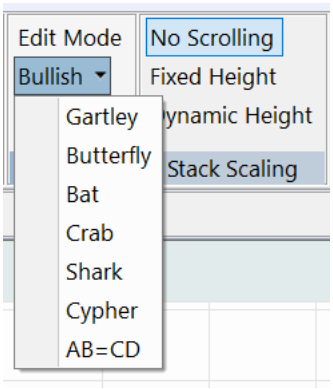
3. **{Bearish}** – Button- and drop-down menu.
   Bearish Harmonics
   Select and drag Bearish Harmonic drawing tool, from drop down menu, onto chart stack, use left mouse click to fix or ESCAPE to abandon.

   Harmonic edit mode can also be toggled on (checked) via the **[Edit…]** menu item from the context menu for the harmonic tool item.

3.3.8.1 Bullish Harmonics Drop-Down Menu

{Bullish} - Bullish Harmonics
Select and drag Bullish Harmonic drawing tool, from drop down menu, onto chart stack, use left mouse click to fix or ESCAPE to abandon.

Harmonic edit mode can also be toggled on (checked) via the **[Edit…]** menu item from the context menu for the harmonic tool item.



1. **[Gartley] -** Menu item.
   Bullish Gartley Tool
   Select and drag bullish Gartley harmonic drawing tool onto chart stack, use left mouse click to fix or ESCAPE to abandon.

2. **[Butterfly]** - Menu item.
   Bullish Butterfly Tool
   Select and drag bullish Butterfly harmonic drawing tool onto chart stack, use left mouse click to fix or ESCAPE to abandon.

3. **[Bat]** - Menu item.
   Bullish Bat Tool
   Select and drag bullish Bat harmonic drawing tool onto chart stack, use left mouse click to fix or ESCAPE to abandon.

4. **[Crab]** - Menu item.
   Bullish Crab Tool
   Select and drag bullish Crab harmonic drawing tool onto chart stack, use left mouse click to fix or ESCAPE to abandon.

5. **[Shark]** - Menu item.
   Bullish Shark Tool

Select and drag bullish Shark harmonic drawing tool onto chart stack, use left mouse click to fix or ESCAPE to abandon.

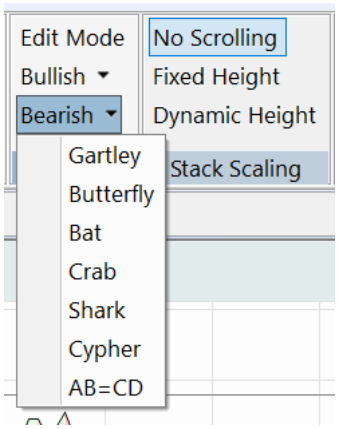
6. **[Cypher]** - Menu item.
   Bullish Cypher Tool
   Select and drag bullish Cypher harmonic drawing tool onto chart stack, use left mouse click to fix or ESCAPE to abandon.

7. **[AB=CD]** - Menu item.
   Bullish AB=CD Tool
   Select and drag bullish AB=CD harmonic drawing tool onto chart stack, use left mouse click to fix or ESCAPE to abandon.

3.3.8.2 Bearish Harmonics Drop-Down Menu

{Bearish} - Bearish Harmonics
Select and drag Bearish Harmonic drawing tool, from drop down menu, onto chart stack, use left mouse click to fix or ESCAPE to abandon.

Harmonic edit mode can also be toggled on (checked) via the **[Edit…]** menu item from the context menu for the harmonic tool item.



1. **[Gartley] -** Menu item.
   Bearish Gartley Tool
   Select and drag bearish Gartley harmonic drawing tool onto chart stack, use left mouse click to fix or ESCAPE to abandon.

2. **[Butterfly]** - Menu item.
   Bearish Butterfly Tool
   Select and drag bearish Butterfly harmonic drawing tool onto chart stack, use left mouse click to fix or ESCAPE to abandon.

3. **[Bat]** - Menu item.
   Bearish Bat Tool
   Select and drag bearish Bat harmonic drawing tool onto chart stack, use left mouse click to fix or ESCAPE to abandon.

4. **[Crab]** - Menu item.
   Bearish Crab Tool
   Select and drag bearish Crab harmonic drawing tool onto chart stack, use left mouse click to fix or ESCAPE to abandon.

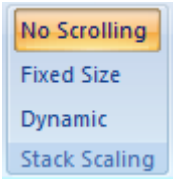
5. **[Shark]** - Menu item.
   Bearish Shark Tool
   Select and drag bearish Shark harmonic drawing tool onto chart stack, use left mouse click to fix or ESCAPE to abandon.

6. **[Cypher]** - Menu item.
   Bearish Cypher Tool

Select and drag bearish Cypher harmonic drawing tool onto chart stack, use left mouse click to fix or ESCAPE to abandon.

3.3.9 Stack Scaling Panel

The **[Stack Scaling]** Panel contains buttons for OHLCvs chart stack sizing and scrolling. Button for currently selected stack scaling type is hi-lighted.



[Stack Scaling] Panel supports following items.

1. **{No Scrolling}** – Button.
   No Scrolling.
   Selects no scrolling, resize chart stack to fill available view window height.

   Height relativities for each chart stack component is maintained. Individual chart sizes may be increased or decreased depending upon total chart stack height and space available.

2. **{Fixed Size}** – Button.
   Fixed size
   Selects fixed height, resize chart stack to pre-defined fixed height. Scrolls if fixed height exceeds available space.

   Height relativities for each chart stack component is maintained. Individual chart sizes may be increased or decreased depending upon total chart stack height and nominated fixed height.

3. **{Dynamic}** – Button.
   Dynamic height.
   Selects dynamic height, resize chart stack to reflect sum of all components. Scrolls if dynamic height exceeds available space.

   Individual allocated chart sizes are maintained.

Selections are applied immediately for currently active OHLCvs **{Tab View}** only, selections for other tabs remain unaltered.

3.3.10 External Reference URL's Panel.

The **[External Reference URL's]** Panel contains buttons for activating configured external reference pages for the primary stock.



Spawned web pages may be instantiated within a [Tab View] or externally in default browser according to the **Ribbon Bar [Home]** Tab >> **[Views]** Panel >> **[External URL Spawn]** check box setting.

1. **{Home Page}** – Button.
   Home Page
   Activate configured home page URL for the primary stock.

2. **{Wiki Page}** – Button.
   Wiki Page
   Activate configured wiki page URL for the primary stock.

3. **{Stock Page#1}** – Button.
   Web Reference Page#1
   Activate configured web reference page #1 URL for the primary stock.

4. **{Stock Page#2}** – Button.
   Web Reference Page#2
   Activate configured web reference page #2 URL for the primary stock.

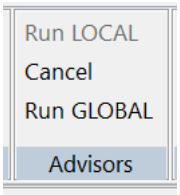
5. **{Stock Page#3}** – Button.
   Web Reference Page#3
   Activate configured web reference page #3 URL for the primary stock.

6. **{Stock Page#4}** – Button.
   Web Reference Page#4
   Activate configured web reference page #4 URL for the primary stock.

The **[External Stock Ref]** Panel web page URL's used are managed through the Datastore Market-OHLCvs Dataset Configuration Dialog for the primary stock.

3.3.11 Advisors Panel

The **[Advisors]** Panel contains buttons for managing python advisor automation scripts.



1. **{Run LOCAL}** – Button.
   Run last LOCAL advisor script.
   Runs the last LOCAL python advisor script for the active chart with focus.

   Enhanced background for an active python advisor script. Disabled when advisor script not previously activated. Scripts may initially be activated by left mouse double click over item in the Automation Explorer Tree. Alternatively, the **[Run LOCAL]** item from the Python Advisor Script Context Menu achieves same results.

   Selected LOCAL script is serialised for chart and persists until a subsequent LOCAL script is selected.

2. **{Cancel}** – Button.
   Cancel active advisor script
   Cancel the active python advisor script and clear all annotations.

   Enhanced for active LOCAL or GLOBAL python advisor script, otherwise normal colour scheme.

3. **{Run GLOBAL}** – Button.
   Run last GLOBAL advisor script.

Runs the last GLOBAL python advisor script for the active chart with focus.

Enhanced background for active python advisor script. Disabled when advisor script not previously activated. Scripts may initially be activated by left mouse double click over item in the Automation Explorer Tree. Alternatively, the **[Run GLOBAL]** item from the Python Advisor Script Context Menu achieves same results.

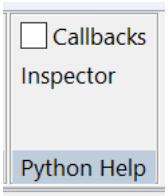
Selected GOBAL script is serialised for all charts and persists until a subsequent GLOBAL script is selected.

Activated python advisor scripts usually run to completion and can be re-run via the **{Run LOCAL** or **GLOBAL}** Buttons. Alternatively, when in **{Replay}** mode the active advisor script is automatically re-run with each **{Replay}** step via left and right arrow keys.

3.3.12 Python Help Panel

The **[Python Help]** Panel contains items for debugging python chart automation scripts.

1. **{Callbacks}** – Button.
   Python Callbacks.
   Toggles display of Python Advisor callbacks in Diagnostics Console Window.

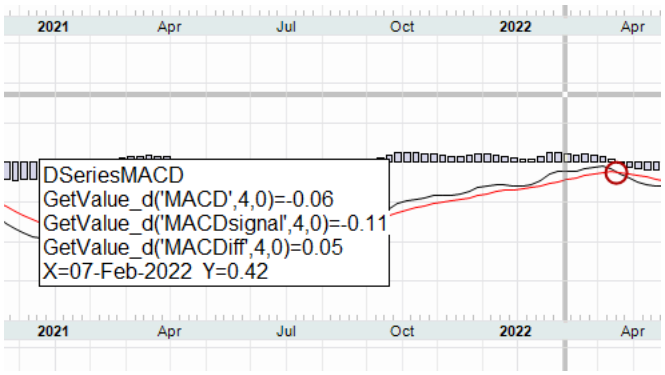


   Python scripts interact with Chartboard via a series of pre-determined callbacks. Observing these scripts can be assisted by viewing their progress in the Diagnostics Console Window.

   Selection status is unique to the current chart.

2. **{Clear Console}** – Button.
   Clear Console.
   Clears the existing contents of the Diagnostics Console Window.

3. **{Inspector}** – Button.
   Inspection Cursor
   Toggles chart inspection cursor on and off, alternatively use the ESCAPE key to cancel.

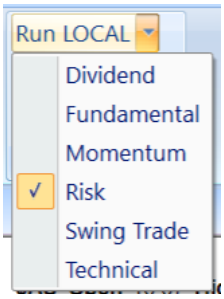


   The Inspection cursor tracks the mouse position as it moves over the chart stack. Position can be both frozen and re-activated via left mouse clicks. Chart data values are annotated in ***"python format"*** to reflect inspection cursor position.

3.3.13 AI URL's

The **[Ai URL's…]** Panel contains buttons for managing python advisor automation scripts.

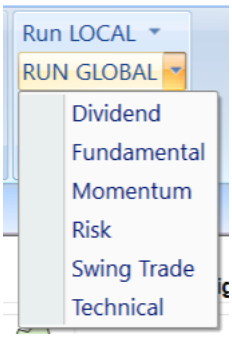
1. **{Run LOCAL}** – Button.
   Run last LOCAL URL command.
   Runs the last LOCAL URL command selected from the drop-down list associated with button.

   Use the drop-down menu option to select new Ai URL command. Alternatively, the **[Run Ai URL]** item from the Datastore Explorer OHLCvs Item Context Menu achieves similar results.

   Selected LOCAL URL command is serialised for chart and persists until a subsequent LOCAL command is selected.

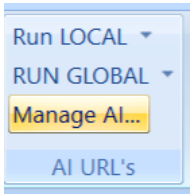
2. **{Run GLOBAL}** – Button.
   Run last GLOBAL URL command.
   Runs the last GLOBAL URL command selected from the drop-down list associated with button.

   Use the drop-down menu option to select new Ai URL command. Alternatively, the **[Run Ai URL]** item from the Datastore Explorer OHLCvs Item Context Menu achieves similar results.

   Selected GOBAL URL command serialised for workspace and persists until a subsequent GLOBAL command is selected.

3. **{Manage AI…}** – Button.
   Activates the Ai URL's Dialog for this chart within the context of this workspace.

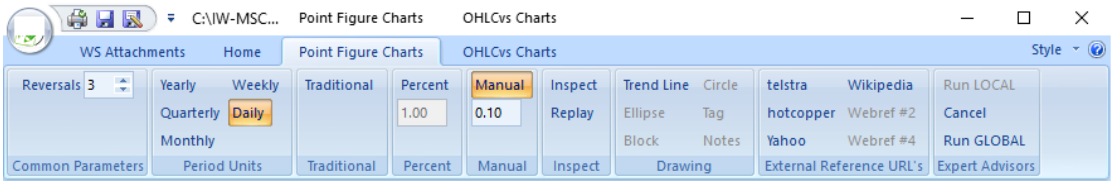
   The managed Ai URL's list is common across all charts for workspace.

Activated python advisor scripts usually run to completion and can be re-run via the **{Run LOCAL** or **GLOBAL}** Buttons. Alternatively, when in **{Replay}** mode the active advisor script is automatically re-run with each **{Replay}** step via left and right arrow keys.

Selections are applied immediately for currently active **{Tab View}** only, selections for other tabs remain unaltered. Multiple cursors may be active simultaneously; ESCAPE key cancels all active inspection cursors. An alternative and more traditional inspection cursor format is available via the Cursors Panel.

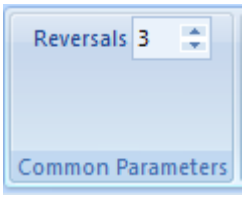
3.4 Point & Figure Charts Category

Selected parameters and settings are unique to Point & Figure chart with focus. Each chart maintains its own unique set.



3.4.1 Common Parameters Panel

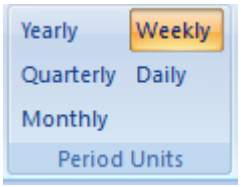
The **[Common Parameters]** Panel contains buttons for managing Point and Figure chart display and calculation units.



1. **{Reversals}** – Spin Control.
   Reversals setting
   Number of movement units required to constitute a Point and Figure reversal.

3.4.2 Period Units Panel

The **[Period Units]** Panel contains buttons for selecting PFigure chart display and calculation units. Current selection is hi-lighted.



1. **{Yearly}** – Button.
   Yearly Period
   Select Yearly period units for Point and Figure chart generation.

2. **{Quarterly}** – Button.
   Quarterly Period
   Select Yearly period units for Point and Figure chart generation.

3. **{Monthly}** – Button.
   Monthly Period
   Select Yearly period units for Point and Figure chart generation.

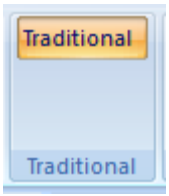
4. **{Weekly}** – Button.
   Weekly Period
   Select Yearly period units for Point and Figure chart generation.

5. **{Daily}** – Button.
   Daily Period
   Select Yearly period units for Point and Figure chart generation.

Selection is applied and persists for current Point and Figure **{Tab View}** only, selections for other tabs remain unaltered. All calculations and settings are kept synchronised with selected units. Button disabled if units not supported by data.

3.4.3 Traditional

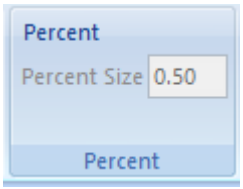
The **[Traditional]** Panel contains buttons for managing Point and Figure chart for selection and generation of Traditional style Point and Figure charts.



1. **{Traditional}** – Button.
   Traditional Point and Figure Chart
   Selects Traditional style Point and Figure chart.

3.4.4 Percent Panel

The **[Percent]** Panel contains buttons for managing Point and Figure chart for selection and generation of Percent style Point and Figure charts.

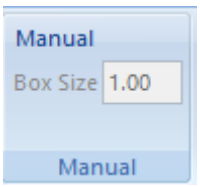


1. **{Percent}** – Button.
   Percent Point and Figure Chart.
   Selects Percentage Point and Figure chart style.

2. **[Percent Size]** – Edit Control
   Percentage Box Size.
   Size of Point and Figure boxes as a percentage of price.

3.4.5 Manual Panel

The **[Manual]** Panel contains buttons for managing Point and Figure chart for selection and generation of Manual style Point and Figure charts.

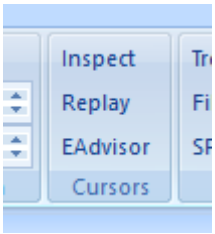


1. **{Manual}** – Button.
   Manual Point and Figure Chart
   Selects Manually sized Point and Figure chart.

2. **[Box Size]** – Edit control
   Box Size
   Absolute size of Point and Figure boxes in price units.

3.4.6 Cursors Panel

The **[Cursors]** Panel contains buttons for Point and Figure chart cursor selection.



1. **{Inspect}** – Button.
   Inspection Cursor
   Toggles chart inspection cursor on and off, alternatively use the ESCAPE key to cancel.

   Inspection tracks the mouse position as it moves over the chart stack. Position can be both frozen and re-activated via left mouse clicks. Chart data values are annotated to reflect inspection cursor position.

2. **{Replay}** – Button.
   Replay Cursor
   Toggles chart replay cursor on and off, alternatively use the ESCAPE key to cancel.

   Limits can simply be adjusted via the **[Market Replay]** menu items in any Chart Context Menu for Point and Figure Category charts. Replay cursor is

moved backwards and forward via the left and right arrow keys.

3. **{Advisor}** – Button.
   Python Advisor Cursor
   Toggles python automation advisor limits on and off for chart, alternatively use the ESCAPE key to discard.

   Advisor limits are observed by python scripts to define the chart periods over which they are effective. Limits can simply be adjusted via the **[Advisor ► Model Begin]** and **[Model End]** items in any Chart Context Menu for Point and Figure Category charts.

Selections are applied immediately for currently active Point and Figure **{Tab View}** only, selections for other tabs remain unaltered.

3.4.7 Drawing Tools Panel

As per OHLCvs Charts Category.

3.4.8 External Reference URL's Panel.

The **[External Reference URL's]** Panel contains buttons for activating configured external reference pages for the primary stock.



Spawned web pages may be instantiated within a [Tab View] or externally in default browser according to the **Ribbon Bar [Home]** Tab >> **[Views]** Panel >> **[External URL Spawn]** check box setting.

1. **{Home Page}** – Button.
   Home Page
   Activate configured home page URL for the primary stock.

2. **{Wiki Page}** – Button.
   Wiki Page
   Activate configured wiki page URL for the primary stock.

3. **{Stock Page#1}** – Button.
   Web Reference Page#1
   Activate configured web reference page #1 URL for the primary stock.

4. **{Stock Page#2}** – Button.
   Web Reference Page#2
   Activate configured web reference page #2 URL for the primary stock.

5. **{Stock Page#3}** – Button.
   Web Reference Page#3
   Activate configured web reference page #3 URL for the primary stock.

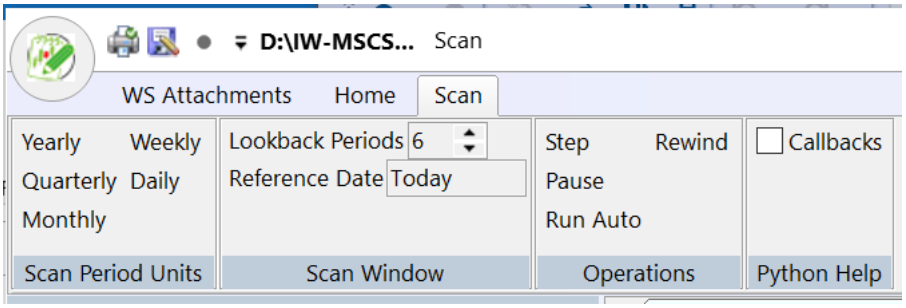
6. **{Stock Page#4}** – Button.
   Web Reference Page#4

Activate configured web reference page #4 URL for the primary stock.

The [External Stock Ref] Panel web page URLs used are managed through the Datastore Market-OHLCvs Dataset Dialog for the primary stock.

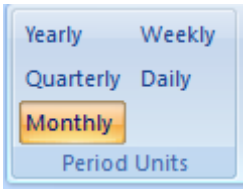
3.5 Automation Scan Category

Selected parameters and settings are unique to Automation Scan View with focus. Each scan maintains its own set of context parameters.



3.5.1 Period Units Panel

The **[Period Units]** Panel contains buttons for selecting advisory units upon which the scan is to be based. Currently selected units button is hi-lighted.



1. **{Yearly}** – Button.
   Yearly Scan Units
   Selects Yearly period units as default scan units.

2. **{Quarterly}** – Button.
   Quarterly Scan Units
   Selects Quarterly period units as default scan units.

3. **{Monthly}** – Button.
   Monthly Scan Units
   Selects Monthly period units as default scan units.

4. **{Weekly}** – Button.
   Weekly Scan Units
   Selects Weekly period units as default scan units.

5. **{Daily}** – Button.
   Daily Scan Units
   Selects Daily period units as default scan units.

Selection is applied and persists for current **{Scan View}** only, selections for other tabs remain unaltered. All calculations and zoom settings are kept synchronised with selected units. Python script is advised of the selected Period Units but observance is not enforced.

3.5.2 Scan Window

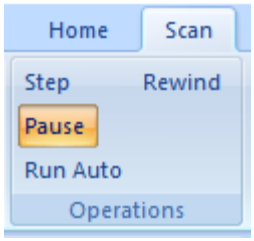
The **[Scan Window]** Panel contains buttons for managing the window in time upon which the scan is focused.

1. **[Loopback Periods]** – Spin control
   Lookback Periods
   Number of lookback periods from the Reference Date used by the scan.

2. **[Reference Date]** – Button.
   Reference Date
   Scan reference date from which loopback periods are based.

3.5.3 Operations Panel

The **[Operations]** Panel contains buttons for managing the loaded python scanning script.



1. **{Step}** – Button.
   Step scanner.
   Steps the python Scan script for the next stock in the scan sequence.

   Enhanced background for active python scanning script. Disabled when python script not previously activated.
   Scripts may initially be activated by left mouse double click over item in the Python Automation Explorer Tree. Alternatively, the **[Run Scan]** item from the Advisors Python Script Context Menu achieves same results.

   Selected scanning script is serialised for scan and persists until a subsequent scanning script is selected.

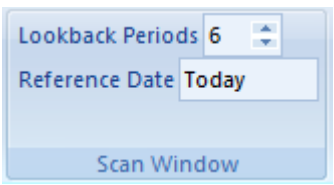
2. **{Pause}** – Button.
   Pause auto scan
   Pause the active python Scan script at the current stock code.

   Enhanced for active python scanning script, otherwise normal colour scheme.

3. **{Run Auto}** – Button.
   Run scan to completion.
   Runs the python Scan to completion for the active scan view with focus.

   Enhanced background for active python scanning script. Disabled when python script not previously defined.

   Selected python scanning script is serialised for scan and persists until a subsequent scanning script is selected.



4. **{Rewind}** – Button.
   Rewinds scanner.
   Rewinds the python Scanning script and clears results displayed on the

screen.

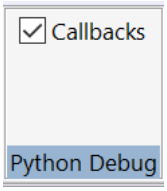
Enhanced background for active python scanning script. Disabled when python script not previously defined.

Selected python scanning script is serialised for scan and persists until a subsequent scanning script is selected.

Activated python scan scripts usually run to completion and can be re-run via the **{Step** or **Run Auto}** Buttons.

3.5.4 Python Help Panel

The **[Python Help]** Panel contains buttons for help with debugging chart scanning scripts.



1. **{Callbacks}** – Button.
   Scanning Callbacks.
   Toggles display of Python-Chartboard callbacks in Diagnostics Console Window.

   Scanning scripts interact with Chartboard via a series of pre-determined callbacks. Debugging these scripts can be assisted by viewing such activity in the Diagnostics Console Window.

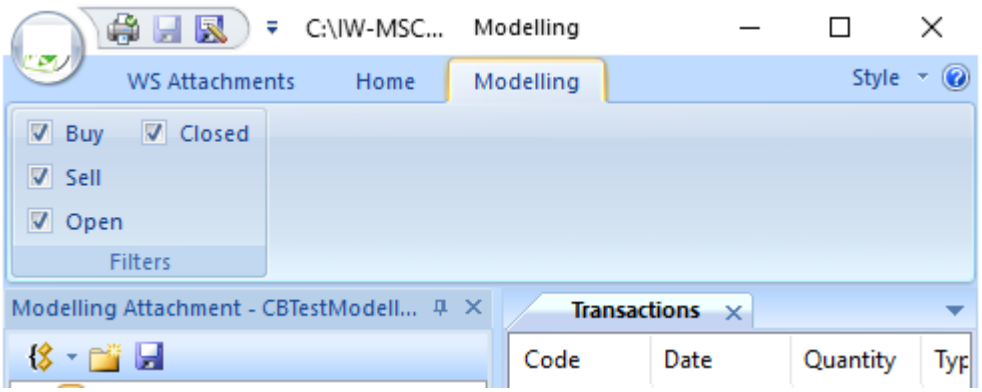
   Selection status is unique to the current scan. The resulting diagnostics will relate to virtual charts created according to the requirements of the scan.

2. **{Clear Console}** – Button.
   Clear Console.
   Clears the existing contents of the Diagnostics Console Window.

Selections are applied immediately for currently active scan only, selections for other tabs remain unaltered.

3.6 Modelling Category

Selected parameters and settings are unique to Modelling Transactions List View with focus. Each scan maintains its own set of context parameters.



3.6.1 Filters Panel

The **[Filters]** Panel contains buttons for selecting advisory units upon which the scan is to be based. Currently selected units button is hi-lighted.

1. **{Buy}** – Check Box.
   Buy Filter
   Toggles display of buy trades on and off.

2. **{Sell}** – Check Box.
   Sell Filter
   Toggles display of sell trades on and off.

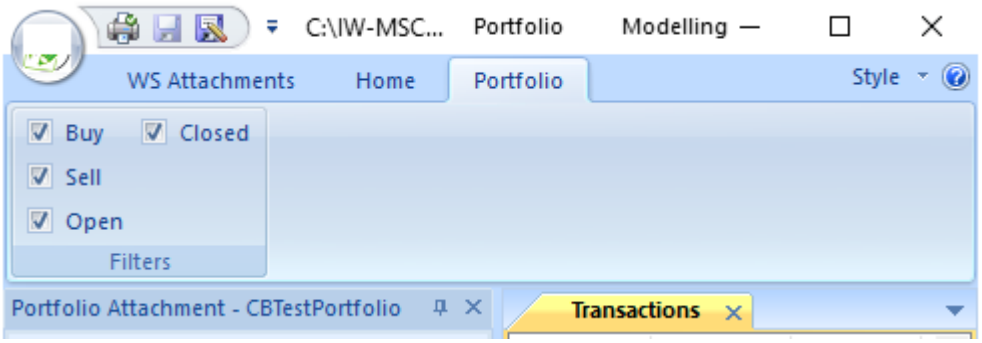
3. **{Open}** – Check Box.
   Open Trades Filter
   Toggles display of open trades (not closed) on and off.

4. **{Closed}** – Check Box.
   Closed Trades Filter
   Toggles display of closed trades on and off.

Selection is applied and persists for current **{Model List View}** only, selections for other tabs remain unaltered.

3.7 Portfolio Category

Selected parameters and settings are unique to Portfolio Transactions List View with focus. Each scan maintains its own set of context parameters.



3.7.1 Filters Panel

The **[Filters]** Panel contains buttons for selecting advisory units upon which the scan is to be based. Currently selected units button is hi-lighted.

1. **{Buy}** – Check Box.
   Buy Filter
   Toggles display of buy trades on and off.

2. **{Sell}** – Check Box.
   Sell Filter

Toggles display of sell trades on and off.

3. **{Open}** – Check Box.
   Open Trades Filter
   Toggles display of open trades (not closed) on and off.

4. **{Closed}** – Check Box.
   Closed Trades Filter
   Toggles display of closed trades on and off.

Selection is applied and persists for current **{Folio List View}** only, selections for other tabs remain unaltered.

4. Dockable Explorers and Grids

Chartboard supports a single Dockable workspace file and numerous attachments as summarised below.

1. Workspace Explorer.
   Single Workspace explorer file supporting subsequent attachments.

2. Datastore Attachment Explorers
   Multiple Datastore attachment files are supported by Workspace Explorer.
   Refer **Ribbon Bar >> WS Attachments Tab >> Datastore Panel** for managing these attachments.

3. Portfolio Attachment Explorers
   Multiple Portfolio attachment files are supported by Workspace Explorer.
   Refer **Ribbon Bar >> WS Attachments Tab >> Portfolio Panel** for managing these attachments.

4. Modelling Attachment Explorers
   Multiple Datastore attachment files are supported by Workspace Explorer.
   Refer **Ribbon Bar >> WS Attachments Tab >> Modelling Panel** for managing these attachments.

5. Automation Attachment Explorers
   Multiple Automation attachment files are supported by Workspace Explorer.
   Refer **Ribbon Bar >> WS Attachments Tab >> Automation Panel** for managing these attachments.

4.1 Workspace Explorer

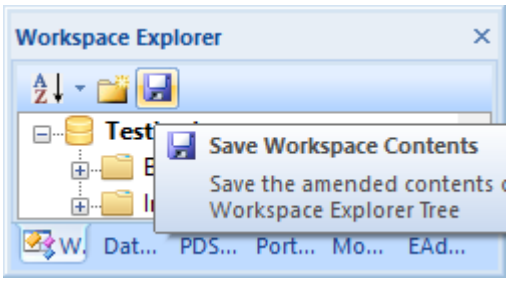
4.1.1 Workspace Explorer Toolbar

The Workspace Explorer Toolbar exists at the top of the Workspace Explorer Tree. Buttons and menu items act only upon instance of Explorer to which they are attached.

Following items exist for sorting of the Workspace Explorer Tree and relate to the selected Root or Folder item. Dataset paths are not influenced by sorting operations.

1. **{Sort Alphabetically}** button item.
   Sorts items alphabetically under the selected item, observing pre-conditions.

   Item is only ever enabled when Workspace Explorer Tree root or folder is selected.



2. **[Sort by Access]** menu item.
   Sorts items by access under the selected item, observing pre-conditions.

Item is only ever enabled when Workspace Explorer Tree root or folder item is selected.

3. **[Group Folders]** menu item.
   Group folder items at top of list under the selected item.

   Toggles current setting and implements immediately.

4. **[Group Chart Types]** menu item.
   Group chart types (OHLCvs, PFigure, Scan) under the selected item.

   Toggles current setting and implements immediately. New setting remains latched and is observed in all subsequent sorting operations

5. **[Recursively Sort]** menu item.
   Recursively sets and sorts subordinate folders accordingly to selected parameters.

   Recursively implements immediately according to current selections.

Following items exist for general Workspace Explorer Tree activities.

6. **{New Folder}** button item.
   New Folder.
   Creates a new folder as a child of the selected item.

   Item is only ever enabled when Workspace Explorer Root or Folder tree item is selected. Equivalent action exists as [New Folder] items in the Workspace Explorer (Root|Folder) Context Menu's

7. **{Save}** button item.
   Save Workspace Contents
   Save the amended contents of this Workspace Explorer Tree.

   Item is only ever enabled when unsaved data exists in Workspace Explorer Tree. Saved status of other Chartboard Explorer's remain unaffected.

   Equivalent action is achieved via the **[Save]** item from the Workspace Explorer Root Context Menu. Alternatively, the **[Save All]** item under the **{Application}** button includes this item in its sequences.

4.1.2 Context Menus

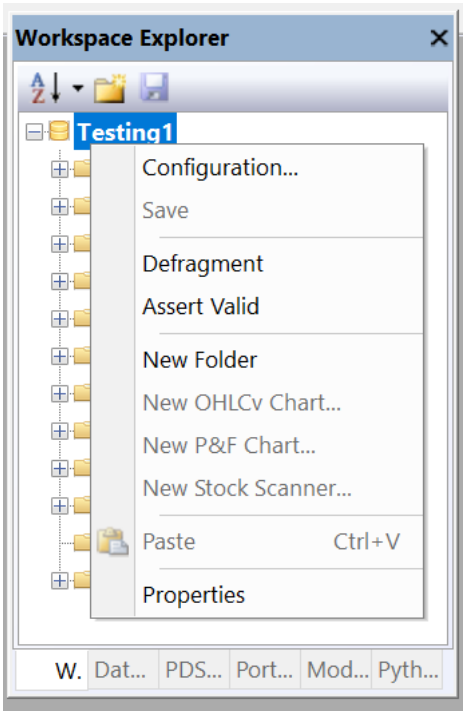
The Workspace Explorer Context Menus are accessed via either a right mouse click over items in the Workspace Explorer Tree or pressing the keyboard context key whenever such items have focus. Menu contents vary according to the activation position and item context as outlined below.

4.1.2.1 Workspace Explorer Root Item Context Menu.

The following Workspace Explorer Root Item Context Menu is accessed via either a right mouse click over the Workspace Explorer Tree root item or pressing the context key whenever such an item has focus.

1. **[Configuration…]** menu item.
   Activates the Workspace Explorer Configuration Dialog for this Workspace.

2. **[Save]** menu item.
   Save amended contents of this Workspace Explorer.

   Item is only ever enabled when unsaved data exists in Workspace Explorer data store. Saved status of other Chartboard Attachment Explorer's remain unaffected.

   Equivalent action is achieved via the **{Save}** button on the Workspace Explorer Toolbar.

   Alternatively the **{Save All}** item under the Application Button Menu includes action in its sequences.

3. **[Defragment]** menu item.
   Defragments Workspace Explorer content and recovers disk space.

   Item is only ever enabled when Workspace has no dependant views.

   Defragments the underlying Workspace data structures and recovers fragmented memory. Chartboard Workspaces are fully memory mapped and usually have better performance after defragmentation. Each Chartboard Explorer maintains its own mapped disk space.

4. **[Assert Valid]** menu item.
   Asserts the validity of the internal Workspace Explorer data structures.

   Item verifies internal data structures of the loaded Workspace, always enabled.

5. **[New Folder]** menu item.
   Creates a new Workspace folder as child of selected item.

   Item is only ever enabled when menu is activated over either Workspace Explorer Root or Folder items.

   Folder is allocated the default unique name "Folder" or "Folder(#)" and control is passed to folder name in edit mode. Refer **[Rename]** item from

Workspace Explorer Root Item Context Menu for further details.

6. **[New OHLCvs Chart…]** menu item.
   Creates a new OHLCvs chart under the selected item and activates the Workspace Explorer OHLCvs Edit Dialog.

   Refer to the **[Edit…]** item from the Workspace Explorer OHLCvs Context Menu for subsequent editing facilities.

   Chart is allocated the default unique name "OHLCvs" or "OHLCvs(#)".

7. **[New P&Figure Chart…]** menu item.
   Creates a new Point and Figure chart under the selected item and activates the Workspace Explorer Point and Figure Edit Dialog.

   Refer to the **[Edit…]** item from the Workspace Explorer Point and Figure Context Menu for subsequent editing facilities.

   Chart is allocated the default unique name "PFigure" or "PFigure(#)".

8. **[New Stock Scanner…]** menu item.
   Creates a new Stock Scanner under the selected folder and activates the Workspace Explorer Stock Scanner Edit Dialog.

   Refer to the **[Edit…]** item from the Workspace Explorer Stock Scanner Context Menu for subsequent editing facilities.

   Scan is allocated the default unique name "Scanner" or "**Scanner**(#)".

9. **[Paste** *object type***]** menu item.
   Pastes clipboard contents under selected item.

   Item is only ever enabled when clipboard contains .Msgraws#OHLCvs, #PFigure, #Scan or #Charts equivalent content. Refer **[Copy]** items under the Workspace Explorer Context Menu's for further details.

   Pasted content is allocated the unique name that reflects the original item name with **"- Copy"** or **"- Copy (#)"** appended.

10. **[Properties]** menu item.
    Activates grid properties for this Workspace Explorer item.

    Refer Workspace Explorer Root Properties Grid for further details.

4.1.2.2 Workspace Explorer Folder Item Context Menu.

The following Workspace Explorer Folder Item Context Menu is accessed via either a right mouse click over Workspace Explorer Tree folder items or pressing the context key whenever such an item has focus.

1. **[Configuration…]** menu item.
Activates the Workspace Explorer Folder Configuration Dialog for this folder item.

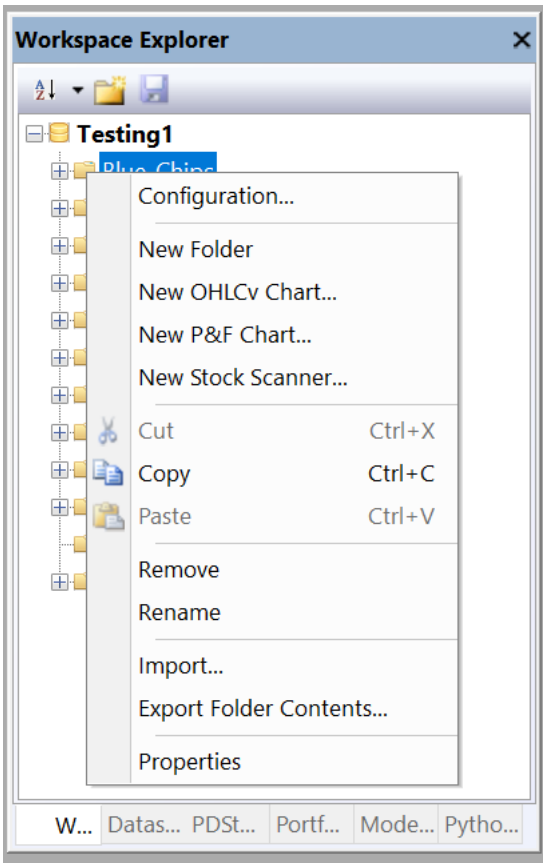
2. **[New Folder]** menu item.
Creates a new folder as a child of the selected item.

   Item is only ever enabled when menu is activated over either Root or Folder tree items.

3. **[New OHLCvs Chart…]** menu item.
Creates a new OHLCvs chart under the selected folder and activates Workspace Explorer OHLCvs Edit Dialog.

   Refer to the **[Edit…]** item from the Workspace Explorer OHLCvs Context Menu for subsequent editing facilities.

   Chart is allocated the default unique name “OHLCvs” or “OHLCvs(#)”.



4. **[New P&Figure Chart…]** menu item.
Creates a new Point and Figure chart under the selected folder and activates the Workspace Explorer Point and Figure Edit Dialog.

   Refer to the **[Edit…]** item from the Workspace Explorer Point and Figure Context Menu for subsequent editing facilities.

   Chart is allocated the default unique name “PFigure” or “PFigure(#)”.

5. **[New Stock Scanner…]** menu item.
Creates a new Stock Scanner under the selected folder and activates the Workspace Explorer Stock Scanner Edit Dialog.

   Refer to the **[Edit…]** item from the Workspace Explorer Stock Scanner Context Menu for subsequent editing facilities.

   Scan is allocated the default unique name “Scanner” or “Scanner(#)”.

6. **[Cut]** menu item.
Cuts item definitions for the selected item to the clipboard, use ESCAPE for abandon.

Content cut from Workspace Explorer's can only be pasted to Workspace Explorer's. Datastore's, Modelling, Portfolio's and Automation attachments are excluded destinations.

7. **[Copy]** menu item.
Copies folder and contents to the application clipboard.

   Content copied from Workspace Explorer's can only be pasted to Workspace Explorer's. Datastore's, Modelling, Portfolio's and Automation attachments are excluded destinations.

8. **[Paste** *object type***]** menu item.
Pastes clipboard contents under selected item.

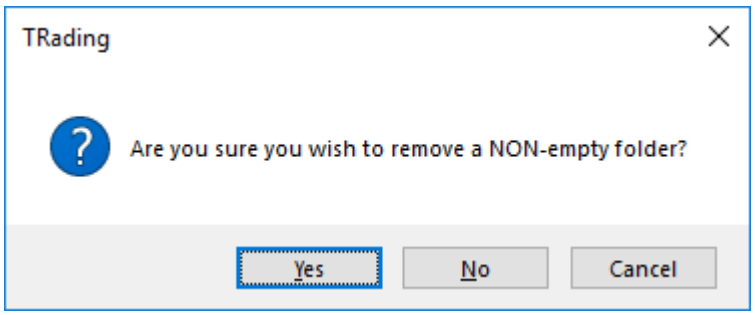
   Item is only ever enabled when application clipboard is populated with contents sourced, **[Cut]** or **[Copy]**, from a Workspace Explorer. **[Copy]** and **[Paste]** sequences can be used to effectively emulate particular chart type templates.

   Workspace Explorer Tree is automatically updated to reflect pasted items.

   Pasted content is allocated the unique name that reflects the original item name with **"- Copy"** or **"- Copy (#)"** appended.

9. **[Remove]** menu item.
Removes or deletes the selected folder and contents from the Workspace Explorer.

   The following confirmation prompt will be made for non-empty folders.



10. **[Rename]** menu item.
Renames the selected Workspace Explorer Tree item.

    Valid folder name characters follow the standard Windows file naming conventions, case insensitive. **ESCAPE** to abandon file naming sequence, **enter** key to accept.

11. **[Import…]** menu item.
Import items into Workspace folder from *.Msgraws#Folder, OHLCvs, PFigure or Scanner file(s).

Source file selection is via the standard Windows File Selection Dialog. The Workspace Explorer Tree will automatically be updated upon completion.

Alternatively individual charts can be copied and pasted via the Workspace Explorer Charts Item Context Menu using **[Copy]** and **[Paste]** items.

12. **[Export Folder Contents…]** menu item.
Export Workspace Explorer folder and contents to *.Msgraws#Folder file.

    Destination file selection is via the standard Windows File Selection Dialog and allocated the *.Msgraws#Folder extension. Such files may be exchanged between Chartboard sites.

13. **[Properties]** menu item.
Activates grid properties for this Workspace Explorer Folder Item.

    Alternatively such grid properties can be activated via a left mouse click over the Workspace Explorer Folder Item.

4.1.2.3 Workspace Explorer OHLCvs Item Context Menu.

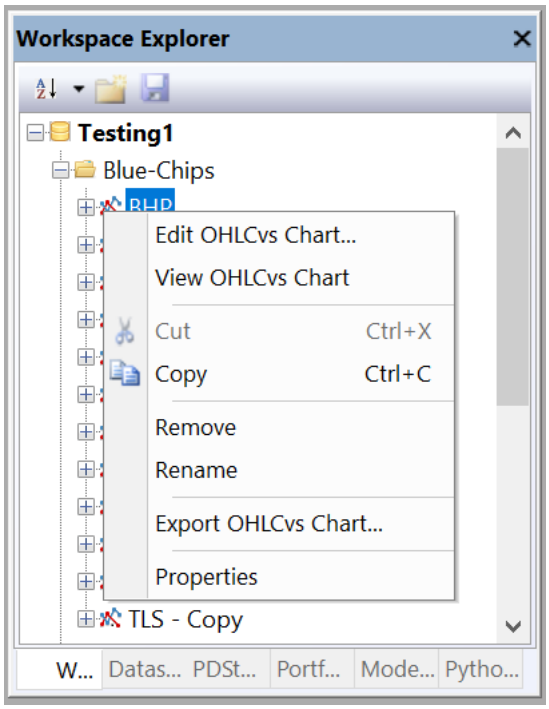
The Workspace Explorer OHLCvs Chart Item Context Menu is accessed via either a right mouse click over the Workspace Explorer Tree OHLCvs Item or pressing the context key whenever such an item has focus.

1. **[Edit OHLCvs Chart…]** menu item.
Activates the Workspace Explorer OHLCvs Edit Dialog for this chart item.

2. **[View OHLCvs Chart]** menu item.
Activates the OHLCvs chart for the selected item in view tab.

    Alternatively chart may be activated by left mouse double click over item.

    Should OHLCvs chart already be activated, View Tab focus will be transferred to the corresponding tab. Ribbon bar will be synchronised with the active tab



Workspace Explorer Tree item is always bolded to reflect the chart with the active tab.

3. **[Cut]** menu item.
   Cuts item definitions for the selected item to the clipboard, use ESCAPE for abandon.

   Content cut from Workspace Explorer's can only be pasted to Workspace Explorer's. Datastore's, Modelling, Portfolio's and Automation attachments are excluded destinations.

4. **[Copy]** menu item.
   Copies workspace definitions for the selected item to the clipboard.

   Content copied from Workspace Explorer's can only be pasted to Workspace Explorer's. Datastore's, Modelling, Portfolio's and Automation attachments are excluded destinations.

5. **[Remove]** menu item.
   Removes or deletes the selected item from the Workspace.

6. **[Rename]** menu item.
   Renames the selected Workspace Explorer Tree item.

   Valid item name characters follow the standard Windows file naming conventions, case insensitive. **ESCAPE** to abandon file naming sequence, **enter** key to accept.

7. **[Export OHLCvs Chart…]** menu item.
   Export Workspace Explorer OHLCvs chart definitions to *.Msgraws#OHLCvs file.

   Destination file selection is via the standard Windows File Selection Dialog and allocated the *.Msgraws#OHLCvs extension. Such files may be exchanged between Chartboard sites.

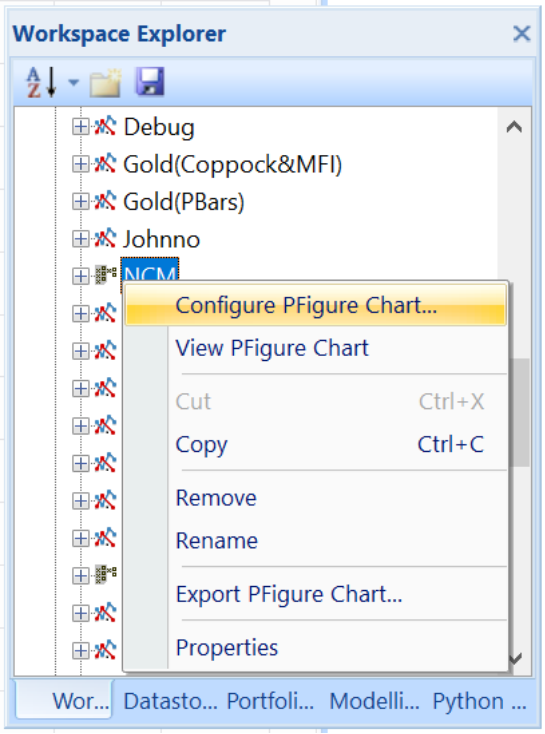
8. **[Properties]** menu item.
   Activates Workspace Explorer OHLCvs Item Properties Grid for chart with context.

   Alternatively such grid properties can be activated via a left mouse click over the Workspace Explorer Tree item.

4.1.2.4 Workspace Explorer PFigure Item Context Menu.

The Workspace Explorer PFigure Chart Item Context Menu is accessed via either a right mouse click over the Workspace Explorer Tree chart item or pressing the context key whenever such an item has focus.

1. **[Configure PFigure Chart…]** menu item.
   Activates the Workspace Explorer Point and Figure Edit Dialog for this chart item.



2. **[View PFigure Chart]** menu item.
   Activates the Point and Figure chart for the selected item in view tab.

   Alternatively chart may be activated by left mouse double click over item.

   Should Point and Figure chart already be activated, View Tab focus will be transferred to the corresponding tab. Ribbon bar will be synchronised with the active tab

   Workspace Explorer Tree item is always bolded to reflect the chart with the active tab.

3. **[Cut]** menu item.
   Cuts item definitions for the selected item to the clipboard, use ESCAPE for abandon.

   Content cut from Workspace Explorer's can only be pasted to Workspace Explorer's. Datastore's, Modelling, Portfolio's and Automation attachments are excluded destinations.

4. **[Copy]** menu item.
   Copies workspace definitions for the selected item to the clipboard.

5. **[Remove]** menu item.
   Removes or deletes the selected chart item from the Workspace

6. **[Rename]** menu item.
   Renames the selected Workspace Explorer Tree item.

   Valid item name characters follow the standard Windows file naming conventions, case insensitive. **ESCAPE** to abandon file naming sequence, **enter** key to accept.

7. **[Export PFigure Chart…]** menu item.
   Export Workspace Explorer Point and Figure chart definitions to *.Msgraws#PFigure file.

   Destination file selection is via the standard Windows File Selection Dialog and allocated the *.Msgraws#PFigure extension. Such files may be exchanged between Chartboard sites.

8. **[Properties]** menu item.
   Activates Workspace Explorer PFigure Item Properties Grid for chart with context.

   Alternatively such grid properties can be activated via a left mouse click over the Workspace Explorer Tree item.

4.1.2.5 Workspace Explorer Scanner Item Context Menu.

The following Workspace Explorer Scanner Item Context Menu is accessed via either a right mouse click over the Workspace Explorer Stock Scanner Item or pressing the context key whenever such an item has focus.

1. **[Configure Stock Scanner…]** menu item.
   Activates the Workspace Explorer Stock Scanner Edit Dialog for this item.

2. **[View Stock Scanner]** menu item.
   Activates the Stock Scanner for the selected item in view tab.

   Alternatively chart may be activated by left mouse double click over item.

   Should the Stock Scanner already be activated, View Tab focus will be transferred to the corresponding tab. Ribbon bar will be synchronised with the active tab

   Workspace Explorer Tree item is always bolded to reflect the chart with the active tab.

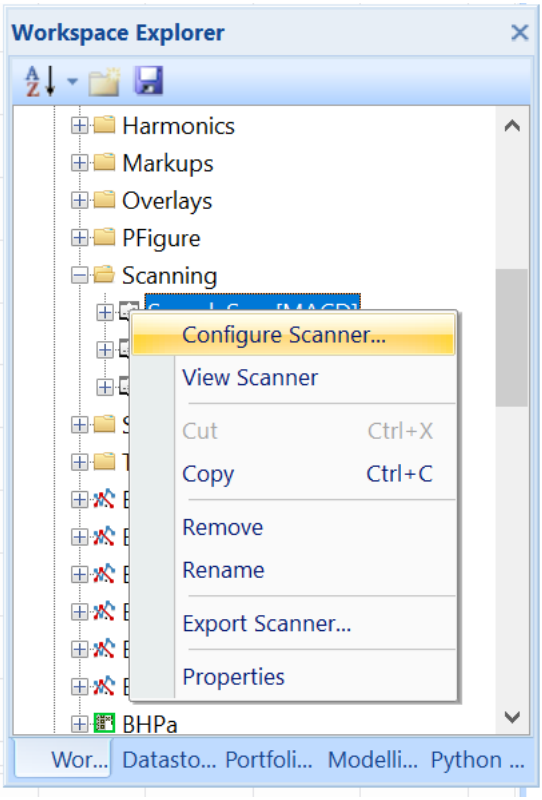
3. **[Cut]** menu item.
   Cuts item definitions for the selected item to the clipboard, use ESCAPE for abandon.

   Content cut from Workspace Explorer's can only be pasted to Workspace Explorer's. Datastore's, Modelling, Portfolio's and Automation attachments are excluded destinations.

4. **[Copy]** menu item.
   Copies workspace definitions for the selected item to the clipboard.

5. **[Remove]** menu item.
   Removes or deletes the selected workspace item

6. **[Rename]** menu item.
   Renames the selected Workspace Explorer Tree item.



Valid item name characters follow the standard Windows file naming conventions, case insensitive. **ESCAPE** to abandon file naming sequence, **enter** key to accept.

7. **[Export Scanner…]** menu item.
Export Workspace Explorer Scanner definitions to *.Msgraws#Scanner file.

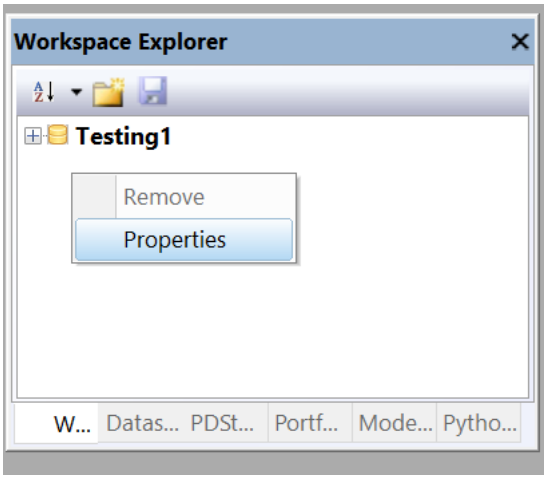
   Destination file selection is via the standard Windows File Selection Dialog and allocated the *.Msgraws#Scanner extension. Such files may be exchanged between Chartboard sites.

8. **[Properties]** menu item.
Activates Workspace Explorer Scanner Item Properties Grid for item with context.

   Alternatively such grid properties can be activated via a left mouse click over the Workspace Explorer Tree item.

4.1.2.6 Workspace Explorer Miscellaneous Context Menu.

The following Workspace Explorer Miscellaneous Context Menu is accessed via either a right mouse click over an unresolved item or region of the Workspace Explorer Tree.



1. **[Remove]** menu item.
Removes or deletes the selected Workspace item.

   Disabled and deleted for vacant space.

2. **[Properties]** menu item.
Activates Workspace Explorer Root Properties Grid.

   Alternatively such grid properties can be activated via a left mouse click over an unresolved region or item. Refer Workspace Explorer Root Properties Grid for further details.

4.1.3 Properties Grid

4.1.3.1 Workspace Explorer Root Properties Grid

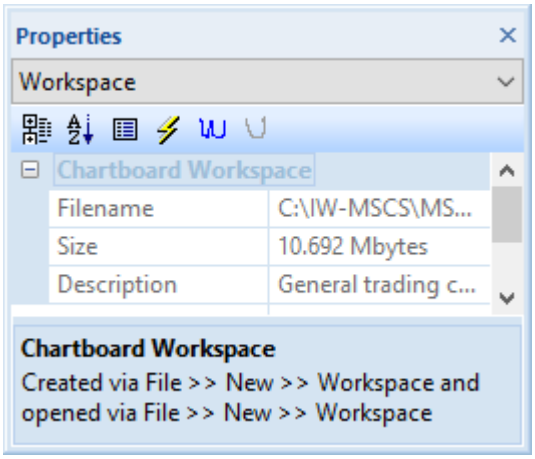
Activated via the **[Properties]** menu item from the Workspace Explorer Root Context Menu or a left mouse click over the Workspace Explorer Tree Root Item.

Tabulates numerous Workspace Explorer properties.

1. **[Filename]** grid item.
   Name of the file through which the Workspace persists and is serialised.

2. **[Size]** grid item.
   Size of the Workspace disk file.

3. **[Description]** grid item.
   Workspace description taken from the Workspace Explorer Configuration Dialog.



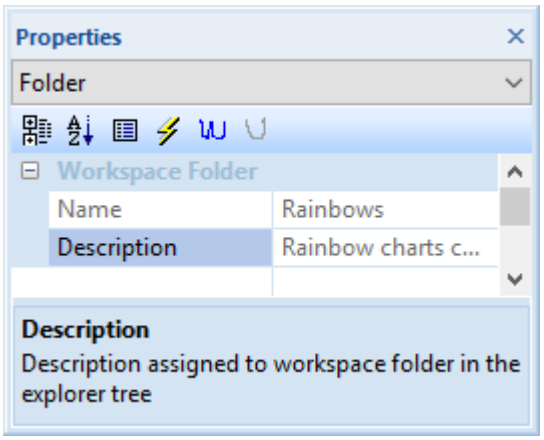
4.1.3.2 Workspace Explorer Folder Properties Grid

Activated via the **[Properties]** menu item from the Workspace Explorer Folder Context Menu or a left mouse click over the Workspace Explorer Tree Folder Item.

Tabulates numerous Workspace Explorer Folder properties.

1. **[Name]** grid item.
   Name assigned to the Workspace Explorer Folder.

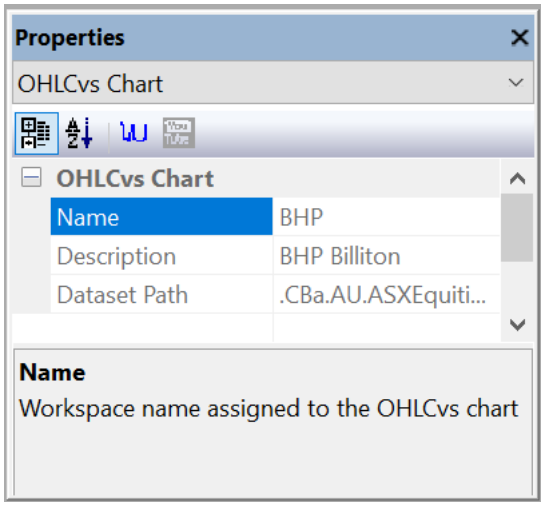
2. **[Description]** grid item.
   Workspace Explorer Folder description taken from the Workspace Folder Configuration Dialog.



4.1.3.3 Workspace Explorer OHLCvs Chart Properties Grid

Activated via the **[Properties]** menu item from the Workspace Explorer OHLCvs Chart Context Menu or a left mouse click over the Workspace Explorer OHLCvs Item.

Tabulates numerous Workspace Explorer OHLCvs Chart properties.



1. **[Name]** grid item.
   Workspace name assigned to the OHLCvs.

2. **[Description]** grid item.
   Point & Figure Chart description, taken from Workspace OHLCvs Chart Configuration Dialog.

3. **[Dataset Path]** grid item.
   Path to primary chart dataset, taken from Workspace OHLCvs Chart Configuration Dialog.

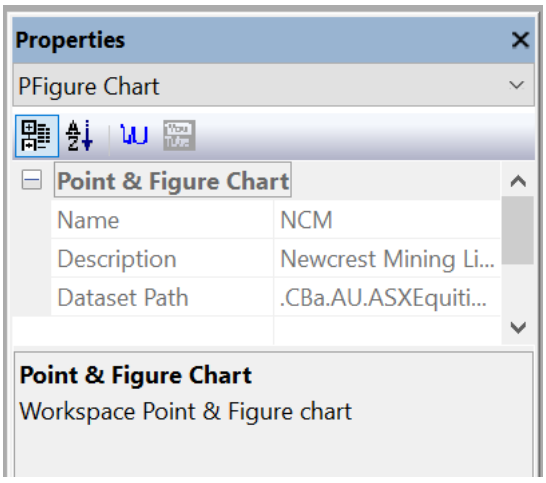
4. **[Local Script]** grid item.
   Local automation python Advisor script, specific to this chart. Activated via **{Run LOCAL}** button on **[Automation]** panel.

5. **[Global Script]** grid item.
   Global python automation Advisor script, common across all OHLCvs charts. Activated via **{Run GLOBAL}** button on **[Automation]** panel.

4.1.3.4 Workspace Explorer PFigure Chart Properties Grid

Activated via the **[Properties]** menu item from the Workspace Explorer PFigure Chart Context Menu or a left mouse click over the Workspace Explorer PFigure Chart Item.

Tabulates numerous Workspace Explorer PFigure Chart properties.



1. **[Name]** grid item.
   Workspace name assigned to the Point and Figure chart.

2. **[Description]** grid item.
   Point & Figure Chart description, taken from 'Workspace PFigure Chart Configuration Dialog'.

3. **[Dataset Path]** grid item.
   Path to primary chart dataset, taken from Workspace PFigure Chart Configuration Dialog.

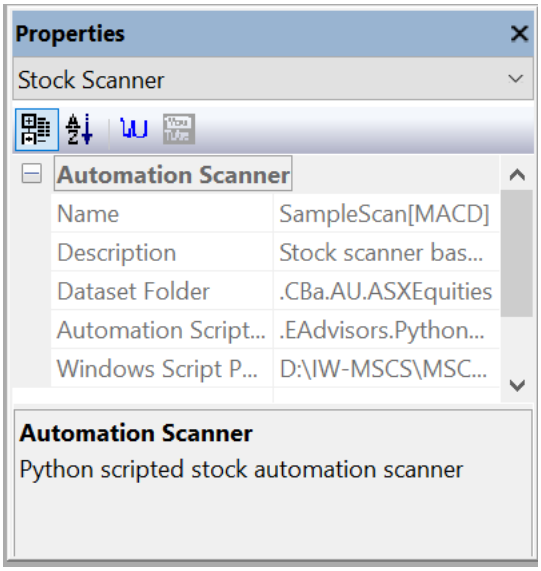
4. **[Local Script]** grid item.
   Local automation python Advisor script, specific to this chart. Activated via **{Run LOCAL}** button on **[Automation]** panel.

5. **[Global Script]** grid item.
   Global python automation Advisor script, common across all PFigure charts. Activated via **{Run GLOBAL}** button on **[Automation]** panel.

4.1.3.5 Workspace Explorer Stock Scanner Properties Grid

Activated via the **[Properties]** menu item from the Workspace Explorer Stock Scanner Item Context Menu or a left mouse click over the Workspace Explorer Stock Scanner Item.

Tabulates numerous Workspace Explorer Tree Stock Scanner properties.



1. **[Name]** grid item.
   Workspace name assigned to the scanner item.

2. **[Description]** grid item.
   Scan description, taken from Workspace Scanner Configuration Dialog.

3. **[Dataset Folder Path]** grid item.
   Datastore path to primary scan dataset folder.

4. **[Script Automation Path]** grid item.
   Automation path to mapped python scan script (*.pys).

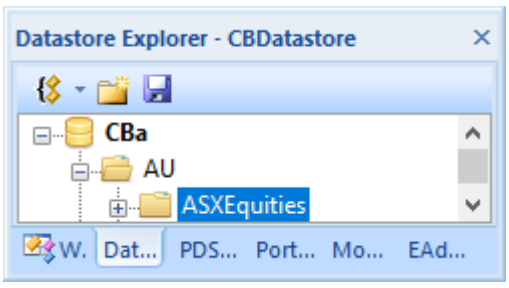
5. **[Script Windows Script]** grid item.
   Windows path to mapped python scan script (*.pys).

4.2 Datastore Explorers

4.2.1 Datastore Explorer Toolbar

The Datastore Explorer Toolbar exists at the top of the Datastore Explorer Tree. Buttons and menu items act only upon instance of Explorer to which they are attached.

Following items exist for sorting of the Datastore Explorer Tree and relate to the selected Root or Folder item. Dataset paths are not influenced by sorting operations.



1. **{Sort Alphabetically}** button item.
   Sorts items alphabetically under the selected item, observing pre-conditions.

   Item is only ever enabled when Datastore Explorer Tree root or folder item is selected.

2. **[Sort by Access]** menu item.
   Sorts items by access under the selected item, observing pre-conditions.

Item is only ever enabled when Datastore Explorer Tree root or folder item is selected.

3. **[Group Folders]** menu item.
   Group folder items at top of list under the selected item.

   Toggles current setting and implements immediately. New setting remains latched and is observed in all subsequent sorting operations

4. **[Group Data Types]** menu item.
   Group chart types (OHLCvs, Events) under the selected item.

   Toggles current setting and implements immediately. New setting remains latched and is observed in all subsequent sorting operations

5. **[Recursively Sort]** menu item.
   Recursively sets and sorts subordinate folders accordingly to selected parameters.

   Recursively implements immediately according to current selections.

Following items exist for general Datastore Explorer Tree activities.

6. **{New Folder}** button item.
   New Folder.
   Creates a new folder as a child of the selected item.

   Item is only ever enabled when Datastore Explorer Market, Markups or Folder tree item is selected. Equivalent action exists as [New Folder] items in the Datastore Explorer (Market|Markup|Folder) Context Menu's

7. **{Save}** button item.
   Save Datastore Contents
   Save the amended contents of this Datastore Explorer Tree.

   Item is only ever enabled when unsaved data exists in Datastore Explorer Tree. Saved status of other Chartboard Explorer's remain unaffected.

   Equivalent action is achieved via the **[Save]** item from the Datastore Explorer Root Context Menu. Alternatively, the **[Save All]** item under the **{Application}** button includes this item in its sequences.

4.2.2 Context Menus

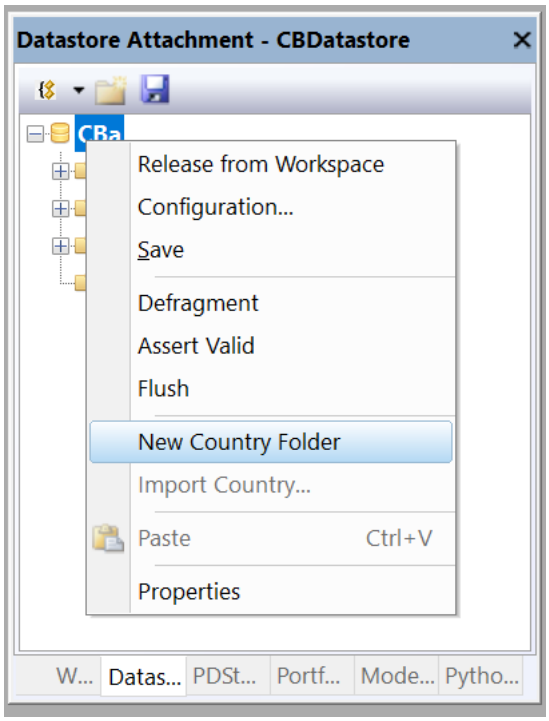
The Datastore Explorer Context Menus are accessed via either a right mouse click over items in the Datastore Explorer Tree or pressing the keyboard context key whenever such items have focus. Menu contents vary according to the activation position and item context as outlined below.

4.2.2.1 Datastore Explorer Root Item Context Menu.

The Datastore Explorer Root Item Context Menu is accessed via either a right mouse clicks over the Datastore Explorer Tree root item or pressing the context key whenever such an item has focus.

1. **[Release from Workspace]** menu item.
   Release this Datastore Explorer from the Workspace

   Refer **Ribbon Bar** >> **[Attachments]** Tab >> **[Datastore]**'s Panel for further details.



2. **[Configuration…]** menu item.
   Activates the Datastore Explorer Configuration Dialog for this Datastore.

3. **[Save]** menu item.
   Save amended contents of this Datastore Explorer Tree.

   Item is only ever enabled when unsaved data exists in Datastore Explorer Tree. Saved status of other Chartboard Explorer's remain unaffected.

   Equivalent action is achieved via the **{Save}** button on the Datastore Explorer Toolbar. Alternatively, the **{Save All}** item under the Application Button Menu includes this action in its sequences.

4. **[Defragment]** menu item.
   Defragment Datastore Explorer content and conserves disk memory.

   Item is only ever enabled when Datastore has no dependant views.

   Defragments the underlying Datastore data structures and recovers fragmented memory. Chartboard Datastore's are partially memory mapped and usually have better performance after defragmentation. Each Chartboard Datastore maintains its own mapped disk space.

5. **[Assert Valid]** menu item.
   Asserts the validity of the internal Datastore Explorer Tree data structures.

   Item verifies internal data structures of the loaded Workspace, always enabled.

6. **[Flush]** menu item.
   Recursively flush internal datasets for selected item to disk and conserve memory.

Item verifies internal data structures of the loaded Datastore, always enabled.

7. **[New Country Folder]** menu item.
   Creates a new, empty Country folder as a child of the selected item.

   Item is only ever enabled when menu is activated over Datastore Explorer Root.

   Folder is allocated the default unique name "Country" or "Country(#)" and control is passed to folder name in edit mode. Refer **[Rename]** item from Datastore Explorer Country Context Menu for further details. Country items are usually assigned standard abbreviations such as AU, US, UK etc.

8. **[Import Country…]** menu item.
   Import Datastore Explorer Country items from *.Msgradsr#Counrtry files

   Source file selection is via the standard Windows File Selection Dialog. The Workspace Explorer Tree will automatically be updated upon completion.

   Alternatively individual Country items can be copied and pasted via the Datastore Explorer Root Item Context Menu using **[Copy]** and **[Paste]** items.

9. **[Paste** *object type***]** menu item.
   Pastes clipboard contents under selected item.

   Item is only ever enabled when clipboard contains .Msgradsr#Country equivalent content. Refer **[Copy]** items under the Datastore Explorer Context Menu's for further details.

   Pasted content is allocated the unique name that reflects the original item name with **"- Copy"** or **"- Copy (#)"** appended.

10. **[Properties]** menu item.
    Activates grid properties for this Datastore explorer.

    Alternatively such grid properties can be activated via a left mouse click over the explorer tree chart item. Refer Datastore Explorer Root Properties Grid for further details.

4.2.2.2 Datastore Explorer Country Item Context Menu

The Datastore Explorer Country Item Context Menu is accessed via either a right mouse clicks over the Datastore Explorer Tree Country item or pressing the context key whenever such an item has focus.

Country items only ever exist under the Datastore Explorer Root Item.

1. **[Configuration…]** menu item.
   Activates the Datastore Explorer Country Configuration Dialog for this item.

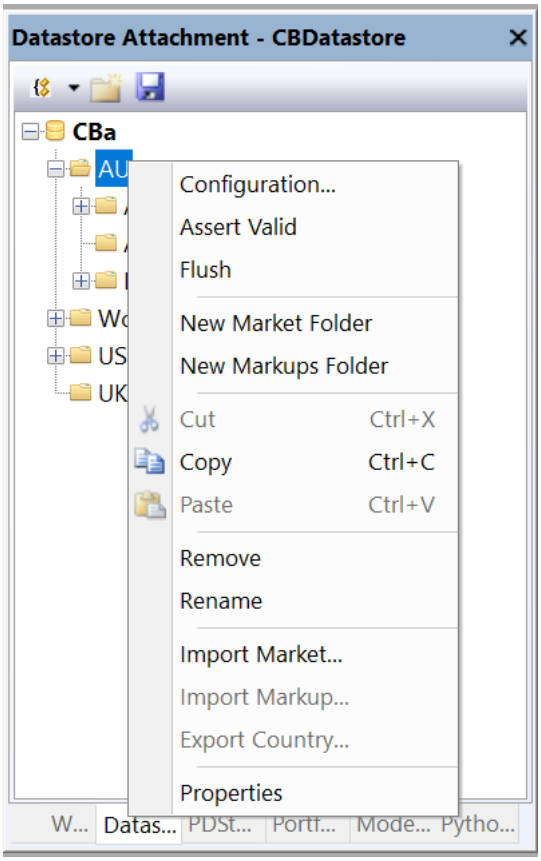
2. **[Assert Valid]** menu item.
Asserts the validity of the internal Datastore Explorer Tree data structures.

Item verifies internal data structures of the loaded Workspace for country, always enabled.

3. **[Flush]** menu item.
Recursively flush internal datasets for selected item to disk and conserve memory.

Item verifies internal data structures of the loaded Datastore for country, always enabled.

4. **[New Market Folder]** menu item.
Creates a new, empty Market folder as child of the selected Country item.



Item is only ever enabled when menu is activated over Datastore Explorer Tree Country items

Folder is allocated the default unique name "Market" or "Market(#)" and control is passed to folder name in edit mode. Refer **[Rename]** item from Datastore Explorer Market Item Context Menu for further details. Market items are usually assigned standard exchange such as *"**ASXEquities**"*, etc.

5. **[New Markups Folder]** menu item.
Creates a new, empty Markups folder as child of selected Country item.

Item is only ever enabled when menu is activated over Datastore Explorer Tree Country items

Folder is allocated the default unique name "Markups" or "Markups(#)" and control is passed to folder name in edit mode. Refer **[Rename]** item from Datastore Explorer Markups Item Context Menu for further details. Markup items are usually assigned standard Country names such as ***"Fedstats"***.

6. **[Cut]** menu item.
Cuts item definitions for the selected item to the clipboard, use ESCAPE for abandon.

Content cut from Datastore Explorer's can only be pasted to Datastore Explorer's. Workspace's, Modelling, Portfolio's and Automation

attachments are excluded destinations.

7. **[Copy]** menu item.
Copies item and contents to the application clipboard.

Content copied from Datastore Explorer's can only be pasted to Datastore Explorer's. Workspace's, Modelling, Portfolio's and Automation attachments are excluded destinations.

8. **[Paste** *object type***]** menu item.
Pastes clipboard contents under selected item.

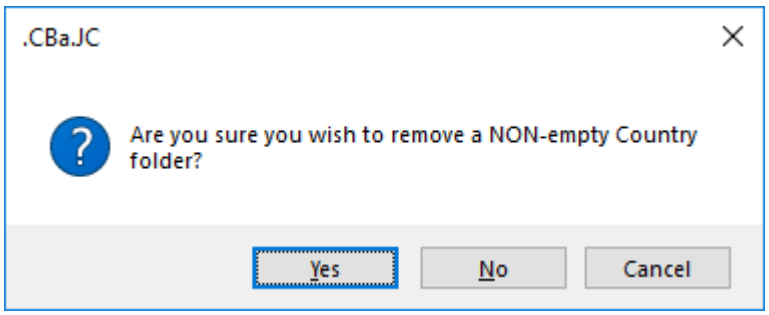
Item is only ever enabled when clipboard contains .Msgradsr#Market or #Markups Country item equivalent content. Refer **[Copy]** items under the Datastore Explorer Context Menu's for further details.

Pasted content is allocated the unique name that reflects the original item name with **"- Copy"** or **"- Copy (#)"** appended.

Country items may contain terabytes of data and as such may exhaust memory limits when **[Copy]** and **[Paste]** sequences are attempted. **[Export…]** and **[Import…]** sequences may be a better alternative.

9. **[Remove]** menu item.
Deletes the selected Country folder and contents from the Datastore Explorer.

The following confirmation prompt will be made for non-empty Country folders.



10. **[Rename]** menu item.
Renames the selected Datastore Explorer Tree item.

Valid folder name characters follow the standard Windows file naming conventions, case insensitive. **ESCAPE** to abandon file naming sequence, **enter** key to accept.

Renaming Country folders will invalidate any activate Chart and Scanning data set references to contained data. Such references will have to be amended, refer Workspace [OHLCvs, PFigure or Scanner] Edit Dialog's for

further details.

11. **[Import Market…]** menu item.
Import Datastore Explorer Market items from *.Msgradsr#Market file.

Source file selection is via the standard Windows File Selection Dialog. The Workspace Explorer Tree will automatically be updated upon completion.

Alternatively individual Markets can be copied and pasted via the Datastore Explorer Market Item Context Menu using **[Copy]** and **[Paste]** items.

12. **[Import Markups…]** menu item.
Import Datastore Explorer Markup items from *.Msgradsr#Markups file.

Source file selection is via the standard Windows File Selection Dialog. The Workspace Explorer Tree will automatically be updated upon completion.

Alternatively individual Markets can be copied and pasted via the Datastore Explorer Markups Item Context Menu using **[Copy]** and **[Paste]** items.

13. **[Export Country…]** menu item.
Export Datastore Explorer Country item and contents to *.Msgradsr#Country file.

Destination file selection is via the standard Windows File Selection Dialog and allocated the *.Msgradsr#Country extension. Such files may be exchanged between Chartboard sites.

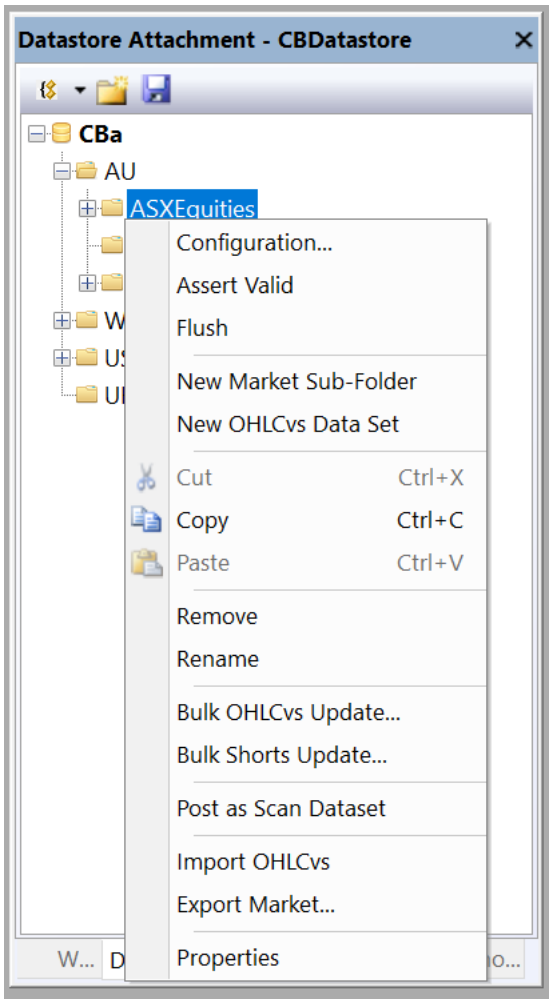
14. **[Properties]** menu item.
Activates grid properties for this Datastore Explorer Country Item.

Alternatively such grid properties can be activated via a left mouse click over the explorer tree chart item. Refer Datastore Explorer Country Properties Grid for further details.

4.2.2.3 Datastore Explorer Market Item Context Menu

The following Datastore Explorer Market Item Context Menu is accessed via either a right mouse click over the Datastore Explorer Tree Market item or pressing the context key whenever such an item has focus.

Market items only ever exist under the Datastore Explorer Country Item's.



1. **[Configuration…]** menu item.
   Activates the Datastore Market Configuration Dialog for this Market item.

2. **[Assert Valid]** menu item.
   Asserts the validity of the internal Datastore Explorer Tree data structures.

   Item verifies internal data structures of the loaded Datastore for Market, always enabled.

3. **[Flush]** menu item.
   Recursively flush internal datasets from selected item to disk and conserve memory.

   Item verifies internal data structures of the loaded Datastore for market, always enabled.

4. **[New Market Sub-Folder]** menu item.
   Creates a new, empty Market sub-folder as child of the selected Market item.

   Item is only ever enabled when menu is activated over Datastore Explorer Tree Market-Folder items

   Folder is allocated the default unique name “Folder” or “Folder(#)” and control is passed to folder name in edit mode. Refer **[Rename]** item from Datastore Explorer Market-Folder Item Context Menu for further details. Market-Folder items are usually assigned dataset group names etc.

5. **[New OHLCvs Dataset]** menu item.
   Creates a new, empty OHLCvs dataset under the selected Market item.

   Item is only ever enabled when menu is activated over Datastore Explorer Tree Market or Market-Folder items

   Item is allocated the default unique name “OHLCvs” or “OHLCvs(#)” and control is passed to folder name in edit mode. Refer **[Rename]** item from Datastore Explorer OHLCvs Item Context Menu for further details. OHLCvs items are MUST assigned standard stock codes that reflect those codes assigned within the Market update files, such as BHP, WOW, etc.

6. **[Cut]** menu item.
   Cuts item definitions for the selected item to the clipboard, use ESCAPE for abandon.

Content cut from Datastore Explorer's can only be pasted to Datastore Explorer's. Workspace's, Modelling, Portfolio's and Automation attachments are excluded

7. **[Copy]** menu item.
Copies item and contents to the application clipboard.

Content copied from Datastore Explorer's can only be pasted to Datastore Explorer's. Workspace's, Modelling, Portfolio's and Automation attachments are excluded destinations.

8. **[Paste** *object type***]** menu item.
Pastes clipboard contents under selected item.

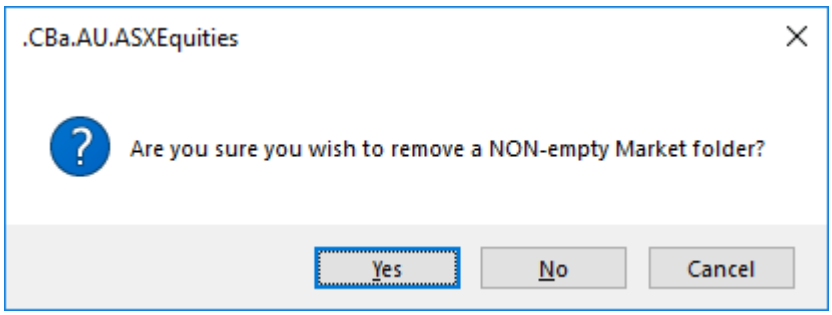
Item is only ever enabled when clipboard contains .Msgradsr#OHLCvs equivalent content. Refer **[Copy]** items under the Datastore Explorer Context Menu's for further details.

Pasted content is allocated the unique name that reflects the original item name with **"- Copy"** or **"- Copy (#)"** appended.

Market items may contain terabytes of data and as may exhaust memory limits when **[Copy]** and **[Paste]** sequences are attempted. **[Export…]** and **[Import…]** sequences may be a better alternative.

9. **[Remove]** menu item.
Removes or deletes the selected Market folder item and contents from the Datastore Explorer.

The following confirmation prompt will be made for non-empty Market folders.



10. **[Rename]** menu item.
Renames the selected Datastore Explorer Tree item.

Valid folder name characters follow the standard Windows file naming conventions, case insensitive. **ESCAPE** to abandon file naming sequence, **enter** key to accept.

Renaming Market folders will invalidate any activate Chart data set references to contained data. Such references will have to be amended, refer Workspace [OHLCvs, PFigure or Scanner] Edit Dialog's for further details.

11. **[Bulk OHLCv Update…]** menu item.
Activates the Datastore Explorer Bulk OHLCv Update Dialog.

The **[Bulk OHLCv Update…]** sequence recursively searches through descendant items and updates those with matching entries in the nominated update file. Refer Datastore Explorer Bulk OHLCvs Update Dialog for further details.

Alternatively individual OHLCvs items can be copied and pasted via the Workspace Explorer OHLCvs Item Context Menu using **[Copy]** and **[Paste]** items.

12. **[Bulk Shorts Update…]** menu item.
Activates the Datastore Explorer Bulk Shorts Update Dialog.

The Bulk Shorts Update sequence recursively searches through descendant items and updates those with matching entries in the nominated update file. Refer Datastore Explorer Bulk Shorts Update Dialog for further details.

Alternatively individual OHLCvs items can be copied and pasted via the Workspace Explorer OHLCvs Item Context Menu using **[Copy]** and **[Paste]** items.

13. **[Post as Scan Dataset]** menu item.
Posts the item as the scanning dataset for Scan View Tab with focus.

The loaded Market dataset is serialised for the scanner and may be subsequently re-run via the **Ribbon Bar >> Scan Tab >> Operations Panel >> {Step** or **Auto Run}** button.

14. **[Import OHLCvs…]** menu item.
Import Workspace Explorer OHLCvs items from *.Msgradsr#OHLCvs files

Source file selection is via the standard Windows File Selection Dialog. The Workspace Explorer Tree will automatically be updated upon completion.

Alternatively individual OHLCvs items can be copied and pasted via the Datastore Explorer OHLCvs Item Context Menu using **[Copy]** and **[Paste]** items.

15. **[Export Market…]** menu item.
Export Datastore Explorer Market item to *.Msgradsr#Market file.

Destination file selection is via the standard Windows File Selection Dialog and allocated the *.Msgradsr#Market extension. Such files may be

exchanged between Chartboard sites.

16. **[Properties]** menu item.
Activates grid properties for this Datastore Market Item.

Alternatively such grid properties can be activated via a left mouse click over the explorer tree Datastore item.

4.2.2.4 Datastore Explorer Market-Folder Item Context Menu.

The following Datastore Explorer Market-Folder Item Context Menu is accessed via either a right mouse click over the Datastore Explorer Tree Market-Folder item or pressing the context key whenever such an item has focus.

Market items only ever exist under the Datastore Explorer Market or Market-Folder Item's.

1. **[Configuration…]** menu item.
Activates the Datastore Explorer Market-Folder Configuration Dialog for this folder item.

2. **[Assert Valid]** menu item.
Asserts the validity of the internal Datastore Explorer Tree data structures.

Item verifies internal data structures of the loaded Workspace for Market-Folder, always enabled.

3. **[Flush]** menu item.
Recursively flush internal datasets from selected item to disk and conserve memory.

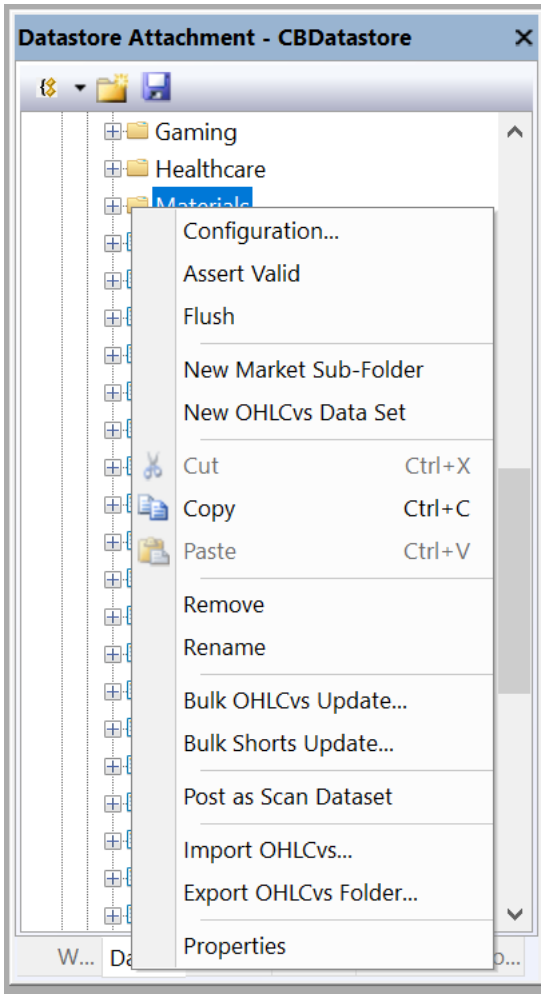
Item verifies internal data structures of the loaded Datastore for Market-Folder, always enabled.

4. **[New Market Sub-Folder]** menu item.
Creates a new, empty Market sub-folder as child of the selected Market-Folder item.

Item is only ever enabled when menu is activated over Datastore Explorer Tree Market-Folder items

Folder is allocated the default unique name "Folder" or "Folder(#)" and control is passed to folder name in edit mode. Refer **[Rename]** item from Datastore Explorer Market-Folder Item Context Menu for further details. Market-Folder items are usually assigned dataset group names etc.

5. **[New OHLCvs Dataset]** menu item.
Creates a new, empty OHLCvs dataset under the selected Market item.



Item is only ever enabled when menu is activated over Datastore Explorer Tree Market or Market-Folder items

Item is allocated the default unique name "OHLCvs" or "OHLCvs(#)" and control is passed to folder name in edit mode. Refer **[Rename]** item from Datastore Explorer OHLCvs Item Context Menu for further details. OHLCvs items are MUST assigned standard stock codes that reflect those codes assigned within the Market update files, such as BHP, WOW, etc.

6. **[Cut]** menu item.
Cuts item definitions for the selected item to the clipboard, use ESCAPE for abandon.

Content cut from Datastore Explorer's can only be pasted to Datastore Explorer's. Workspace's, Modelling, Portfolio's and Automation attachments are excluded

7. **[Copy]** menu item.
Copies item and contents to the application clipboard.

Content copied from Datastore Explorer's can only be pasted to Datastore Explorer's. Workspace's, Modelling, Portfolio's and Automation attachments are excluded destinations.

8. **[Paste** *object type***]** menu item.
Pastes clipboard contents under selected item.

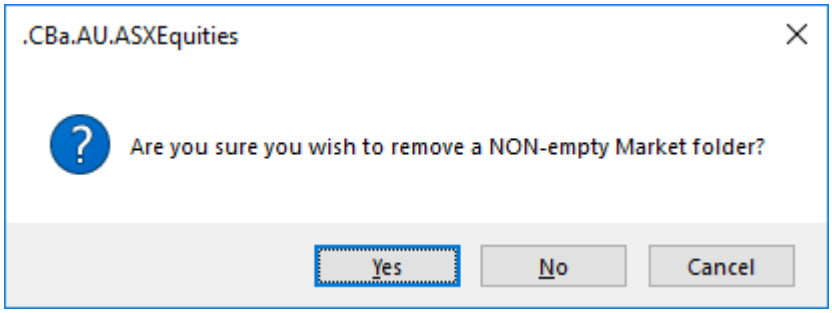
Item is only ever enabled when clipboard contains .Msgradsr#Market equivalent content. Refer **[Copy]** items under the Datastore Explorer Context Menu's for further details.

Pasted content is allocated the unique name that reflects the original item name with **"- Copy"** or **"- Copy (#)"** appended.

Country items may contain terabytes of data and as may exhaust memory limits when [Copy] and [Paste] sequences are attempted. [Export…] and [Import…] sequences may be a better alternative.

9. **[Remove]** menu item.
Removes or deletes the selected Market-Folder and contents from the workspace explorer.

The following confirmation prompt will be made for non-empty Market folders.



10. **[Rename]** menu item.
Renames the selected Workspace Explorer Tree item.
Valid folder name characters follow the standard Windows file naming conventions, case insensitive. **ESCAPE** to abandon file naming sequence, **enter** key to accept.

Renaming Market folders will invalidate any activate Chart data set references to contained data. Such references will have to be amended, refer Workspace [OHLCvs, PFigure] Edit Dialog's for further details.

11. **[Bulk OHLCv Update…]** menu item.
Activates the Datastore Explorer Bulk OHLCv Update Dialog.

The **[Bulk OHLCv Update]** sequence recursively searches through descendant items and updates those with matching entries in the nominated update file. Refer Datastore Explorer Bulk OHLCv Update Dialog for further details.

Alternatively individual OHLCvs items can be copied and pasted via the Workspace Explorer OHLCvs Item Context Menu using **[Copy]** and **[Paste]** items.

12. **[Bulk Shorts Update…]** menu item.
Activates the Datastore Explorer Bulk Shorts Update Dialog.

The Bulk Shorts Update sequence recursively searches through descendant items and updates those with matching entries in the nominated update file. Refer Datastore Explorer Bulk Shorts Update Dialog for further details.

Alternatively individual OHLCvs items can be copied and pasted via the Workspace Explorer OHLCvs Item Context Menu using **[Copy]** and **[Paste]** items.

13. **[Post as Scan Dataset]** menu item.
Posts the item as the scanning dataset for Scan View Tab with focus.

The loaded Market dataset is serialised for the scanner and may be subsequently re-run via the **Ribbon Bar >> Scan Tab >> Operations Panel >> {Step** or **Auto Run}** button.

14. **[Import…]** menu item.
Import Workspace Explorer Market items from *.Msgradsr#Market or #OHLCvs files

Source file selection is via the standard Windows File Selection Dialog. The Workspace Explorer Tree will automatically be updated upon completion.

Alternatively individual Market or OHLCvs items can be copied and pasted via the Workspace Explorer Charts Item Context Menu using **[Copy]** and **[Paste]** items.

15. **[Export…]** menu item.
Export Workspace Explorer Country item to *.Msgradsr#Market file.

Destination file selection is via the standard Windows File Selection Dialog and allocated the *.Msgraws#Market extension. Such files may be exchanged between Chartboard sites.

16. **[Properties]** menu item.
Activates grid properties for this Datastore Explorer Market-Folder Item.

Alternatively such grid properties can be activated via a left mouse click over the explorer tree Datastore item.

4.2.2.5 Datastore Explorer OHLCvs Item Context Menu.

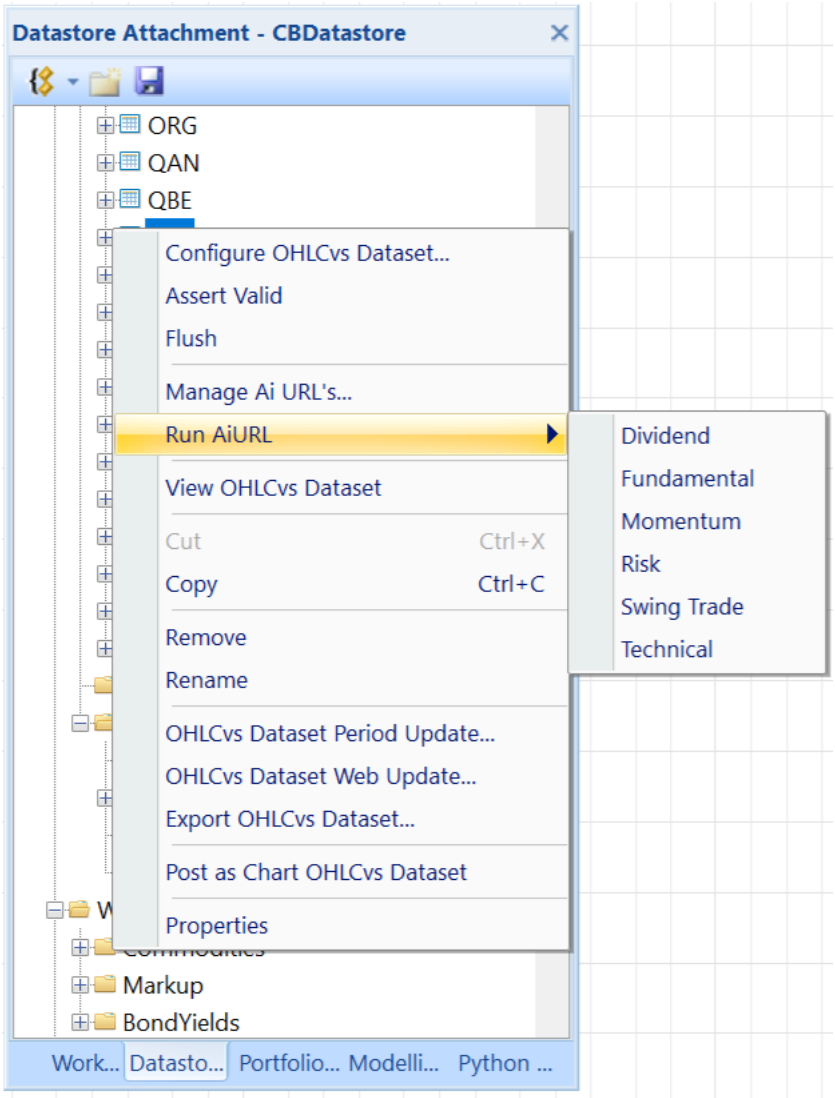
The following Datastore Explorer OHLCvs Item Context Menu is accessed via either a right mouse clicks over the Datastore Explorer Tree OHLCvs item or pressing the context key whenever such an item has focus.

OHLCvs items only ever exist under the Datastore Explorer Market and Market-Folder Item's.

1. **[Configure OHLCvs…]** menu item.
Activates the Datastore Explorer OHLCvs Configuration Dialog for this item.

2. **[Assert Valid]** menu item.
Asserts the validity of the internal Datastore Explorer Tree data structures.

Item verifies internal data structures of the loaded Workspace for Market-OHLCvs dataset, always enabled.



3. **[Flush]** menu item.
Flushes (checked) mapped OHLCvs dataset to disk.

   Item is only ever enabled when menu is activated over Datastore Explorer Tree OHLCvs or Market-Folder-OHLCvs items

   Verifies internal data structures of the loaded Datastore for Market-OHLCvs dataset, always enabled. OHLCvs items are usually assigned standard stock codes that reflect those codes assigned into the Market update files, such as BHP, WOW, etc.

4. **[Cache]** menu item.
Caches (checked) mapped OHLCvs dataset from disk.

   Item is only ever enabled when menu is activated over Datastore Explorer Tree OHLCvs or Market-Folder-OHLCvs items

Caches the data structures of the loaded Datastore for Market-OHLCvs dataset, always enabled. Caches OHLCvs datasets may be flashed to disk vi a the complimentary **[Flush]** context menu item,

5. **[Manage Ai URL's…]** menu item.
   Activates the Ai URL's Dialog for this OHLCvs item within this Market.

   Managed Ai URL's list in common across the whole market.
6. **[Run Ai URL]** sub menu
   Activates sub-menu containing all the URL's defined and/or managed via the above Ai URL's Dialog for this OHLCvs item within this Market.

7. **[View OHLCvs Dataset]** menu item.
   Activates the OHLCvs Dataset List View for the selected item.

   Should view already be activated for the OHLCvs item, view tab focus will be transferred to the corresponding tab. Ribbon bar will be synchronised with the active tab

   Datastore Explorer Tree item is always bolded to reflect the view with the active tab.

8. **[Cut]** menu item.
   Cuts item definitions for the selected item to the clipboard, use ESCAPE for abandon.

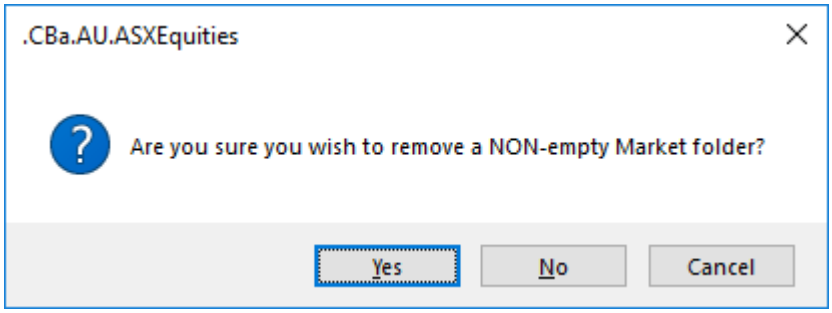
   Content cut from Datastore Explorer's can only be pasted to Datastore Explorer's. Workspace's, Modelling, Portfolio's and Automation attachments are excluded.

9. **[Copy]** menu item.
   Copies item and contents to the application clipboard.

   Content copied from Datastore Explorer's can only be pasted to Datastore Explorer's. Workspace's, Modelling, Portfolio's and Automation attachments are excluded destinations.

10. **[Remove]** menu item.
    Removes or deletes the selected OHLCvs item from the Datastore explorer.

    The following confirmation prompt will be made for non-empty Market folders.



11. **[Rename]** menu item.
Renames the selected Workspace Explorer Tree item.

    Valid folder name characters follow the standard Windows file naming conventions, case insensitive. **ESCAPE** to abandon file naming sequence, **enter** key to accept.

    Renaming Market folders will invalidate any activate Chart and Scanner dataset references to contained data. Such references will have to be amended, refer Workspace [OHLCvs, PFigure or Scanner] Configuration Dialog's for further details.

12. **[OHLCvs Period Update…]** menu item.
Activates the Datastore Explorer OHLCv Period Update Dialog.

    Refer Datastore Explorer OHLCv Period Update Dialog for further details.

    Alternatively individual OHLCvs items can be copied and pasted via the Workspace Explorer OHLCvs Item Context Menu using **[Copy]** and **[Paste]** items.

13. **[OHLCvs Web Update…]** menu item.
Activates the Datastore Market-OHLCvs Web Update Dialog.

    Refer Datastore Market-OHLCvs Web Update Dialog for further details.

    Alternatively individual OHLCvs items can be copied and pasted via the Workspace Explorer OHLCvs Item Context Menu using **[Copy]** and **[Paste]** items.

14. **[Shorts Update…]** menu item.
Activates the Datastore Explorer Shorts Update Dialog.

    Refer Datastore Explorer Shorts Update Dialog for further details.

    Alternatively individual OHLCvs items can be copied and pasted via the Workspace Explorer OHLCvs Item Context Menu using **[Copy]** and **[Paste]** items.

15. **[Import…]** menu item.
    Import Workspace Explorer Market items from *.Msgradsr#OHLCvs files

    Source file selection is via the standard Windows File Selection Dialog. The Workspace Explorer Tree will automatically be updated upon completion.

    Alternatively individual Market or Market can be copied and pasted via the Workspace Explorer Charts Item Context Menu using **[Copy]** and **[Paste]** items.

16. **[Export…]** menu item.
    Export Workspace Explorer OHLCvs item to *.Msgradsr#OHLCvs file.

    Destination file selection is via the standard Windows File Selection Dialog and allocated the *.Msgradsr#Market extension. Such files may be exchanged between Chartboard sites.

17. **[Properties]** menu item.
    Activates Datastore Explorer OHLCvs Properties Grid.

    Alternatively such grid properties can be activated via a left mouse click over the explorer tree chart item.

4.2.2.6 Datastore Explorer Markups Item Context Menu

The following Datastore Explorer Markups Item Context Menu is accessed via either a right mouse click over the Datastore Explorer Tree Markups item or pressing the context key whenever such an item has focus.

Market items only ever exist under the Datastore Explorer Country Item's.

1. **[Configuration…]** menu item.
   Activates the Datastore Markups Configuration Dialog for this item.

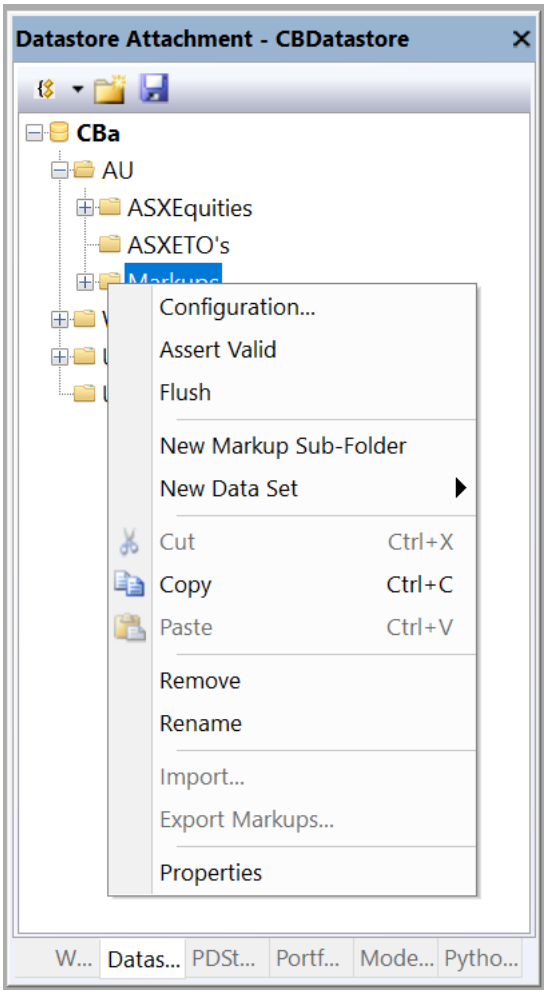
2. **[Assert Valid]** menu item.
   Asserts the validity of the internal Datastore Explorer Tree data structures.

   Item verifies internal data structures of the loaded Datastore for Markup, always enabled.

3. **[Flush]** menu item.
   Recursively flush internal datasets from selected item to disk and conserve memory.

   Item verifies internal data structures of the loaded Datastore for Markup, always enabled.

4. **[New Markup Sub-Folder]** menu item.
Creates a new, empty Markup sub-folder as child of the selected Markup item.



Item is only ever enabled when menu is activated over Datastore Explorer Tree Markups-Folder items

Folder is allocated the default unique name “Folder” or “Folder(#)” and control is passed to folder name in edit mode. Refer **[Rename]** item from Datastore Explorer Markups-Folder Item Context Menu for further details. Markups-Folder items are usually assigned dataset group names etc.

5. **[New Markups Dataset]** menu.
Creates a new, empty dataset under the selected Market item.

Item is only ever enabled when menu is activated over Datastore Explorer Tree Markups or Markups-Folder items.

[► Events] menu item.
Dataset is allocated the default unique name “Events” or “Events(#)” and control is passed to folder name in edit mode.

[► Shades] menu item.
Dataset is allocated the default unique name “Shades” or “Shades(#)” and control is passed to folder name in edit mode.

[► Times] menu item.
Dataset is allocated the default unique name “Times” or “Times(#)” and control is passed to folder name in edit mode.

6. **[Cut]** menu item.
Cuts item definitions for the selected item to the clipboard, use ESCAPE for abandon.

Content cut from Datastore Explorer’s can only be pasted to Datastore Explorer’s. Workspace’s, Modelling, Portfolio’s and Automation attachments are excluded.

7. **[Copy]** menu item.
Copies item and contents to the application clipboard.

Content copied from Datastore Explorer's can only be pasted to Datastore Explorer's. Workspace's, Modelling, Portfolio's and Automation attachments are excluded destinations.

8. **[Paste** *object type***]** menu item.
Pastes clipboard contents under selected item.

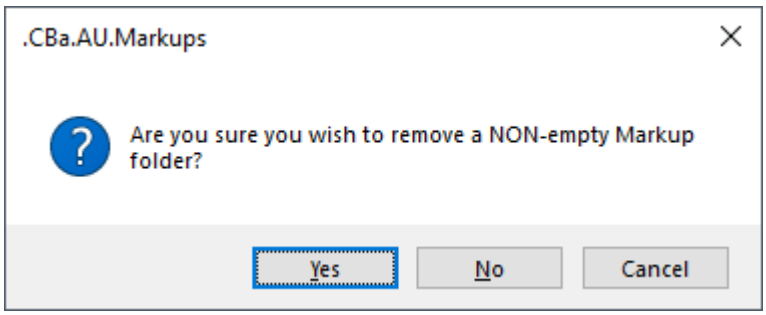
Item is only ever enabled when clipboard contains .Msgradsr#Markups equivalent content. Refer **[Copy]** items under the Datastore Explorer Context Menu's for further details.

Pasted content is allocated the unique name that reflects the original item name with **"- Copy"** or **"- Copy (#)"** appended.

Markup items may contain terabytes of data and as may exhaust memory limits when **[Copy]** and **[Paste]** sequences are attempted. **[Export…]** and **[Import…]** sequences may be a better alternative.

9. **[Remove]** menu item.
Removes or deletes the selected Markups folder item and contents from the Datastore Explorer.

The following confirmation prompt will be made for non-empty Markups folders.



10. **[Rename]** menu item.
Renames the selected Workspace Explorer Tree item.

Valid folder name characters follow the standard Windows file naming conventions, case insensitive. **ESCAPE** to abandon file naming sequence, **enter** key to accept.

Renaming Market folders will invalidate any activate Chart data set references to contained data. Such references will have to be amended, refer Workspace [OHLCvs, PFigure or Scanner] Edit Dialog's for further details.

11. **[Import…]** menu item.
    Import Workspace Explorer markup items from *.Msgradsr#Markup files

    Source file selection is via the standard Windows File Selection Dialog. The Workspace Explorer Tree will automatically be updated upon completion.

    Alternatively individual markup items can be copied and pasted via the Datastore Explorer Markup Item Context Menu using **[Copy]** and **[Paste]** items.

12. **[Export…]** menu item.
    Export Datastore Explorer Market-Folder item to *.Msgradsr#Markups file.

    Destination file selection is via the standard Windows File Selection Dialog and allocated the *.Msgradsr#Markups extension. Such files may be exchanged between Chartboard sites.

13. **[Properties]** menu item.
    Activates grid properties for this Datastore Markups Item.

    Alternatively such grid properties can be activated via a left mouse click over the explorer tree Datastore item.

4.2.2.7 Datastore Explorer Markups-Folder Item Context Menu.

The following Datastore Explorer Markups-Folder Item Context Menu is accessed via either a right mouse click over the Datastore Explorer Tree Market-Folder item or pressing the context key whenever such an item has focus.

Market items only ever exist under the Datastore Explorer Markups or Markups-Folder Item's.

1. **[Configuration…]** menu item.
   Activates the Datastore Explorer Markups-Folder Configuration Dialog for this folder item.

2. **[Assert Valid]** menu item.
   Asserts the validity of the internal Datastore Explorer Tree data structures.

   Item verifies internal data structures of the loaded Workspace for Markups-Folder, always enabled.

3. **[Flush]** menu item.
   Recursively flush internal datasets from selected item to disk and conserve memory.

   Item verifies internal data structures of the loaded Datastore for Markups-Folder, always enabled.

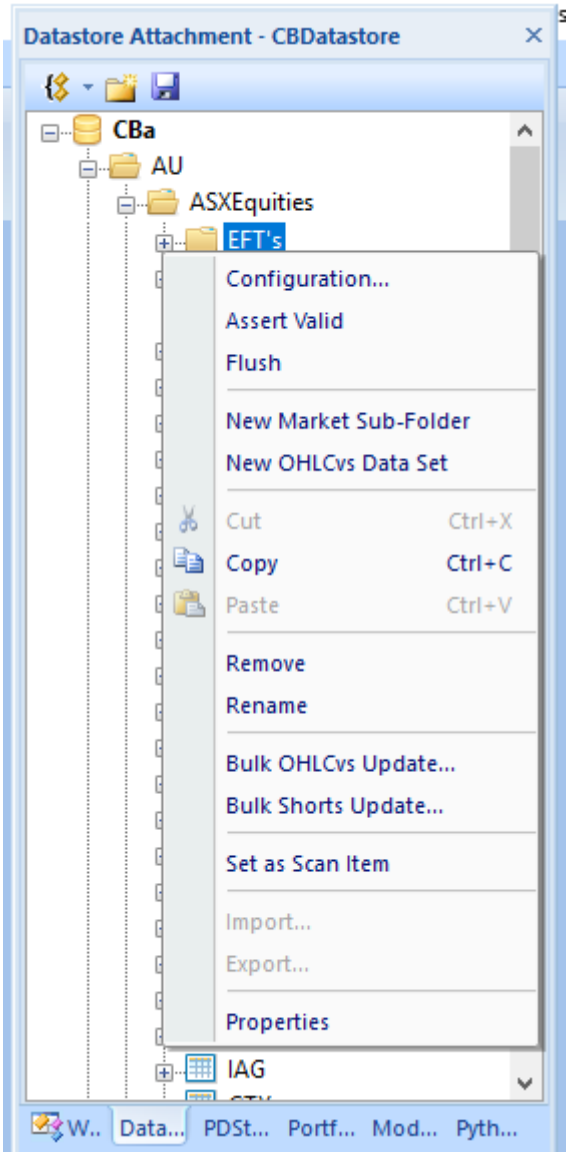
4. **[New Markups Sub-Folder]** menu item.
   Creates a new, empty Markups sub-folder as child of the selected Markups-

Folder item.

Item is only ever enabled when menu is activated over Datastore Explorer Tree Markups-Folder items

Folder is allocated the default unique name “Folder” or “Folder(#)” and control is passed to folder name in edit mode. Refer **[Rename]** item from Datastore Explorer Markups-Folder Item Context Menu for further details. Markups-Folder items are usually assigned dataset group names etc.

5. **[New Markups Dataset]** menu item.
Creates a new, empty Markups dataset under the selected Markups item.



Item is only ever enabled when menu is activated over Datastore Explorer Tree Markups or Markups-Folder items

Item is allocated the default unique name “Dataset” or “Dataset(#)” and control is passed to folder name in edit mode. Refer **[Rename]** item from Datastore Explorer Dataset Item Context Menu for further details.

6. **[Cut]** menu item.
Cuts item definitions for the selected item to the clipboard, use ESCAPE for abandon.

Content cut from Datastore Explorer’s can only be pasted to Datastore Explorer’s. Workspace’s, Modelling, Portfolio’s and Automation attachments are excluded

7. **[Copy]** menu item.
Copies item and contents to the application clipboard.

Content copied from Datastore Explorer’s can only be pasted to Datastore Explorer’s. Workspace’s, Modelling, Portfolio’s and Automation attachments are excluded destinations.

8. **[Paste** *object type***]** menu item.
Pastes clipboard contents under selected item.

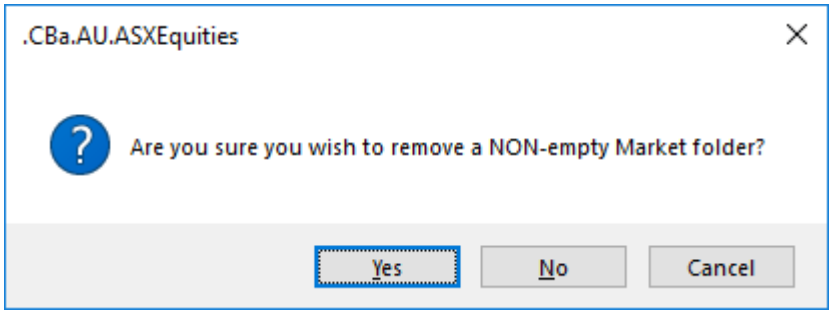
Item is only ever enabled when clipboard contains .Msgradsr#Markups equivalent content. Refer **[Copy]** items under the Datastore Explorer Context Menu's for further details.

Pasted content is allocated the unique name that reflects the original item name with **"- Copy"** or **"- Copy (#)"** appended.

Country items may contain terabytes of data and as may exhaust memory limits when [Copy] and [Paste] sequences are attempted. [Export…] and [Import…] sequences may be a better alternative.

9. **[Remove]** menu item.
Removes or deletes the selected Markups-Folder and contents from the workspace explorer.

The following confirmation prompt will be made for non-empty Markups folders.



10. **[Rename]** menu item.
Renames the selected Workspace Explorer Tree item.
Valid folder name characters follow the standard Windows file naming conventions, case insensitive. **ESCAPE** to abandon file naming sequence, **enter** key to accept.

Renaming Market folders will invalidate any activate Chart data set references to contained data. Such references will have to be amended, refer Workspace [OHLCvs, PFigure] Edit Dialog's for further details.

11. **[Import…]** menu item.
Import Workspace Explorer Markup items from *.Msgradsr#Markups or #Dataset files

Source file selection is via the standard Windows File Selection Dialog. The Workspace Explorer Tree will automatically be updated upon completion.

Alternatively individual Markups or Dataset items can be copied and pasted via the Workspace Explorer Charts Item Context Menu using **[Copy]** and

[Paste] items.

12. **[Export…]** menu item.
Export Workspace Explorer Country item to *.Msgradsr#Markups file.

Destination file selection is via the standard Windows File Selection Dialog and allocated the *.Msgraws#Markups extension. Such files may be exchanged between Chartboard sites.

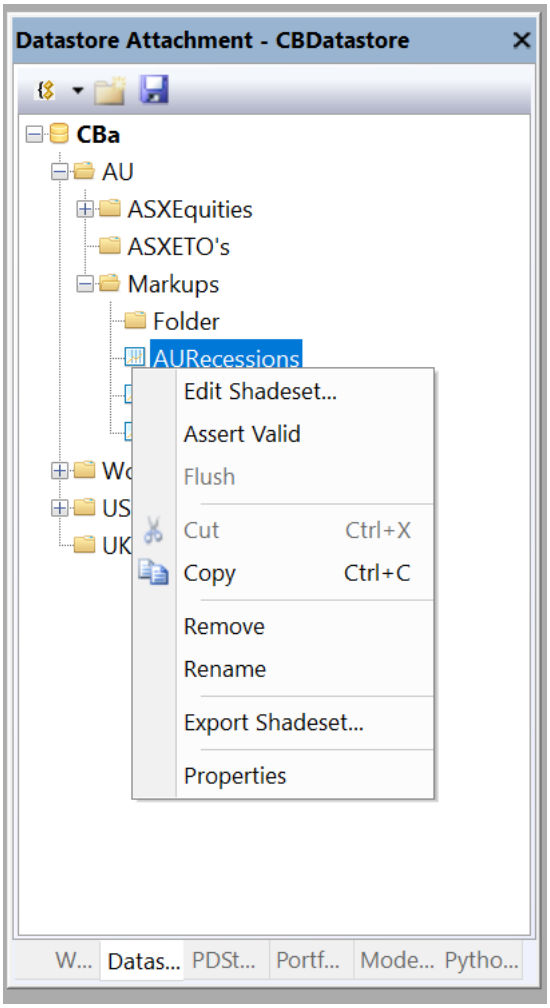
13. **[Properties]** menu item.
Activates grid properties for this Datastore Explorer Markups-Folder Item.

Alternatively such grid properties can be activated via a left mouse click over the explorer tree Datastore item.

4.2.2.8 Datastore Explorer Markups-Shadeset Context Menu

The following Datastore Explorer Shadeset Item Context Menu is accessed via either a right mouse click over the Datastore Explorer Tree Shadeset item or pressing the context key whenever such an item has focus.

Shadeset items only ever exist under the Datastore Explorer Markups and Markups-Folder Item's.



1. **[Edit Shadeset…]** menu item.
   Activates the Datastore Explorer Shadeset Edit Dialog for this item.

2. **[Assert Valid]** menu item.
   Asserts the validity of the internal Datastore Explorer Tree data structures.

   Item verifies internal data structures of the loaded Workspace for Markups-Shadeset, always enabled.

3. **[Flush]** menu item.
   Flushes (checked) mapped Shadeset to disk.

   Item is only ever enabled when menu is activated over Datastore Explorer Tree Shadeset or Markups-Folder-Shadeset items

4. **[Cut]** menu item.
   Cuts item definitions for the selected item to the clipboard, use ESCAPE for abandon.

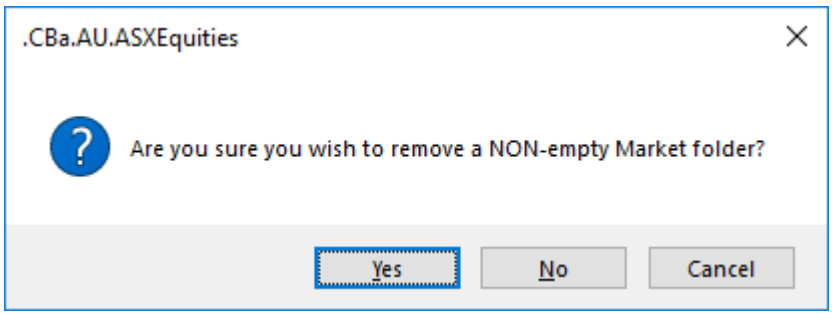
   Content cut from Datastore Explorer's can only be pasted to Datastore Explorer's. Workspace's, Modelling, Portfolio's and Automation attachments are excluded.

5. **[Copy]** menu item.
   Copies item and contents to the application clipboard.

   Content copied from Datastore Explorer's can only be pasted to Datastore Explorer's. Workspace's, Modelling, Portfolio's and Automation attachments are excluded destinations.

6. **[Remove]** menu item.
   Removes or deletes the selected Shadeset item from the Datastore explorer.

   The following confirmation prompt will be made for non-empty Markup folders.



7. **[Rename]** menu item.
   Renames the selected Workspace Explorer Tree item.

   Valid folder name characters follow the standard Windows file naming conventions, case insensitive. **ESCAPE** to abandon file naming sequence, **enter** key to accept.

   Renaming a Shadeset will invalidate any activate Markups references to contained data. Such references will have to be amended.

8. **[Export…]** menu item.
   Export Workspace Explorer Shadeset item to *.Msgradsr#Shadeset file.

   Destination file selection is via the standard Windows File Selection Dialog and allocated the *.Msgradsr#Shadeset extension. Such files may be exchanged between Chartboard sites.

9. **[Properties]** menu item.
   Activates Datastore Explorer Shadeset Properties Grid.

   Alternatively such grid properties can be activated via a left mouse click over the explorer tree chart item.

4.2.2.9 Datastore Explorer Markups-Eventset Context Menu

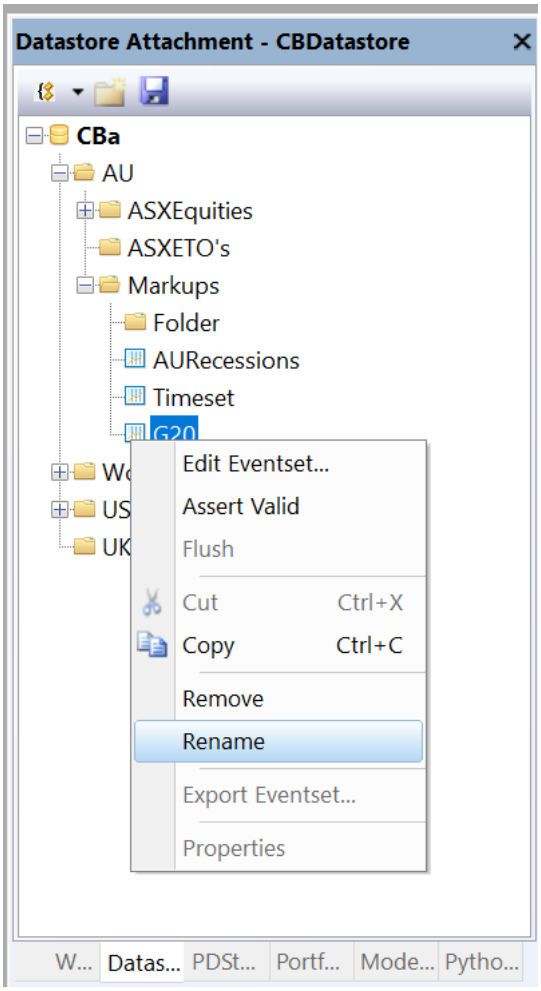
The following Datastore Explorer Eventset Item Context Menu is accessed via either a right mouse click over the Datastore Explorer Tree Eventset item or pressing the context key whenever such an item has focus.

Eventset items only ever exist under the Datastore Explorer Markups and Markups-Folder Item's.

1. **[Edit Eventset…]** menu item.
   Activates the Datastore Explorer Eventset Edit Dialog for this item.

2. **[Assert Valid]** menu item.
Asserts the validity of the internal Datastore Explorer Tree data structures.

   Item verifies internal data structures of the loaded Workspace for Markups-Eventset, always enabled.



3. **[Flush]** menu item.
Flushes (checked) mapped Eventset to disk.

   Item is only ever enabled when menu is activated over Datastore Explorer Tree Eventset or Markups-Folder-Eventset items

4. **[Cut]** menu item.
Cuts item definitions for the selected item to the clipboard, use ESCAPE for abandon.

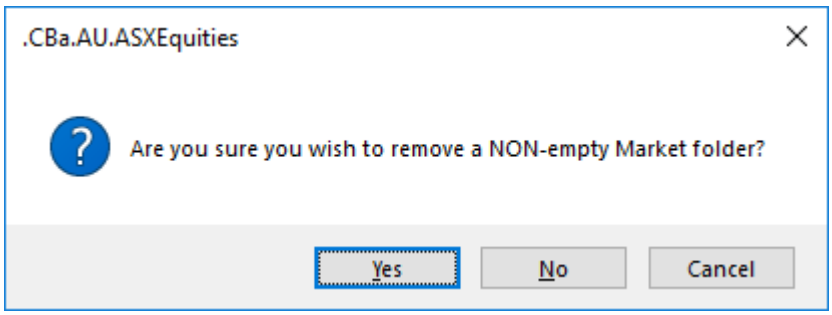
   Content cut from Datastore Explorer's can only be pasted to Datastore Explorer's. Workspace's, Modelling, Portfolio's and Automation attachments are excluded.

5. **[Copy]** menu item.
Copies item and contents to the application clipboard.

   Content copied from Datastore Explorer's can only be pasted to Datastore Explorer's. Workspace's, Modelling, Portfolio's and Automation attachments are excluded destinations.

6. **[Remove]** menu item.
Removes or deletes the selected Eventset item from the Datastore explorer.

   The following confirmation prompt will be made for non-empty Market folders.



7. **[Rename]** menu item.
   Renames the selected Workspace Explorer Tree item.

   Valid folder name characters follow the standard Windows file naming conventions, case insensitive. **ESCAPE** to abandon file naming sequence, **enter** key to accept.

   Renaming a Eventset will invalidate any activate Markups references to contained data. Such references will have to be amended.

8. **[Export…]** menu item.
   Export Workspace Explorer Eventset item to *.Msgradsr#Eventset file.

   Destination file selection is via the standard Windows File Selection Dialog and allocated the *.Msgradsr#Eventset extension. Such files may be exchanged between Chartboard sites.

9. **[Properties]** menu item.
   Activates Datastore Explorer Eventset Properties Grid.

   Alternatively such grid properties can be activated via a left mouse click over the explorer tree chart item.

4.2.2.10 Datastore Explorer Markups-Timeset Context Menu

The following Datastore Explorer Timeset Item Context Menu is accessed via either a right mouse clicks over the Datastore Explorer Tree Timeset item or pressing the context key whenever such an item has focus.

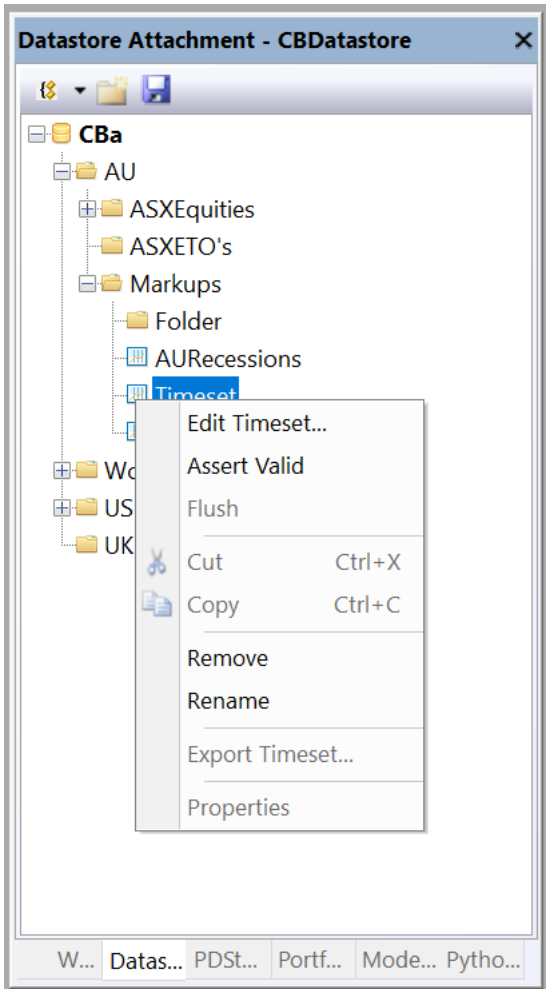
Shadeset items only ever exist under the Datastore Explorer Markups and Markups-Folder Item's.

1. **[Edit Timeset…]** menu item.
   Activates the Datastore Explorer Timeset Edit Dialog for this item.

2. **[Assert Valid]** menu item.
   Asserts the validity of the internal Datastore Explorer Tree data structures.

   Item verifies internal data structures of the loaded Workspace for Markups-Timeset, always enabled.

3. **[Flush]** menu item.
Flushes (checked) mapped Timeset to disk.



Item is only ever enabled when menu is activated over Datastore Explorer Tree Timeset or Markups-Folder-Timeset items

Folder is allocated the default unique name "Folder" or "Folder(#)" and control is passed to folder name in edit mode. Refer **[Rename]** item from Datastore Explorer Shadeset Item Context Menu for further details. Shadeset items are usually assigned names that reflect the underlying events series.

4. **[Cut]** menu item.
Cuts item definitions for the selected item to the clipboard, use ESCAPE for abandon.

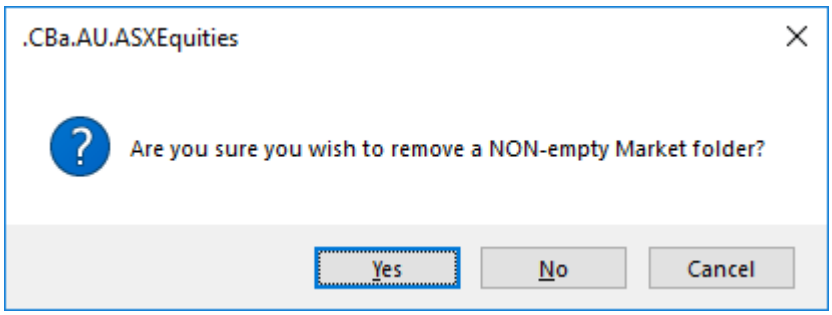
Content cut from Datastore Explorer's can only be pasted to Datastore Explorer's. Workspace's, Modelling, Portfolio's and Automation attachments are excluded.

5. **[Copy]** menu item.
Copies item and contents to the application clipboard.

Content copied from Datastore Explorer's can only be pasted to Datastore Explorer's. Workspace's, Modelling, Portfolio's and Automation attachments are excluded destinations.

6. **[Remove]** menu item.
Removes or deletes the selected Timeset item from the Datastore explorer.

The following confirmation prompt will be made for non-empty Market folders.



7. **[Rename]** menu item.
   Renames the selected Workspace Explorer Tree item.

   Valid folder name characters follow the standard Windows file naming conventions, case insensitive. **ESCAPE** to abandon file naming sequence, **enter** key to accept.

   Renaming a Shadeset will invalidate any activate Markups references to contained data. Such references will have to be amended.

8. **[Export…]** menu item.
   Export Workspace Explorer Timeset item to *.Msgradsr#Timeset file.

   Destination file selection is via the standard Windows File Selection Dialog and allocated the *.Msgradsr#Timeset extension. Such files may be exchanged between Chartboard sites.

9. **[Properties]** menu item.
   Activates Datastore Explorer Timeset Properties Grid.

   Alternatively such grid properties can be activated via a left mouse click over the explorer tree chart item.

4.2.2.11 Datastore Explorer Miscellaneous Context Menu

The following Dataspace Explorer Miscellaneous Context Menu is accessed via a right mouse click over an unresolved item or region of the Dataspace Explorer Tree.

1. **[Release from Workspace]** menu item.
   Release this Datastore Explorer from the Workspace

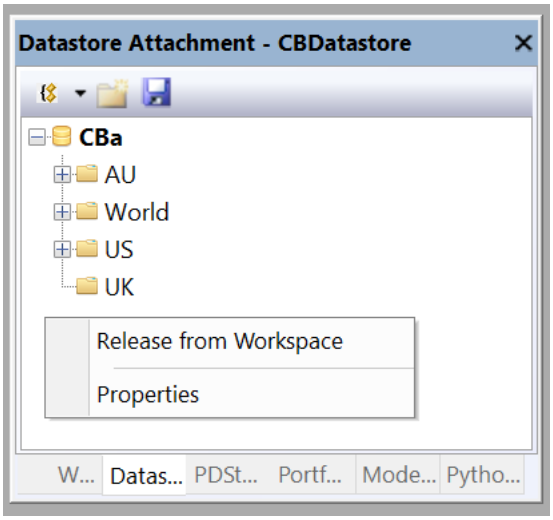
   Refer **Ribbon Bar** >> **[Attachments]** Tab >> **[Datastore's]** Panel for further details.

2. **[Remove]** menu item.
Removes or deletes the selected Datastore item.

   Disabled for unselected items.

3. **[Properties]** menu item.
Activates Datastore Explorer Root Properties Grid.

   Alternatively such grid properties can be activated via a left mouse click over an unresolved region or item.
Refer Datastore Explorer Root Properties Grid for further details.



4.2.3 Properties Grid

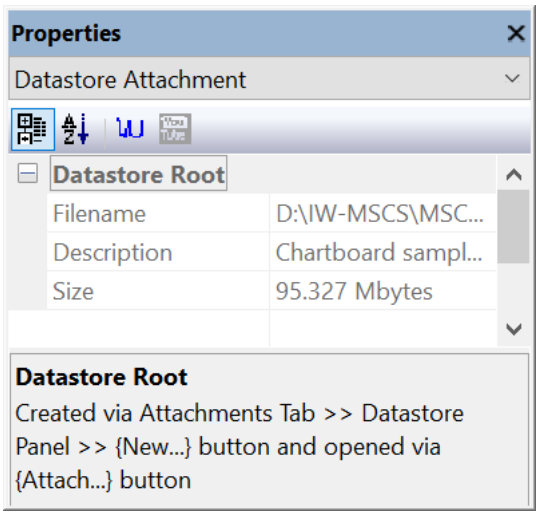
4.2.3.1 Datastore Explorer Root Properties Grid

The following Datastore Explorer Root Properties Grid are activated via either a left mouse click over the Datastore Explorer Tree Root Item or selection of the [Properties] item from the Datastore Explorer Tree Root Item Context Menu.

1. **[Filename]** grid item.
Name of the disk file through which the Datastore Attachment persists and is serialised.

2. **[Description]** grid item.
Datastore description. Refer Datastore Explorer Configuration Dialog for further details.

3. **[Size]**
Current size of Datastore. Make use of Defragment and Flush context menu items to recover space.

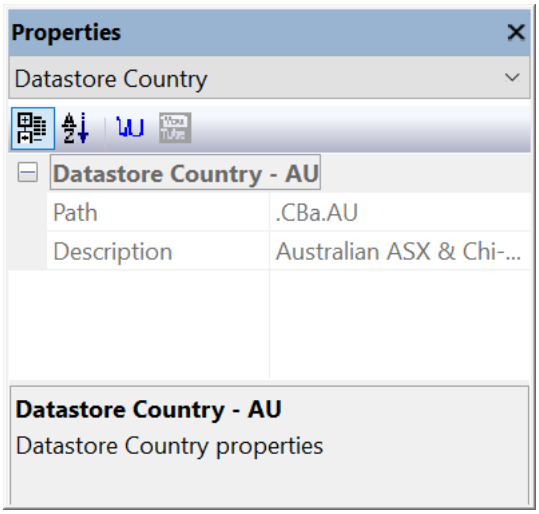


4.2.3.2 Datastore Explorer Country Properties Grid

The following Datastore Explorer Country Properties Grid are activated via either a left mouse click over the Datastore Explorer Tree Country Item or selection the [Properties] item from the Datastore Explorer Tree Country Item Context Menu.

1. **[Path]** grid item.
   Full internal Datastore Country path.

2. **[Description]** grid item.
   Datastore Country description. Refer Datastore Explorer Country Configuration Dialog.

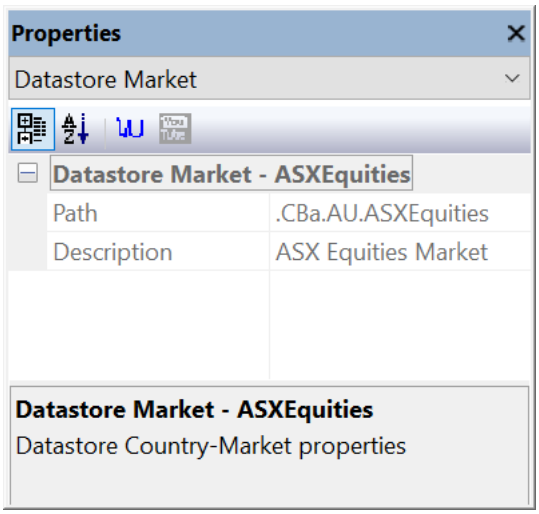


4.2.3.3 Datastore Explorer Market Properties Grid

The following Datastore Explorer Market Properties Grid are activated via either a left mouse click over the Datastore Explorer Tree Market Item or selection the [Properties] item from the Datastore Explorer Tree Market Item Context Menu.

1. **[Path]** grid item.
   Full internal Datastore Country-Market path.

2. **[Description]** grid item.
   Datastore Country-Market description. Refer Datastore Explorer Market Configuration Dialog for further details.

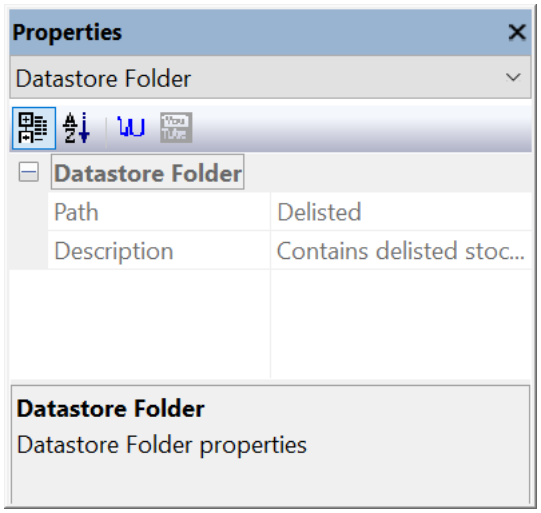


4.2.3.4 Datastore Explorer Market-Folder Properties Grid

The following Datastore Explorer Market-Folder Properties Grid are activated via either a left mouse clicks over Datastore Explorer Market-Folder Item's or selecting the **[Properties]** item from the Datastore Explorer Market-Folder Item Context Menu.

1. **[Path]** grid item.
   Full internal Datastore Folder path.

2. **[Description]** grid item.
   Datastore Folder description. Refer Datastore Explorer Market-Folder Configuration Dialog.



4.2.3.5 Datastore Explorer Market-OHLCvs Properties Grid

The following Datastore Explorer Market-OHLCvs Properties Grid are activated via either a left mouse clicks over the Datastore Explorer Market-OHLCvs Item or selection the [Properties] item from the Datastore Explorer Tree Market-OHLCvs Item Context Menu.

1. **[Path]** grid item.
   Full internal Country-Market-OHLCvs path.

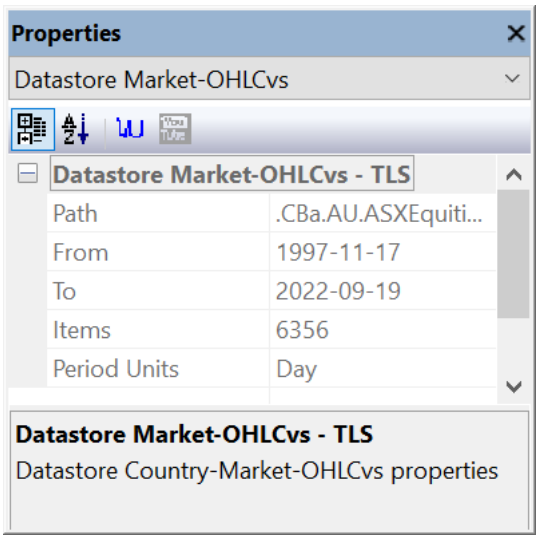
2. **[Description]** grid item.
   Country-Market-OHLCvs dataset description. Refer Datastore Market-OHLCvs Configuration Dialog.

3. **[From]** grid item.
   First OHLCvs item dataset date.

4. **[To]** grid item.
   Last OHLCvs item dataset date.

5. **[Items]** grid item.
   Number of unit items in the data set.

6. **[Period Units]** grid items.
   Country-Market-OHLCvs period units (Year, Quarter, Month, Week, Day).

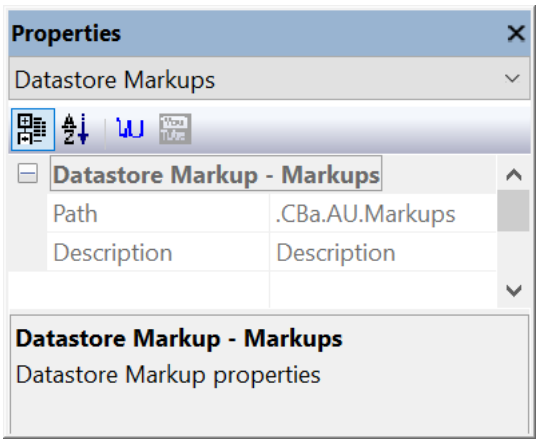


4.2.3.6 Datastore Explorer Markups Properties Grid

The following Datastore Explorer Markups Properties Grid are activated via either a left mouse click over the Datastore Explorer Tree Markups Item or selection the [Properties] item from the Datastore Explorer Tree Markups Item Context Menu.

1. **[Path]** grid item.
   Full internal Datastore Country-Markups path.

2. **[Description]** grid item.
   Datastore Country-Markups description. Refer Datastore Explorer Markups Configuration Dialog.

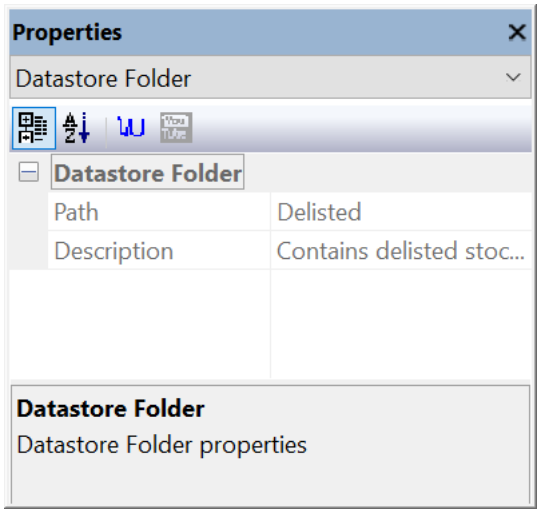


4.2.3.7 Datastore Explorer Markups-Folder Properties Grid

The following Datastore Explorer Markups-Folder Properties Grid are activated via either a left mouse click over Datastore Explorer Markups-Folder Item's or selecting the **[Properties]** item from the Datastore Explorer Markups-Folder Item Context Menu.

1. **[Path]** grid item.
   Full internal Datastore Folder path.

2. **[Description]** grid item.
   Datastore Folder description. Refer Datastore Explorer Markups-Folder Configuration Dialog.



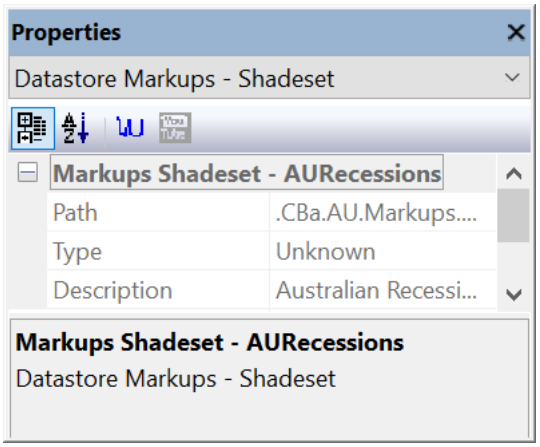
4.2.3.8 Datastore Explorer Markups-Shadeset Properties Grid

The following Datastore Explorer Markups-Shadeset Properties Grid are activated via either a left mouse click over the Datastore Explorer Markups-Shadeset Item or selection the [Properties] item from the Datastore Explorer Tree Markups-Shadeset Item Context Menu.

1. **[Path]** grid item.
   Full internal Country-Markups-Shadeset path.

2. **[Type]** grid item.
   Country-Markups-Shadeset type.

3. **[Description]** grid item.
   Datastore Country-Markups-Shadeset description. Refer Datastore Explorer Markups-Shadeset Configuration Dialog.



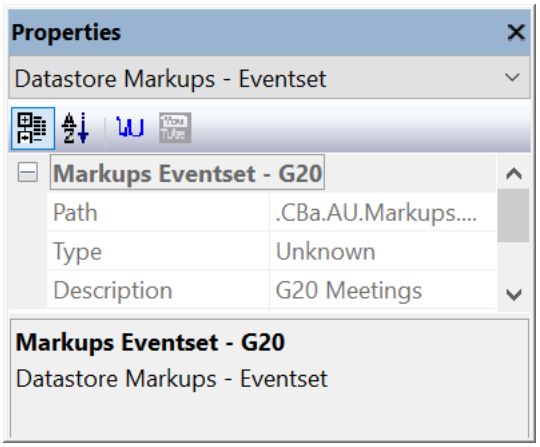
4.2.3.9 Datastore Explorer Markups-Eventset Properties Grid

The following Datastore Explorer Markups-Eventset Properties Grid are activated via either a left mouse click over the Datastore Explorer Markups-Eventset Item or selection the [Properties] item from the Datastore Explorer Tree Markups-Eventset Item Context Menu.

1. **[Path]** grid item.
   Full internal Country-Market-Eventset path.

2. **[Type]** grid item.
   Country-Markups-Eventset type.

3. **[Description]** grid item.
   Datastore Country-Markups-Shadeset description. Refer Datastore Explorer Markups-Eventset Configuration Dialog.



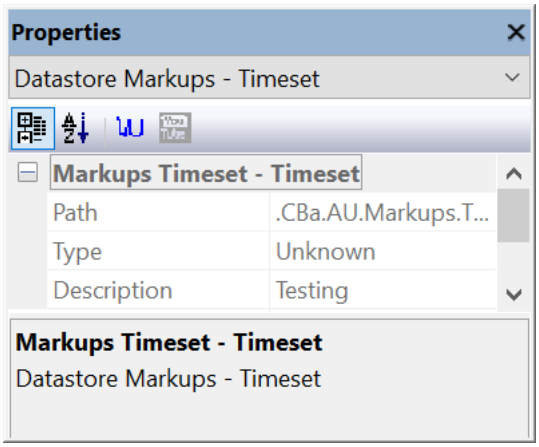
4.2.3.10 Datastore Explorer Markups-Timeset Properties Grid

The following Datastore Explorer Markups-Timeset Properties Grid are activated via either a left mouse click over the Datastore Explorer Markups-Timeset Item or selection the [Properties] item from the Datastore Explorer Tree Markups-Timeset Item Context Menu.

1. **[Path]** grid item.
   Full internal Country-Market-Timeset path.

2. **[Type]** grid item.
   Country-Markups-Timeset type.

3. **[Description]** grid item.
   Datastore Country-Markups-Shadeset description. Refer Datastore Explorer Markups-Timeset Configuration Dialog.

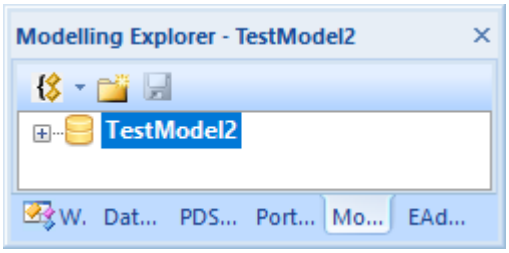


4.3 Modelling Explorers

4.3.1 Modelling Explorer Toolbar

The following Modelling Explorer Toolbar exists at the top of the Modelling Explorer Tree.

Following items exist for sorting of the Modelling Explorer Tree and relate to the selected Root or Folder item.



1. **[Sort Alphabetically]** button item.
   Sorts items alphabetically under the selected item, observing pre-conditions.

   Item is only ever enabled when Modelling Explorer Tree root or folder item is selected.

2. **[Sort by Access]** menu item.
   Sorts items by access under the selected item, observing pre-conditions.

   Item is only ever enabled when Modelling Explorer Tree root or folder item is selected.

3. **[Group Folders]** button item.
   Group folder items at top of list under the selected item, observing pre-conditions.

   Toggles current setting and implements immediately. New setting currently remains latched and is observed in all subsequent sorting operations

4. **[Group Data Types]** button item.
   Group item types (Trades, Dividends) under the selected item, observing pre-conditions.

   Toggles current setting and implements immediately. New setting currently

remains latched and is observed in all subsequent sorting operations

5. **[Recursively Sort]** menu item.
Recursively sets and sorts subordinate folders accordingly to selected parameters.

Recursively implements immediately according to current selections.

Following items exist for general Modelling Explorer Tree activities.

6. **{New Folder}** button item.
Creates a new folder under the selected item.

Item is only ever enabled when Modelling Explorer Market, Markups or Folder tree item is selected.

7. **[Save]** button item.
Save edited contents of Modelling Explorer Tree.

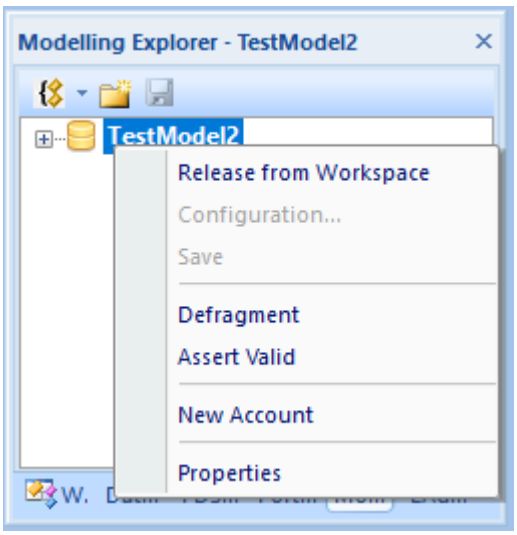
Item is only ever enabled when unsaved data exists in Modelling Explorer Tree. Saved status of other Chartboard Explorer's remain unaffected.

Equivalent action is achieved via the **[Save]** item from the Modelling Explorer Root Context Menu. Alternatively, the **[Save All]** item under the **{Application}** button includes this item in its sequences.

4.3.2 Context Menus

4.3.2.1 Modelling Explorer Root Item Context Menu.

The following Modelling Explorer Root Item Context Menu is accessed via either a right mouse click over the Modelling Explorer Tree root item or pressing the context key whenever such an item has focus.



1. **[Release from Workspace]** menu item.
Detaches the Modelling Explorer from the Workspace

Refer Ribbon Bar >> Attachments Tab >> Modelling Panel for further details.

2. **[Configuration…]** menu item.
Activates the Modelling Explorer Configuration Dialog.

3. **[Save]** menu item.
Save the amended contents of this Modelling Explorer tree.

Item is only ever enabled when unsaved data exists in Modelling Explorer data store. Saved status of other Chartboard Explorer's remain unaffected.

Equivalent action is achieved via the **{Save}** button on the Modelling Explorer Toolbar. Alternatively, the **{Save All}** item under the Application Button Menu includes action in its sequences.

4. **[Defragment]** menu item.
Defragments Modelling Explorer contents and recovers disk space.

Item is only ever enabled when Modelling Explorer has no dependant views.

Defragments the underlying Modelling data structures and recovers fragmented memory. Chartboard Modelling Explorers are fully memory mapped and usually have better performance after defragmentation. Each Modelling Explorer maintains its own mapped disk space.

5. **[Assert Valid]** menu item.
Asserts the validity of the internal Modelling Explorer data structures.

Item verifies internal data structures of the loaded Modelling Explorer, always enabled.

6. **[New Account]** menu item.
Creates a new, empty Modelling Account folder under the selected item.

Item is only ever enabled when menu is activated over either Modelling Explorer Root.

Folder is allocated the default unique name "Account" or "Account(#)" and control is passed to folder name in edit mode. Refer **[Rename]** item from Modelling Explorer Account Item Context Menu for further details. Account items are usually assigned standard reference names.

7. **[Properties]** menu item.
Activates workspace properties.

Refer Modelling Explorer Root Properties Grid for further details.

4.3.2.2 Modelling Explorer Account Item Context Menu

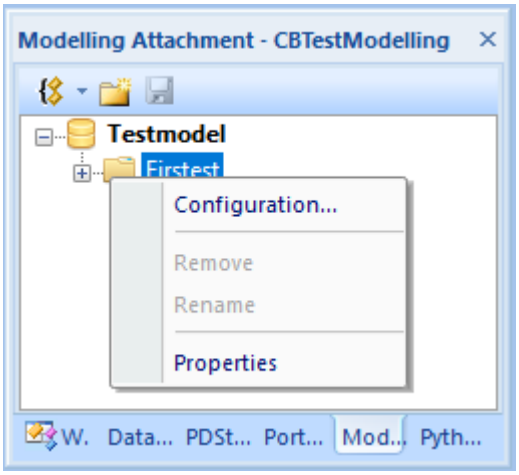
The following Modelling Explorer Account Item Context Menu is accessed via either a right mouse click over the Modelling Explorer Tree Country item or pressing the context key whenever such an item has focus.

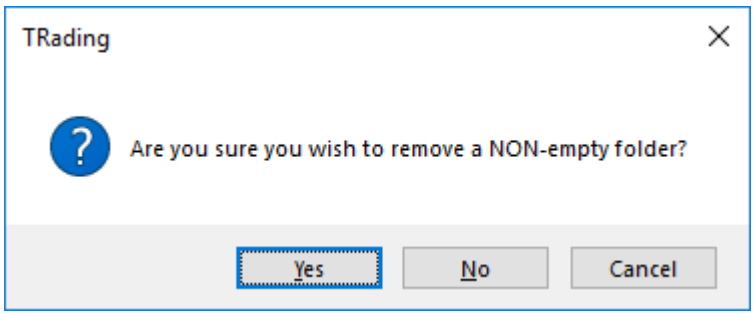
Account items only ever exist under the Modelling Explorer Root Item.

1. **[Configuration…]** menu item.
   Activates the Modelling Explorer Account Configuration Dialog.

2. **[Remove]** menu item.
   Removes or deletes the selected Account folder and contents from the Modelling Explorer.

   The following confirmation prompt will be made for non-empty Account folders.





3. **[Rename]** menu item.
   Renames the selected Modelling Explorer Tree item.

   Valid folder name characters follow the standard Windows file naming conventions, case insensitive. **ESCAPE** to abandon file naming sequence, **enter** key to accept.

   Renaming Account folders will invalidate any activate Chart data set references to contained data. Such references will have to be amended, refer Modelling Account Edit Dialog's for further details.

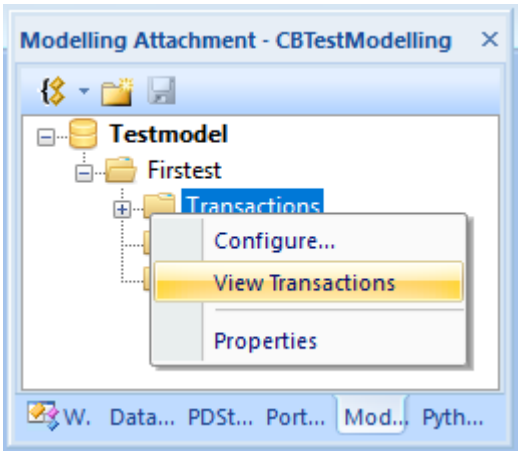
4. **[Properties]** menu item.
   Activates Properties Grid for the Modelling Explorer Account.

   Alternatively such Properties Grid can be activated via a left mouse click over the explorer tree chart item.

4.3.2.3 Modelling Explorer Transactions Item Context Menu

The following Modelling Explorer Transactions Item Context Menu is accessed via either a right mouse click over the Modelling Explorer Tree Transactions item or pressing the context key whenever such an item has focus.

Transaction items only ever exist under the Modelling Explorer Account Item's.



1. **[Configure…]** menu item.
   Activates the Modelling Explorer Transactions Configuration Dialog.

2. **[View Transactions]** menu item.
   Activates the transactions list view for the selected item.

   Should list view already be activated view tab focus will be transferred to the corresponding tab. Ribbon bar will be synchronised with the active tab

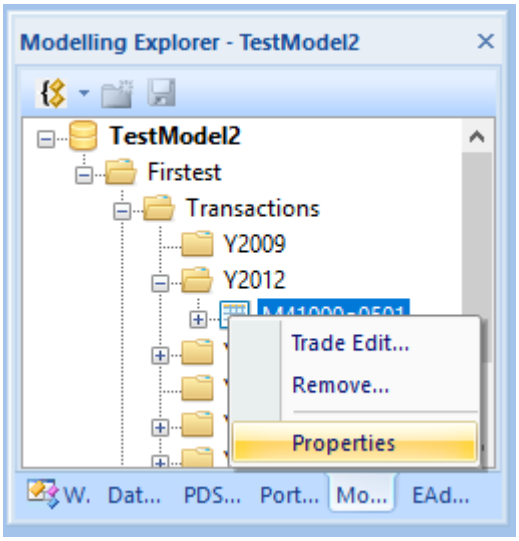
   Modelling Explorer Tree item is always bolded to reflect the chart with the active tab.

3. **[Properties]** menu item.
   Activates Properties Grid for this Modelling Explorer Transactions Item.

   Alternatively such Properties Grid can be activated via a left mouse click over the explorer tree chart item.

4.3.2.4 Modelling Explorer Trade Item Context Menu.

The following Modelling Explorer Trade Item Context Menu is accessed via either a right mouse click over the Modelling Explorer Tree Trade item or pressing the context key whenever such an item has focus.



1. **[Trade Edit…]** menu item.
   Activates the appropriate Modelling Explorer Trade Edit Dialog.

2. **[Remove]** menu item.
   Removes or deletes the selected Modelling Explorer item

3. **[Properties]** menu item.
   Activates Properties Grid for this Modelling Explorer Trade Item.

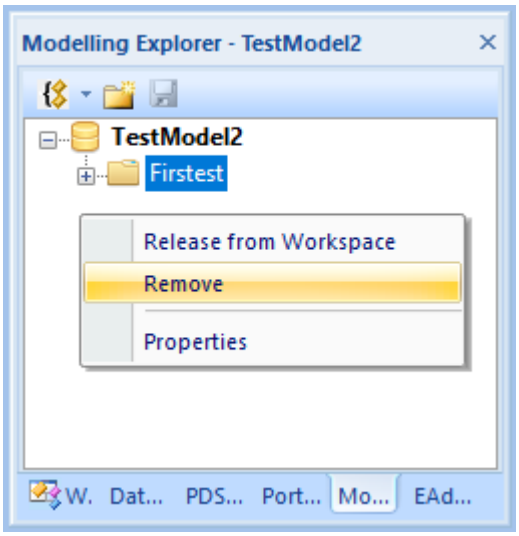
   Alternatively such Properties Grid can be activated via a left mouse click over the explorer tree chart item.

4.3.2.5 Modelling Explorer Miscellaneous Context Menu.

The following Modelling Explorer Miscellaneous Context Menu is accessed via either a right mouse click over an unresolved item or region of the Modelling Explorer Tree.

1. **[Release from Workspace]** menu item.
   Release this Modelling Explorer from the Workspace

   Refer **Ribbon Bar** >> **[Attachments]** Tab >> **[Modelling]** Panel for further details.



2. **[Remove]** menu item.
   Removes or deletes the selected Modelling Explorer item.

   Disabled for unselected items.

3. **[Properties]** menu item.
   Activates Modelling Explorer Root Properties Grid.

   Alternatively such Properties Grid can be activated via a left mouse click over an unresolved region or item. Refer Modelling Explorer Root Properties Grid for further details.

4.3.3 Properties Grid

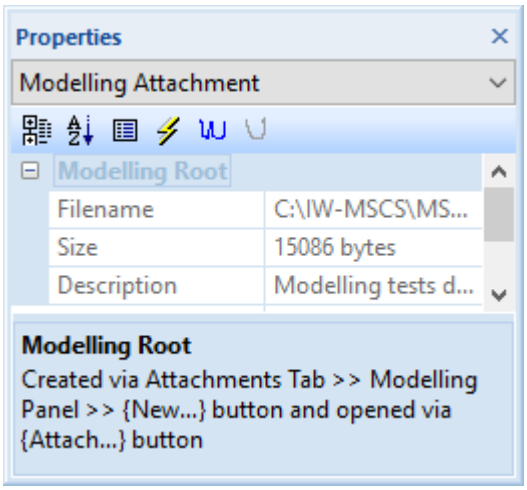
4.3.3.1 Modelling Explorer Root Item Properties Grid

The following Modelling Explorer Root Properties Grid are activated via either a left mouse click over the Modelling Explorer Tree Root Item or selection the [Properties] item from the Modelling Explorer Tree Root Item Context Menu.

1. **[Filename]** grid item.
   Name of the disk file through which the Modelling Explorer attachment persists.

2. **[Description]** grid item.
   Modelling Explorer description.

3. **[Size]**
   Current size of Modelling Explorer. Make use of Defragment and Flush context menu items to recover space.



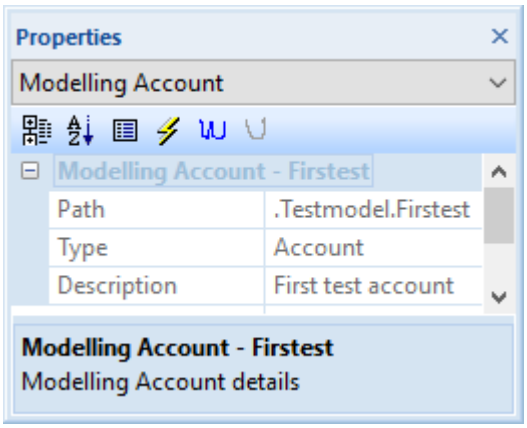
4.3.3.2 Modelling Explorer Account Item Properties Grid

The following Modelling Explorer Account Properties Grid is activated via either a left mouse click over the Modelling Explorer Tree Account Item or selection the [Properties] item from the Modelling Explorer Tree Account Item Context Menu.

1. **[Path]** grid item.
   Full internal Account path.

2. **[Description]** grid item.
   Account description.

3. **[Description]** grid item.
   Modelling Account description.



4.3.3.3 Modelling Explorer Transactions Item Properties Grid

The following Modelling Explorer Transactions Properties Grid are activated via either a left mouse click over the Modelling Explorer Tree Transactions Item or selection the [Properties] item from the Modelling Explorer Tree Transactions Item Context Menu.

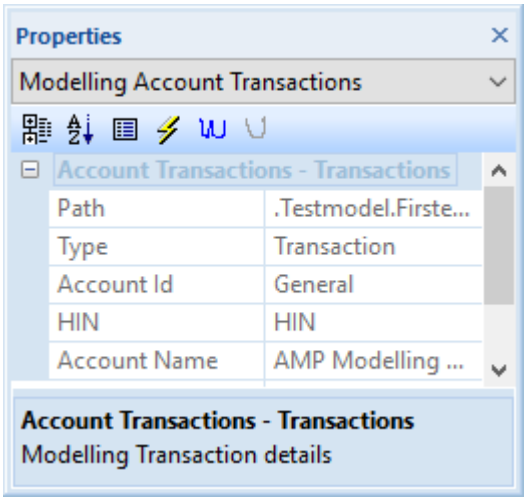
1. **[Path]** grid item.
   Full internal Transaction folder path.

2. **[Type]** grid item.
   Transaction folder type.

3. **[Account Id]** grid item.
   Modelling Account Id.

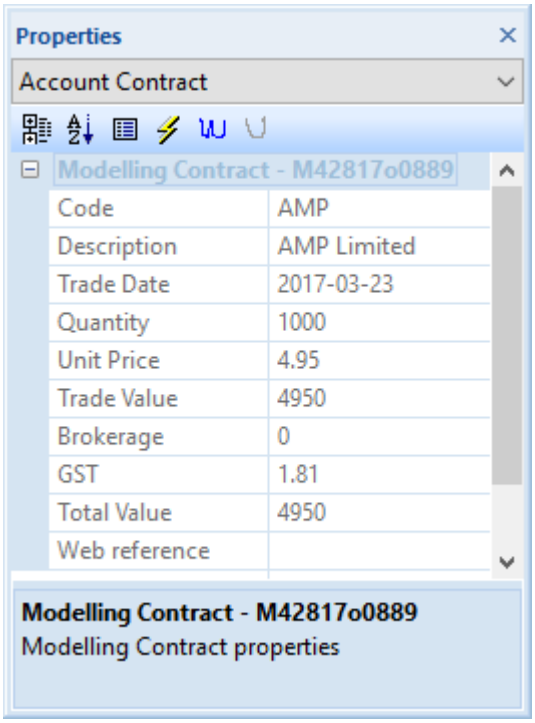
4. **[HIN]** grid item.
   Modelling Account HIN.

5. **[Account Name]** grid item.
   Modelling Account name.



4.3.3.4 Modelling Explorer Trade Item Properties Grid.

The following Modelling Explorer Account-Trade Properties Grid are activated via either a left mouse click over the Modelling Explorer Account-Trade Item or selection of the [Properties] item from the Modelling Explorer Tree Account-Trade Item Context Menu.



1. **[Code]** grid item.
   Stock code.

2. **[Description]** grid item.
   Stock description.

3. **[Trade Date]** grid item.
   Modelled trade date.

4. **[Quantity]** grid item.
   Modelled trade quantity.

5. **[Unit Price]** grid items.
   Modelled trade unit price.

6. **[Trade Value]** grid item.
   Modelled trade value.

7. **[Brokerage]** grid item.
   Modelled trade brokerage amount.

8. **[GST]** grid item.
   Modelled trade GST or tax.

9. **[Total Value]** grid item.
   Total modelled trade value.

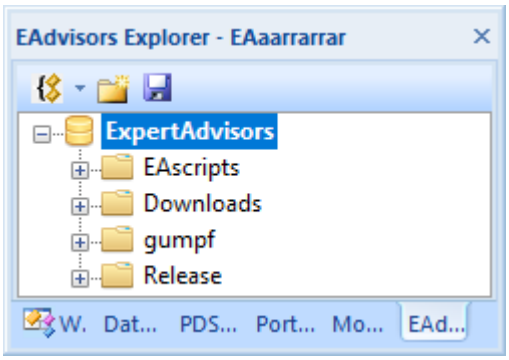
10. **[Web reference]** grid item.
    Modelled trade web reference etc.

4.4 Portfolio Explorers

4.4.1 Portfolio Explorer Toolbar

The following Portfolio Explorer Toolbar exists at the top of the Portfolio Explorer Tree.

Following items exist for sorting of the Portfolio Explorer Tree and relate to the selected Root or Folder item.



1. **[Sort Alphabetically]** button item.
   Sorts items alphabetically under the selected item, observing pre-conditions.

   Item is only ever enabled when Portfolio Explorer Tree root or folder item is selected.

2. **[Sort by Access]** menu item.
   Sorts items by access under the selected item, observing pre-conditions.

Item is only ever enabled when Portfolio Explorer Tree root or folder item is selected.

3. **[Group Folders]** button item.
   Group folder items at top of list under the selected item, observing pre-conditions.

   Toggles current setting and implements immediately. New setting currently remains latched and is observed in all subsequent sorting operations

4. **[Group Data Types]** button item.
   Group item types (Trades, Dividends) under the selected item, observing pre-conditions.

   Toggles current setting and implements immediately. New setting currently remains latched and is observed in all subsequent sorting operations

5. **[Recursively Sort]** menu item.
   Recursively sets and sorts subordinate folders accordingly to selected parameters.

   Recursively implements immediately according to current selections.

Following items exist for general Portfolio Explorer Tree activities.

6. **{New Folder}** button item.
   Creates a new folder under the selected item.

   Item is only ever enabled when Portfolio Explorer Market, Markups or Folder tree item is selected.

7. **[Save]** button item.
   Save edited contents of Portfolio Explorer Tree.

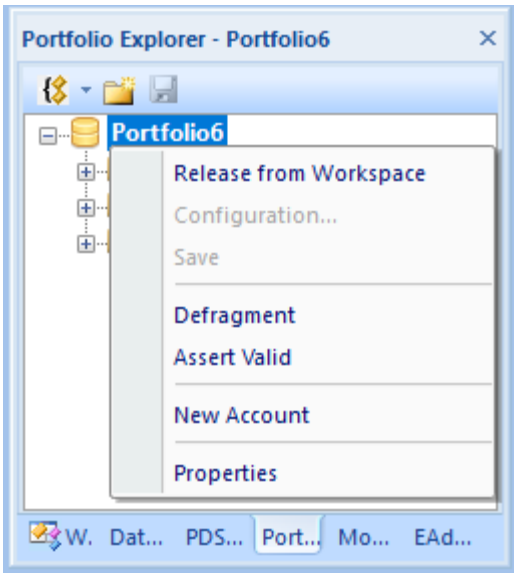
   Item is only ever enabled when unsaved data exists in Portfolio Explorer Tree. Saved status of other Chartboard Explorer's remain unaffected.

   Equivalent action is achieved via the **[Save]** item from the Portfolio Explorer Root Context Menu. Alternatively, the **[Save All]** item under the **{Application}** button includes this item in its sequences.

4.4.2 Context Menus

4.4.2.1 Portfolio Explorer Root Item Context Menu.

The following Portfolio Explorer Root Item Context Menu is accessed via either a right mouse click over the Portfolio Explorer Tree root item or pressing the context key whenever such an item has focus.



1. **[Release from Workspace]** menu item.
   Releases the Portfolio from the Workspace

   Refer Ribbon Bar >> Attachments Tab >> Portfolio Panel for further details.

2. **[Configuration…]** menu item.
   Activates the Portfolio Explorer Configuration Dialog.

3. **[Save]** menu item.
   Save altered contents of Portfolio Explorer.

   Item is only ever enabled when unsaved data exists in Portfolio Explorer data store. Saved status of other Chartboard Explorer's remain unaffected.

   Equivalent action is achieved via the **{Save}** button on the Portfolio Explorer Toolbar. Alternatively, the **{Save All}** item under the Application Button Menu includes action in its sequences.

4. **[Defragment]** menu item.
   Defragments Portfolio Explorer content and recovers disk space.

   Item is only ever enabled when Portfolio has no dependant views.

   Defragments the underlying Portfolio data structures and recovers fragmented memory. Chartboard Portfolios are partially memory mapped and usually have better performance after defragmentation. Each Chartboard Portfolio maintains its own mapped disk space.

5. **[Assert Valid]** menu item.
   Asserts the validity of the internal Portfolio Explorer data structures.

   Item verifies internal data structures of the loaded Workspace, always enabled.

6. **[New Account]** menu item.
   Creates a new, empty Account folder as child of the selected item.

   Item is only ever enabled when menu is activated over either Portfolio Explorer Root.

   Folder is allocated the default unique name "Account" or "Account(#)" and control is passed to folder name in edit mode. Refer **[Rename]** item from Portfolio Explorer Account Item Context Menu for further details. Account

items are usually assigned standard reference names.

7. **[Properties]** menu item.
   Activates properties grid for the Portfolio Workspace Explorer.

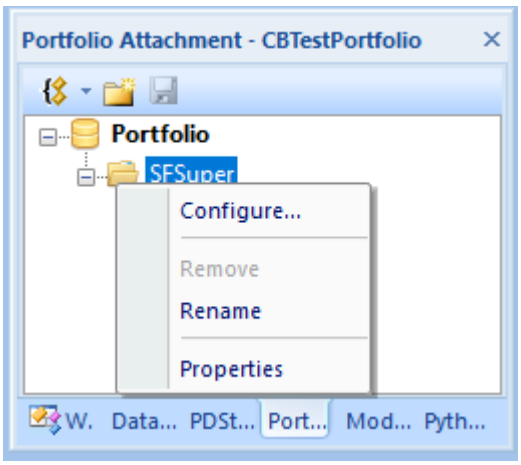
   Refer Portfolio Explorer Root Properties Grid for further details.

4.4.2.2 Portfolio Explorer Account Item Context Menu

The following Portfolio Explorer Account Item Context Menu is accessed via either a right mouse click over the Portfolio Explorer Tree Account item or pressing the context key whenever such an item has focus.

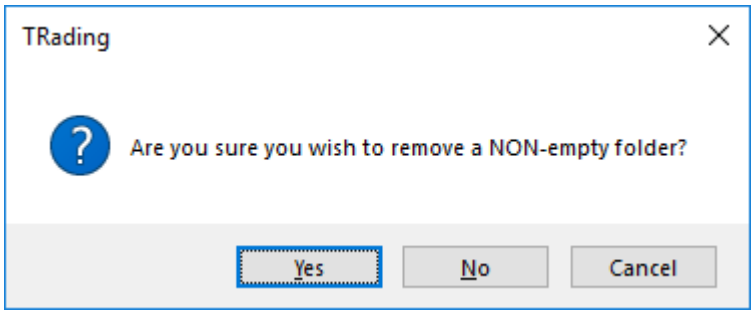
Account items only ever exist under the Portfolio Explorer Root Item.

1. **[Edit…]** menu item.
   Activates the Portfolio Explorer Account Configuration Dialog.



2. **[Remove]** menu item.
   Removes or deletes the selected Account folder and contents from the Portfolio Workspace Explorer.

   The following confirmation prompt will be made for non-empty Account folders.



3. **[Rename]** menu item.
   Renames the selected Portfolio Explorer Tree Account item.

   Valid folder name characters follow the standard Windows file naming conventions, case insensitive. **ESCAPE** to abandon file naming sequence, **enter** key to accept.

   Renaming Account folders will invalidate any activate Chart Portfolio Markup References to contained data. Such references will have to be amended, refer Portfolio Account Edit Dialog's for further details.

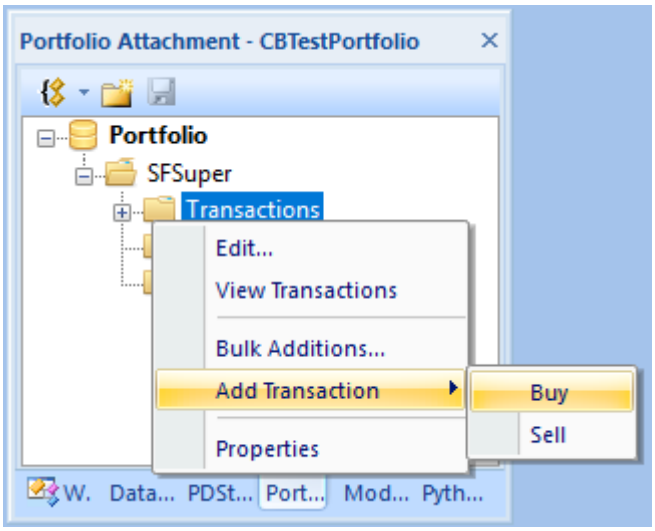
4. **[Properties]** menu item.
   Activates properties grid for the Portfolio Explorer Account.

   Alternatively such properties grid can be activated via a left mouse click over the Portfolio Explorer Tree chart item.

4.4.2.3 Portfolio Explorer Transactions Item Context Menu

The following Portfolio Explorer Transactions Item Context Menu is accessed via either a right mouse click over the Portfolio Explorer Tree Transactions item or pressing the context key whenever such an item has focus.

Transaction items only ever exist under the Portfolio Explorer Account Item's.



1. **[Configuration…]** menu item.

   Activates the Portfolio Explorer Transactions Configuration Dialog.

2. **[View Transactions]** menu item.
   Activates the appropriate list view for the selected item.

   Should list view already be activated view tab focus will be transferred to the corresponding tab. Ribbon bar will be synchronised with the active tab

   Portfolio Explorer Tree item is always bolded to reflect the chart with the active tab.

3. **[Bulk Additions…]** menu item.
   Activates the Portfolio Explorer Transactions Bulk Import Dialog.

   Refer Portfolio Explorer Transactions Bulk Import Dialog for further details.

   Alternatively individual Transaction items can be copied and pasted via the Portfolio Explorer Transactions Item Context Menu using **[Add Transaction...]** item.

4. **[Add Transaction ► Buy…]** menu item.
   Activates the Portfolio Transaction Addition Dialog for buy transaction

   Refer Portfolio Explorer Transaction Addition Dialog for further details.

   Alternatively bulk Transaction items can be added via the Portfolio Explorer

Transaction Item Context Menu using **[Bulk Transactions…]** item.

5. **[Add Transaction ► Sell…]** menu item.
   Activates the Portfolio Transaction Addition Dialog for sell transaction

   Refer Portfolio Explorer Transaction Addition Dialog for further details.

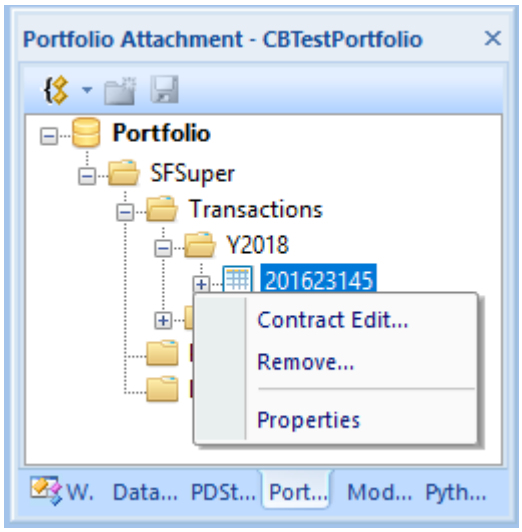
   Alternatively bulk Transaction items can be added via the Portfolio Explorer Transaction Item Context Menu using **[Bulk Transactions…]** item.

6. **[Properties]** menu item.
   Activates properties grid for the Portfolio Explorer Transactions item.

   Alternatively such properties grid can be activated via a left mouse click over the explorer tree chart item.

4.4.2.4 Portfolio Explorer Trade Item Context Menu.

The following Portfolio Explorer Trade Item Context Menu is accessed via either a right mouse click over the Portfolio Explorer Tree Trade item or pressing the context key whenever such an item has focus.



1. **[Contract Edit…]** menu item.
   Activates the appropriate Portfolio Explorer Trade Edit Dialog.

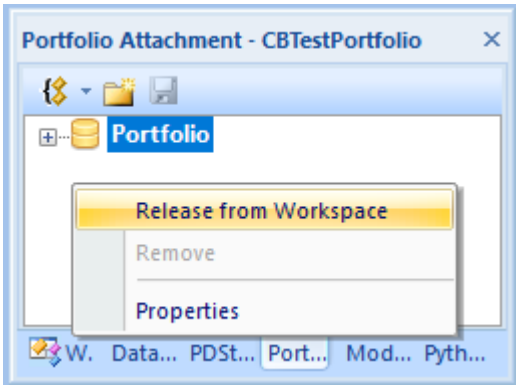
2. **[Remove]** menu item.
   Removes or deletes the selected Contract and contents from the Portfolio Workspace Explorer.

3. **[Properties]** menu item.
   Activates properties grid for the Portfolio Explorer Contract Item with context.

   Alternatively such properties grid can be activated via a left mouse click over the explorer tree chart item.

4.4.2.5 Portfolio Explorer Miscellaneous Context Menu.

The following Portfolio Explorer Miscellaneous Context Menu is accessed via either a right mouse click over an unresolved item or region of the Portfolio Explorer Tree.



1. **[Release from Workspace]** menu item.
   Release this Portfolio Attachment from the Workspace

   Refer **Ribbon Bar** >> **[Attachments]** Tab >> **[Portfolio]'s** Panel for further details.

2. **[Remove]** menu item.
   Removes or deletes the selected Portfolio Explorer item.

   Disabled for unselected items.

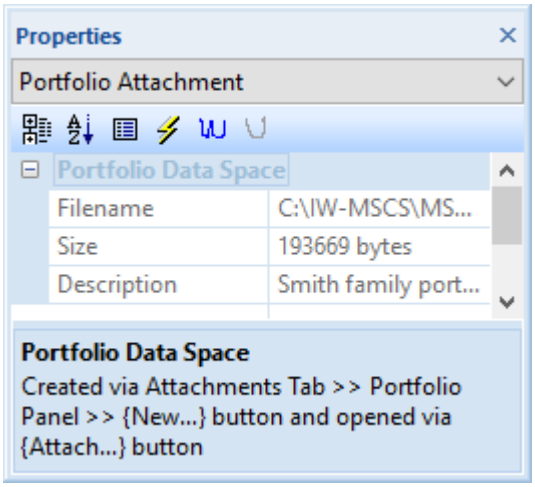
3. **[Properties]** menu item.
   Activates properties grid for the Portfolio Explorer Root item.

   Alternatively such properties grid can be activated via a left mouse click over an unresolved region or item. Refer Portfolio Explorer Root Properties Grid for further details.

4.4.3 Properties Grid

4.4.3.1 Portfolio Explorer Root Item Properties Grid

The following Portfolio Explorer Root Properties Grid are activated via either a left mouse click over the Portfolio Explorer Tree Root Item or selection the [Properties] item from the Portfolio Explorer Tree Root Item Context Menu.



1. **[Filename]** grid item.
   Name of the disk file through which the Portfolio Explorer attachment persists.

2. **[Size]**
   Current size of Portfolio Explorer. Make use of Defragment and Flush context menu items to recover space.

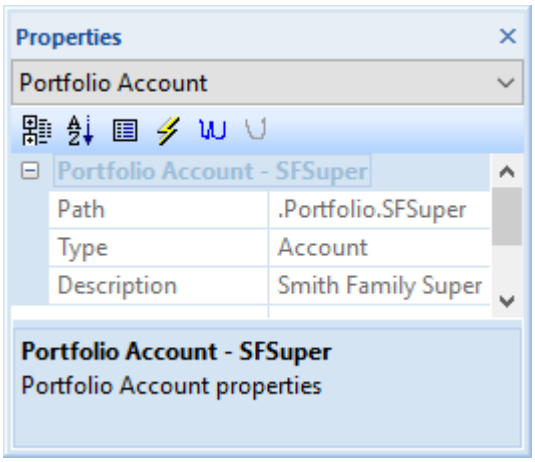
3. **[Description]** grid item.
   Portfolio Explorer description.

4.4.3.2 Portfolio Explorer Account Item Properties Grid

The following Portfolio Explorer Account Properties Grid are activated via either a left mouse click over the Portfolio Explorer Tree Account Item or selection the [Properties] item from the Portfolio Explorer Tree Account Item Context Menu.

1. **[Path]** grid item.
   Full internal Account path.

2. **[Description]** grid item.
   Account description.



4.4.3.3 Portfolio Explorer Transactions Item Properties Grid

The following Portfolio Explorer Transactions Properties Grid are activated via either a left mouse click over the Portfolio Explorer Tree Transactions Item or selection the [Properties] item from the Portfolio Explorer Tree Transactions Item Context Menu.

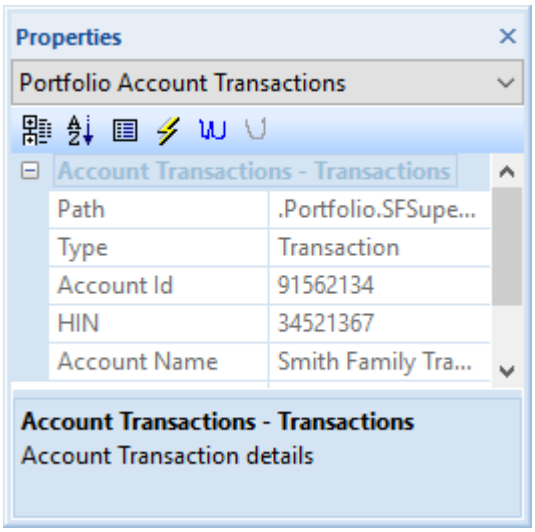
1. **[Path]** grid item.
   Full internal Transaction folder path.

2. **[Type]** grid item.
   Transaction folder type.

3. **[Account Id]** grid item.
   Portfolio Account Id.

4. **[HIN]** grid item.
   Portfolio Account HIN.

5. **[Account Name]** grid item.
   Portfolio Account name.

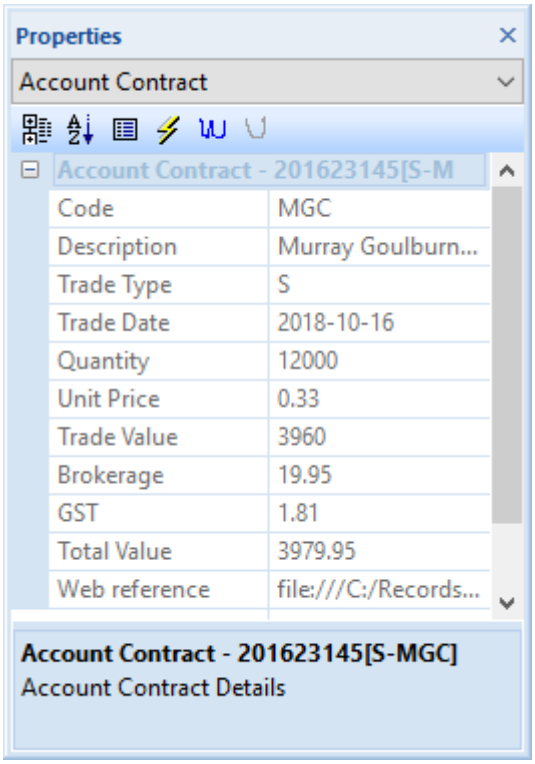


4.4.3.4 Portfolio Explorer Trade Item Properties Grid.

The following Portfolio Explorer Account-Trade Properties Grid is activated via either a left mouse click over the Portfolio Explorer Account-Trade Item or selection of the [Properties] item from the Portfolio Explorer Tree Account-Trade Item Context Menu.

1. **[Code]** grid item.
   Stock code.

2. **[Description]** grid item.
   Stock description.



3. **[Trade Date]** grid item.
   Portfolio trade date.

4. **[Quantity]** grid item.
   Portfolio trade quantity.

5. **[Unit Price]** grid items.
   Portfolio trade unit price.

6. **[Trade Value]** grid item.
   Portfolio trade value.

7. **[Brokerage]** grid item.
   Portfolio trade brokerage amount.

8. **[GST]** grid item.
   Portfolio trade GST or tax.

9. **[Total Value]** grid item.
   Total Portfolio trade value.

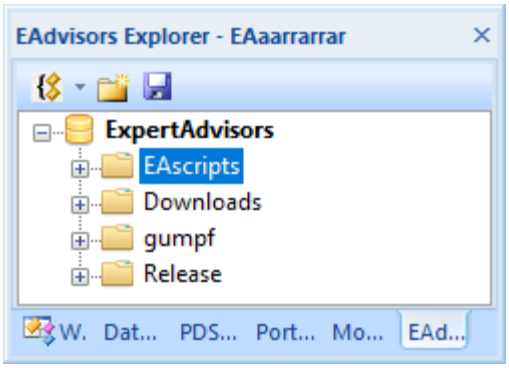
10. **[Web reference]** grid item.
    Portfolio trade web reference etc.

4.5 Python Scripts Explorer

4.5.1 Python Scripts Explorer Toolbar

The following Python Scripts Explorer Toolbar exists at the top of the Python Scripts Explorer Tree.

Following items exist for sorting of the Python Scripts Explorer Tree and relate to the selected Root or Folder item.



1. **[Sort Alphabetically]** button item.
   Sorts items alphabetically under the selected item, observing pre-conditions.

   Item is only ever enabled when Python Scripts Explorer Tree root or folder item is selected.

2. **[Sort by Access]** menu item.
   Sorts items by access under the selected item, observing pre-conditions.

   Item is only ever enabled when Python Scripts Explorer Tree root or folder item is selected.

3. **[Group Folders]** button item.
   Group folder items at top of list under the selected item, observing pre-

conditions.

Toggles current setting and implements immediately. New setting currently remains latched and is observed in all subsequent sorting operations

4. **[Group Data Types]** button item.
Group item types (Scripts) under the selected item, observing pre-conditions.

Toggles current setting and implements immediately. New setting currently remains latched and is observed in all subsequent sorting operations

5. **[Recursively Sort]** menu item.
Recursively sets and sorts subordinate folders accordingly to selected parameters.

Recursively implements immediately according to current selections.

Following items exist for general Portfolio Explorer Tree activities.

6. **{New Folder}** button item.
Creates a Python Scripts map folder under the selected item.

Item is only ever enabled when Python Scripts Explorer Root tree item is selected.

7. **[Save]** button item.
Save edited contents of Python Scripts Explorer Tree.

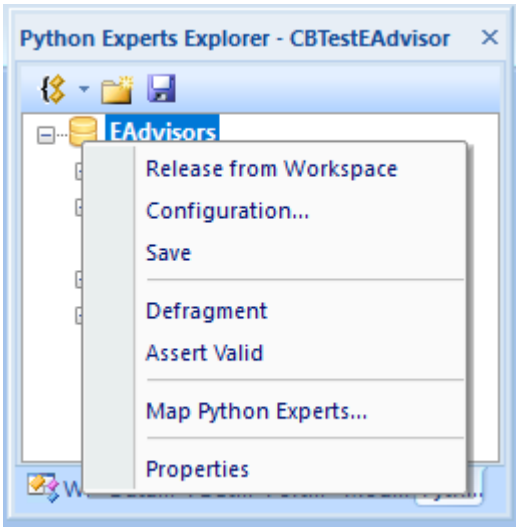
Item is only ever enabled when unsaved data exists in Python Scripts Explorer Tree. Saved status of other Chartboard Explorer's remain unaffected.

Equivalent action is achieved via the **[Save]** item from the Python Scripts Explorer Root Context Menu. Alternatively, the **[Save All]** item under the **{Application}** button includes this item in its sequences.

4.5.2 Python Advisors Context Menus

4.5.2.1 Python Scripts Explorer Root Item Context Menu.

The following Python Scripts Explorer Root Item Context Menu is accessed via either a right mouse click over the Python Scripts Explorer Tree Root item or pressing the context key whenever such an item has focus.



1. **[Release from Workspace]** menu item.
   Releases the Python Scripts Attachment from the Workspace.

   Refer Ribbon Bar >> Attachments Tab >> Python Scripts Panel for further details.

2. **[Configuration…]** menu item.
   Activates the Python Scripts Explorer Configuration Dialog.

3. **[Save]** menu item.
   Save altered contents of Python Scripts Explorer.

   Item is only ever enabled when unsaved data exists in Python Scripts Explorer data store. Saved status of other Chartboard Explorer's remain unaffected.

   Equivalent action is achieved via the **{Save}** button on the Python Scripts Explorer Toolbar. Alternatively, the **{Save All}** item under the Application Button Menu includes action in its sequences.

4. **[Defragment]** menu item.
   Defragments Python Scripts Explorer content and recovers disk space.

   Item is only ever enabled when Python Scripts Explorer has no dependant views.

   Defragments the underlying Python Scripts data structures and recovers fragmented memory. Chartboard Python Scripts Explorer's are partially memory mapped and usually have better performance after defragmentation. Each Chartboard Datastore maintains its own mapped disk space.

5. **[Assert Valid]** menu item.
   Asserts the validity of the internal Python Scripts Explorer data structures.

   Item verifies internal data structures of the loaded Workspace, always enabled.

6. **[Properties]** menu item.
   Activates properties grid for the Python Scripts Root item.

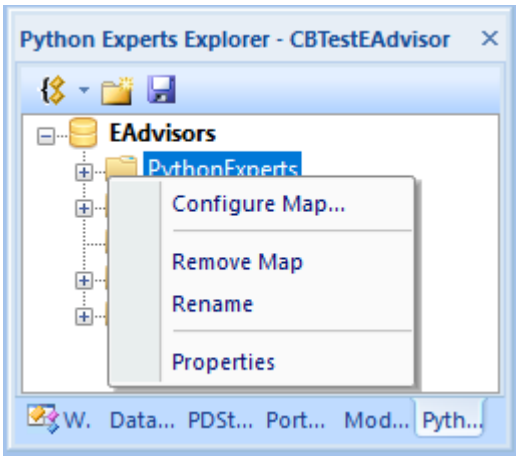
   Refer Python Scripts Explorer Root Properties Grid for further details.

4.5.2.2 Python Scripts Explorer Mapped Item Context Menu.

The following Python Scripts Explorer Mapped Item Context Menu is accessed via either a right mouse click over the Python Scripts Explorer Tree Root item or pressing the context key whenever such an item has focus.

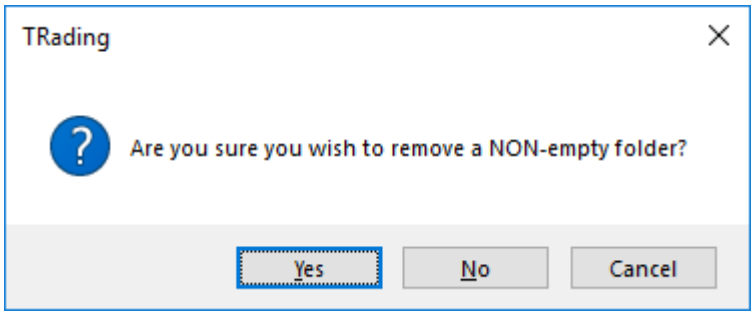
Mapped items only ever exist under the Python Scripts Explorer Root Item.

1. **[Configure Map…]** menu item.
   Activates the Python Scripts Explorer Map Configuration Dialog.



2. **[Remove Map]** menu item.
   Removes or deletes the selected Map folder and contents from the Python Scripts Explorer Tree.

   The following confirmation prompt will be made for non-empty Script folders.



3. **[Rename]** menu item.
   Renames the selected Python Scripts Explorer Tree item.

   Valid folder name characters follow the standard Windows file naming conventions, case insensitive. **ESCAPE** to abandon file naming sequence, **enter** key to accept.

   Renaming Python Scripts Map folders will invalidate any activate Chart data set references to contained data. Such references will have to be amended, refer Workspace [OHLCvs|PFigure|Scanning] Configuration Dialog's for further details.

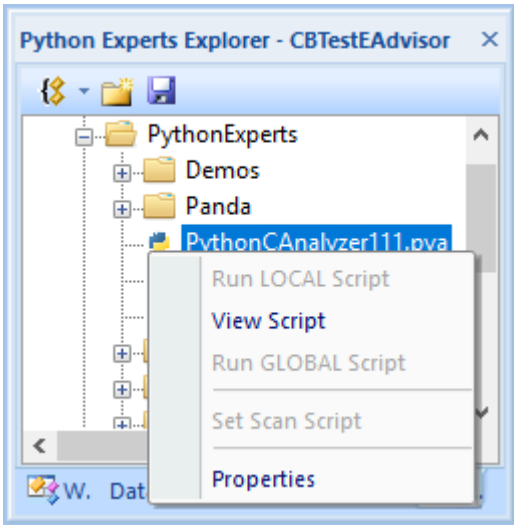
4. **[Properties]** menu item.
   Activates properties grid for the Python Scripts Explorer Map item.

   Alternatively such properties grid can be activated via a left mouse click over the explorer tree map item.

4.5.2.3 Python Scripts Explorer Script Item Context Menu.

The following Python Scripts Explorer Script Item Context Menu is accessed via either a right mouse click over the Python Script Explorer Tree Python Script item or pressing the context key whenever such an item has focus.

Mapped items only ever exist under the Python Scripts Explorer Mapped Item's.



1. **[Run LOCAL Script]** menu item.
   Loads and runs the script as a LOCAL script for chart with focus.

   The loaded script is serialised for the chart and may be subsequently re-run via the **Ribbon Bar >> OHLCvs Tab >> Python Scripts Panel >> {Run LOCAL}** button.

2. **[View Script]** menu item.
   Displays the python script for the selected item in view tab.

   Alternatively python script may be viewed by left mouse double click over item.

   Should python script view already be activated, View Tab focus will be transferred to the corresponding tab. Ribbon bar will be synchronised with the active tab

   Workspace Explorer Tree item is always bolded to reflect the chart with the active tab. Refer Python Script View for further details.

3. **[Run GLOBAL Script]** menu item.
   Loads and runs the script as a GLOBAL script for chart with focus.

   The loaded script is serialised for the chart and may be subsequently re-run via the **Ribbon Bar >> OHLCvs Tab >> Python Scripts Panel >> {Run GLOBAL}** button.

4. **[Rename]** menu item.
   Renames the selected Workspace Explorer Tree item.

   Valid folder name characters follow the standard Windows file naming conventions, case insensitive. **ESCAPE** to abandon file naming sequence, **enter** key to accept.

   Renaming Scripts will invalidate any configured references to contained sequences. Such references will have to be amended, refer Workspace [OHLCvs|PFigure|Scanning] Configuration Dialog's for further details.

5. **[Set Scan Script]** menu item.
   Selects and sets the underlying python scan script as the active scan script for the active scan view tab.

   Disabled for no active scan tab view.

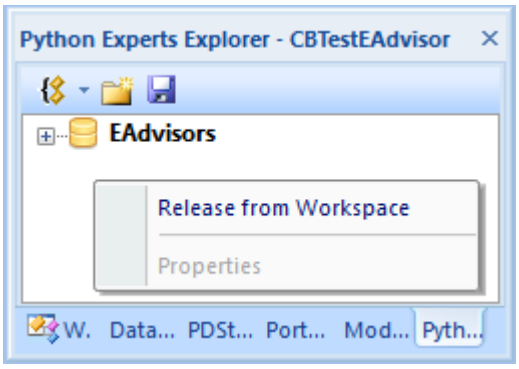
   The selected and set script is serialised for the Scan Tab and may be subsequently re-run via the **Ribbon Bar >> Scan Tab >> Python Scripts Panel >> {Step** or **Run Auto}** buttons.

6. **[Properties]** menu item.
   Activates properties grid for the Python Scripts Explorer Script item.

   Alternatively such properties grid can be activated via a left mouse click over the explorer tree map item.

4.5.2.4 Python Scripts Explorer Miscellaneous Context Menu

The following Python Scripts Explorer Miscellaneous Context Menu is accessed via a right mouse click over an unresolved item or region of the Python Scripts Explorer Tree.



1. **[Release from Workspace]** menu item.
   Release this Python Scripts Explorer from the Workspace

   Refer **Ribbon Bar** >> **[Attachments]** Tab >> **[Python Scripts]** Panel for further details.

2. **[Remove]** menu item.
   Removes or deletes the selected Python Scripts Explorer item.

   Disabled for unselected items.

3. **[Properties]** menu item.
   Activates Python Scripts Explorer Root Properties Grid.

   Alternatively such properties grid can be activated via a left mouse click over an unresolved region or item. Refer Python Scripts Explorer Root Properties Grid for further details.

4.5.3 Python Scripts Properties Grid

4.5.3.1 Python Scripts Explorer Root Item Properties Grid.

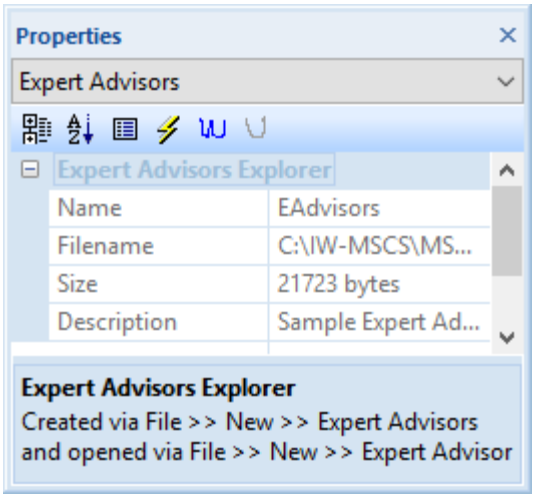
The following Python Scripts Explorer Root Properties Grid are activated via either a left mouse click over the Python Scripts Explorer Tree Root Item or selection the [Properties] item from the Python Scripts Explorer Tree Root Item Context Menu.

1. **[Name]** grid item.
   Internal Python Scripts attachment name.

2. **[Filename]** grid item.
   Name of the disk file through which the Python Scripts Explorer attachment persists.

3. **[Size]**
   Current size of Python Scripts Explorer. Make use of Defragment and Flush context menu items to recover space.

4. **[Description]** grid item.
   Python Scripts Explorer description.



4.5.3.2 Python Scripts Explorer Mapped Directory Properties Grid.

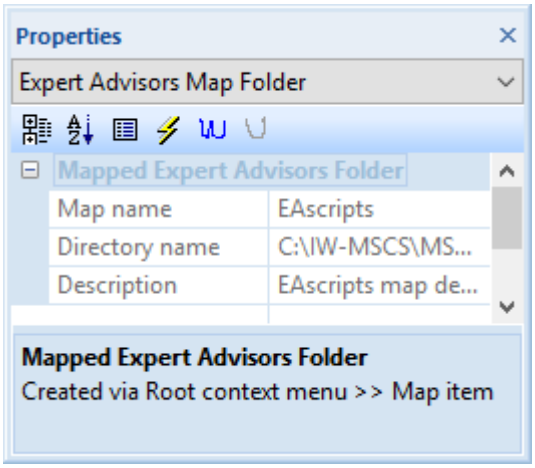
The following Python Scripts Explorer Mapped Directory Properties Grid are activated via either a left mouse click over the Python Scripts Explorer Tree Account Item or selection the [Properties] item from the Python Scripts Explorer Tree Account Item Context Menu.

Account items only ever exist under the Python Scripts Explorer Mapped Directory Item.

1. **[Map name]** grid item.
   Name allocated to the external Python Scripts mapped directory.

2. **[Directory Name]** grid item.
   Name of the mapped external mapped containing the Python Scripts.

3. **[Description]** grid item.
   Mapped Python Scripts directory description.



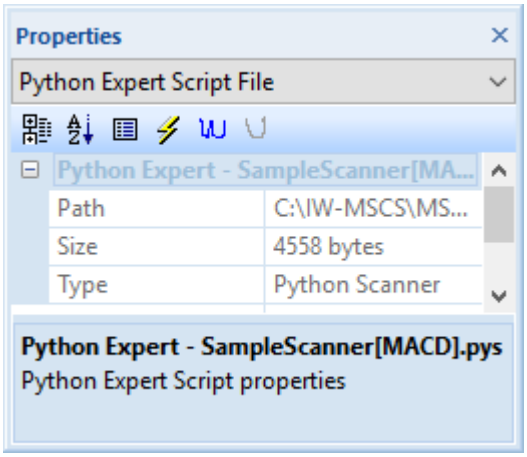
4.5.3.3 Python Scripts Explorer Python Script Properties Grid.

The following Datastore Explorer Market-OHLCvs Properties Grid are activated via either a left mouse click over the Datastore Explorer Market-OHLCvs Item or selection the [Properties] item from the Datastore Explorer Tree Market-OHLCvs Item Context Menu.

1. **[Path]** grid item.
   Full external file path.

2. **[Type]** grid item.
   Type of Python Scripts file.

3. **[Size]** grid item.
   Size of external Python Scripts file.



4.6 Chartboard Properties Grid

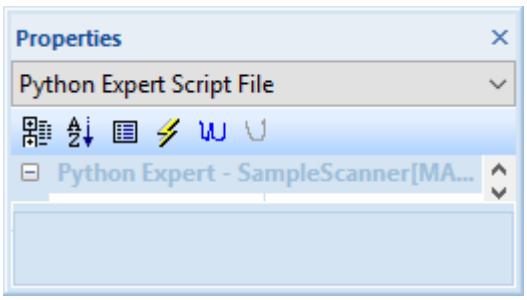
4.6.1 Chartboard Properties Grid Toolbar

The following Properties Grid Toolbar exists at the top of Properties Grid.

Following items exist for sorting of the Python Scripts Explorer Tree and relate to the selected Root or Folder item.

1. **[Categorized]** button item.
   Toggles categorized layout on and off.

2. **[A-Z]** button item.
   Sorts items alphabetically under the selected item, observing pre-conditions.



3. **[===]** button item.
   Sorts items alphabetically under the selected item, observing pre-conditions.

4. **[Control Events]** button item.
   Toggles display of control events on and off.

5. **[wiki]** button item.
   Activates Wikipedia page associated with Properties Grid.

6. **[YouTube]** button item.
   Activates YouTube page associated with Properties Grid.

4.6.2 Context Menus

5. Tabbed Views

Chartboard supports multiple tabbed views of various types. The order of which may be varied by dragging the respective tabs to the left and right utilising a depressed left mouse button.

- OHLCvs Chart Tab View
  Displays and facilitates management of OHLCvs charts.
- PFigure Chart Tab View
  Displays and facilitates management of Point & Figure charts.
- OHLCvs Data List Tab View.
  Tabulates raw OHLCvs data sets.
- Portfolio List Tab View.
  Tabulates raw Portfolio trade data.
- Modelling List Tab View
  Tabulates raw Modelling trade data
- Stock Scan Tab View.
  Manages stock scans and display of subsequence results.
- Automation Scripts Tab View
  Displays and facilitates editing of Python Advisor and Scanning automation scripts.
- Embedded URL Tab View
  Displays Activates URL views. May also be externalised in browser.

Each tab supports its own unique context menu accessed via the right mouse button.

5.1 OHLCvs Chart Tab View

Activated from the Workspace Explorer OHLCvs Item Context Menu, **[View OHLCvs Chart]** item or left mouse double click over any Workspace Explorer OHLCvs Tree Item. Displays the underlying OHLCvs Category Chart.



Chartboard supports multiple unique instances of OHLCvs Chart Views, but only a single instance of any given chart.

The OHLCvs Category Charts View contains an OHLCvs Chart Stack whose content and configuration is controlled via the following facilities.

1. Static configuration and stock assignment is via the OHLCvs Chart Configuration Dialog.

2. Dynamic configuration is via the Ribbon Bar **[OHLCvs]** tab. Contents of this tab is kept synchronised with the selected OHLCvs Chart Tab View.

3. Each chart within the OHLCvs chart stack supports a context menu containing both common and unique items for managing stack order, overlays, removing and hiding individual charts.

4. Charts within the OHLCvs share a common scrollable Period Axis. Logically vertical axis is unique to each chart within the stack.

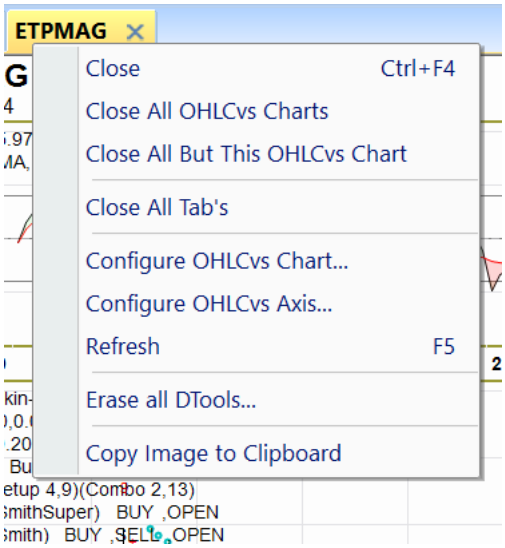
5. Context Menus have been assigned to all regions, objects, markups and labels within the chart stack.

6. Unique Properties Grids have been assigned to all regions, objects and labels within the chart stack.

7. Images representing either the whole chart stack or individual components can be copied to the clipboard.

5.1.1 OHLCvs Chart View Tab Context Menu

The following OHLCvs Chart View Tab Context Menu is accessed via either a right mouse click over the OHLCvs View Tab or pressing the context key whenever such an item has focus.



1. **[Close]** menu item.
   Closes the active document.

2. **[Close All OHLCvs Charts]** menu item.
   Close all open OHLCvs chart views.

3. **[Close All But this OHLCvs Chart]** menu item.
   Close all open OHLCvs charts but for this chart.

4. **[Close All Tab's]** menu item.
   Close all view tabs.

5. **[Configure OHLCvs Chart…]** menu item.
   Activates the 'Workspace OHLCvs Chart Configuration Dialog'.

6. **[Configures OHLCvs Axis…]** menu item.
   Activates the 'Workspace OHLCvs Chart-Axis Configuration Dialog'.

7. **[Refresh]** menu item.
   Refresh the underlying chart data set.

8. **[Erase all DTools…]** menu item.
   Erase all DTool items, for all types, from all Charts in Stack.

9. **[Copy Image to Clipboard]** menu item.
   Copy view image to clipboard. Subsequently pasted to word, Paint etc.

5.1.2 OHLCvs Chart View Tab Properties Grid

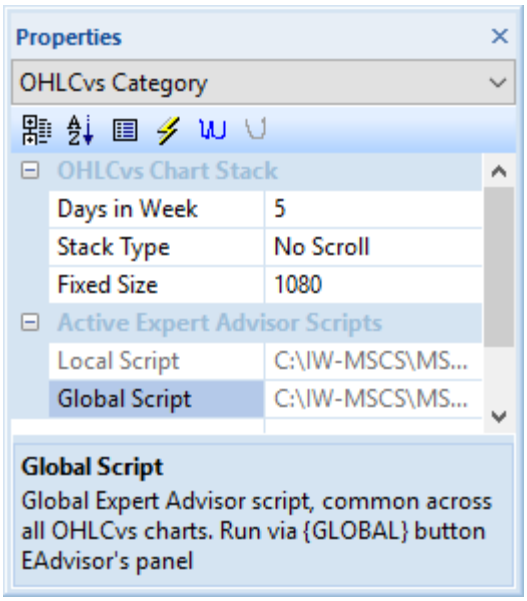
The following OHLCvs Chart View Tab Properties Grid is activated via a left mouse click over the equivalent item in the Workspace Explorers Tree or selection of the [Properties] item from the associated context menu.

1. **[Days in Week]** grid item.
   Number of displayed days in a week. Usually 5, alternatively 7.

2. **[Stack Type]** grid item.
   Type of chart stack from No Scrolling, Fixed or Dynamic.

3. **[Fixed Size]** grid item.
   Height of chart of stack in pixels.

4. **[Local Script]** grid item.
   Local Advisor script, specific to this OHLCvs chart. Run via **{LOCAL}** button Automation panel.



5. **[Global Script]** grid item.
   Global Advisor script, common across all OHLCvs charts. Run via **{GLOBAL}** button Automation panel.

5.2 PFigure Chart Tab View

Activated from the Workspace Explorer PFigure Item Context Menu, **[View]** item or left mouse double click over any Workspace Explorer FPigure Tree Item. Displays the underlying PFigure Category Chart.



Chartboard supports multiple unique instances of PFigure Chart Views, but only single instance of any given chart.

The PFigure Category Charts View contains a PFigure Category Chart Stack whose content and configuration is controlled via the following facilities.

1. Static configuration and stock assignment is via the PFigure Chart Configuration Dialog.

2. Dynamic configuration is via the Ribbon Bar **[PFigure]** tab. Contents of this tab are kept synchronised with the selected PFigure Chart Tab View.

3. Each chart within the PFigure chart stack supports a context menu containing numerous items for managing stack order, removing and hiding individual charts.

4. Charts within the PFigure share a common scrollable Period Axis. Logically vertical axis is unique to each chart within the stack.

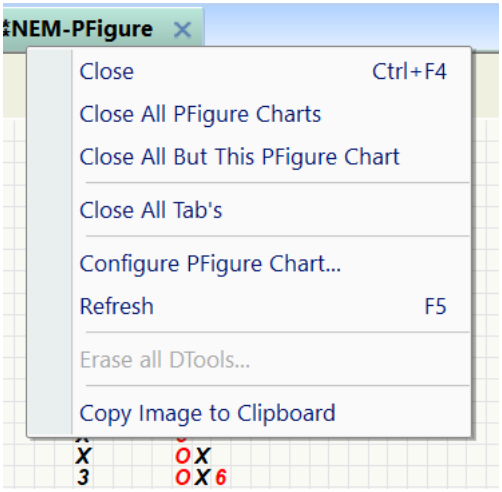
5. Context Menus have been assigned to all regions, objects and labels within the chart stack.

6. Properties Grid have been assigned to all regions, objects and labels within the chart stack.

7. Images representing either the whole chart stack or individual components can be copied to the clipboard.

5.2.1 PFigure Chart View Tab Context Menu

The following PFigure Chart View Tab Context Menu is accessed via either a right mouse click over the PFigure View Tab or pressing the context key whenever such an item has focus.



1. **[Close]** menu item.
   Closes the active document.

2. **[Close All PFigure Charts]** menu item.
   Close all open PFigure charts.

3. **[Close All But This PFigure Chart]** menu item.
   Close all documents but this.

4. **[Close All Tab's]** menu item.
   Close all view tabs.

5. **[Configure PFigure Chart…]** menu item.
   Activates the 'Workspace PFigure Chart Configuration Dialog'.

6. **[Refresh]** menu item.
   Refresh the underlying chart data set.

7. **[Erase all DTools…]** menu item.
   Erase all DTool items, for all types, from all Charts in Stack.

8. **[Copy Image to Clipboard]** menu item.
   Copy view image to clipboard.

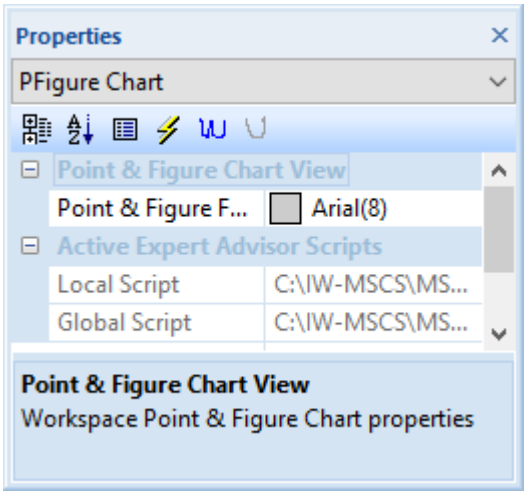
5.2.2 PFigure Chart View Tab Properties Grid

The following PFigure Chart View Tab Properties Grid is activated via a left mouse click over the equivalent item in the Workspace Explorers Tree or selection of the [Properties] item from the associated context menu.

1. **[Point & Figure Font]** grid item.
   Font used to generate the Point & Figure chart 'X' and 'O' markings, effectively controls grid size.

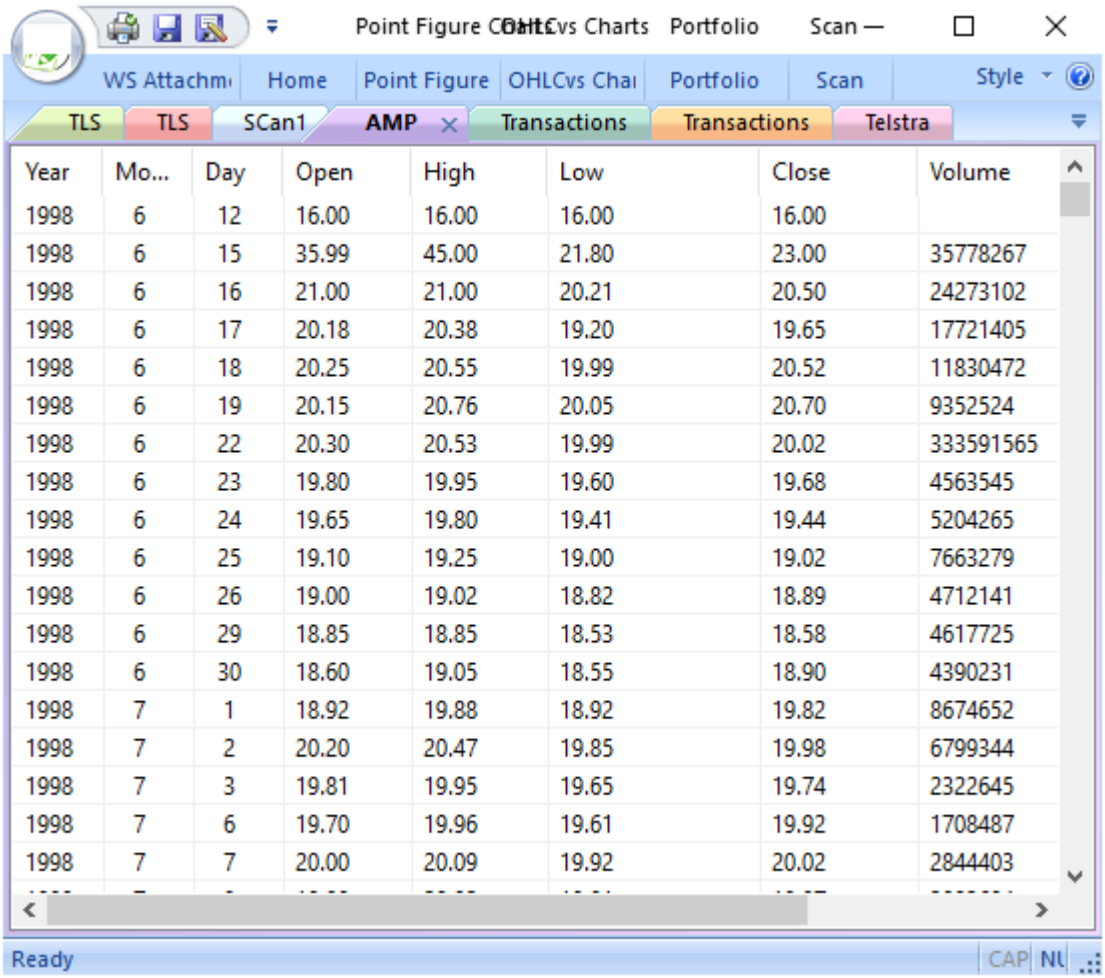
2. **[Local Script]** grid item.
   Local Advisor script, specific to this PFigure chart. Run via {LOCAL} button on Automation panel.

3. **[Global Script]** grid item.
   Global Advisor script, common across all PFigure charts. Run via {GLOBAL} button on Automation panel.



5.3 OHLCvs Data List Tab View

Activated via the Datastore Explorer Market-OHLCvs Item Context Menu, **[View]** item. Displays the underlying Open-High-Low-Close and Volume data along with Short positions.



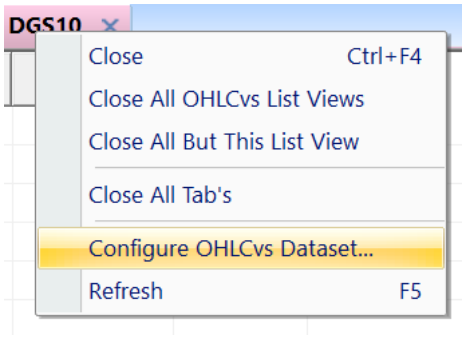
Chartboard supports multiple unique instances of OHLCvs Data List Views, but a single instance of any given data set.

The OHLCvs Data List View supports the following columns

1. Year
2. Month
3. Day
4. Open
   Opening or first trade price for the period.
5. High
   Highest trade price within the data period
6. Low
   Lowest trade price within the data period.
7. Close
   Closing trade price for the data period.
8. Volume
   Trade volume for the data period.
9. Shorts
   Total shorts at completion of trade period.
10. % of Total
    Shorts as percentage of total shares on issue.
11. Comments
    Comments associated with the OHLCvs data set.

5.3.1 OHLCvs List View Tab Context Menu

The following OHLCvs List View Tab Context Menu is accessed via either a right mouse click over the OHLCvs List View Tab or pressing the context key whenever such an item has focus.



1. **[Close]** menu item.
   Closes the active document.
2. **[Close All OHLCvs List Views]** menu item.
   Close all open documents.
3. **[Close All But This List View]** menu item.
   Close all documents but this.

4. **[Close All Tab's]** menu item.
   Close all view tabs.

5. **[Configure OHLCvs dataset…]** menu item.
   Activates the 'CBDatastore OHLCvs Dataset Configuration Dialog'.

6. **[Refresh]** menu item.
   Refresh the underlying OHLCvs List data set.

5.3.2 OHLCvs List View Tab Properties Grid

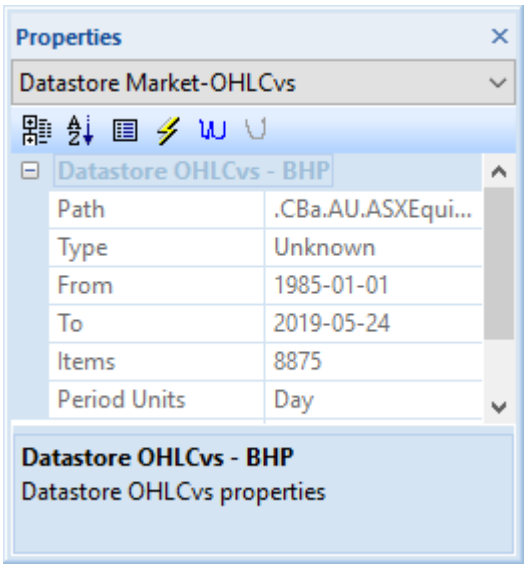
The following OHLCvs List View Tab Properties Grid is activated via a left mouse click over the equivalent item in the Workspace Explorers Tree or selection of the [Properties] item from the associated context menu.

1. **[Path]** grid item.
   Full internal Country-Market-OHLCvs path.

2. **[From]** grid item.
   First Country-Market-OHLCvs item date (yyyy-mm-dd).

3. **[To]** grid item.
   Last Country-Market-OHLCvs item date (yyyy-mm-dd).

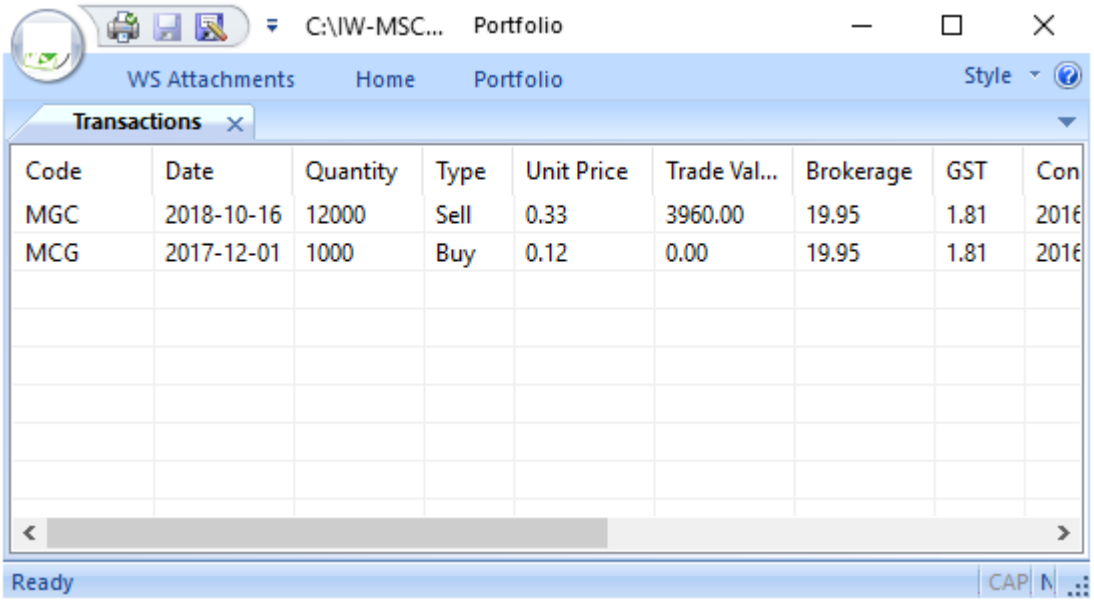
4. **[Items]** grid item.
   Number of unit items in the Country-Market-OHLCvs dataset.



5. **[Period Units]** grid item.
   Data set period units from Year, Quarter, Month, Week and Day.

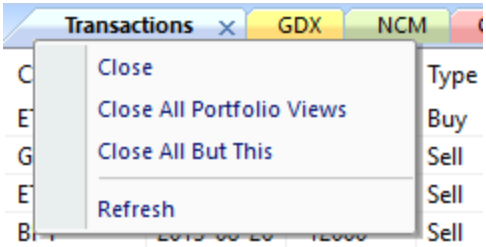
5.4 Portfolio List Tab View

Activated via the Portfolio Explorer Account-Transaction Item Context Menu, **[View Transactions]** item. Displays the underlying Portfolio positions and associated summaries.



5.4.1 Portfolio List View Tab Context Menu

The following Portfolio List View Tab Context Menu is accessed via either a right mouse click over the Portfolio List View Tab or pressing the context key whenever such an item has focus.



1. **[Close]** menu item.
   Closes the active document.

2. **[Close All]** menu item.
   Close all open documents.

3. **[Close All But This]** menu item.
   Close all documents but this.

4. **[Close All Portfolio Views]** menu item.
   Close all open Portfolio views.

5. **[Close All But this Portfolio View]** menu item.
   Close all open Portfolio views but for this view.

6. **[Refresh]** menu item.
   Refresh the underlying Portfolio contents.

5.4.2 Portfolio List View Tab Item Properties Grid

The following Portfolio List View Tab Properties Grid is activated via a left mouse click over the equivalent item in the Workspace Explorers Tree or selection of the [Properties] item from the associated context menu.

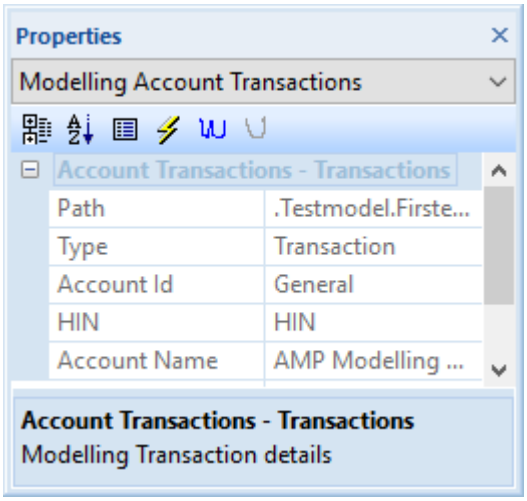
1. **[Path]** grid item.
   Full internal Transaction folder path.

2. **[Type]** grid item.
   Transaction folder type.

3. **[Account Id]** grid item.
   Portfolio Account Id.

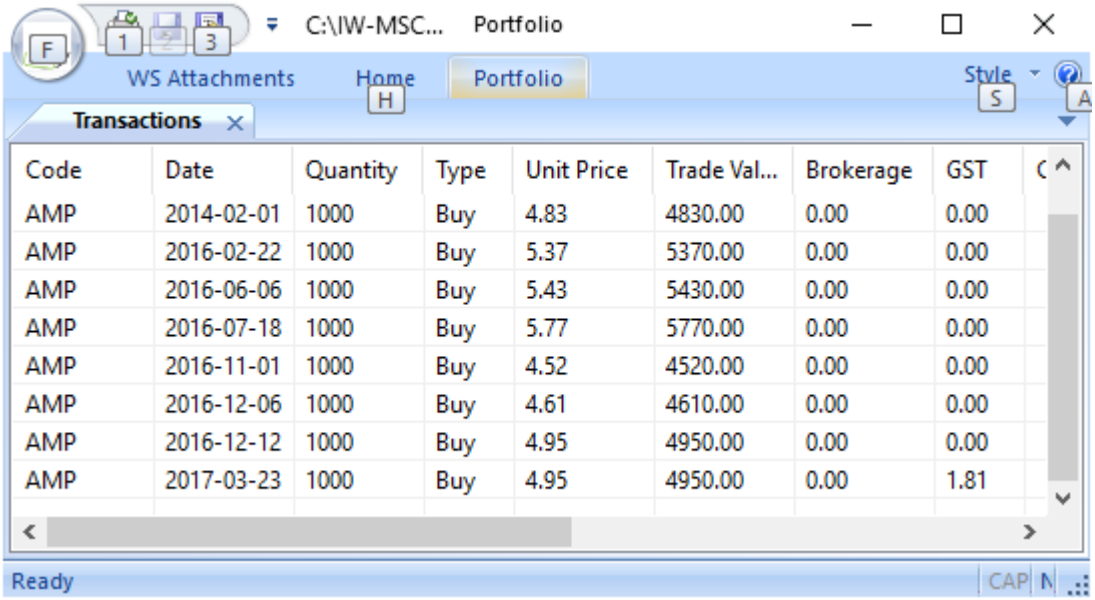
4. **[HIN]** grid item.
   Portfolio Account HIN.

5. **[Account Name]** grid item.
   Portfolio Account name.



5.5 Modelling List Tab View

Activated via the Modelling Explorer Account-Transaction Item Context Menu, **[View Transactions]** item. Displays the underlying Modelling positions and associated summaries.



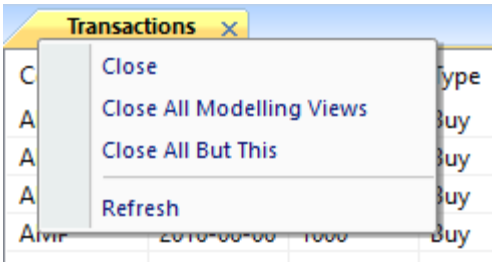
5.5.1 Modelling List View Tab Context Menu

The following Modelling List View Tab Context Menu is accessed via either a right mouse click over the Modelling List View Tab or pressing the context key whenever such an item has focus.

1. **[Close]** menu item.
   Closes the active document.

2. **[Close All]** menu item.
   Close all open documents.

3. **[Close All But This]** menu item.
   Close all documents but this.



4. **[Close All Modelling Views]** menu item.
   Close all open Modelling Views.

5. **[Close All But this Modelling View]** menu item.
   Close all open Modelling views but for this view.

6. **[Refresh]** menu item.
   Refresh the underlying Modelling data sets.

5.5.2 Modelling List View Tab Item Properties Grid

The following Modelling List View Tab Properties Grid is activated via a left mouse click over the equivalent item in the Workspace Explorers Tree or selection of the [Properties] item from the associated context menu.

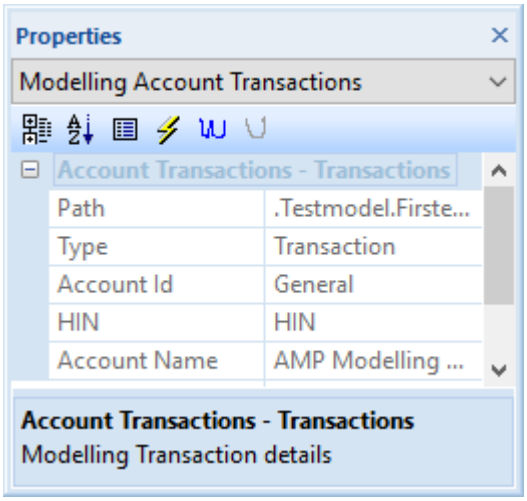
6. **[Path]** grid item.
   Full internal Transaction folder path.

7. **[Type]** grid item.
   Transaction folder type.

8. **[Account Id]** grid item.
   Modelling Account Id.

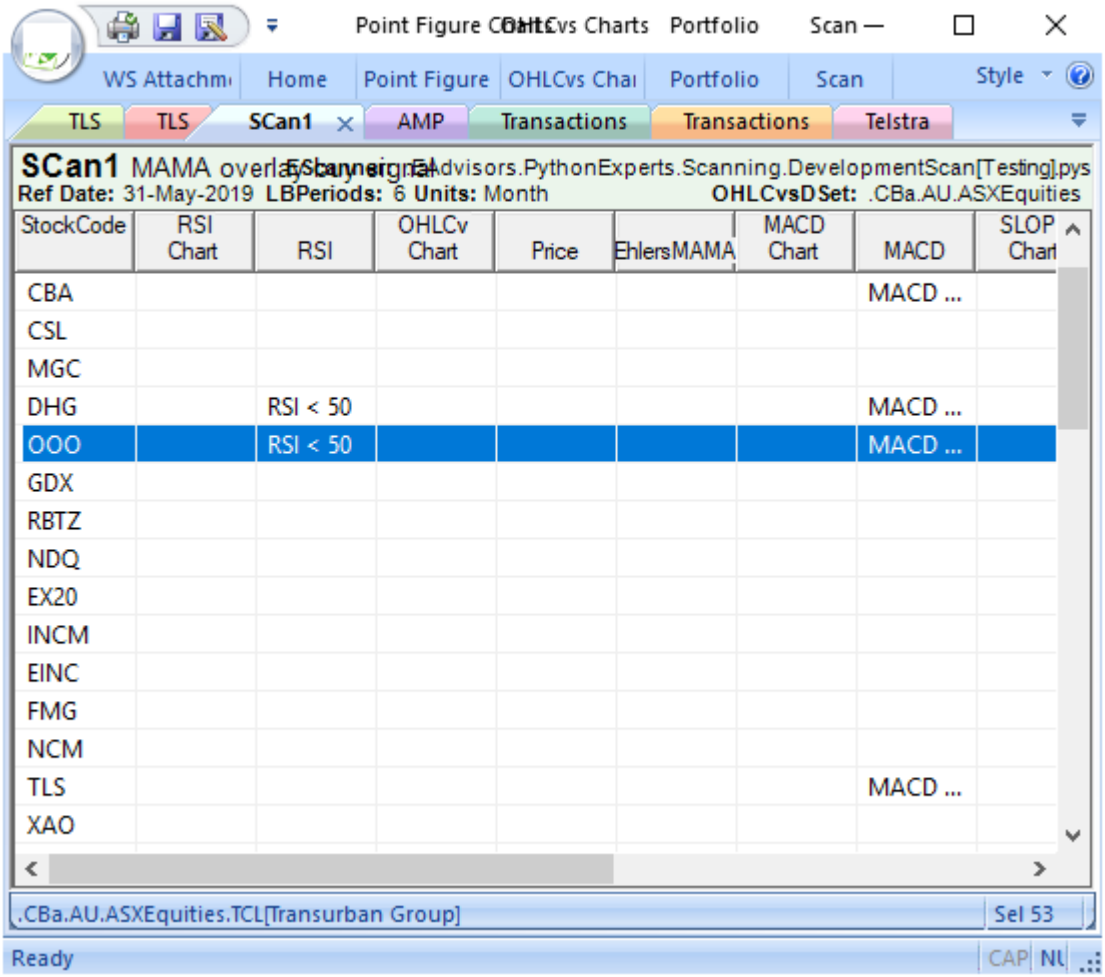
9. **[HIN]** grid item.
   Modelling Account HIN.

10. **[Account Name]** grid item.
    Modelling Account name.



5.6 Stock Scan Tab View

Activated from the Workspace Explorer Scripts Item Context Menu, **[View]** item or left mouse double click over any Workspace Explorer Scripts Tree Item. Displays in a grid control the results of the underlying Python Script Scan.



Chartboard supports multiple unique instances of Python Scan Views, but a single instance of any given scan.

The Python Scan View contains an individual scan whose content and configuration is controlled via the following facilities.

1. Static configuration and stock assignment is via the Python Scan Configuration Dialog.

2. Dynamic configuration is via the Ribbon Bar **[Scan]** tab. Contents of this tab is kept synchronised with the selected Python Scan Tab View.

3. Each row within the scan results list supports a context menu containing numerous items for viewing, removing and activating individual charts.

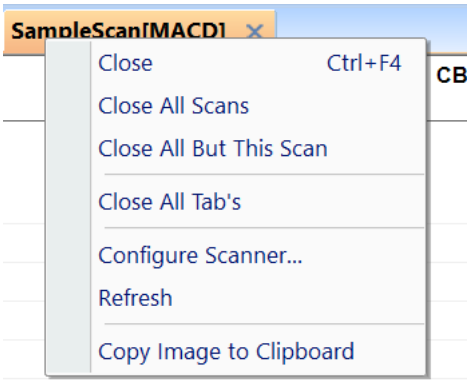
4. Context Menus have been assigned to tabulated rows within the results list.

5. Properties Grid have been assigned to all tabulated rows within the results list.

6. Details representing either the whole results list or individual rows can be copied to the clipboard.

5.6.1 Python Scanner Tab Context Menu

The following Python Scanner Tab Context Menu is accessed via a right mouse click over the View Tab.



1. **[Close]** menu item.
   Closes the active document.

2. **[Close All Scans]** menu item.
   Close all open scan views.

3. **[Close All But This Scan]** menu item.
   Close all documents but this.

4. **[Close All Tab's]** menu item.
   Close all view tabs.

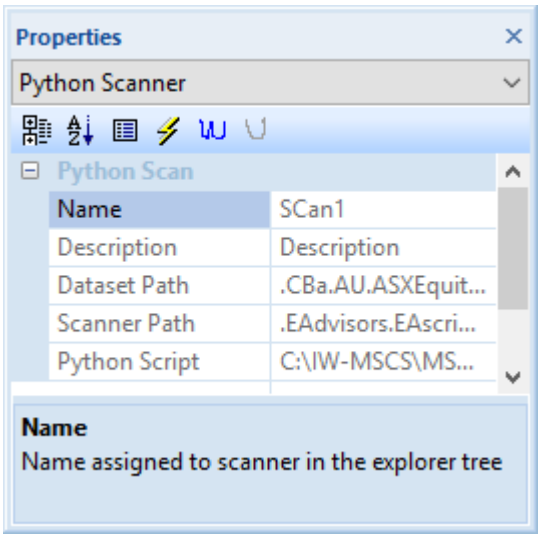
5. **[Configure Scanner]** menu item.
   Activates the 'Workspace Python Scanning Configuration Dialog'.

6. **[Refresh]** menu item.
   Refresh the underlying Scanner configuration parameters.

7. **[Copy Image to Clipboard]** menu item.
   Copy view image to clipboard.

5.6.2 Python Scanner Tab Properties Grid

The following Python Scan Results Tab Properties Grid is activated via either a left mouse click over the Python Scripts Explorer Tree Script Item or selection the [Properties] item from the Python Scripts Explorer Tree Script Context Menu.



1. **[Name]** grid item.
   Name assigned to scanner in the explorer tree.

2. **[Description]** grid item.
   Brief description of scan definitions.

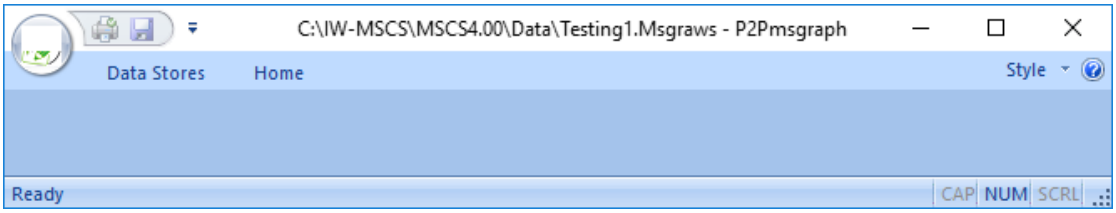
3. **[Dataset Path]** grid item.
   Chartboard dataset path to stocks to be scanned.

4. **[Scanner Path]** grid item.
   Chartboard path to python scanning script.

5. **[Python Script]** grid item.
   Windows path to python scanning script.

5.6.3 Python Scanner Tab Status Bar

The Python Scanner Tab Status Bar is located across the bottom of Stock Scan Tab View's.



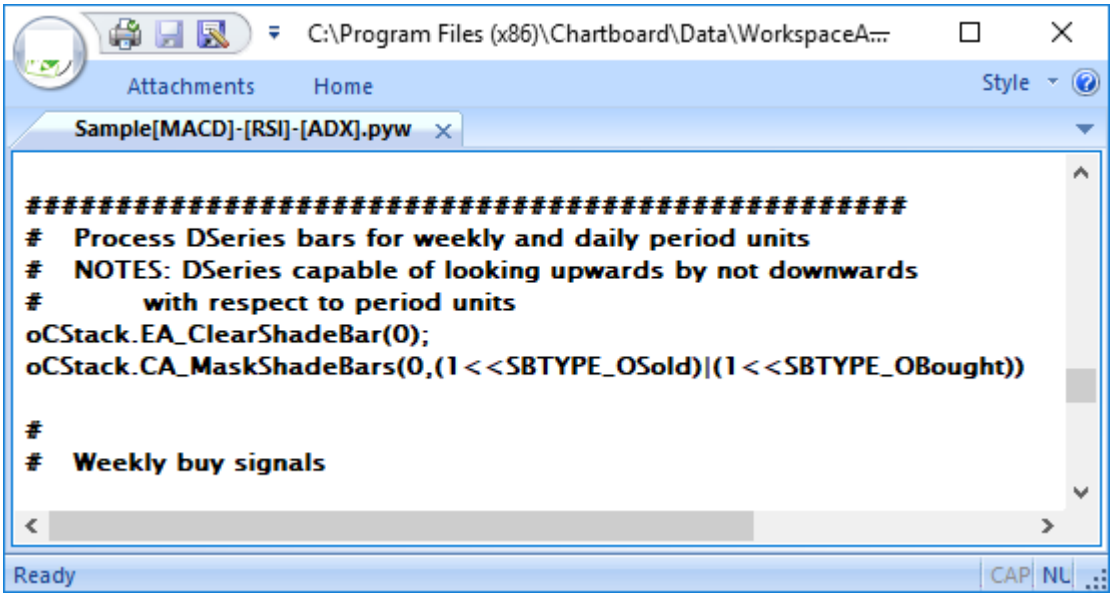
The content and context of each item contained within the status bar is summarised below.

1. Selected
   Total number of stocks selected in the scan sequence. These stocks will be tabulated in the list control.

2. Scanned
   Total number of stocks processed in the scan sequence.

5.7 Automation Script Tab View

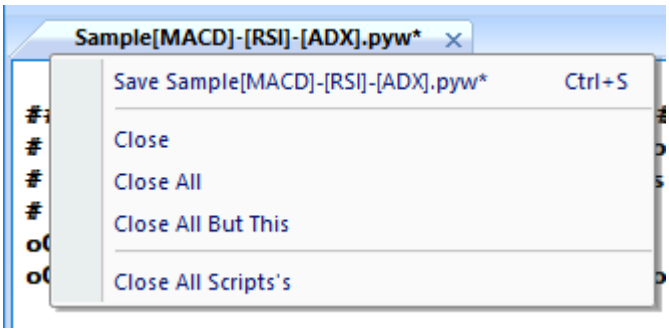
Activated from the Automation Explorer Script Item Context Menu, **[View Script]** item. Displays the underlying Automation script.



5.7.1 Embedded Automation Script View Tab Context Menu

Activated via the Automation Explorer Script Item Context Menu, **[View]** item. Displays the underlying script.

1. **[Save Scriptname.pyw]** menu item.
   Save edited script contents contained within this tab.

   Enabled for scripts with unsaved edits, flagged with '*' character appended to filename. The Application Button >> Save All menu item sequences also save edited contents of Python Script View's.

2. **[Close]** menu item.
   Closes the active document.

3. **[Close All]** menu item.
   Close all tabbed views.

4. **[Close All But This]** menu item.
   Close all documents but this.

5. **[Close All Automation Scripts]** menu item.
   Close all open automation scripts.

6. **[Close All But this Script]** menu item.
   Close all open automation scripts but for this script.

7. **[Copy Script to Clipboard]** menu item.
   Copy script to clipboard.

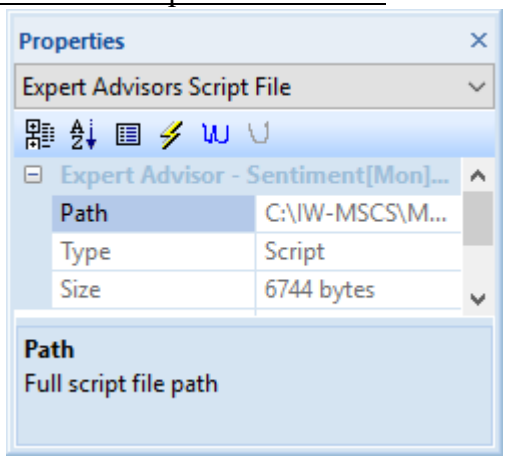
5.7.2 Python Script View Tab Properties Grid

The following Python Scripts Explorer Python Properties Grid are activated via either a left mouse click over the Python Scripts Explorer Tree Script Item or selection the [Properties] item from the Python Scripts Explorer Tree Script Context Menu.

1. **[Path]** grid item.
   Name of the disk file through which the Python script persists.

2. **[Type]** grid item.
   Type of script.

3. **[Size]** grid item.
   Current size of script disk file.



5.8 Embedded URL Tab View



5.8.1 Embedded URL View Tab Context Menu

The following Python Scanner Tab Context Menu is accessed via a right mouse click over the View Tab.



1. **[Close]** menu item.
   Closes the active document.

2. **[Close All]** menu item.
   Close all open documents.

3. **[Close All But This]** menu item.
   Close all documents but this.

4. **[Close All URL's]** menu item.
   Close all open URL views.

5. **[Close All But This URL]** menu item.
   Close all open URL views but for this view.

6. **[Externalise Original URL]** menu item.
   Externalise the original URL in the default browser.

7. **[Externalise This URL]** menu item.
   Externalise the current URL in the default browser.

8. **[Copy Image to Clipboard]** menu item.
   Copy view image to clipboard.

5.8.2 Embedded URL View Tab Properties Grid

6. OHLCvs Chart Stack

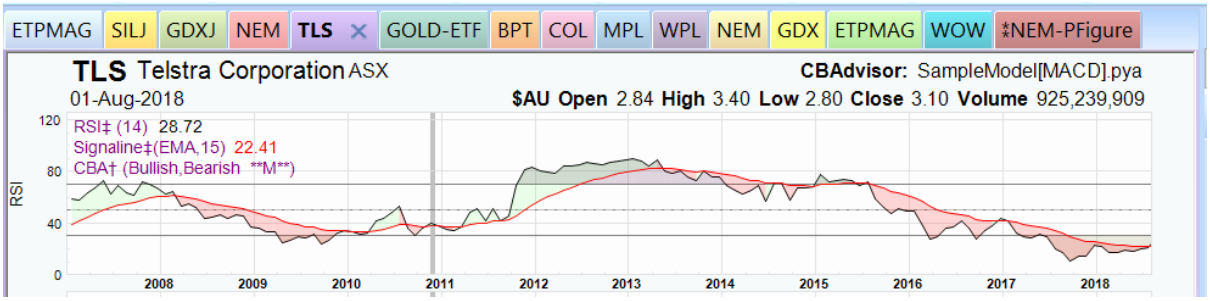
Activated from the Workspace Explorer OHLCvs Item Context Menu, **[View OHLCvs Chart]** item or left mouse double click over any Workspace Explorer OHLCvs Tree Item. Displays the underlying OHLCvs Category Chart.

Chart configuration parameters and calculations are assessable from the Chartboard Extension Functions (CBEF) and Extension Classes (CBEC) for both Python Advisor and Stock Scanning scripts,

OHLCvs Charts may be copied/pasted and exported/imported from within the Workspace Explorer. Macro level configuration is performed via the Workspace Explorer OHLCvs Chart Configuration Dialog.

6.1 Legend

Legend appears as the first item in all OHLCvs Chart Stacks.



1. **[TLS]** item.
   Exchange code for chart.

2. **[Telstra Limited]** item.
   Assigned stock or calculated data series name.

3. **[ASX]** item.
   Exchange from which data is sourced.

4. **[CBAdvisor:** SampleModel[MACD].pya**]** item.
   Python Advisor script currently activate for the chart stack. Refer Ribbon **Bar >> OHLCvs Group >> [Python Advisor's] Panel** >> **{Run Local}** and **{Run Global}** buttons for the Chart. Field omitted when **Pya** automation script not active, refer Ribbon **Bar >> OHLCvs Group >> [Python Advisor's] Panel** >> **{Cancel}** button for the Chart.

5. **[© Your Copyright]** item.
   Copyright notice. Toggled on and off via the OHLCvs Chart Configuration Dialog.

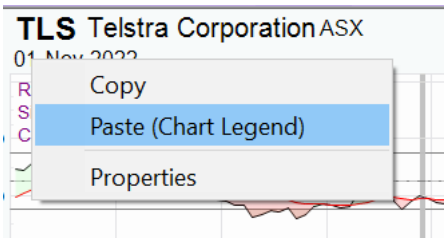
6. **[01-Aug-2018]** item.
   Date associated with last displayed data series item.

7. **$US** or **$AU** currency items
   Currency units for underlying OHLCvs data set, **$US:$AU** for ratio charts.

8. **[Open** 2.00 **High** 2.00 **Low** 2.00 **Close** 2.00 **Volume** 2,000,000**]** items
   Last displayed trade summary.

6.1.1 Legend Context Menu

The following Legend Context Menu is accessed via a right mouse click over the Chart Legend.



1. **[Copy]** menu item
   Copies cosmetic parameters from Legend to clipboard.

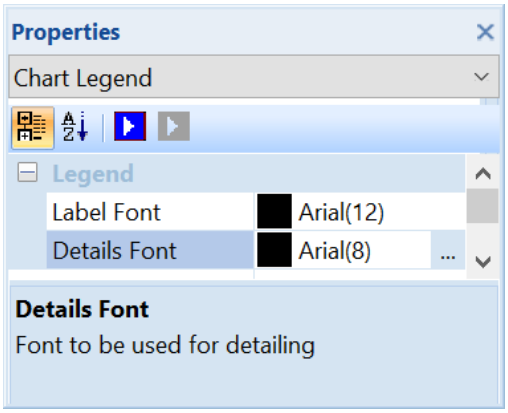
2. **[Paste** *object type***]** menu item
   Pastes Legend cosmetic parameters from clipboard to Legend.

   Item is only enabled when clipboard contains content previously copied, *object=Chart* and *type=Legend,* from Chart Stack Legend.

3. **[Properties]** button item.
   Activates Legend Label Properties Grid.

6.1.2 Legend Properties Grid

The following Legend Properties Grid is accessed via a right mouse click over the active chart area exclusive of prioritised objects such as labels, regression curves, mark-ups, drawing objects.



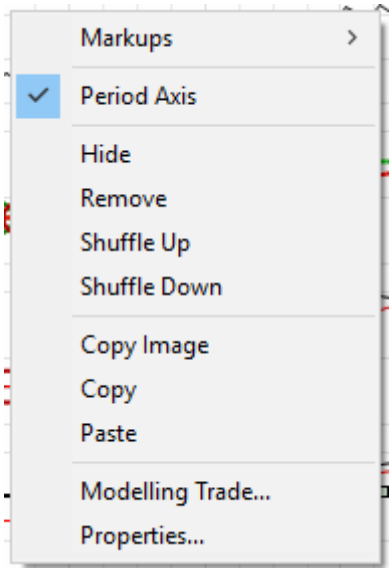
1. **[Label Font]** grid item.
   Font used for the primary Legend label.

2. **[Details Font]** grid item.
   Font used for Legend details.

6.2 Common OHLCvs Stack Components

6.2.1 Common OHLCvs Stack Context Menu Items

The following Common OHLCvs Stack Context Menu is accessed via a right mouse click over the active chart area exclusive of prioritised objects such as labels, regression curves, mark-ups, drawing objects.



1. **[Markups]** menu item.
   Common chart stack context sub-menu items

2. **[Period Axis]** menu item.
   Toggles Period axis on (checked) and off for the chart.

3. **[Hide]** menu item.
   Hides chart, retaining settings and position in the chart stack.

   Hidden charts may be recovered via the Ribbon Bar **[OHLCvs]** Tab >> **[Chart Stack]** Panel >> **{EoD Stack Items}** Button >> Drop down menu.

4. **[Remove]** menu item.
   Permanently removes or deletes chart from the chart stack.

   Deleted charts may be re-created via the Ribbon Bar **[OHLCvs]** Tab >> **[Chart Stack]** Panel >> **{Add 2 Stack}** Button >> Drop down menu.

5. **[Shuffle Up]** menu item.
   Shuffles chart up one position in chart stack. Disabled for first chart in stack.

6. **[Shuffle Down]** menu item.
   Shuffles chart down one position in chart stack. Disabled for last chart in stack.

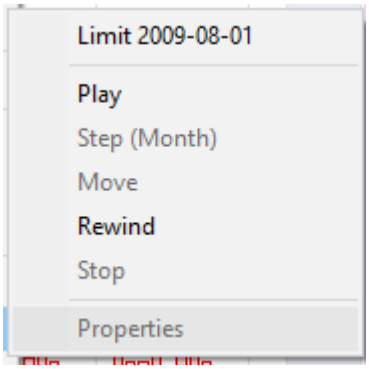
7. **[Copy Image]** menu item.
   Copies chart image to clipboard from which in can subsequently be pasted to Word, Paint etc.

8. **[Copy]** menu item.
   Copies chart properties to the clipboard.

9. **[Paste** *object type***]** menu item.
   Pastes chart properties from the clipboard.

10. **[Modelling Trade…]** menu item.
    Activates the Modelling Transaction-Trade Edit Dialog. Trade date and position defined by the cursor position.

11. **[Market Replay]** menu item
Activates market replay submenu



[Market Replay > Limit 2009-08-01]
Trade date and position defined by the current cursor location.

[Market Replay ► Play]
Commence market replay from previous play position\nPlay

[Market Replay ► Step]
Step market replay cursor forward one period unit, alternative use right arrow key.

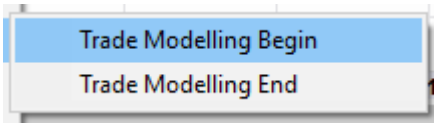
[Market Replay ► Move]
Move market replay cursor to current chart period axis position.

[Market Replay ► Rewind]
Rewind all market replay parameters\nRewind

[Market Replay ► Stop]
Stop or abandon market replay mode\nStop

[Market Replay ► Properties]
Activate properties grid for Market Replay cursor.

12. **[Python Advisor]** button item.
Activates the Python Advisor trade modelling sub-menu



[Python Advisor ► Trade Modelling Begin] button item.
Sets the python automation Advisor trade modelling left limit to current chart period axis mouse position.

Value is dynamically exposed to the python automation Advisor scripts to manage processing limits.

[Market Replay ► Trade Modelling End] button item.
Sets python automation Advisor trade modelling right limit to current chart period axis mouse position.

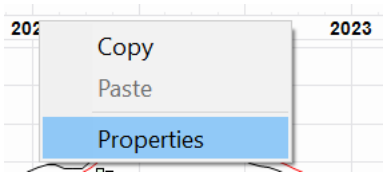
Value is dynamically exposed to the python automation Advisor scripts to manage processing limits.

13. **[Properties]** menu item.
Activates Generic Chart Properties Grid.

Inclusion of the above Generic Chart Context Menu Item's is subjective and varies according to chart type.

6.2.2 Common OHLCvs Stack Period Axis Context Menu

The following Common OHLCvs Stack Period Axis Context Menu is accessed via a right mouse click over the period axis labelling region common to all charts within a stack.



1. **[Copy]** menu item
   Copies Period Axis calculation and cosmetic parameters to clipboard

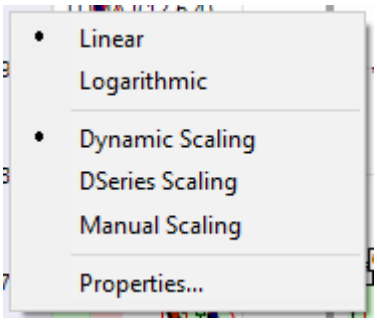
2. **[Paste** *object type***]** menu item
   Pastes Period Axis calculation and cosmetic parameters from clipboard to axis.

   Item is only enabled when clipboard contains content previously copied from Period Axis.

3. **[Properties]** menu item.
   Activates properties grid for the common Chart Stack period axis.

6.2.3 Common OHLCvs Stack Primary Axis Context Menu

The following Common OHLCvs Stack Primary Axis Context Menu is accessed via a right mouse click over the primary axis labelling region unique to all charts within a stack. Charts within the stack support their own sub-set of the following items. Selections are unique to each Chart in the stack.



1. **[Linear]** menu item.
   Selects linear axis annotations and scaling for the primary chart axis.

   Optional Primary Axis Context Menu item.

2. **[Logarithmic]** menu item.
   Selects logarithmic axis annotations and scaling for the primary chart axis.

   Optional Primary Axis Context Menu item.

3. **[Dynamic Scaling]** menu item.
   Selects dynamic scaling ranges for the primary chart axis, dependent upon data extremes within view window.

   Optional Primary Axis Context Menu item.

4. **[DSeries Scaling]** menu item.
   Selects data series scaling ranges for the primary chart axis, dependent upon data extremes for the whole data series.

   Optional Primary Axis Context Menu item.

5. **[Manual Scaling]** menu item.
   Selects manual scaling ranges for the primary chart axis, dependent upon data extremes manually managed through Primary Axis Properties Grid.

   Optional Primary Axis Context Menu item.

6. **[Fixed Scaling]** menu item.
   Flags fixed scaling ranges for the primary chart axis, dependent upon pre-determined ranges associated with Oscillator or Indicator.

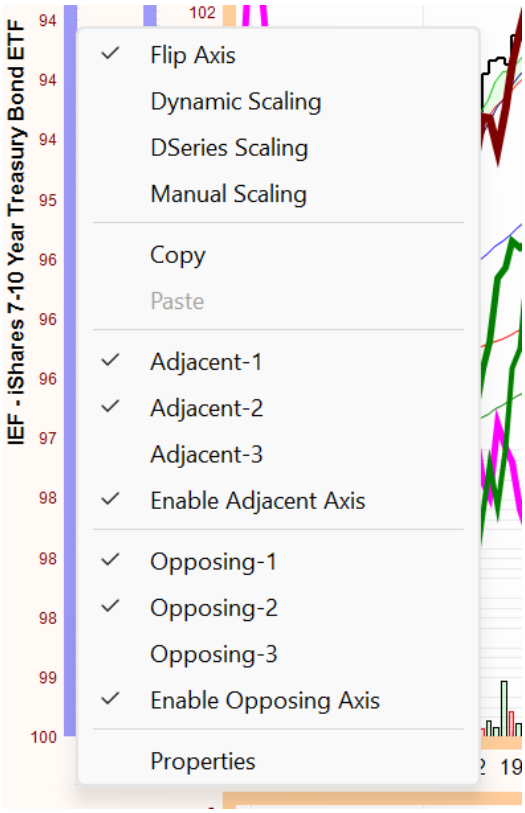
   Optional Primary Axis Context Menu item.

7. **[Properties]** menu item.
   Activates properties grid for the unique Primary Chart Axis.

   Common to all Primary Axis Context Menu's within chart stack

6.2.4 Common OHLCvs Stack Extra-Axis Context Menu

The following Common OHLCvs Stack Extra-Axis Context Menu is accessed via a right mouse click over any extra-axis labelling region unique to charts within a stack. Charts within the stack support their own sub-set of the following items. Selections are unique to each Chart in the stack.



1. **[Flip Axis]** menu item.
   Flip or inverts axis (checked) scale range. Alternatively inverts attached data series.

2. **[Dynamic Scaling]** menu item.
   Selects dynamic scaling ranges for the primary chart axis, dependent upon data extremes within view window.

3. **[DSeries Scaling]** menu item.
   Selects data series scaling ranges for the primary chart axis, dependent upon data extremes for the whole data series.

4. **[Manual Scaling]** menu item.
   Selects manual scaling ranges for the primary chart axis, dependent upon data extremes manually managed through Primary Axis Properties Grid.

5. **[Fixed Scaling]** menu item.
   Flags fixed scaling ranges for the primary chart axis, dependent upon pre-determined ranges associated with Oscillator or Indicator.

6. **[Adjacent-1,2,3]** menu item.
   Toggles display of the **"Adjacent-1,2,3"** extra axis on (checked) and off. Configuration for axis is retained. Refer Workspace OHLCvs Chart-Axis Configuration Dialog for further details

7. **[Enable Adjacent Axis]** menu item.
   Toggles display of the **"Adjacent"** extra axis on (checked) and off as a group in their current state. Configuration for **"Adjacent"** axis is retained. Refer Workspace OHLCvs Chart-Axis Configuration Dialog for further details.

8. **[Opposing-1,2,3]** menu item.
   Toggles display of the **"Opposing-1,2,3"** extra axis on (checked) and off. Configuration for axis is retained. Refer Workspace OHLCvs Chart-Axis Configuration Dialog for further details

9. **[Enable Opposing Axis]** menu item.
   Toggles display of the **"Opposing"** extra axis on (checked) and off as a group in their current state. Configuration for **"Opposing"** axis is retained. Refer Workspace OHLCvs Chart-Axis Configuration Dialog for further details.

10. **[Properties]** menu item.
    Activates properties grid for the unique Chart Extra-Axis.

    Common to all Primary Extra-Axis Context Menu's within chart stack

6.2.5 Common OHLCvs Stack Chart Properties Grid

The following Common OHLCvs Stack Chart Properties Grid form part of the Properties Grid for each Chart. Chart Properties Grid's are activated via a left mouse click over the active chart area exclusive of prioritised objects such as labels, regression curves, mark-ups, drawing objects.

1. **[Reference Height**] grid item.
   Chart reference height used for {No Scrolling}, {Fixed Size} and {Dynamic} stack scaling.

   Total stack height is the sum of all chart reference heights plus legend height.

2. **[Inspection Pen]** grid item.
   Common pen used to draw the vertical inspection cursor. Common to all charts within a given chart stack for both Chart data and Python script formats.

3. **[Inspection Font]** grid item.
   Common chart stack font used to tabulate inspection legends for both Chart data and Python script formats.

4. **[Splits Pen]** grid item.
   Pen used to draw the vertical OHLCvs data set splits line. Common to all charts within this chart stack.

5. **[Splits Display]** grid combo.
   Toggles annotation of splits on and off for this chart.

6. **[Splits Font]** grid item.
   Font used to label OHLCvs splits line. Common to all charts within this chart stack.

7. **[Splits Label]** grid combo.
   Activates combo for selection of splits label offset from (Top | Middle | Bottom).

8. **[Replay Limits Pen]** grid item.
   Common pen used to draw the vertical replay limits bars. Common to all charts within a given chart stack.

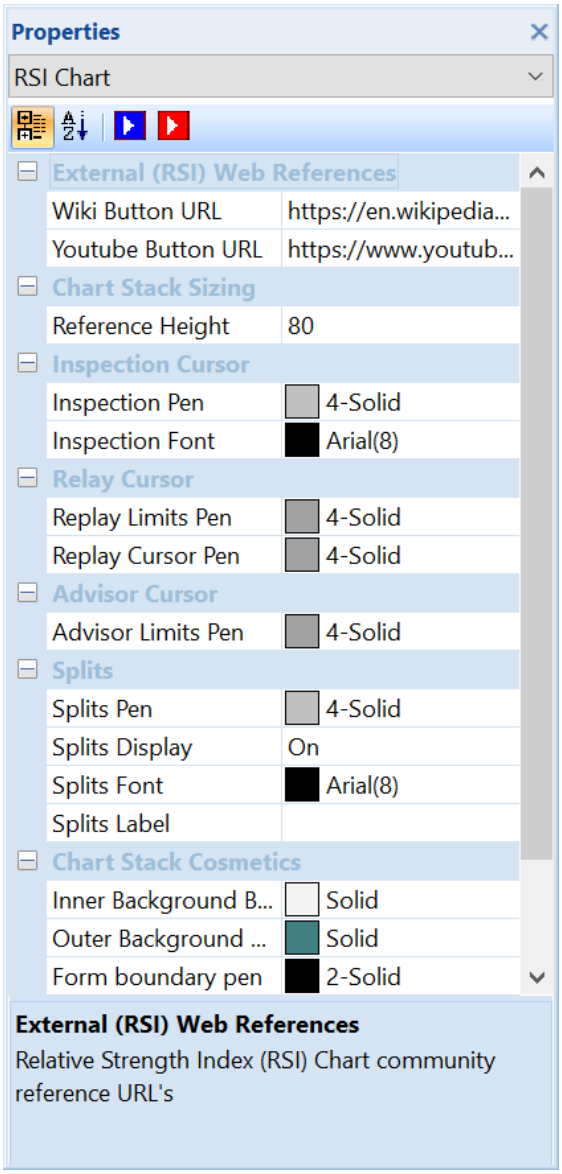
9. **[Replay Cursor Pen]** grid item.
   Common pen used to draw the vertical replay cursor. Common to all charts within a given chart stack.

10. **[Python Advisor Limits]** grid item.
    Common pen used to draw the vertical left and right Advisor limit bars. Common to all charts within a given chart stack.

11. **[Inner Background Brush]** grid item.
    Common brush used to paint all inner chart backgrounds. Common to all charts within a given chart stack.

12. **[Outer Background Brush]** grid item.
    Common brush used to paint all outer chart backgrounds. Common to all charts within a given chart stack.

13. **[Form Boundary Pen]** grid item.
    Common Pen used to draw form boundaries for all Charts in the stack. Common to all charts within a given chart stack.



6.2.6 Common OHLCvs Stack Primary Linear Axis Properties Grid

The following Common OHLCvs Stack Primary Axis Properties Grid are activated via a left mouse click over the primary axis (vertical) regions. Grid properties can either be unique to an individual chart within the stack or common to all as indicated.

1. **[Title]** grid item.
   Title to be applied to the axis.

2. **[Title visibility]** grid item.
   Combo for selecting title visibility options (Yes | No).

3. **[Title Offset]** grid item.
   Combo for selecting title offset options (Left | Centre | Right).

4. **[Axis Pen]** grid item.
   Activates Properties Grid Pen Selection Dialog for axis pen. Common to all charts in stack.

5. **[Primary Label Font]** grid item.
   Activates Properties Grid Font Selection Dialog for primary labels. Common to charts in stack.

6. **[Secondary Label Font]** grid item.
   Activates Properties Grid Font Selection Dialog for secondary labels. Common to all charts in stack.

7. **[Title Font]** grid item.
Activates Properties Grid Font Selection Dialog for titles. Common to all charts in stack.

8. **[Orientation]** grid item.
Activates combo for selection of axis labelling orientation (Portrait | Landscape).

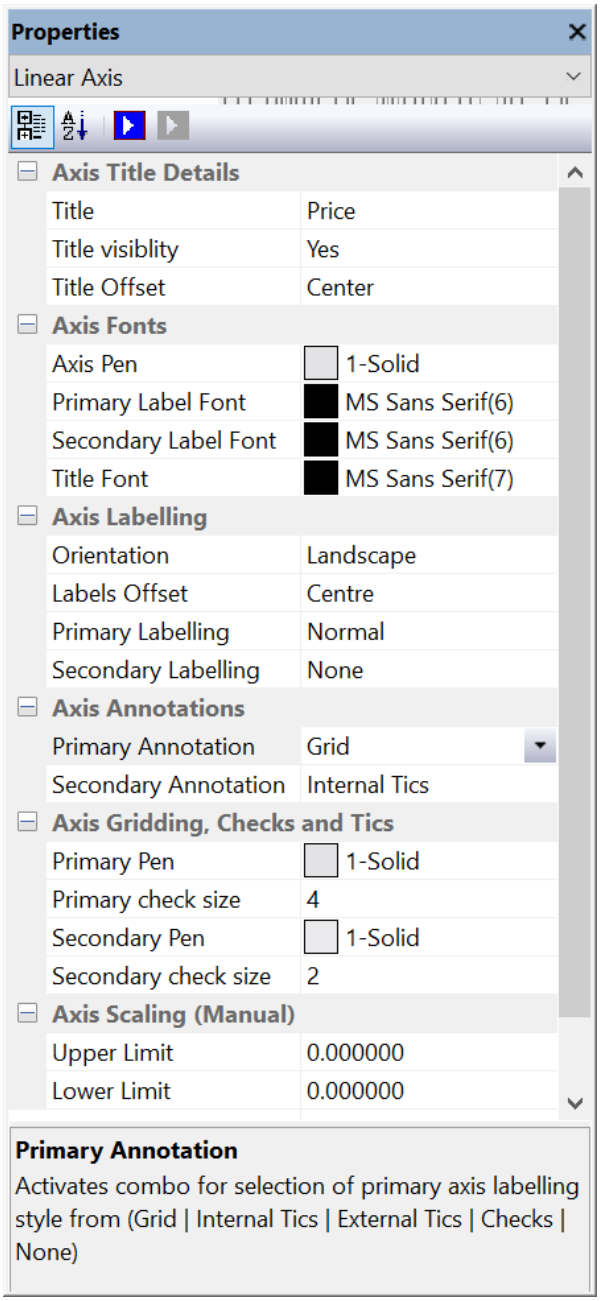
9. **[Labels Offset]** grid item.
Activates combo for selection of axis labels offset from (Left | Centre | Right).

10. **[Primary Labelling]** grid item.
Activates combo for selection of primary axis labelling style from (Grid | Internal Tics | External Tics | Checks | None).

11. **[Secondary Labelling]** grid item.
Activates combo for selection of secondary axis labelling style from (Grid | Internal Tics | External Tics | Checks | None).

12. **[Primary Annotation]** grid item.
Activates combo for selection of primary axis annotation style from (Grid | Internal Tics | External Tics | None).

13. **[Secondary Annotation]** grid item.
Activates combo for selection of secondary axis annotation style from (Grid | Internal Tics | External Tics | None).



14. **[Primary Pen]** grid item.
Activates Properties Grid Pen Selection Dialog for primary axis annotations pen. Common to all charts in stack.

15. **[Primary Check Size]** grid item.
Common size of primary axis checks and tics.

16. **[Secondary Pen]** grid item.
Activates Properties Grid Pen Selection Dialog for secondary axis annotations pen. Common to all charts in stack.

17. **[Secondary Check Size]** grid item.
Common size of secondary axis checks and tics.

18. **[Upper Limit]** grid item.
Sets Upper Limit for manual scaling option.

19. **[Lower Limit]** grid item.
Sets Lower Limit for manual scaling option.

6.3 Primary OHLCvs Chart

6.3.1 OHLCvs Chart Context Menu

1. **[Simple Moving Averages (SMA)]** overlay menu item
Toggles display of Simple Moving Averages (SMA) chart overlays on (checked) and off.

SMA label is displayed for activated overlay.

[► SMAnnn *menulist***]** menu item.
Menu list of SMA items. List contents managed through the SMA Menu List Management Properties Grid activated via the **[► Manage List …]** menu item.

[► EoD] menu item.
Toggle the enabled (checked) disabled status of all selected items in the SMA list.

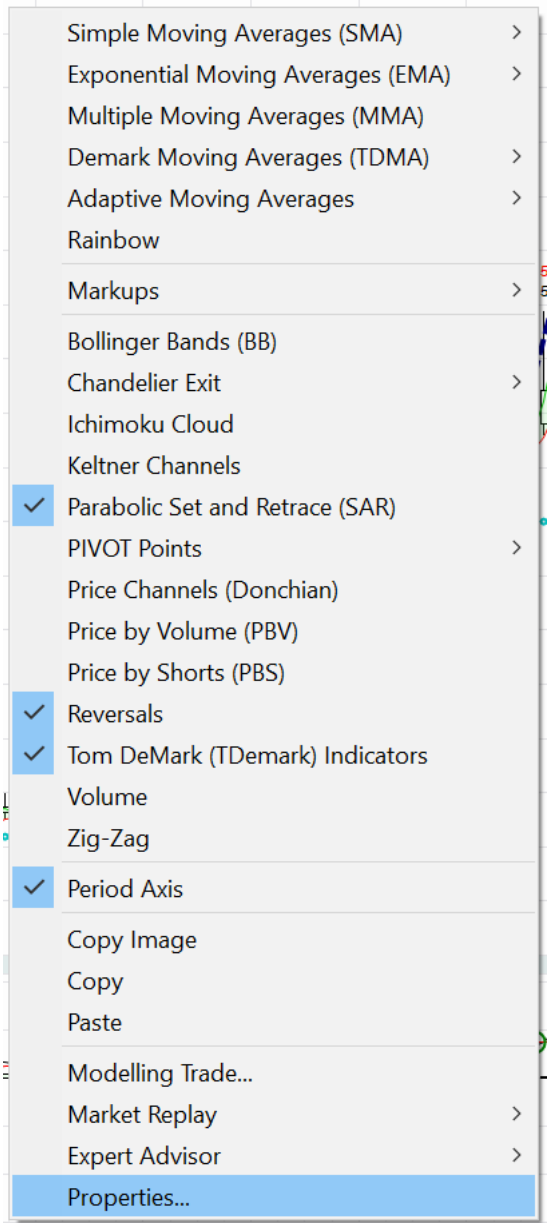
[► Copy] menu item.
Copy entire contents of the SMA menu list to clipboard for current chart period.

[► Paste *object type***]** menu item.
Paste entire contents of the SMA menu list from clipboard for current chart period.

Item is only enabled when clipboard contains content previously copied from equivalent menu list.

[► Manage List …] menu item.
Activates SMA Menu List Management Properties Grid for current chart period.

Manages the contents of the displayed



SMA list.

2. **[Exponential Moving Averages (EMA)]** overlay menu item
Toggles display of Exponential Moving Averages (EMA) chart overlays on (checked) and off.

EMA label is displayed for activated overlay.

[► EMAnnn *menulist***]** menu item.
Menu list of EMA items. List contents manged through the EMA Menu List Management Properties Grid activated via the **[► Manage List …]** menu item.

[► EoD] menu item.
Toggle the enabled (checked) disabled status of all selected items in the SMA list.

[► Copy] menu item.
Copy entire contents of the EMA menu list to clipboard for current chart period.

[► Paste *object type***]** menu item.
Paste entire contents of the EMA menu list from clipboard for current chart period.

Item is only enabled when clipboard contains content previously copied from equivalent menu list.

[► Manage List …] menu item.
Activates EMA Menu List Management Properties Grid for current chart period.

Manages the contents of the displayed EMA list.

3. **[Multiple Moving Averages (MMA)]** overlay menu item
Toggles display of Multiple Moving Averages (MMA) chart overlay on (checked) and off.

MMA label is displayed whenever overlay is activated.

4. **[Demark Moving Averages (TDMA)]** overlay menu item
Toggles display of Demark Moving Averages (TDMA) chart overlay on (checked) and off.

TDMA label is displayed whenever overlay activated.

[► TDMA-A] menu item.
Toggles display of Tom Demark configuration TDMA-A chart overlay on (checked) and off.

Tom Demark TDMA-A chart label is displayed whenever overlay activated.

[► TDMA-B] menu item.
Toggles display of Tom Demark configuration TDMA-B chart overlay on (checked) and off.

Tom Demark TDMA-B chart label is displayed whenever overlay activated.

[► TDMA-C] menu item.
Toggles display of Tom Demark configuration TDMA-C chart overlay on (checked) and off.

[► EoD] menu item.
Toggles the enabled-disabled status of all selected items in the TDMA-(A,B,C) menu list.

Tom Demark TDMA-C chart label is displayed whenever overlay activated.

5. **[Adaptive Moving Averages]** overlay menu item
Toggles display of KAMA and MAMA moving averages on (checked) and off.

[► KAMA] menu item.
Toggles display of Kaufmans (KAMA) chart overlay on (checked) and off.

KAMA label is displayed whenever overlay activated.

[► MAMA] menu item.
Toggles display of Ehlers MAMA chart overlay on (checked) and off.

Ehlers MAMA chart label is displayed whenever overlay activated.

6. **[Analytics]** menu item
Toggles display of Reversals-[A,B,C] and Harmonics-[A,B,C] chart overlays on (checked) and off.

Chartboard supports 3 unique sets of Reversal and Harmonic overlays that can be uniquely and independently configured.

[► Reversals-A, Reversals-B, Reversals-C] menu items.
Toggles display of **Reversals-[A,B,C]** chart overlays on (checked) and off. The equivalent label is displayed whenever overlay is activated. Reversals are subsequently managed through these labels.

[► Harmonics-A, Harmonics-B, Harmonics-C] menu items.
Toggles display of **Harmonics-[A,B,C]** chart overlays on (checked) and off. The equivalent label is displayed whenever overlay is activated. Harmonics are subsequently managed through these labels.

7. **[Rainbow]** overlay menu item
   Toggles display of Rainbow chart overlay on (checked) and off.

   Rainbow label is displayed whenever overlay activated.

8. **[Bollinger Bands (BB)]** overlay menu item
   Toggles display of Bollinger Bands chart overlay on (checked) and off.

   BB label is displayed whenever overlay activated.

9. **[Chandelier Exit]** overlay menu item
   Toggles display of Chandelier Exit chart overlay on (checked) and off.

   Chandelier Short and Long labels are displayed whenever overlays activated.

   [► Short] menu item.
   Toggles display of Chandelier Exit (SHORT) overlay on(checked) and off.

   [► Long] menu item.
   Toggle display of Chandelier Exit (LONG) overlay on(checked) and off.

10. **[Ichimoku Cloud]** menu item.
    Toggles display of Ichimoku chart overlay on (checked) and off.

    Ichimoku label is displayed whenever overlay activated.

11. **[Keltner Channel]** overlay menu item
    Toggles display of Keltner Channels chart overlay on (checked) and off.

    Keltner Channel label is displayed whenever overlay activated.

12. **[Parabolic set and retrace (SAR)]** overlay menu item
    Toggles display of Parabolic set and retrace (SAR) chart overlay on (checked) and off.

    SAR label is displayed whenever overlay activated.

13. **[PIVOT Points]** overlay menu item
    Toggles display of PIVOT Points chart overlay on (checked) and off.

    PIVOT Standard, Fibonacci and Demark labels are displayed whenever overlays activated.

    [► Standard] menu item.
    Toggles display of PIVOT (Standard) Points chart overlay on(checked) and off.

    [► Fibonacci] menu item.
    Toggles display of PIVOT (Fibonacci) Points chart overlay on(checked) and off.

[► Demark] menu item.
Toggles display of PIVOT (Demark) Points chart overlay on(checked) and off.

14. **[Price Channels (Donchian)]** overlay menu item
Toggles display of Price Channels (Donchian) chart overlay on (checked) and off.

Donchian label is displayed whenever overlay activated.

15. **[Price by Volume (PBV)]** overlay menu item
Toggles display of Price-by-Volume (PBV) chart overlay on (checked) and off.

PBV label is displayed whenever overlay activated.

16. **[Price by Shorts]** overlay menu item
Toggles display of Price-by-Shorts (PBS) chart overlay on (checked) and off.

PBS label is displayed whenever overlay activated.

17. **[Tom Demark (TDemark) Indicators]** overlay menu item
Toggles display of Tom Demark (TDemark) chart overlay on (checked) and off.

TDemark label is displayed whenever overlay activated.

18. **[Volume]** overlay menu item
Toggles display of Volume chart overlay on (checked) and off.

Volume label is displayed whenever overlay activated.

19. **[Zig-Zag]** overlay menu item
Toggles display of Zig-Zag Bands chart overlay on (checked) and off.

Zig-Zag label is displayed whenever overlay activated.

20. **[Paste** *object type***]** menu item
Pastes OHLCvs calculation and cosmetic parameters from clipboard to chart.

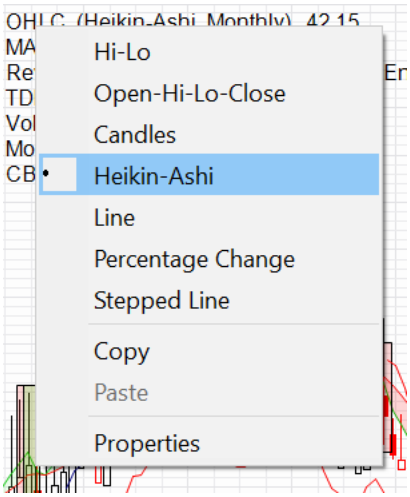
Item is only enabled when clipboard contains content previously copied from OHLCvs chart.

21. **[Modelling Trade…]**, **[Market Replay]** and **[Python Advisor]** menu items
Activates the Modelling Transaction-Trade Edit Dialog. Trade date and position defined by the cursor position.

22. **[Properties]** menu item.
Activates the OHLCvs Chart Properties Grid.

6.3.2 OHLCvs Label Context Menu

The following OHLCvs Label Context Menu is accessed via a right mouse click over the OHLCvs chart label.



1. **[Hi Lo]** menu item.
   Select (checked) HI-LO display of the OHLCvs data set.

2. **[Open-Hi-Lo-Close]** menu item.
   Select (checked) OPEN_HI-LO-CLOSED display of the OHLCvs data set.

3. **[Candles]** menu item.
   Select (checked) traditional candles display of OHLCvs data set.

4. **[Heikin-Ashi]** menu item.
   Select (checked) Heikin-Ashi display of OHLCvs data set.

5. **[Line]** menu item.
   Select (checked) line display of OHLCvs data set.

6. **[Percentage Change]** menu item.
   Select (checked) Percentage Change display of OHLCvs data set.

7. **[Stepped Line]** menu item.
   Select (checked) price stepping annotation to display underlying Close data.

8. **[Copy]** menu item
   Copies OHLCvs chart calculation and cosmetic parameters from label to clipboard.

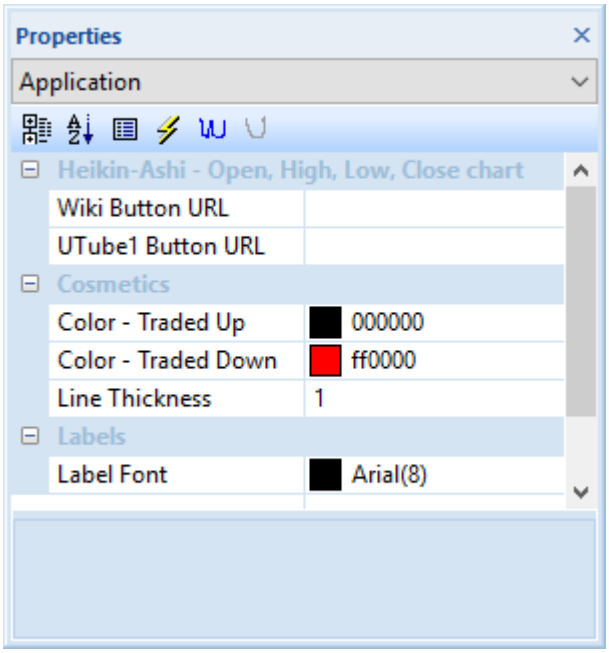
9. **[Paste** *object type***]** menu item
   Pastes OHLCvs calculation and cosmetic parameters from clipboard to label.

   Item is only enabled when clipboard contains content previously copied from OHLCvs label.

10. **[Properties]** menu item.
    Activates properties grid for OHLCvs Label.

6.3.3 OHLCvs Chart Properties Grid

6.3.4 OHLCvs Label Properties Grid



6.3.4.1 OHLCvs-Candles Chart Label Properties Grid

6.3.4.2 OHLCvs-Heikin-Ashi Chart Label Properties Grid

6.3.4.3 OHLCvs-OHLC Chart Label Properties Grid

6.3.4.4 OHLCvs-HL Chart Label Properties Grid

6.3.4.5 OHLCvs-Line Label Properties Grid

6.3.4.6 OHLCvs-Bars Chart Label Properties Grid

6.3.4.7 OHLCvs-Percent Chart Label Properties Grid

6.3.4.8 OHLCvs-Steps Chart Label Properties Grid

6.4 Overlays

Overlays are toggled on (checked) and off from the Generic Chart Context Menu or the Overlay Label Context Menu selectively for each chart stack item. Overlay configuration is exclusively performed through either the Overlay Label Context Menu or the Overlay Label Properties Grid.

Chart stack items support an overlay sub-set as defined by the Generic Chart Context Menu. The Pivotal OHLCvs chart supports the most overlays.

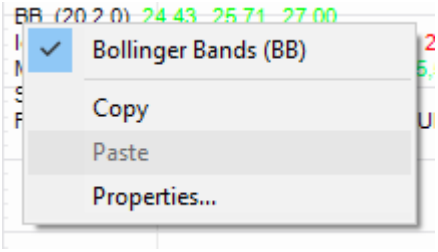
6.4.1 Bollinger Bands (BB)

Overlay supported by the pivotal OHLCvs Chart.



6.4.1.1 Bollinger Bands Label Context Menu

The following BB Label Context Menu is accessed via a right mouse click over the BB overlay label.



1. **[BB]** menu item.
   Toggles display of the BB overlay on (checked) and off.

   Logically label will not exist when overlay display toggled off. BB overlay display is toggled from the equivalent [BB] item from the Context Menu for the hosting chart.

2. **[Copy]** menu item
   Copies BB overlay calculation and cosmetic parameters from label to clipboard.

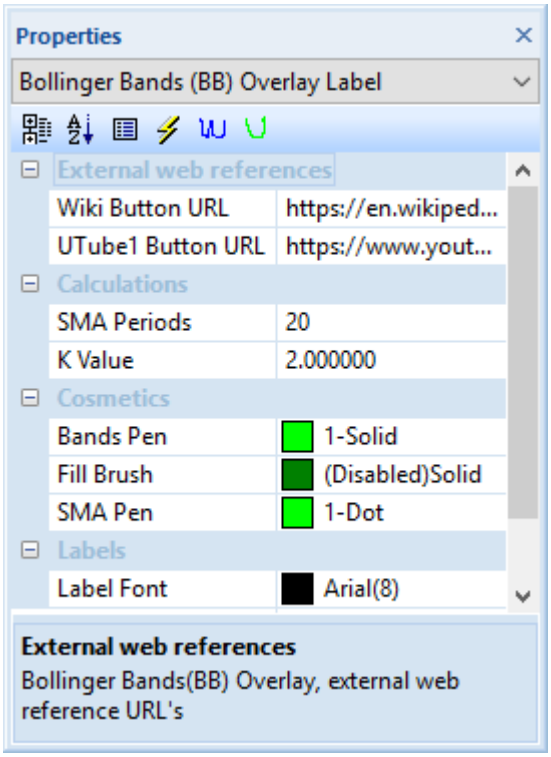
3. **[Paste** *object type*] menu item
   Pastes BB calculation and cosmetic parameters from clipboard to label.

   Item is only enabled when clipboard contains content previously copied from BB label.

4. **[Properties]** menu item.
   Activates the Bollinger Bands Label Properties Grid.

6.4.1.2 Bollinger Bands Label Properties Grid

The following BB Label Properties Grid is accessed via a left mouse click over the BB overlay label.



1. **[Wiki Button URL**] grid item.
   URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

3. **[SMA Periods]** grid item.
   Number of periods used to calculate simple moving average, usually 20.

4. **[K Value]** grid item.
   Standard deviation multiplier for upper and lower bands, usually 2.0.

5. **[Bands Pen]** grid item.
   Pen used to draw and label the upper and lower Bollinger Bands.

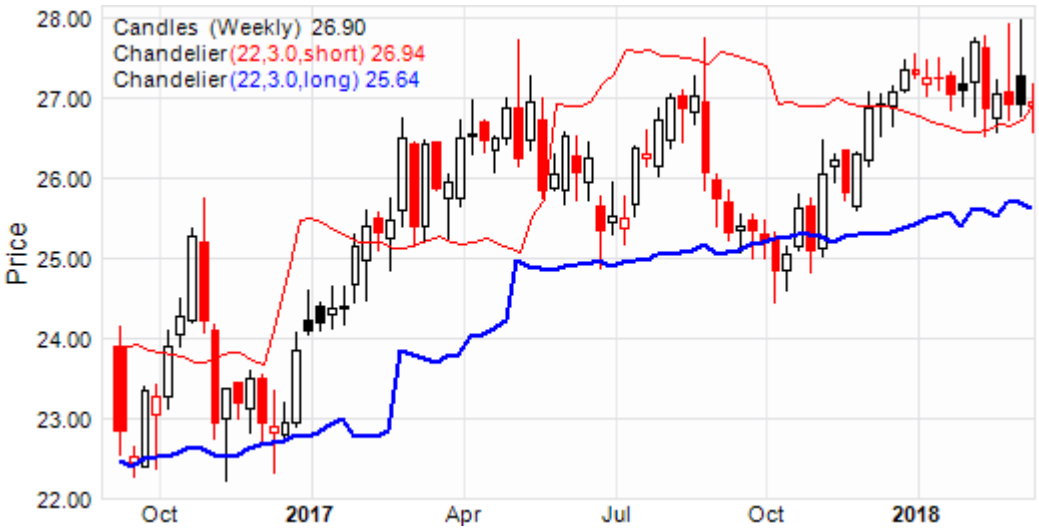
6. **[Fill Brush]** grid item.
   Brush used to fill between the upper and lower Bollinger Bands, Transparency usually around 20.

7. **[SMA Pen]** grid item.
   Pen used to draw and label the calculated simple moving average (SMA).

8. [**Labels]** grid item.
   Cosmetics common across all labels in this chart stack.

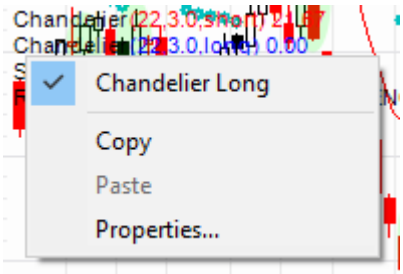
6.4.2 Chandelier (Short, Long) Exit

Overlays supported by the pivotal OHLCvs Chart.



6.4.2.1 Chandelier Label Context Menu

The following Chandelier Label Context Menu is accessed via a right mouse click over the Chandelier overlay label.



1. **[Chandelier]** menu item.
   Toggles display of the Chandelier overlay on (checked) and off.

   Logically label will not exist when overlay display toggled off. Chandelier overlay display is toggled from the equivalent **[Chandelier]** item from the Context Menu for the hosting chart.

2. **[Copy]** menu item
   Copies Chandelier overlay calculation and cosmetic parameters from label to clipboard.

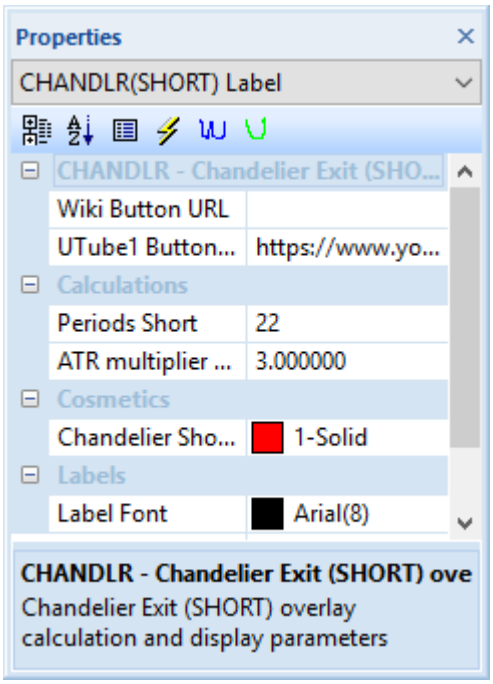
3. **[Paste** *object type***]** menu item
   Pastes Chandelier calculation and cosmetic parameters from clipboard to label.

   Item is only enabled when clipboard contains content previously copied from Chandelier label.

4. **[Properties]** menu item.
   Activates the Chandelier Label Properties Grid.

6.4.2.2 Chandelier Label Properties Grid

The following Chandelier Label Properties Grid is accessed via a left mouse click over the Chandelier overlay label.



1. **[Wiki Button URL**] grid item.
   URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

3. **[Short|Long Periods]** grid item.
   Periods used to calculate Chandelier Exit (SHORT|LONG).

4. **[ATR Multiplier SHORT|LONG]** grid item.
   Periods used to calculate Average True Range (SHORT|LONG).

5. **[Chandelier Short|Long Pen]** grid item.

Specifies the pen used to draw the Chandelier Exit (SHORT|LONG) line.

6. **[Labels]** grid items.
   Cosmetics common across all labels in this chart stack.

6.4.3 Custom Technical Analysis (CTA)

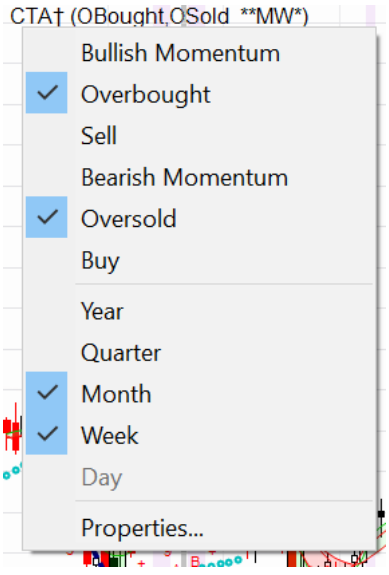
Overlay supported by all Charts. Generated automatically by python automation scripts.



6.4.3.1 CTA Label Context Menu

The following CTA Label Context Menu is accessed via a right mouse click over the CTA overlay label.

Display management of zones calculated by the underlying automation script. Items disabled when not supported. Zones are calculated upon the basis of the whole chart stack but displayed on the basis of individual charts.



1. **[Bullish Momentum]** menu item.
   Toggles display of *Bullish Momentum* shade overlays on (checked) and off.

   Disabled when not supported by underlying automation script.

2. **[Overbought]** menu item
   Toggles display of *Overbought* shade overlays on (checked) and off.

   Disabled when not supported by underlying automation script.

3. **[Sell]** menu item
   Toggles display of *Sell* shade overlays on (checked) and off.

Disabled when not supported by underlying automation script.

4. **[Bearish Momentum]** menu item
   Toggles display of *Bearish Momentum* shade overlays on (checked) and off.

   Disabled when not supported by underlying automation script.

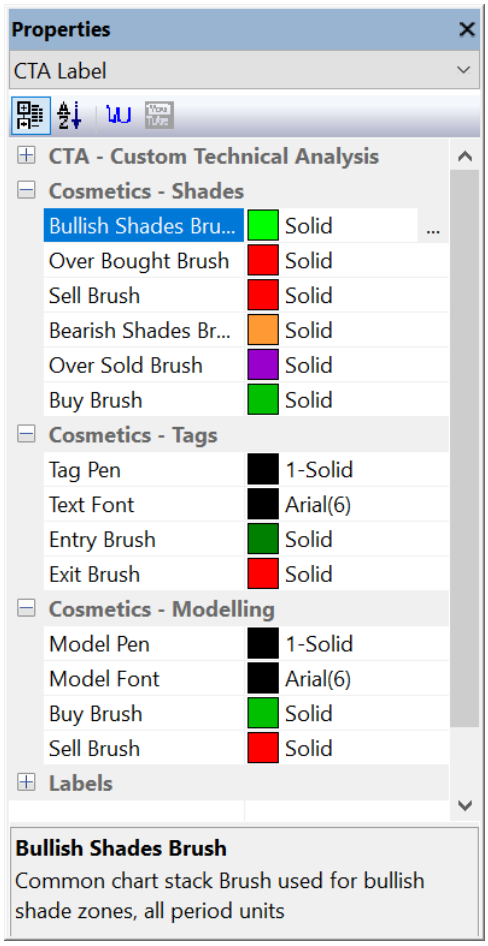
5. **[Oversold]** menu item
   Toggles display of *Oversold* shade overlays on (checked) and off.

   Disabled when not supported by underlying automation script.

6. **[Buy]** menu item
   Toggles display of *Buy* shade overlays on (checked) and off.

   Disabled when not supported by underlying automation script.

Manage periods for which underlying shade zones are displayed.



7. **[Year]** menu item
   Toggles display of calculated shade zones on(checked) and off for charts with yearly period.

8. **[Quarter]** menu item
   Toggles display of calculated shade zones on(checked) and off for charts with quarterly period.

9. **[Month]** menu item
   Toggles display of calculated shade zones on(checked) and off for charts with monthly period.

10. **[Week]** menu item
    Toggles display of calculated shade zones on(checked) and off for charts with weekly period.

11. **[Day]** menu item
    Toggles display of calculated shade zones on(checked) and off for charts with daily period.

12. **[Properties]** menu item.
    Activates CTA Label Properties Grid.

6.4.3.2 CTA Label Properties Grid

The following CTA Label Properties Grid is accessed via a left mouse click over the CTA overlay label.

1. **[Wiki Button URL**] grid item.
   URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

Cosmetics used to annotate shade zones, calculated by the underlying automation script. Common across whole chart stack.

3. **[Bullish Brush]** grid item.
   Common chart stack Brush used to annotate bullish shade zones, all period units.

4. **[Over Bought Brush]** grid item.
   Common chart stack Brush used to annotate over bought shade zones, all period units.

5. **[Sell Brush]** grid item.
   Common chart stack brush used to annotate bearish shade zones, all period units.

6. **[Bearish Brush]** grid item.
   Common chart stack brush used to annotate bearish shade zones, all period units.

7. **[Over Sold Brush]** grid item.
   Common chart stack Brush used to annotate over sold shade zones, all period units.

8. **[Buy Brush]** grid item.
   Common chart stack brush used to annotate buy shade zones, all period units.

Cosmetics used to annotate tags generated by the underlying automation script. Common across whole chart stack.

9. **[Buy Brush]** grid item.
   Common chart stack brush used to annotate buy shade zones, all period units.

10. **[Labels]** grid items.
    Cosmetics common across all labels in this chart stack.

6.4.4 Ehlers MESA Adaptive Moving Average (MAMA)

Overlay supported by the pivotal OHLCvs Chart.



6.4.4.1 Ehlers MAMA Label Context Menu

The following Ehlers MAMA Label Context Menu is accessed via a right mouse click over the Ehlers MAMA overlay label.



1. **[Ehlers MAMA]** menu item.
   Toggles display of the Ehlers MAMA overlay on (checked) and off.

   Logically label will not exist when overlay display toggled off. MAMA overlay display is toggled from the equivalent [MAMA] item from the Context Menu for the hosting chart.

2. **[Copy]** menu item
   Copies MAMA overlay calculation and cosmetic parameters from label to clipboard.

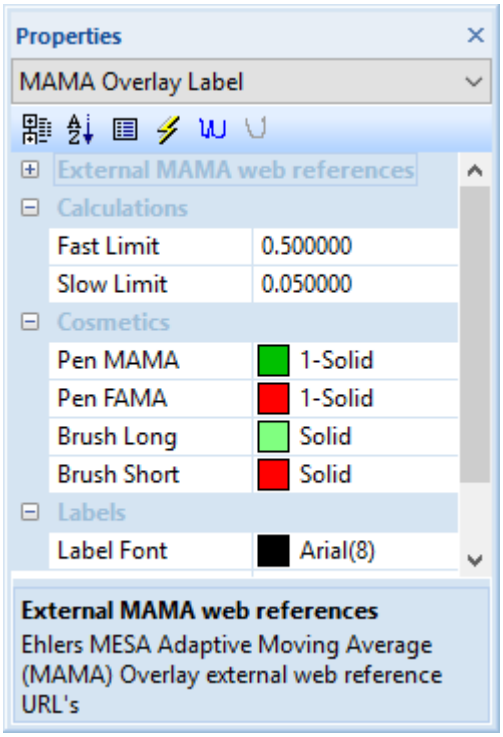
3. **[Paste** *object type***]** menu item
   Pastes MAMA calculation and cosmetic parameters from clipboard to label.

   Item is only enabled when clipboard contains content previously copied from MAMA label.

4. **[Properties]** menu item.
   Activates Ehlers MESA Multiple Moving Average (MAMA) Label Properties Grid.

6.4.4.2 Ehlers MAMA Label Properties Grid

The following Ehlers MAMA Label Properties Grid is accessed via a left mouse click over the Ehlers MAMA overlay label.



1. **[Wiki Button URL**] grid item.
   URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

3. **[Fast Limit]** grid item.
   Fast Ehlers MESA adaptive moving average (MAMA) limit, usually 0.5

4. **[Slow Limit]** grid item.
   Slow Ehlers MESA adaptive moving average (MAMA) limit, usually 0.05

5. **[Pen MAMA]** grid item.
   Pen used to draw the calculated MAMA line.

6. **[Pen FAMA]** grid item.
   Pen used to draw the calculated FAMA line.

7. **[Brush Long]** grid item.
   Brush used to fill regions between the calculated MAMA > FAMA values. Regions in which long positions are usually taken.

8. **[Brush Short]** grid item.
   Brush used to fill regions between the calculated FAMA > MAMA values. Regions in which short positions are usually taken.

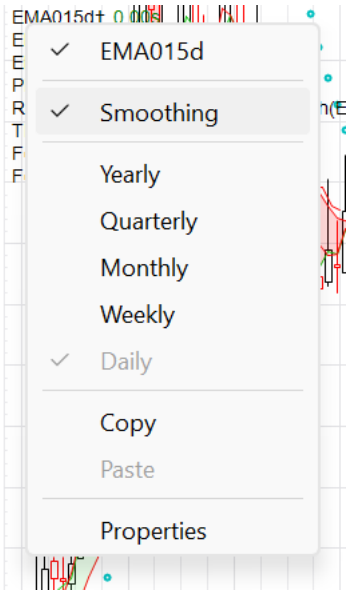
6.4.5 Exponential Moving Averages

Overlay supported by the pivotal OHLCvs Chart.



6.4.5.1 Exponential Moving Average Label Context Menu

The following Exponential Moving Average Label Context Menu is accessed via a right mouse click over the EMAnnnp overlay label.



1. **[EMAnnnp]** menu item.
   Toggles display of the Exponential Moving Average overlay on (checked) and off.

   Logically label will not exist when overlay display toggled off. Exponential Moving Average overlay display is toggled from the equivalent **[EMAnnnp]** item from the Context Menu for the hosting chart.

2. **[Smoothing]** menu item.
   Toggles Exponential Moving Average smoothing on (checked) and off.

3. **[Yearly], [Quarterly], [Monthly], [Weekly], [Daily]** menu items.
   Toggles display of [**EMAnnnp**] on(checked) and off for charts of nominated Period.

   Logically originating units, although always toggled on, cannot be toggled off. Additionally coarser averages cannot be displayed on finer period units, **[EMAnnnq]** averages on Monthly, Weekly and Daily charts etc.

4. **[Copy]** menu item
   Copies Exponential overlay calculation and cosmetic parameters from label to clipboard.

5. **[Paste** *object type***]** menu item
   Pastes Exponential Moving Average calculation and cosmetic parameters from clipboard to label.

   Item is only enabled when clipboard contains content previously copied from **[EMAnnnp]** label.

6. **[Properties]** menu item.
   Activates Exponential Moving Average (EMA) Label Properties Grid.

6.4.5.2 Exponential Moving Average Label Properties Grid

The following Exponential Moving Average Label Properties Grid is accessed via a left mouse click over the EMA overlay label.

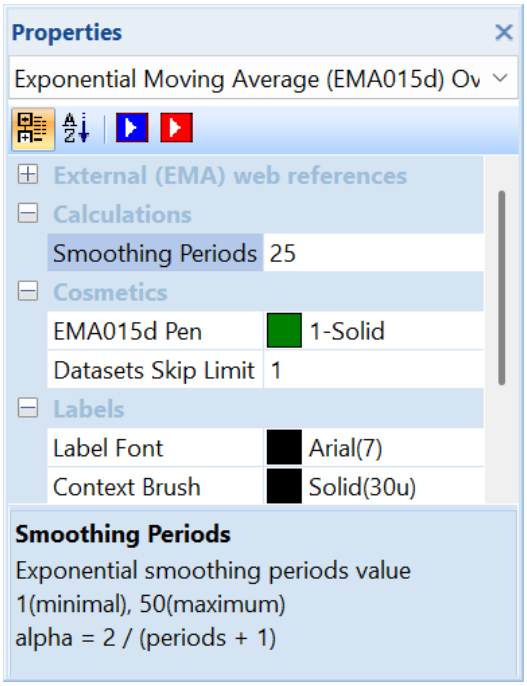
1. **[Wiki Button URL**] grid item.
   URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

3. **[Smoothing Periods]** grid item.
   Exponential smoothing periods value 1(minimal), 50(maximum).
   alpha=2/(periods+1)

4. **[EMAnnn Pen]** grid item.
   Pen used to draw the Exponential Moving Average.

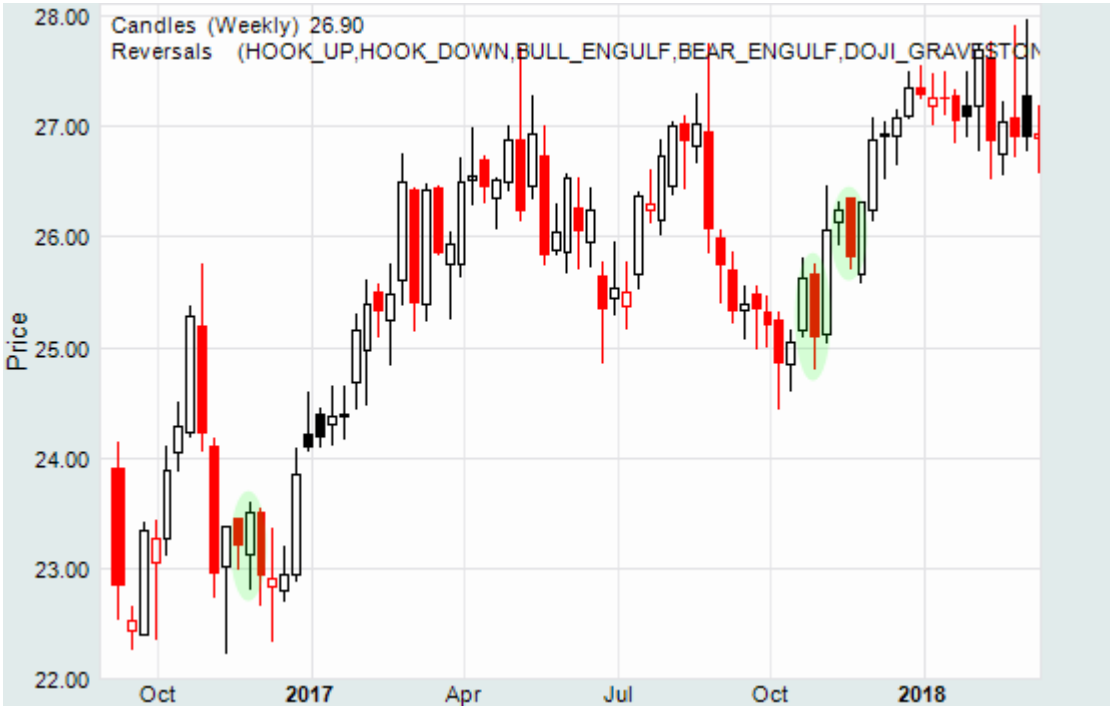
5. **[Datasets Skip Limit]** grid item.
   Skip limit for bars with missing data sets, continuous, width (0-12) period items.



6. **[Labels]** grid item.
   Cosmetics common across all labels in this chart stack.

6.4.6 Harmonics

Overlays supported by the pivotal OHLCvs Chart. Three (3) unique sets of Harmonics overlays can be selected. Subsequently Chartboard will attempt to fit and display the selected items.

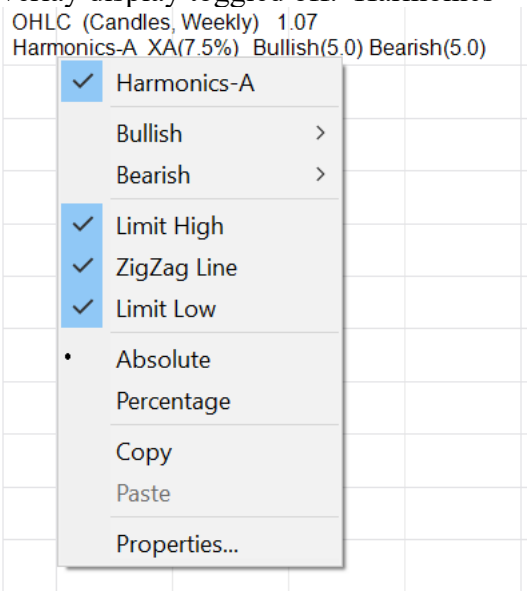


6.4.6.1 Harmonics Label Context Menu

The following Harmonics Label Context Menu is accessed via a right mouse click over the Harmonics overlay label.

1. **[Harmonics-A,B,C]** menu item.
   Toggles display of the Harmonics overlay on (checked) and off.

   Logically label will not exist when overlay display toggled off. Harmonics overlay display is toggled from the equivalent **[Analytics > Harmonics-A,B,C]** item from the Chart Context Menu.



2. **[Bullish ► Gartley]** menu item.
   Toggles fitting and display of bullish Gartley harmonic patterns on (checked) and off.

   [Bullish ► Butterfly] menu item.
   Toggles fitting and display of bullish Butterfly harmonic patterns on (checked) and off.

   [Bullish ► Bat] menu item.
   Toggles fitting and display of bullish Bat harmonic patterns on (checked) and off.

   [Bullish ► Crab] menu item.
   Toggles fitting and display of bullish Crab harmonic patterns on (checked) and off.

   [Bullish ► Shark] menu item.
   Toggles fitting and display of bullish Shark harmonic patterns on (checked) and off.

   [Bullish ► Cypher] menu item.
   Toggles fitting and display of bullish Cypher harmonic patterns on (checked) and off.

   [Bullish ► AB=CD] menu item.
   Toggles fitting and display of bullish AB=CD harmonic patterns on (checked) and off.

   [Bullish ► Pattern 5-0] menu item.
   Toggles fitting and display of bullish Pattern 5-0 harmonic patterns on (checked) and off.

   [Bullish ► HaS] menu item.
   Toggles fitting and display of bullish HaS harmonic patterns on (checked) and off.

[Bullish ► Enable] menu item.
Toggle status of all bullish harmonic patterns as enabled (checked) and disabled.

3. **[Bearish ► Gartley]** menu item.
Toggles fitting and display of bearish Gartley harmonic patterns on (checked) and off.

[Bearish ► Butterfly] menu item.
Toggles fitting and display of bearish Butterfly harmonic patterns on (checked) and off.

[Bearish ► Bat] menu item.
Toggles fitting and display of bearish Bat harmonic patterns on (checked) and off.

[Bearish ► Crab] menu item.
Toggles fitting and display of bearish Crab harmonic patterns on (checked) and off.

[Bearish ► Shark] menu item.
Toggles fitting and display of bearish Shark harmonic patterns on (checked) and off.

[Bearish ► Cypher] menu item.
Toggles fitting and display of bearish Cypher harmonic patterns on (checked) and off.

[Bearish ► Pattern 5-0] menu item.
Toggles fitting and display of bearish Pattern 5-0 harmonic patterns on (checked) and off.

[Bearish ► HaS] menu item.
Toggles fitting and display of bearish HaS harmonic patterns on (checked) and off.

[Bearish ► Enable] menu item.
Toggle status of all bearish harmonic patterns as enabled (checked) and disabled.

4. **[Limit High]** menu item.
Toggles display of high Zig-Zag limit on(checked) and off.

5. **[Zig-Zag Line]** menu item.
Toggles display of precipitating Zig-Zag reversals on(checked) and off.

6. **[Limit Low]** menu item.
Toggles display of low Zig-Zag limit on(checked) and off.

7. **[Absolute]** menu item.
   Use absolute values to annotate Zig-Zag limits.

8. **[Percentage]** menu item.
   Use percentage values to annotate Zig-Zag limits.

9. **[Copy]** menu item
   Copies Harmonics overlay calculation and cosmetic parameters from label to clipboard.

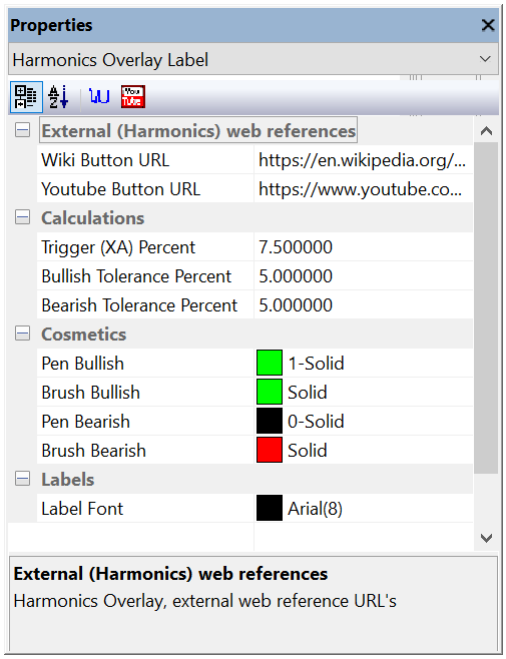
10. **[Paste** *object type***]** menu item
    Pastes Harmonics calculation and cosmetic parameters from clipboard to label.

    Item is only enabled when clipboard contains content previously copied from Harmonics label.

11. **[Properties]** menu item.
    Activates the Harmonics Label Properties Grid.

6.4.6.2 Harmonics Label Properties Grid

The following Harmonics Label Properties Grid is accessed via a left mouse click over the Harmonics overlay label.



1. **[Wiki Button URL**] grid item.
   URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

3. **[Trigger (XA) Percent]** grid item.
   Bullish and bearish XA percentage variation percentage, usually 7.5 percent.

4. **[Bullish Tolerance Percent]** grid item.
   Bullish tolerance percentage variation or over shoot, usually 5.0pc.

5. **[Bearish Tolerance Percent]** grid item.
   Bullish tolerance percentage variation or over shoot, usually 5.0pc.

6. **[Pen Bullish]** grid item.
   Pen used to annotate the bullish harmonics path.

7. **[Brush Bullish]** grid item.
   Brush used to fill the bullish harmonics background.

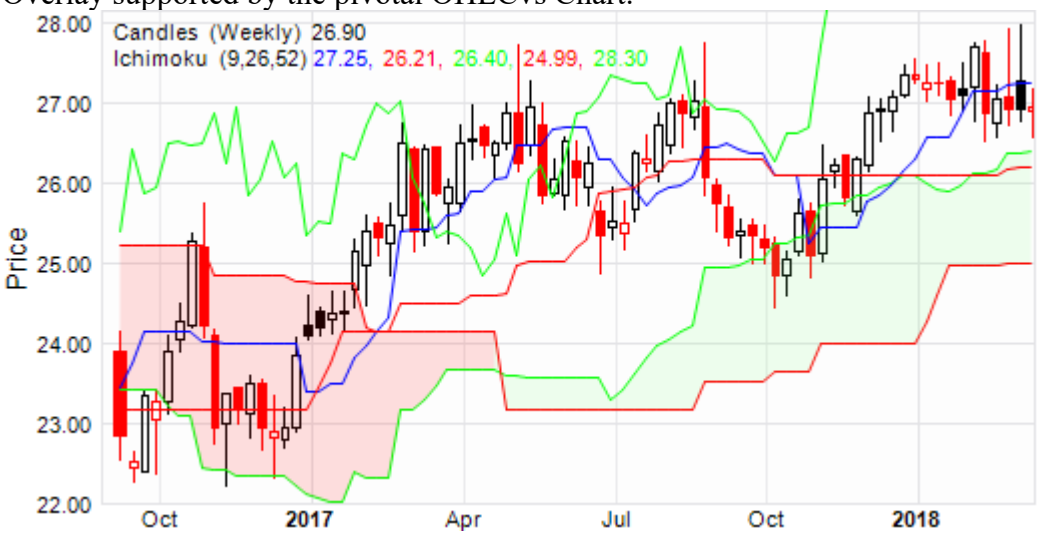
8. **[Pen Bearish]** grid item.
   Pen used to annotate the bearish harmonics path.

9. **[Brush Bullish]** grid item.
   Brush used to fill the bearish harmonics background.

10. **[Labels]** grid items.
    Cosmetics common across all labels in this chart stack.

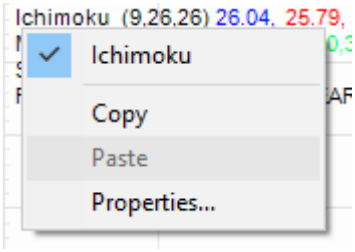
6.4.7 Ichimoku Cloud

Overlay supported by the pivotal OHLCvs Chart.



6.4.7.1 Ichimoku Cloud Label Context Menu

The following Ichimoku Cloud Label Context Menu is accessed via a right mouse click over the Ichimoku overlay label.



1. **[Ichimoku]** menu item.
   Toggles display of the Ichimoku overlay on (checked) and off.

   Logically label will not exist when overlay display toggled off. Ichimoku overlay display is toggled from the equivalent **[Ichimoku]** item from the Context Menu for the hosting chart.

2. **[Copy]** menu item
   Copies Ichimoku overlay calculation and cosmetic parameters from label to clipboard.

3. **[Paste** *object type***]** menu item
   Pastes Ichimoku calculation and cosmetic parameters from clipboard to label.

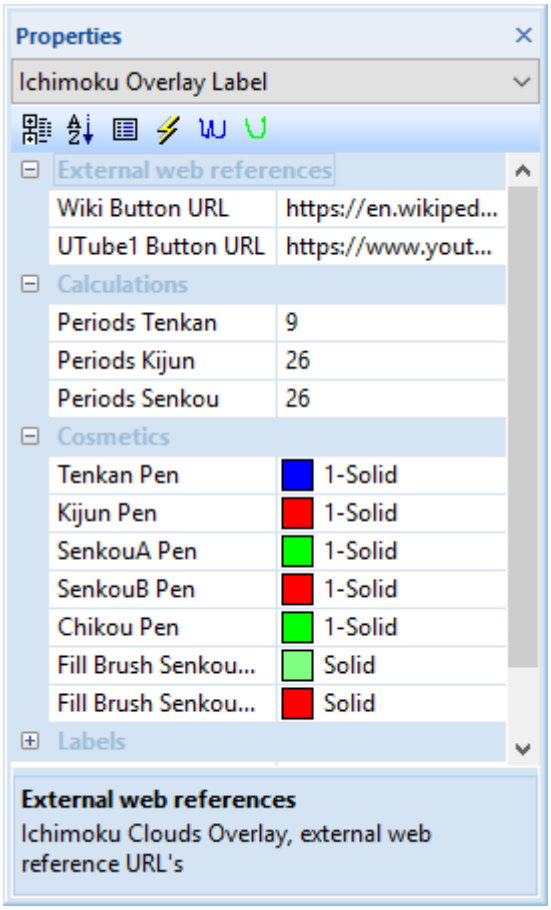
   Item is only enabled when clipboard contains content previously copied from

Ichimoku label.

4. **[Properties]** menu item.
   Activates the Ichimoku Cloud Label Properties Grid.

6.4.7.2 Ichimoku Cloud Label Properties Grid

The following Ichimoku Cloud Label Properties Grid is accessed via a left mouse click over the Ichimoku overlay label.



1. **[Wiki Button URL**] grid item.
   URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

3. **[Periods Tenkan]** grid item.
   Number of periods used to calculate simple moving average, usually 9.

4. **[Periods Kijun]** grid item.
   Number of periods used to calculate simple moving average, usually 26.

5. **[Periods Senkou]** grid item.
   Number of periods used to calculate simple moving average, usually 26.

6. **[Tenkan Pen]** grid item.
   Pen used to draw the Tenkan line.

7. **[SenkouA Pen]** grid item.
   Pen used to draw the SenkoaA line.

8. **[SenkouB Pen]** grid item.
   Pen used to draw the SenkouB line.

9. **[Chikou Pen]** grid item.
   Pen used to draw the Chikou line.

10. **[Fill Brush SenkouA > B]** grid item.
    Brush used to fill the regions between the SenkouA & B lines when SenkouA value is greater than SenkouB value.

11. **[Fill Brush SenkouB > A]** grid item.
Brush used to fill the regions between the SenkouB & A lines when SenkouB value is greater than SenkouA value.

12. **[Labels]** grid items.
Cosmetics common across all labels in this chart stack.

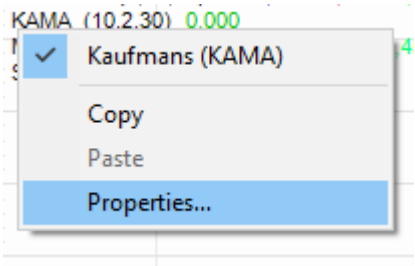
6.4.8 Kaufman's Adaptive Moving Average (KAMA)

Overlay supported by the pivotal OHLCvs Chart.



6.4.8.1 KAMA Label Context Menu

The following KAMA Label Context Menu is accessed via a right mouse click over the KAMA overlay label.



1. **[KAMA]** menu item.
Toggles display of the KAMA overlay on (checked) and off.

   Logically label will not exist when overlay display toggled off. KAMA overlay display is toggled from the equivalent [KAMA] item from the Context Menu for the hosting chart.

2. **[Copy]** menu item
Copies KAMA overlay calculation and cosmetic parameters from label to clipboard.

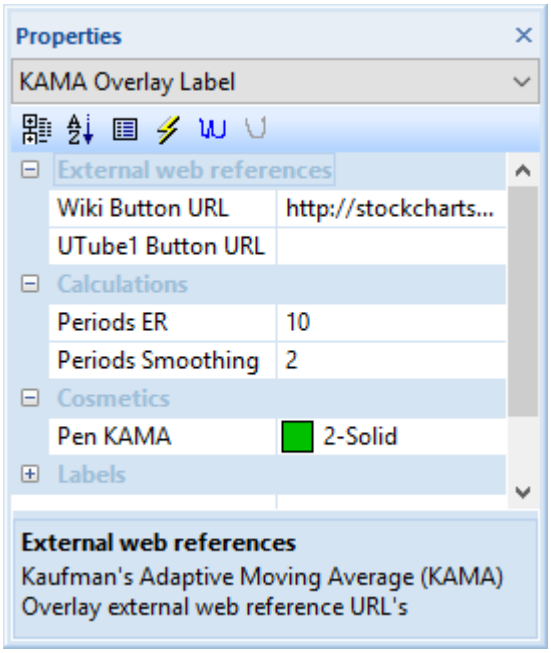
3. **[Paste** *object type***]** menu item
Pastes KAMA calculation and cosmetic parameters from clipboard to label.

   Item is only enabled when clipboard contains content previously copied from KAMA label.

4. **[Properties]** menu item.
Activates Kaufman's Adaptive Moving Average, KAMA Label Properties Grid.

6.4.8.2 KAMA Label Properties Grid

The following KAMA Label Properties Grid is accessed via a left mouse click over the KAMA overlay label.



1. **[Wiki Button URL]** grid item.
   URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

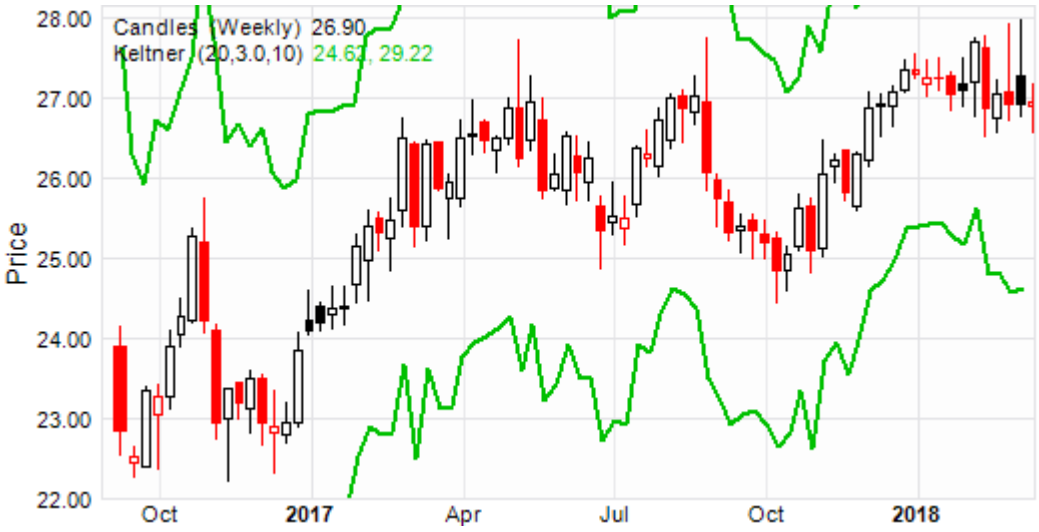
3. **[Periods ER]** grid item.
   Number of look back periods used to calculate Efficiency Ratio, usually 10.

4. **[Periods Smoothing]** grid item.
   Number of smoothing periods used to calculate D, usually 2.

5. **[Labels]** grid item.
   Cosmetics common across all labels in this chart stack.

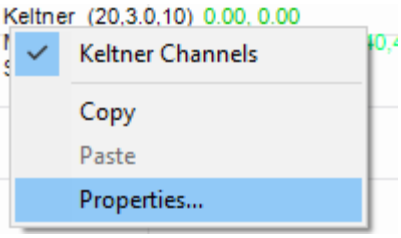
6.4.9 Keltner Channels

Overlay supported by the pivotal OHLCvs Chart.



6.4.9.1 Keltner Channels Label Context Menu

The following Keltner Label Context Menu is accessed via a right mouse click over the Keltner overlay label.



1. **[Keltner]** menu item.
   Toggles display of the Keltner overlay on (checked) and off.

   Logically label will not exist when overlay display toggled off. Keltner overlay display is toggled from the equivalent **[Keltner]** item from the Context Menu for the hosting chart.

2. **[Copy]** menu item
   Copies Keltner overlay calculation and cosmetic parameters from label to clipboard.

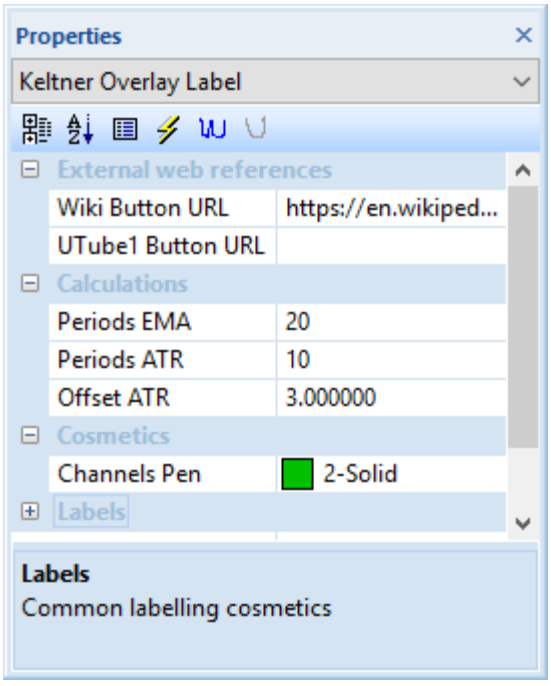
3. **[Paste** *object type***]** menu item
   Pastes Keltner calculation and cosmetic parameters from clipboard to label.

   Item is only enabled when clipboard contains content previously copied from Keltner label.

4. **[Properties]** menu item.
   Activates the Keltner Channels Label Properties Grid.

6.4.9.2 Keltner Channels Label Properties Grid

The following Keltner Label Properties Grid is accessed via a left mouse click over the Keltner overlay label.



1. **[Wiki Button URL**] grid item.
   URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

3. **[EMA Periods]** grid item.
   Number of periods used to calculate exponential moving average for closing price, usually 20.

4. **[ATR Periods]** grid item.
   Number of periods used to calculate the Average True Range, usually 10.

5. **[ATR Offset]** grid item.
   Offset factor used to extend ATR above and below the exponentual moving

average, usually 3.

6. **[Channels Pen]** grid item.
   Pen used to draw upper and lower Keltner channels.

7. **[Labels]** grid item.
   Cosmetics common across all labels in this chart stack.

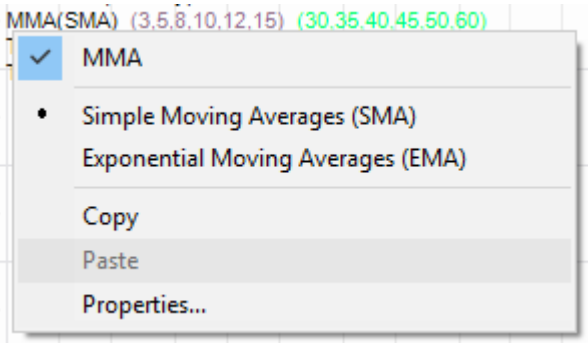
6.4.10 Multiple Moving Averages (MMA))

Overlay supported by the pivotal OHLCvs Chart.



6.4.10.1 Multiple Moving Averages (MMA) Label Context Menu

The following MMA Label Context Menu is accessed via a right mouse click over the MMA overlay label.



1. **[MMA]** menu item.
   Toggles display of the MMA overlay on (checked) and off.

   Logically label will not exist when overlay display toggled off. MMA overlay display is toggled from the equivalent [MMA] item from the Context Menu for the hosting chart.

2. **[Simple Moving Averages (SMA)]** button item.
   Select Simple Moving Average (SMA) calculations for Multiple Moving Average (MMA) overlay.

3. **[Exponential Moving Averages (EMA)]** button item.
   Select Exponential Moving Average (EMA) calculations for Multiple Moving Average (MMA) overlay.

4. **[Copy]** menu item
   Copies MMA overlay calculation and cosmetic parameters from label to

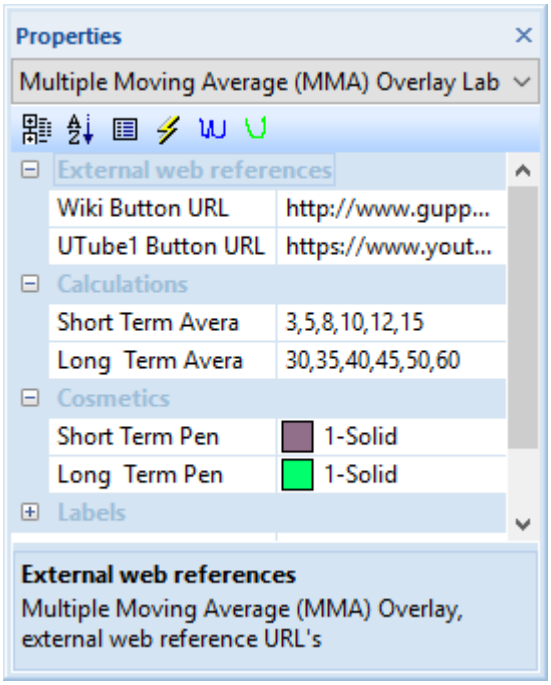
clipboard.

5. **[Paste** *object type***]** menu item
Pastes MMA calculation and cosmetic parameters from clipboard to label. Item is only enabled when clipboard contains content previously copied from MMA label.

6. **[Properties]** menu item.
Activates the Multiple Moving Averages (MMA) Label Properties Grid.

6.4.10.2 Multiple Moving Average (MMA) Label Properties Grid

The following Multiple Moving Average Label Properties Grid is accessed via a left mouse click over the MMA overlay label.



1. **[Wiki Button URL**] grid item.
URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
URL to be activated upon **{YouTube}** button press.

3. **[Short Term Aver]** grid item.
Sequence of short term moving averages to be calculated and displayed, usually 3,5,8,10,12,15.

4. **[Long Term Aver]** grid item.
List of long-term averages to be calculated and displayed.

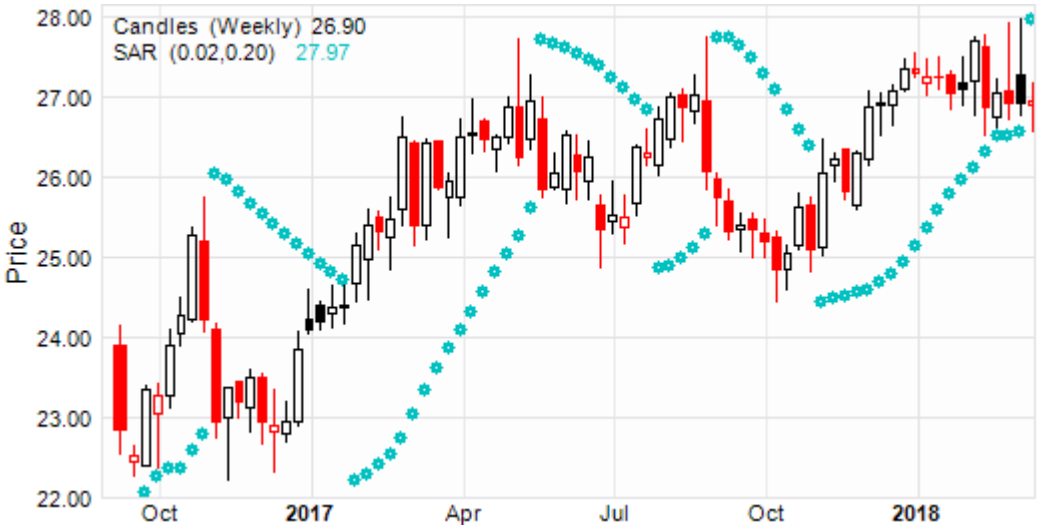
5. **[Short Term Pen]** grid item.
Pen used to draw the short-term sequence of moving averages.

6. **[Long Term Pen]** grid item.
Pen used to draw the long-term sequence of moving averages.

7. **[Labels]** grid items.
Cosmetics common across all labels in this chart stack.

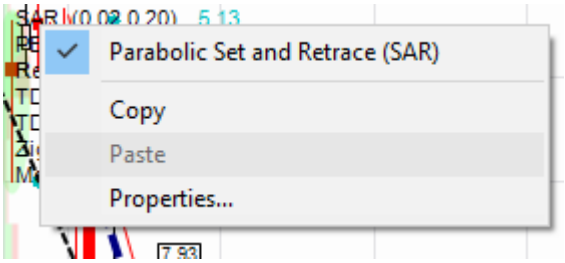
6.4.11 Parabolic Set and Retrace (SAR)

Overlay supported by the pivotal OHLCvs Chart.



6.4.11.1 SAR Label Context Menu

The following SAR Label Context Menu is accessed via a right mouse click over the SAR overlay label.



1. **[SAR]** menu item.
   Toggles display of the SAR overlay on (checked) and off.

   Logically label will not exist when overlay display toggled off. SAR overlay display is toggled from the equivalent [SAR] item from the Context Menu for the hosting chart.

2. **[Copy]** menu item
   Copies SAR overlay calculation and cosmetic parameters from label to clipboard.

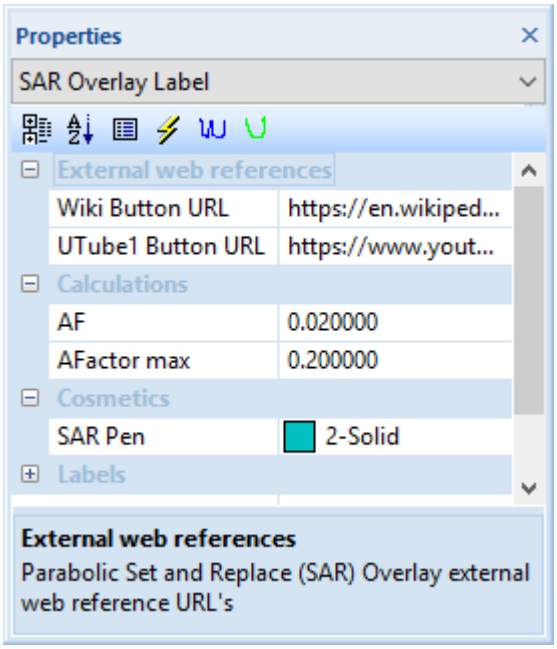
3. **[Paste** *object type***]** menu item
   Pastes SAR calculation and cosmetic parameters from clipboard to label.

   Item is only enabled when clipboard contains content previously copied from SAR label.

4. **[Properties]** menu item.
   Activates Parabolic Set and Retrace (SAR) Label Properties Grid.

6.4.11.2 SAR Label Properties Grid

The following SAR Label Properties Grid is accessed via a left mouse click over the SAR overlay label.



1. **[Wiki Button URL**] grid item.
   URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

3. **[AF]** grid item.
   Acceleration factor or step, usually 0.01.

4. **[AFactor max]** grid item.
   Acceleration factor or step maximum, usually 0.20.

5. **[SAR Pen]** grid item.
   Pen used to annotate parabolic SAR points.

6. **[Labels]** grid items.
   Cosmetics common across all labels in this chart stack.

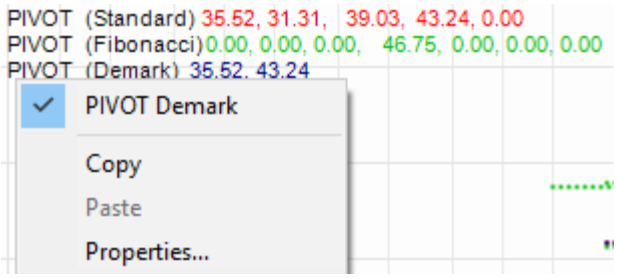
6.4.12 PIVOT (Standard, Fibonacci, Demark) points

Overlay supported by the pivotal OHLCvs Chart.



6.4.12.1 PIVOT Label Context Menu

The following PIVOT Label Context Menu is accessed via a right mouse click over the PIVOT overlay label.



1. [PIVOT Standard] [PIVOT Fibonacci], or [PIVOT Demark] menu items.
   Toggles display of the PIVOT overlays on (checked) and off.

   Logically label will not exist when overlay display toggled off. PIVOT overlay display is toggled from the equivalent [PIVOT] items from the Context Menu for the hosting chart.

2. **[Copy]** menu item
   Copies PIVOT overlay calculation and cosmetic parameters from label to clipboard.

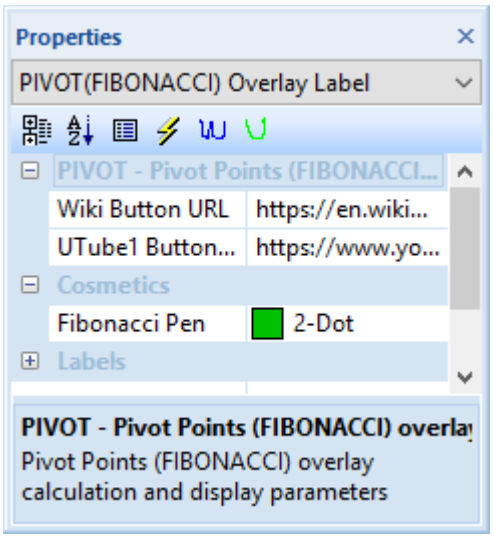
3. **[Paste** *object type***]** menu item
   Pastes PIVOT calculation and cosmetic parameters from clipboard to label.

   Item is only enabled when clipboard contains content previously copied from PIVOT label.

4. **[Properties]** menu item.
   Activates the PIVOT(Standard,Fibonacci,Demark) Label Properties Grid.

6.4.12.2 PIVOT Label Properties Grid

The following PIVOT Label Properties Grid is accessed via a left mouse click over the PIVOT (STANDARD, FIBONACCI or DEMARK) overlay labels.



1. **[Wiki Button URL**] grid item.
   URL to be activated upon **{Wiki}** button press.

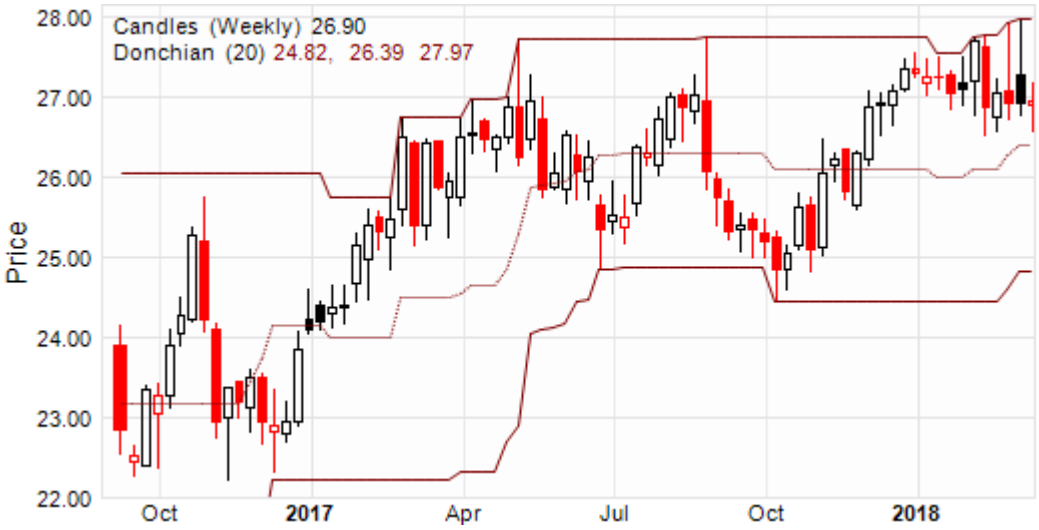
2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

3. **[Fibonacci Pen]** grid item.
   Pen used to draw (STANDARD, FIBANACCI, DEMARK) pivot and bands, central pivot always solid line.

4. **[Labels]** grid items.
   Cosmetics common across all labels in this chart stack.

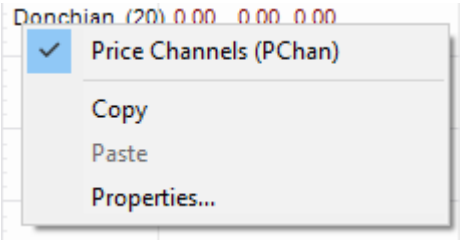
6.4.13 Price Channels (Donchian)

Overlay supported by the pivotal OHLCvs Chart.



6.4.13.1 Price Channels Label Context Menu

The following Price Channels Label Context Menu is accessed via a right mouse click over the Price Channels overlay label.



1. **[Price Channels]** menu item.
   Toggles display of the Price Channels overlay on (checked) and off.

   Logically label will not exist when overlay display toggled off. Price Channels overlay display is toggled from the equivalent [Price Channels] item from the Context Menu for the hosting chart.

2. **[Copy]** menu item
   Copies Price Channels overlay calculation and cosmetic parameters from label to clipboard.

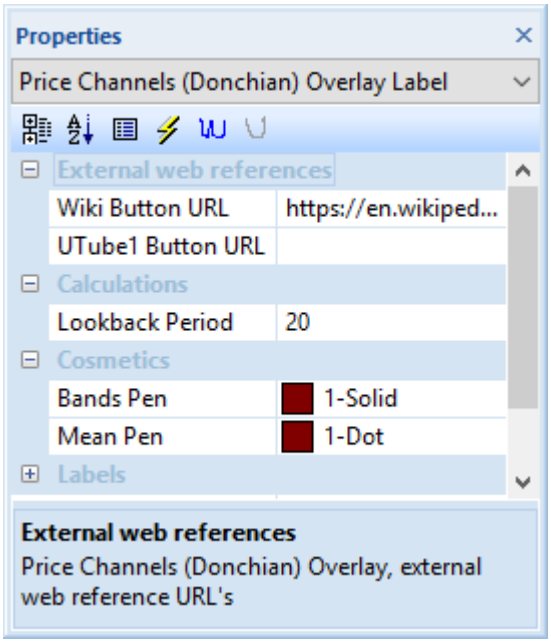
3. **[Paste** *object type***]** menu item
   Pastes Price Channels calculation and cosmetic parameters from clipboard to label.

   Item is only enabled when clipboard contains content previously copied from Price Channels label.

4. **[Properties]** menu item.
   Activates the Price Channels (Donchian) Label Properties Grid.

6.4.13.2 Price Channels Label Properties Grid

The following Price Channels Label Properties Grid is accessed via a left mouse click over the Price Channels overlay label.



1. **[Wiki Button URL**] grid item.
   URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

3. **[Lookback Periods]** grid item.
   Number of lookback periods used to calculate upper and lower bounds, usually 20.

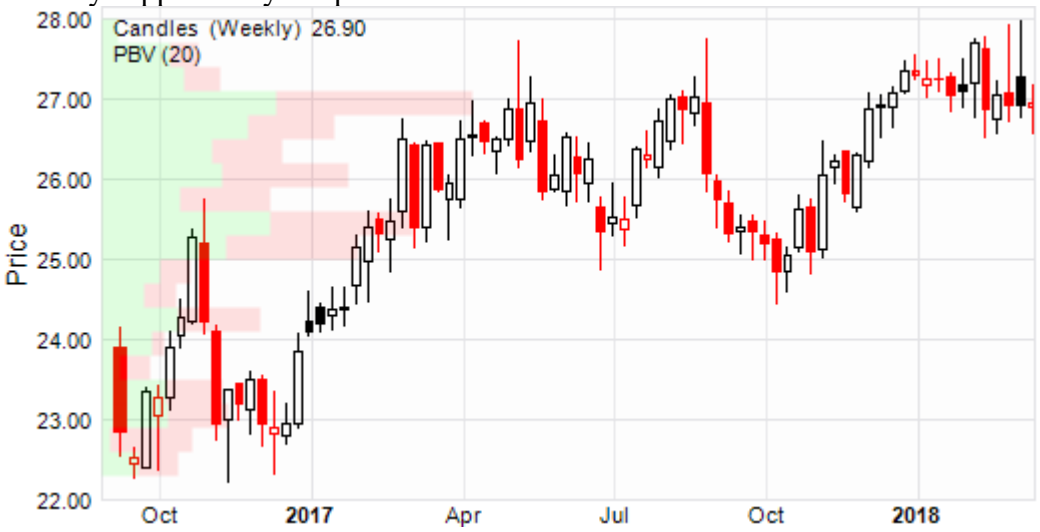
4. **[Bands Pen]** grid item.
   Pen used to draw the upper and lower Donchian Price Channels bands.

5. **[Mean Pen]** grid item.
   Pen used to draw the mean Donchian Price Channels line.

6. **[Labels]** grid items.
   Cosmetics common across all labels in this chart stack.

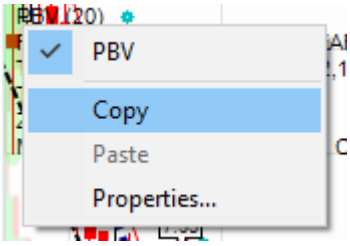
6.4.14 Price by Volume (PBV)

Overlay supported by the pivotal OHLCvs Chart.



6.4.14.1 PBV Label Context Menu

The following PBV Label Context Menu is accessed via a right mouse click over the PBV overlay label.



1. **[PBV]** menu item.
   Toggles display of the PBV overlay on (checked) and off.

   Logically label will not exist when overlay display toggled off. PBV overlay display is toggled from the equivalent [PBV] item from the Context Menu for the hosting chart.

2. **[Copy]** menu item
   Copies PBV overlay calculation and cosmetic parameters from label to clipboard.

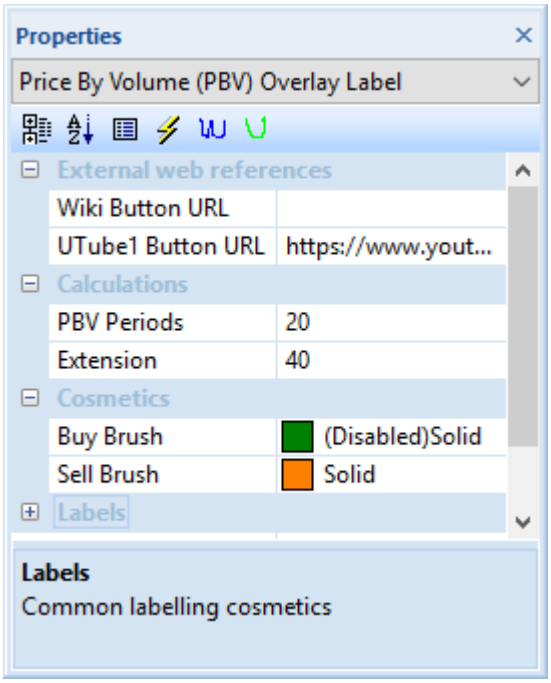
3. **[Paste** *object type***]** menu item
   Pastes PBV calculation and cosmetic parameters from clipboard to label.

   Item is only enabled when clipboard contains content previously copied from PBV label.

4. **[Properties]** menu item.
   Activates the Price by Volume (PBV) Label Properties Grid.

6.4.14.2 PBV Label Properties Grid

The following PBV Label Properties Grid is accessed via a left mouse click over the PBV overlay label.



1. **[Wiki Button URL**] grid item.
   URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

3. **[PBV Periods]** grid item.
   Number of horizontal volume bars or PBV intervals, usually 20

4. **[Extension]** grid item.
   Percentage by which volume bars extend horizontally across the chart, usually 40pc.

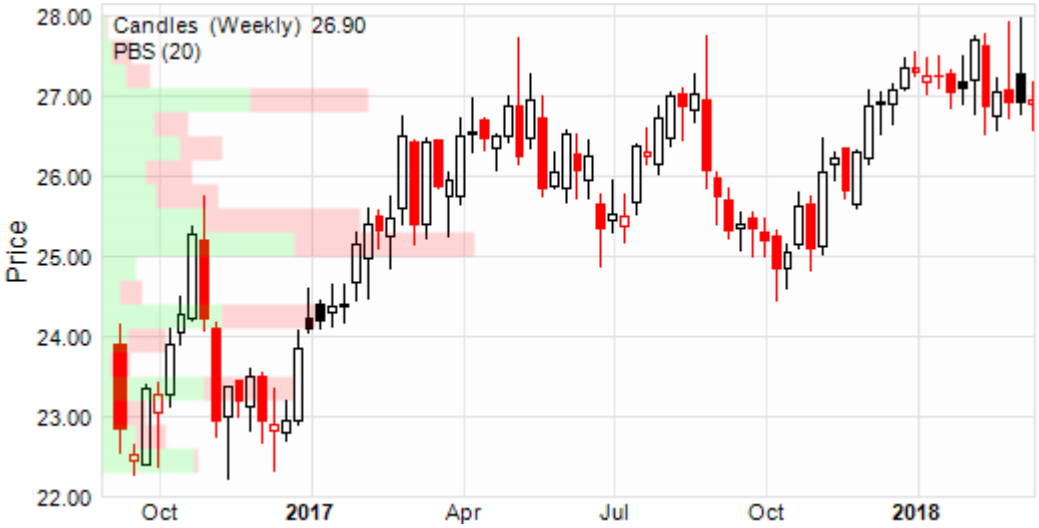
5. **[Buy Brush]** grid item.
   Brush used to paint buy volume bars.

6. **[Sell Brush]** grid item.
   Brush used to paint sell volume bars.

7. **[Labels]** grid items.
   Cosmetics common across all labels in this chart stack.

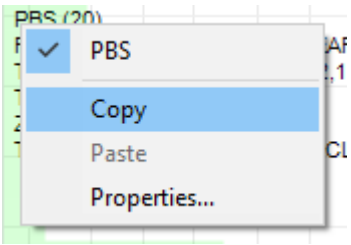
6.4.15 Price by Shorts (PBS)

Overlay supported by the pivotal OHLCvs Chart.



6.4.15.1 PBS Label Context Menu

The following PBS Label Context Menu is accessed via a right mouse click over the PBS overlay label.



1. **[PBS]** menu item.
   Toggles display of the PBS overlay on (checked) and off.

   Logically label will not exist when overlay display toggled off. PBS overlay display is toggled from the equivalent **[PBS]** item from the Context Menu for the hosting chart.

2. **[Copy]** menu item
   Copies PBS overlay calculation and cosmetic parameters from label to clipboard.

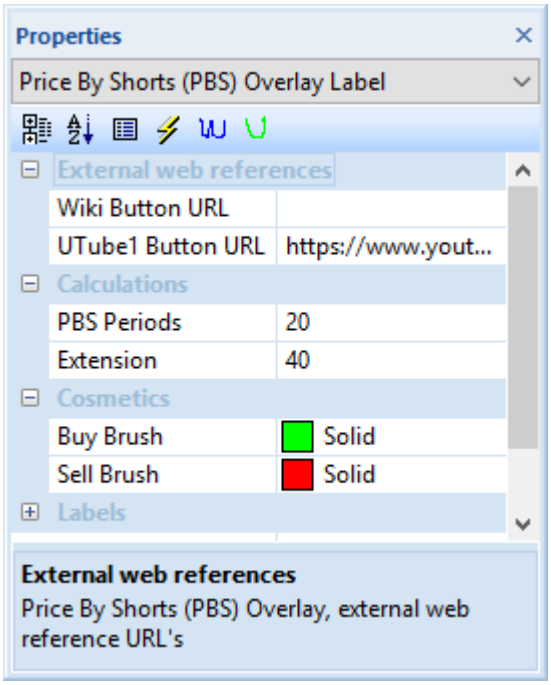
3. **[Paste** *object type***]** menu item
   Pastes PBS calculation and cosmetic parameters from clipboard to label.

   Item is only enabled when clipboard contains content previously copied from PBS label.

4. **[Properties]** menu item.
   Activates Price by Shorts (PBS) Label Properties Grid.

6.4.15.2 PBS Label Properties Grid

The following PBS Label Properties Grid is accessed via a left mouse click over the PBS overlay label.



1. **[Wiki Button URL**] grid item.
   URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

3. **[PBS Periods]** grid item.
   Number of horizontal bars or PBS intervals.

4. **[Extension]** grid item.
   Percentage by which shorts bars extend across the chart, usually 40percent.

5. **[Buy Brush]** grid item.
   Brush used to paint reduction in shorts for price.

6. **[Sell Brush]** grid item.
   Brush used to paint increment in shorts for price.

7. **[Labels]** grid item.
   Cosmetics common across all labels in this chart stack.

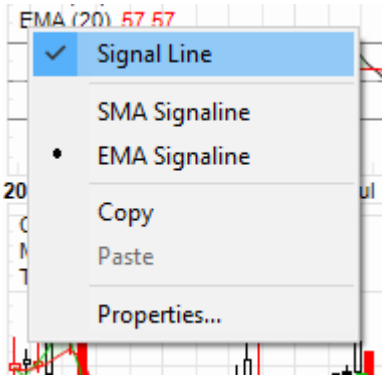
6.4.16 Signal lines (EMA & SMA Signal)

Overlay supported by the ATR, CCI, Chaikin, CMF, Coppock, MFI, MSA, OBV, ROC, RSI, SLOPE and WmR Charts.



6.4.16.1 Signaline Label Context Menu

The following Signaline Label Context Menu is accessed via a right mouse click over the Signaline overlay label.



1. **[Signaline]** menu item.
   Toggles display of the Signaline overlay on (checked) and off.

   Logically label will not exist when overlay display toggled off. Signaline overlay display is toggled from the equivalent [Signaline] item from the Context Menu for the hosting chart.

2. **[SMA Signaline]** menu item
   Selects simple moving average (SMA) algorithm for calculating the signal line. Based on the primary data series for the chart.

3. **[EMA Signaline]** menu item
   Selects exponential moving average (EMA) algorithm for calculating the signal line. Based on the primary data series for the chart.

4. **[Copy]** menu item
   Copies Signaline overlay calculation and cosmetic parameters from label to clipboard.

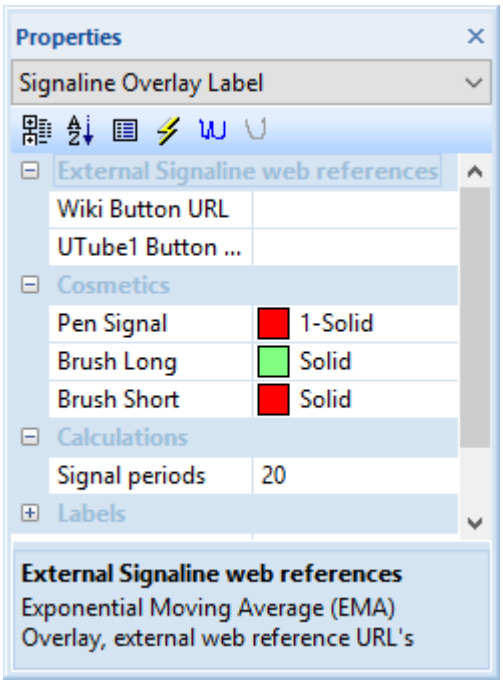
5. **[Paste** *object type***]** menu item
   Pastes Signaline calculation and cosmetic parameters from clipboard to label.

   Item is only enabled when clipboard contains content previously copied from Signaline label.

6. **[Properties]** menu item.
   Activates Signaline Label Properties Grid.

6.4.16.2 Signaline Label Properties Grid

The following Signaline Label Properties Grid is accessed via a left mouse click over the Signaline SMA or EMA overlay labels.



1. **[Wiki Button URL**] grid item.
   URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

3. **[Signal Pen]** grid item.
   Pen used to draw the calculated SMA or EMA signal line

4. **[Brush Long]** grid item.
   Brush used to fill regions between the calculated Signaline > Oscillator or Indicator values. Regions in which long positions are usually taken.

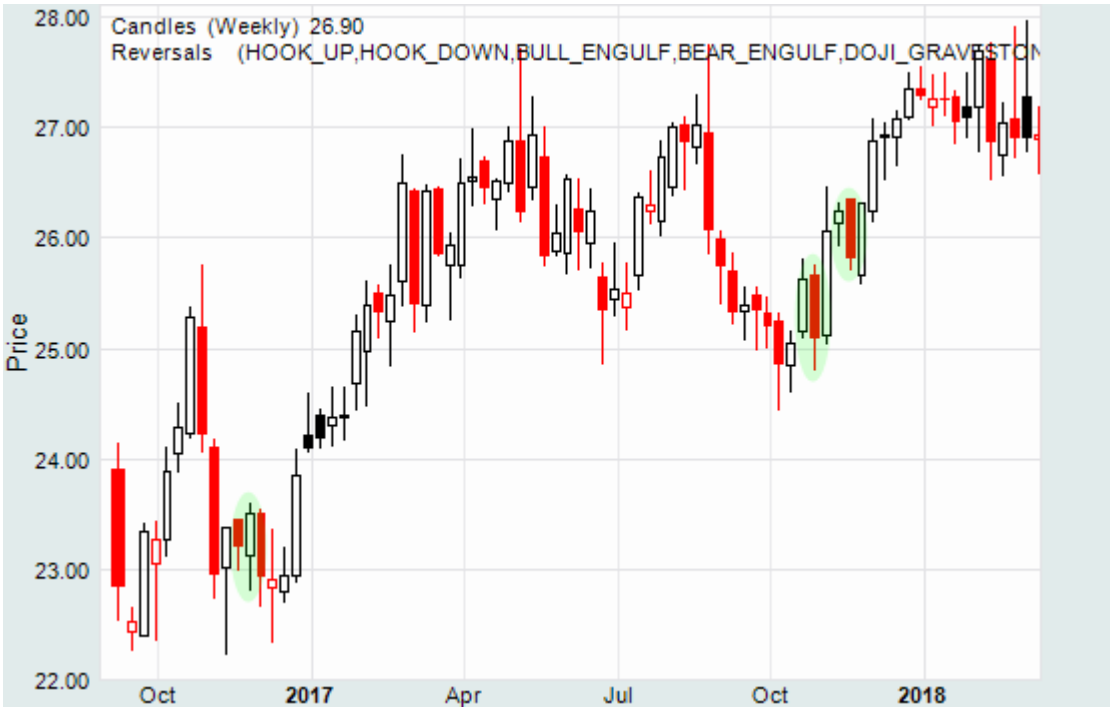
5. **[Brush Short]** grid item.
   Brush used to fill regions between the calculated Oscillator or Indicator > Signaline values. Regions in which short positions are usually taken.

6. **[Signaline Periods]** grid item.
   Simple Moving Average periods over which Signal line is averaged (15) daily, weekly, monthly or yearly.

6.4.17 Reversals

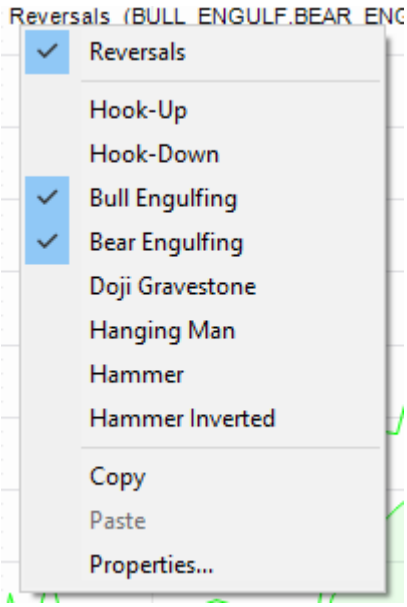
Overlay supported by the pivotal OHLCvs Chart.

Three (3) unique sets of Reversals overlays can be selected. Subsequently Chartboard will attempt to fit and display the selected items.



6.4.17.1 Reversals Label Context Menu

The following Reversals Label Context Menu is accessed via a right mouse click over the Reversals overlay label.



1. **[Reversals-A, B, C]** menu item.
   Toggles display of the Reversals overlay on (checked) and off.

   Logically label will not exist when overlay display toggled off. Reversals overlay display is toggled from the equivalent **[Analytics > Reversals-A,B,C]** item from the Chart Context Menu.

2. **[EMA]** menu item.
   Toggles display of exponential moving average (EMA) bullish-bearish reference line on and off.

3. **[Bullish ► Engulfing]** menu item.
   Toggles fitting of bullish Engulfing reversal patterns on (checked) and off.

   [Bullish ► Hammer] menu item.
   Toggles fitting of bullish Hammer reversal patterns on (checked) and off.

   [Bullish ► Piercing] menu item.
   Toggles fitting of bullish Piercing reversal patterns on (checked) and off.

   [Bullish ► Morning Star] menu item.

Toggles fitting of bullish Morning Star reversal patterns on (checked) and off.

[Bullish ► 3 White Soldiers] menu item.
Toggles fitting of bullish 3 White Soldiers reversal patterns on (checked) and off.

[Bullish ► White Marabozu] menu item.
Toggles fitting of bullish White Marabozu reversal patterns on (checked) and off.

[Bullish ► 3 Upside Down] menu item.
Toggles fitting of bullish 3 Upside Down reversal patterns on (checked) and off.

[Bullish ► Harami] menu item.
Toggles fitting of bullish Harami reversal patterns on (checked) and off.

[Bullish ► Abandoned Baby] menu item.
Toggles fitting of bullish Abandoned Baby reversal patterns on (checked) and off.

[Bullish ► Inverted Bottom] menu item.
Toggles fitting of bullish Inverted Bottom reversal patterns on (checked) and off.

[Bullish ► 3 Outside Up] menu item.
Toggles fitting of bullish 3 Outside Up reversal patterns on (checked) and off.

[Bullish ► Deliberation] menu item.
Toggles fitting of bullish Deliberation reversal patterns on (checked) and off.

[Bullish ► Matching Low] menu item.
Toggles fitting of bullish Matching Low reversal patterns on (checked) and off.

[Bullish ► Tri Star] menu item.
Toggles fitting of bullish Tri Star reversal patterns on (checked) and off.

[Bullish ► Squeeze Alert] menu item.
Toggles fitting of bullish Squeeze Alert reversal patterns on (checked) and off.

[Bullish ► 3 Gap Down] menu item.
Toggles fitting of bullish 3 Gap Down reversal patterns on (checked) and off.

[Bullish ► Homing Pigeon] menu item.
Toggles fitting of bullish Homing Pigeon reversal patterns on (checked) and off.

[Bullish ► Enable] menu item.
Toggle status of all bullish reversal patterns as enabled (checked) and disabled.

4. **[Bearish ► Engulfing]** menu item.
Toggles fitting of bearish Engulfing reversal patterns on (checked) and off.

[Bearish ► Hanging Man] menu item.
Toggles fitting of bearish Hanging Man reversal patterns on (checked) and off.

[Bearish ► Dark Cloud Cover] menu item.
Toggles fitting of bearish Dark Cloud Cover reversal patterns on (checked) and off.

[Bearish ► Evening Star] menu item.
Toggles fitting of bearish Evening Star reversal patterns on (checked) and off.

[Bearish ► 3 Black Crows] menu item.
Toggles fitting of bearish 3 Black Cros reversal patterns on (checked) and off.

[Bearish ► Black Marabozu] menu item.
Toggles fitting of bearish Black Marabozu reversal patterns on (checked) and off.

[Bearish ► 3 Inside Down] menu item.
Toggles fitting of bearish 3 Inside Down reversal patterns on (checked) and off.

[Bearish ► Harami] menu item.
Toggles fitting of bearish Harami reversal patterns on (checked) and off.

[Bearish ► Shooting Star] menu item.
Toggles fitting of bearish Shooting Star reversal patterns on (checked) and off.

[Bearish ► Abandoned Baby] menu item.
Toggles fitting of bearish Abandoned Baby reversal patterns on (checked) and off.

[Bearish ► 3 Outside Down] menu item.
Toggles fitting of bearish 3 Outside Down reversal patterns on (checked) and off.

[Bearish ► Deliberation] menu item.
Toggles fitting of bearish Deliberation reversal patterns on (checked) and off.

[Bullish ► Matching High] menu item.
Toggles fitting of bearish Matching Low reversal patterns on (checked) and off.

[Bearish ► Tri Star] menu item.
Toggles fitting of bearish Tri Star reversal patterns on (checked) and off.

[Bearish ► Squeeze Alert] menu item.
Toggles fitting of bearish Squeeze Alert reversal patterns on (checked) and off.

[Bearish ► 3 Gap Up] menu item.
Toggles fitting of bearish 3 Gap Up reversal patterns on (checked) and off.

[Bearish ► Descending Hawk] menu item.
Toggles fitting of bearish Descending Hawk reversal patterns on (checked) and off.

[Bearish ► Enable] menu item.
Toggle status of all bearish reversal patterns as enabled (checked) and disabled.

5. **[Copy]** menu item
   Copies Reversal overlay calculation and cosmetic parameters from label to clipboard.

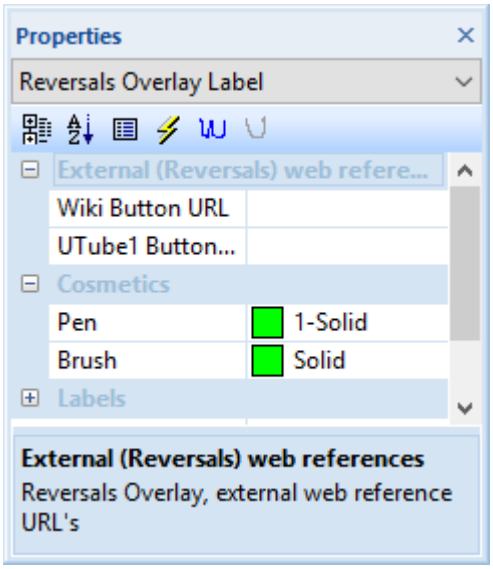
6. **[Paste** *object type***]** menu item
   Pastes Reversal calculation and cosmetic parameters from clipboard to label.

   Item is only enabled when clipboard contains content previously copied from Reversal label.

7. **[Properties]** menu item.
   Activates the Reversals Label Properties Grid.

6.4.17.2 Reversals Label Properties Grid

The following Reversals Label Properties Grid is accessed via a left mouse click over the Reversals overlay label.



1. **[Wiki Button URL**] grid item.
   URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

3. **[EMA Periods]** grid item.
   Number of periods (4-50) used to calculate exponential moving average for closing price. Slope is subsequently then used to establish bullish or bearish market conditions.

4. **[Pen]** grid item.
   Pen used to annotate the reversal region (ellipse).

5. **[Brush]** grid item.
   Brush used to fill annotated reversal region.

6. **[Labels]** grid items.
   Cosmetics common across all labels in this chart stack.

6.4.18 Simple Moving Average

Overlay supported by the pivotal OHLCvs Chart.

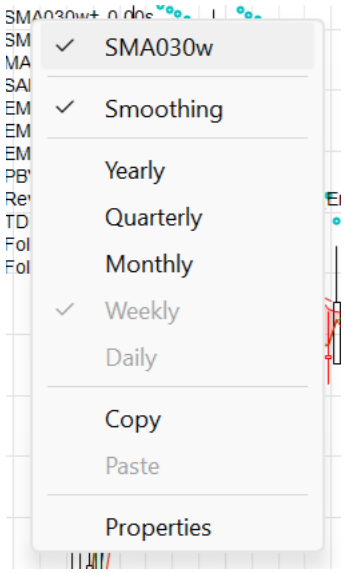


6.4.18.1 Simple Moving Average Label Context Menu

The following Simple Moving Average Label Context Menu is accessed via a right mouse click over the SMAnnnp overlay label.

1. **[SMAnnnp]** menu item.
   Toggles display of the Simple Moving Average overlay on (checked) and off.

Logically label will not exist when overlay display toggled off. Simple Moving Average overlay display is toggled from the equivalent **[SMAnnnp]** item from the Context Menu for the hosting chart.



2. **[Smoothing]** menu item.
Toggles Simple Moving Average smoothing on (checked) and off.

3. **[Yearly], [Quarterly], [Monthly], [Weekly], [Daily]** menu items.
Toggles display of [**SMAnnnp**] on(checked) and off for charts of nominated Period.

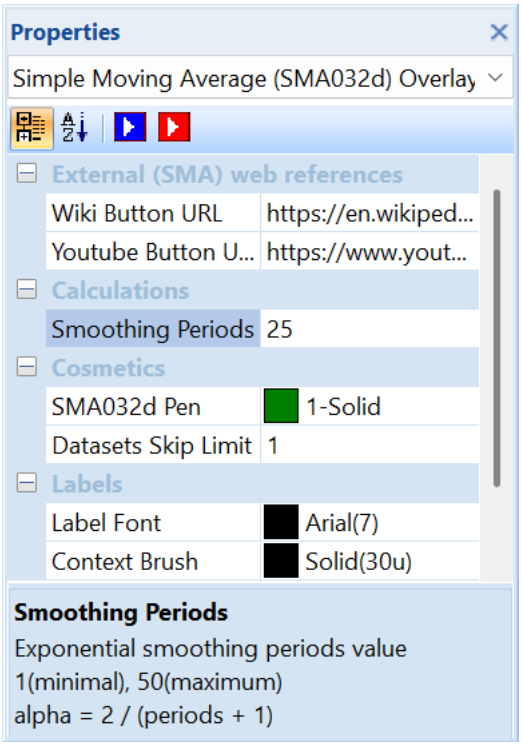
   Logically originating units, although always toggled on, cannot be toggled off. Additionally coarser averages cannot be displayed on finer period units, **[SMAnnnq]** averages on Monthly, Weekly and Daily charts etc.

4. **[Copy]** menu item
Copies Simple Moving Average overlay calculation and cosmetic parameters from label to clipboard.

5. **[Paste** *object type***]** menu item
Pastes Simple Moving Average calculation and cosmetic parameters from clipboard to label.

   Item is only enabled when clipboard contains content previously copied from **[SMAnnnp]** label.

6. **[Properties]** menu item.
Activates Simple Moving Average (SMA) Label Properties Grid.



6.4.18.2 Simple Moving Average Label Properties Grid

The following Simple Moving Average Label Properties Grid is accessed via a left mouse click over the SMAnnn overlay label.

1. **[Wiki Button URL**] grid item.
URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
URL to be activated upon **{YouTube}** button press.

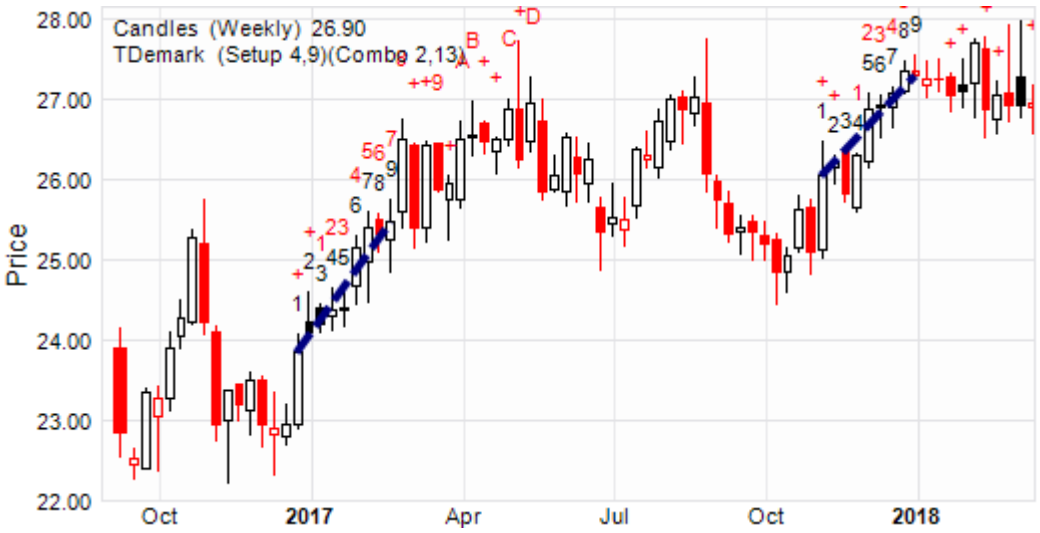
3. **[Smoothing Periods]** grid item.
   Exponential smoothing periods value 1(minimal), 50(maximum).
   alpha=2/(periods+1)

4. **[SMAnnn Pen]** grid item.
   Pen used to draw the calculated moving average.

5. **[Datasets Skip Limit]** grid item.
   Skip limit for bars with missing data sets, contiguous, width (0-12) period items.

6. **[Labels]** grid items.
   Cosmetics common across all labels in this chart stack.

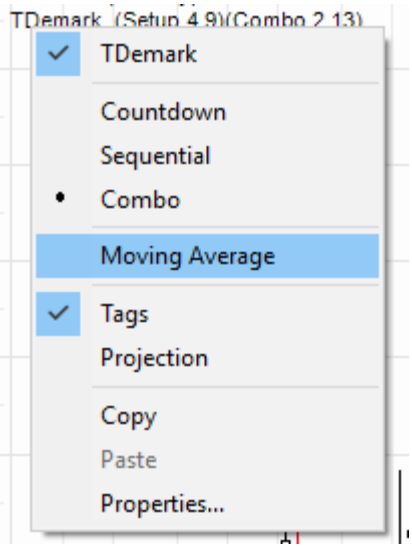
6.4.19 Tom Demark Indicators



6.4.19.1 Tom Demark Label Context Menu

Overlay supported by the pivotal OHLCvs Chart.

The following Tom Demark Label Context Menu is accessed via a right mouse click over the Tom Demark overlay label.



1. **[Tom Demark]** menu item.
   Toggles display of the Tom Demark overlay on (checked) and off.

   Logically label will not exist when overlay display toggled off. Tom Demark overlay display is toggled from the equivalent [Tom Demark] item from the Chart Context Menu.

2. **[Countdown]** menu item.
   Selects Tom Demark countdown overlay format.

3. **[Sequential]** menu item.
   Selects Tom Demark sequential overlay format.

4. **[Combo]** menu item.
   Selects Tom Demark combo overlay format.

5. **[Moving Average]** menu item.
   Toggles display of Tom Demark moving average on (checked) and off.

6. **[Tags]** menu item.
   Toggles display of Setup, Combo and Countdown overlay sequences on (checked) and off.

7. **[Projection]** menu item
   Toggles display of Countdown overlay projection sequences on (checked) and off.

8. **[Copy]** menu item
   Copies Tom Demark overlay calculation and cosmetic parameters from label to clipboard.

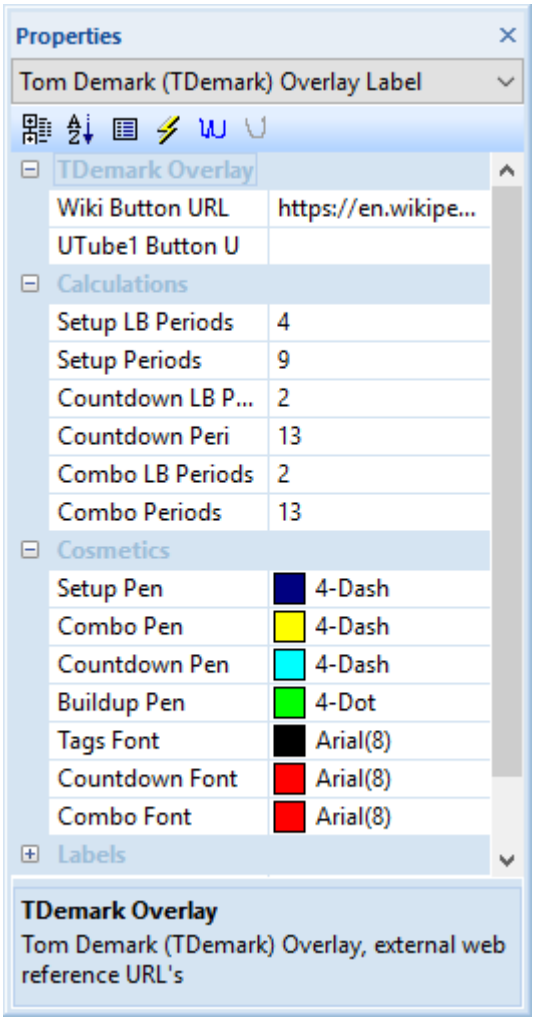
9. **[Paste** *object type***]** menu item
   Pastes Tom Demark calculation and cosmetic parameters from clipboard to label.

   Item is only enabled when clipboard contains content previously copied from Tom Demark label.

10. **[Properties]** menu item.
    Activates the Tom Demark Label Properties Grid.

6.4.19.2 Tom Demark Label Properties Grid

The following Tom Demark Label Properties Grid is accessed via a left mouse click over the TDemark overlay label.



1. **[Wiki Button URL**] grid item.
   URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

3. **[Setup LB Periods]** grid item.
   Number of TDemark setup lookback periods (usually 4).

4. **[Setup Periods]** grid item.
   Number of TDemark setup periods (usually 9).

5. **[Countdown LB Periods]** grid item.
   Number of TDemark countdown lookback periods (usually 2).

6. **[Combo LB Periods]** grid item.
   Number of Demark combo lookback periods (usually 2).

7. **[Combo Periods]** grid item.
   Number of Demark combo periods (usually 13).

8. **[Setup Pen]** grid item.
   Pen used to draw Tom Demark Setup overlay sequences.

9. **[Combo Pen]** grid item.
   Pen used to draw Tom Demark Combo overlay sequences.

10. **[Countdown Pen]** grid item.
    Pen used to draw Tom Demark Countdown overlay sequences.

11. **[Build-up Pen]** grid item.
    Pen used to draw Tom Demark incomplete setup or build up overlay sequences.

12. **[Tags Font]** grid item.
    Font used to tag the Setup, Combo and Countdown overlay sequences.

13. **[Countdown Font]** grid item.
    Font used to label Countdown overlay sequences.

14. **[Combo Font]** grid item.
Font used to label Combo overlay sequences.

15. **[Labels]** grid items.
Cosmetics common across all labels in this chart stack.

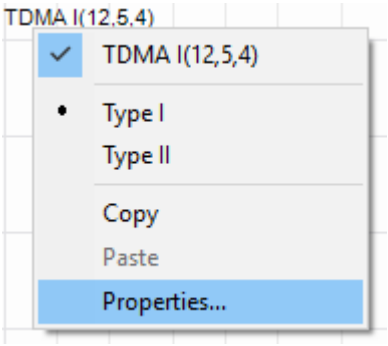
6.4.20 Tom Demark Moving Averages (TDMA)

Overlay supported by the pivotal OHLCvs Chart.



6.4.20.1 Tom Demark Moving Average (TDMA) Label Context Menu

The following TDMA Label Context Menu is accessed via a right mouse click over the Tom Demark Moving Averages overlay label.



1. **[TDMA I(nn,n,n)]** menu item.
Toggles display of the TDMA I overlay on (checked) and off.

   Logically label will not exist when overlay display toggled off. TTDMA Demark overlay display is toggled from the equivalent **[TDMA I(nn,n,n)]** item from the Chart Context Menu.

2. **[Type I]** menu item.
Selects TDMA type 1 overlay format.

3. **[Type II]** menu item.
Selects TDMA type II overlay format.

4. **[Copy]** menu item
Copies TDMA overlay calculation and cosmetic parameters from label to clipboard.

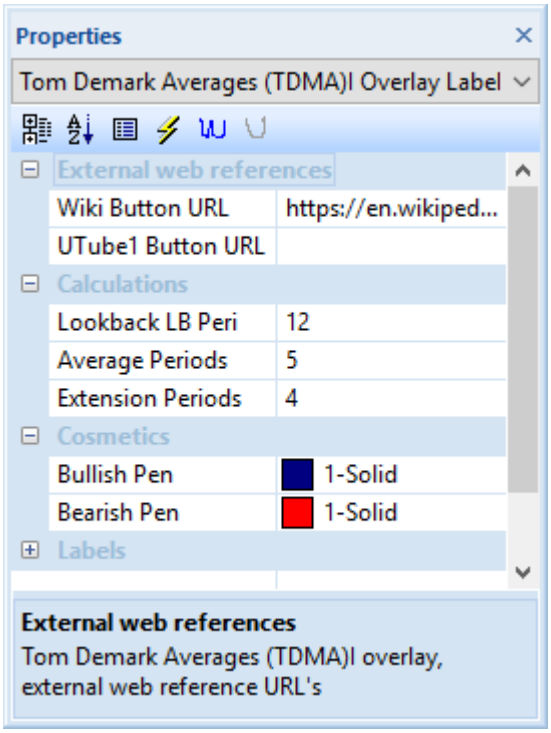
5. **[Paste** *object type***]** menu item
Pastes TDMA calculation and cosmetic parameters from clipboard to label.

Item is only enabled when clipboard contains content previously copied from TDMA label.

6. **[Properties]** menu item.
Activates the Tom Demark Moving Average (TMDA) Label Properties Grid.

6.4.20.2 Tom Demark Moving Average (TDMA) Label Properties Grid

The following Tom Demark Moving Average Label Properties Grid is accessed via a left mouse click over the TDMA overlay label.



1. **[Wiki Button URL**] grid item.
URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
URL to be activated upon **{YouTube}** button press.

3. **[Lookback Periods]** grid item.
Number of TDMA lookback periods (usually 12).

4. **[Average Periods]** grid item.
Number of periods used to calculate high and low averages (usually 5).

5. **[Extension Periods]** grid item.
Number of TDMA extension periods (usually 4).

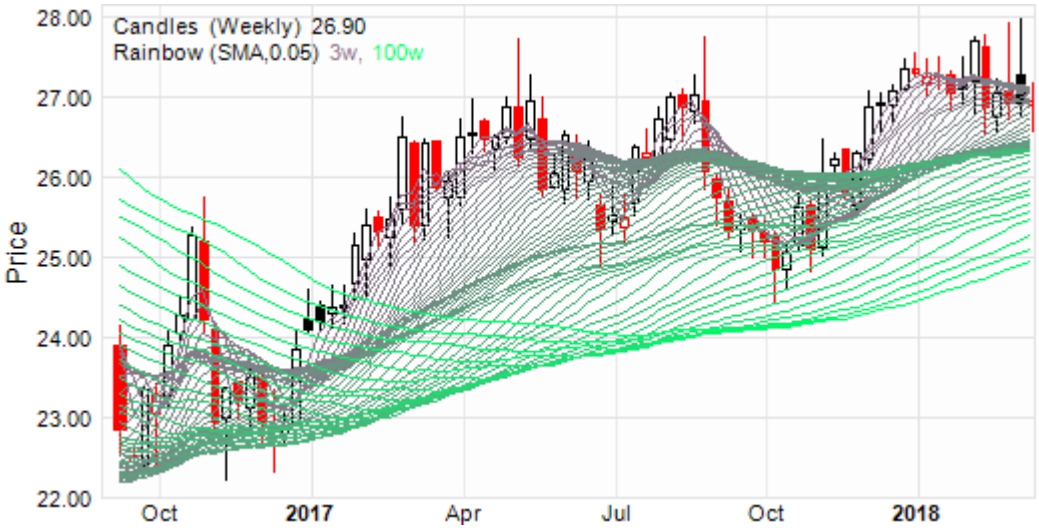
6. **[Bullish Pen]** grid item.
Pen used to draw TDMA bullish average I overlay.

7. **[Bearish Pen]** grid item.
Pen used to draw TDMA bearish average I overlay.

8. **[Labels]** grid items.
Cosmetics common across all labels in this chart stack.

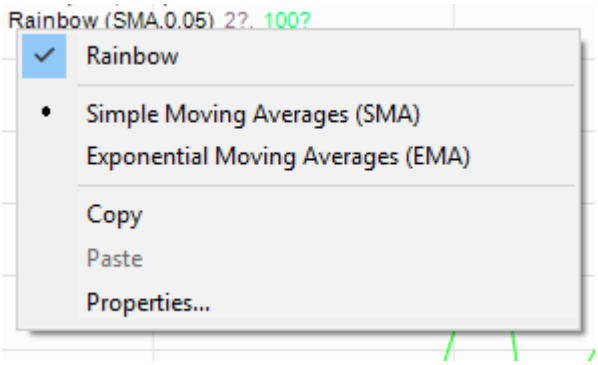
6.4.21 Rainbow

Overlay supported by the pivotal OHLCvs Chart.



6.4.21.1 Rainbow Label Context Menu

The following Rainbow Label Context Menu is accessed via a right mouse click over the Rainbow overlay label.



1. **[Rainbow]** menu item.
   Toggles display of the Rainbow overlay on (checked) and off.

   Logically label will not exist when overlay display toggled off. Rainbow overlay display is toggled from the equivalent **[Rainbow]** item from the Chart Context Menu.

2. **[Simple Moving Averages]** menu item.
   Use Simple Moving Average (SMA) calculations for Rainbow display.

3. **[Exponential Moving Averages]** menu item.
   Use Exponential Moving Average (EMA) calculations for Rainbow display.

4. **[Copy]** menu item
   Copies Rainbow overlay calculation and cosmetic parameters from label to clipboard.

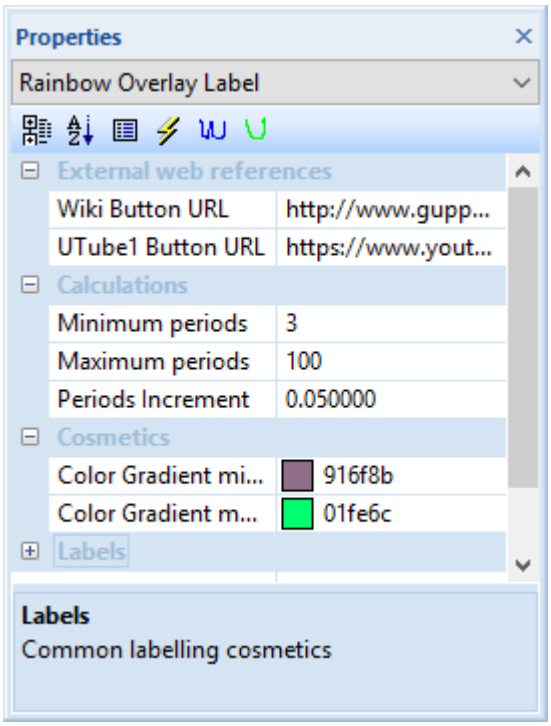
5. **[Paste** *object type***]** menu item
   Pastes Rainbow calculation and cosmetic parameters from clipboard to label.

   Item is only enabled when clipboard contains content previously copied from Rainbow label.

6. **[Properties]** menu item.
   Activates the Rainbow Label Properties Grid.

6.4.21.2 Rainbow Label Properties Grid

The following Rainbow Label Properties Grid is accessed via a left mouse click over the Rainbow overlay label.



1. **[Wiki Button URL**] grid item.
   URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

3. **[Minimum Periods]** grid item.
   Periods used to calculate minimum moving average, usually 2.

4. **[Maximum Periods]** grid item.
   Periods used to calculate minimum moving average, usually 100.

5. **[Periods Increment]** grid item.
   Percentage by which moving average bands are incremented between minimum and maximum periods, usually 5pc.

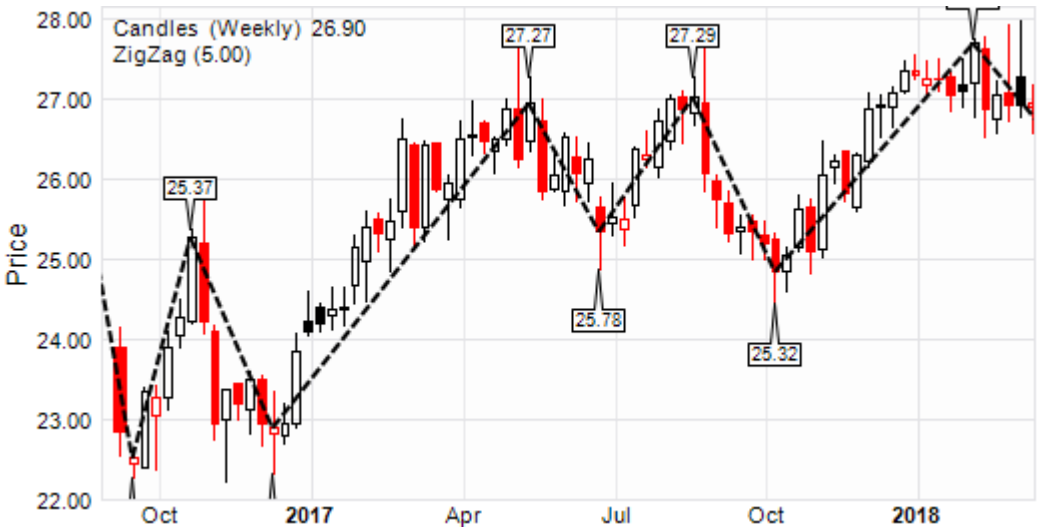
6. **[Color Gradient Min]** grid item.
   Color assigned to the minimum period. Periods are assigned color according to the linear gradient between min and max value.

7. **[Color Gradient Max]** grid item.
   Color assigned to the maximum period. Periods are assigned color according to the linear gradient between min and max value.

8. **[Labels]** grid items.
   Cosmetics common across all labels in this chart stack.

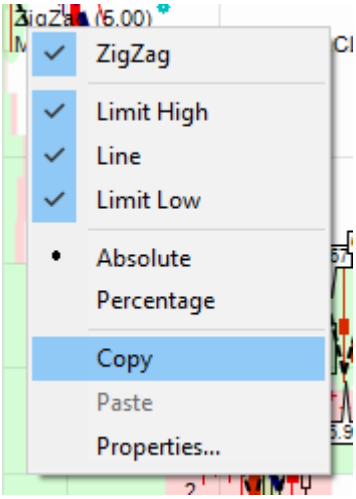
6.4.22 Zig-Zag

Overlay supported by the pivotal OHLCvs Chart.



6.4.22.1 Zig-Zag Label Context Menu

The following Zig-Zag Label Context Menu is accessed via a right mouse click over the Zig-Zag overlay label.



1. **[Zig-Zag]** menu item.
   Toggles display of the Zig-Zag overlay on (checked) and off.

   Logically label will not exist when overlay display toggled off. Zig-Zag overlay display is toggled from the equivalent **[Zig-Zag]** item from the Chart Context Menu.

2. **[Limit High]** menu item.
   Toggles annotation of high Zig-Zag limits on (checked) and off.

   Annotations will be according to the [Absolute] or [Percentage] selection.

3. **[Line]** menu item.
   Toggles annotation of the Zig-Zag line on (checked) and off.

   Zig-Zag lines are drawn using the Zig-Zag pen from the Zig-Zag Label Properties Grid.

4. **[Limit Low]** menu item.
   Toggles annotation of Zig-Zag limits on (checked) and off.

   Annotations will be according to the [Absolute] or [Percentage] selection.

5. **[Absolute]** menu item.
   Toggles absolute price annotation of high Zig-Zag limits on (checked) and off.

   Annotations will be according to the [Limit High] and [Limit Low]

selections.

6. **[Percentage]** menu item.
Toggles percentage price annotation of high Zig-Zag limits on (checked) and off.

   Annotations will be according to the [Limit High] and [Limit Low] selections.

7. **[Copy]** menu item
Copies Zig-Zag overlay calculation and cosmetic parameters from label to clipboard.

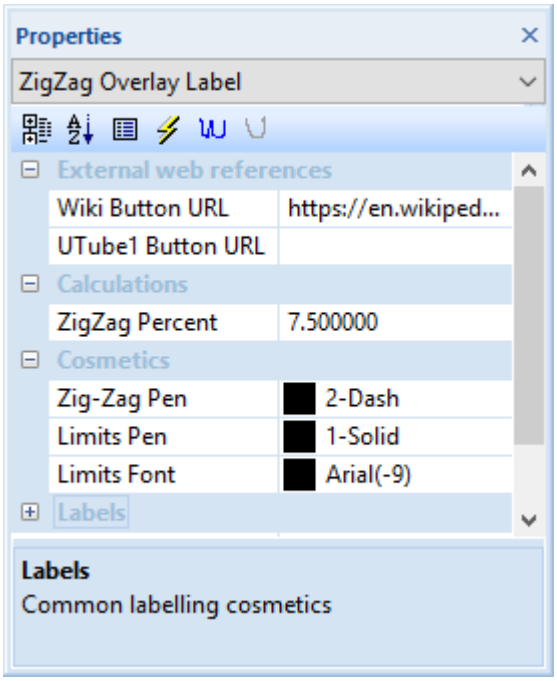
8. **[Paste** *object type***]** menu item
Pastes Zig-Zag calculation and cosmetic parameters from clipboard to label.

   Item is only enabled when clipboard contains content previously copied from Zig-Zag label.

9. **[Properties]** menu item.
Activates the Zig-Zag Label Properties Grid.

6.4.22.2 Zig-Zag Label Properties Grid

The following Zig-Zag Label Properties Grid is accessed via a left mouse click over the Zig-Zag overlay label.



1. **[Wiki Button URL**] grid item.
URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
URL to be activated upon **{YouTube}** button press.

3. **[ZigZag Percent]** grid item.
Minimum percent price variation to trigger a ZigZag, usually 5pc.

4. **[Zig-Zag Pen]** grid item.
Pen used to draw the Zig-Zag overlay line.

5. **[Limits Pen]** grid item.
Pen used to enclose Zig-Zag limits.

6. **[Limits Font]** grid item.
Font used to label the Zig-Zag limits.

7. **[Labels]** grid items.
   Cosmetics common across all labels in this chart stack.

6.5 Oscillator and Indicator Stack Charts

Oscillator and Indicator charts are added to the Chart Stack as required via the **Ribbon Bar >> OHLCvs Tab >> Chart Stack Panel >> Add to Stack Button** drop down list items. All Charts added to the stack have synchronised Period Axis and share certain cosmetic properties grid.

6.5.1 Shared Components

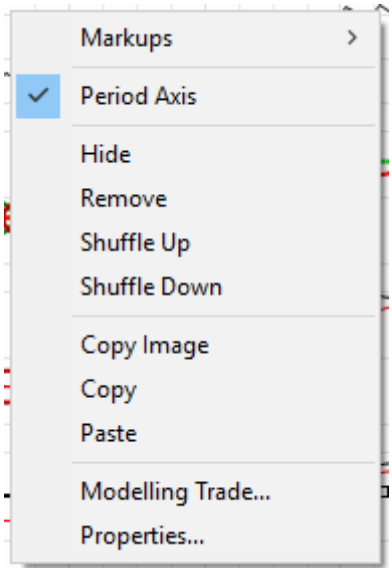
The following components are common to and shared across the OHLCvs Chart stack including the primary pivotal OHLCvs Chart.

6.5.2 Average Directional Index (ADX)



6.5.2.1 ADX Chart Context Menu

The following ADX Chart Context Menu is accessed via a right mouse click over the active chart area exclusive of prioritised objects such as labels, regression curves, mark-ups, drawing objects.



1. **[Markups]** menu item.
   Common chart stack context sub-menu items

2. **[Period Axis]** menu item.
   Common chart stack context menu item.

3. **[Hide]**, **[Remove]**, **[Shuffle Up]**, **[Shuffle Down]** button items.
   Common chart stack context menu items.

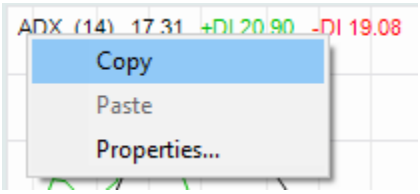
4. **[Copy Image]**, **[Copy]**, **[Paste** *object type*] button item.
   Common chart stack clipboard related menu items.

5. **[Modelling Trade…]** menu item.
   Common chart stack trade modelling item.

6. **[Properties]** menu item.
   Activates the ADX Chart Properties Grid.

6.5.2.2 ADX Label Context Menu

The following ADX Label Context Menu is accessed via a right mouse click over the ADX chart label.



1. **[Copy]** menu item
   Copies ADX calculation and cosmetic parameters from label to clipboard.

2. **[Paste** *object type***]** menu item
   Pastes ADX calculation and cosmetic parameters from clipboard to label.

   Item is only enabled when clipboard contains content previously copied from ADX label.

3. **[Properties]** button item.
   Activates the ADX Label Properties Grid.

6.5.2.3 ADX Chart Properties Grid

The following ADX Chart Properties Grid is accessed via a right mouse click over the active chart area exclusive of prioritised objects such as labels, regression curves, mark-ups, drawing objects.

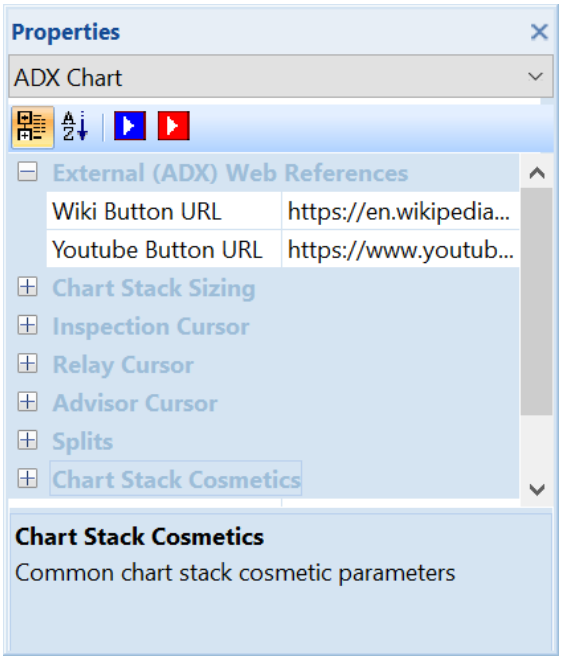
1. **[Wiki Button URL]** grid item.
   URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

3. **[Chart Stack Sizing]** grid item.
   Common Chart Stack sizing parameters.

4. **[Inspection Cursor]** grid item.
   Common Chart Stack inspection cursor parameters.

5. **[Replay Cursor]** grid item.
   Common Chart Stack replay cursor parameters.



6. **[Advisor Cursor]** grid item.
   Common Chart Stack advisor cursor parameters.

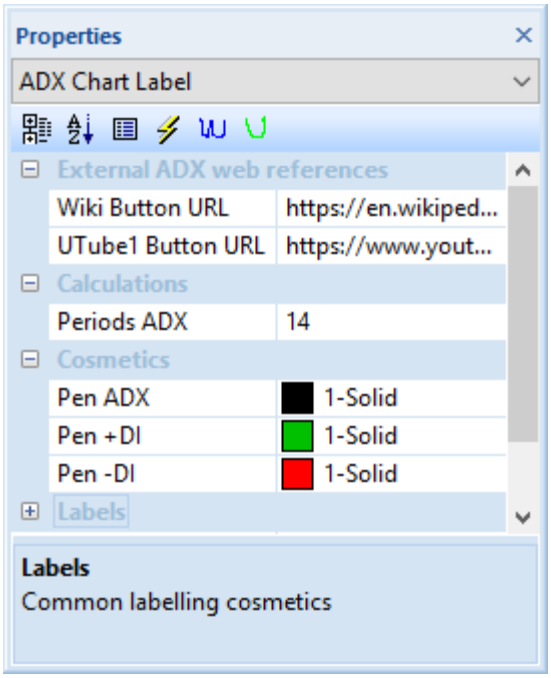
7. **[Splits Pen]** grid item.
   Pen used to draw the vertical OHLCvs data set splits line. Common to all charts within this chart stack.

8. **[Chart Stack Cosmetics]** grid items.
   Common Chart Stack cosmetics parameters.

   Refer Common OHLCvs Chart Stack Properties Grid for further details.

6.5.2.4 ADX Label Properties Grid

The following ADX Label Properties Grid is accessed via a left mouse click over the ADX chart label.



1. **[Wiki Button URL**] grid item.
   URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

3. **[Periods ADX]** grid item.
   Look back periods used to calculate ADX, usually 14.

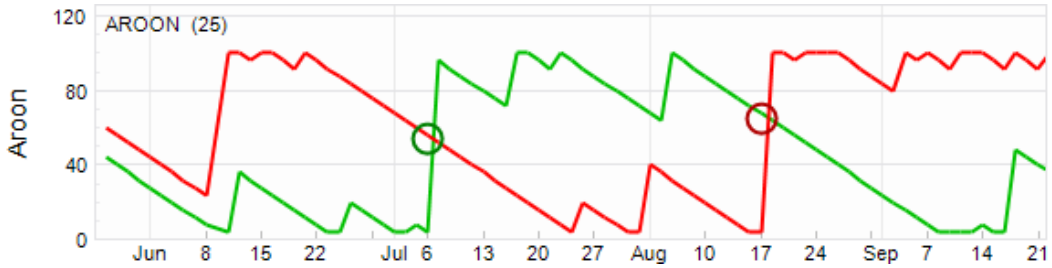
4. **[Pen ADX]** grid item.
   Pen used to draw the calculated ADX series.

5. **[Pen +DI]** grid item.
   Pen used to draw the positive directional index.

6. **[Pen +DI]** grid item.
   Pen used to draw the negative directional index.

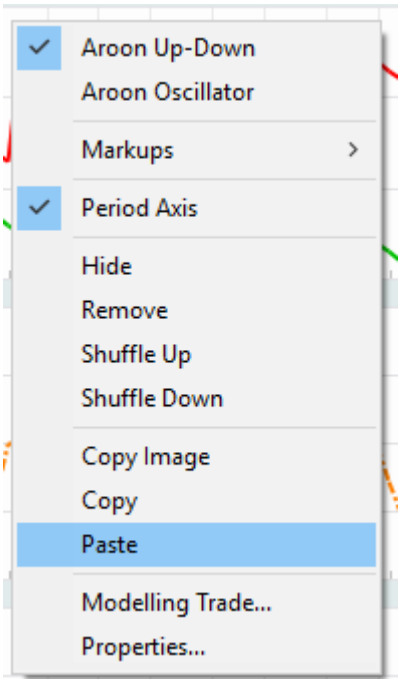
7. **[Labels]** grid item.
   Cosmetics common across all labels in this chart stack.

6.5.3 Aroon



6.5.3.1 Aroon Chart Context Menu

The following Aroon Chart Context Menu is accessed via a right mouse click over the active chart area exclusive of prioritised objects such as labels, regression curves, mark-ups, drawing objects.



1. **[Aroon Up-Down]** menu item.
   Annotate the traditional Aroon up and down indicators on the charts.

2. **[Aroon Oscillator]** menu item.
   Annotate the Aroon Oscillator on the chart.

3. **[Markups]** menu item.
   Common chart stack context sub-menu items

4. **[Period Axis]** menu item.
   Common chart stack context menu item.

5. **[Hide]**, **[Remove]**, **[Shuffle Up]**, **[Shuffle Down]** menu item.
   Common chart stack context menu items.

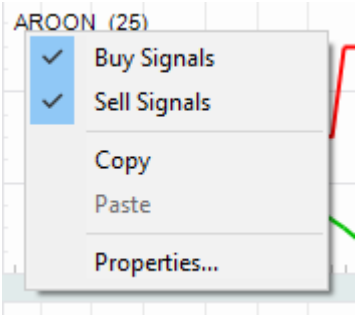
6. **[Copy Image]**, **[Copy]**, **Paste** *object type*] menu item.
   Common chart stack clipboard related menu items.

7. **[Modelling Trade…]** menu item.
   Common chart stack trade modelling item.

8. **[Properties]** menu item.
   Activates Aroon Chart Properties Grid.

6.5.3.2 Aroon Label Context Menu

The following Aroon Label Context Menu is accessed via a right mouse click over the Aroon chart label.



1. **[Buy Signals]** menu item.
   Toggles the display of buy signals on (checked) and off.

   Buy signal is defined as when the signal lines passed from above the Aroon line to below the Aroon line.

2. **[Sell Signals]** menu item.
   Toggles the display of sell signals on (checked) and off.

   Sell signal is defined as when the signal line passes from below the Arron line to above the Aroon line.

3. **[Copy]** menu item
   Copies Aroon calculation and cosmetic parameters from label to clipboard.

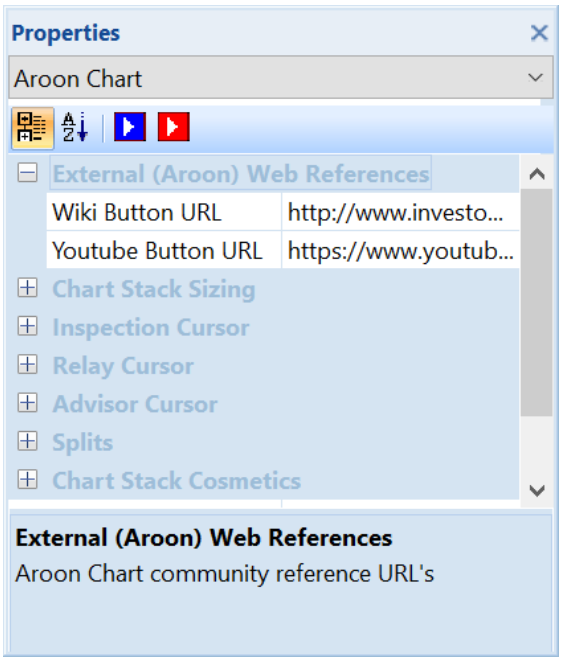
4. **[Paste** *object type***]** menu item
   Pastes Aroon calculation and cosmetic parameters from clipboard to label.

   Item is only enabled when clipboard contains content previously copied from Aroon label.

5. **[Properties]** menu item.
   Activates Aroon Label Properties Grid.

6.5.3.3 Aroon Chart Properties Grid

The following Aroon Chart Properties Grid are activated via a left mouse click over the active chart area exclusive of prioritised objects such as labels, regression curves, mark-ups, drawing objects.



1. **[Wiki Button URL**] grid item.
   URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

3. **[Chart Stack Sizing]** grid item.
   Common Chart Stack sizing parameters.

4. **[Inspection Cursor]** grid item.
   Common Chart Stack inspection cursor parameters.

5. **[Replay Cursor]** grid item.
   Common Chart Stack replay cursor

parameters.

6. **[Advisor Cursor]** grid item.
   Common Chart Stack advisor cursor parameters.

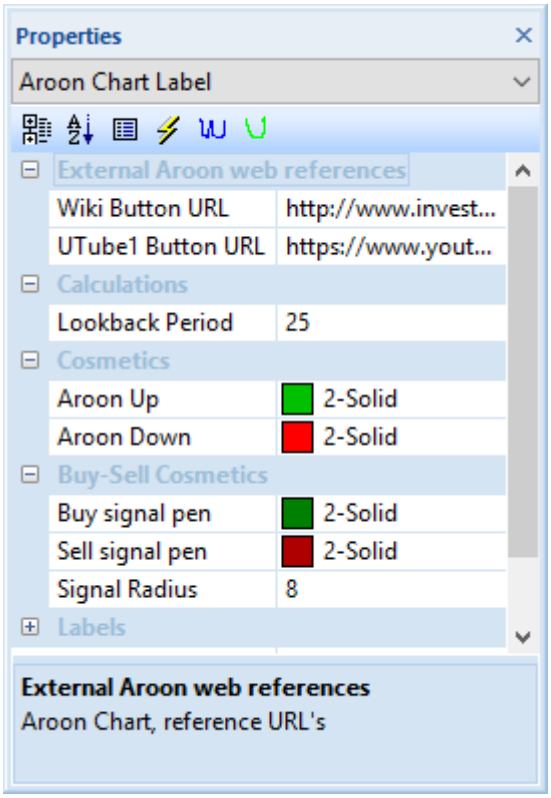
7. **[Splits Pen]** grid item.
   Common to all charts within this chart stack.

8. **[Chart Stack Cosmetics]** grid item.
   Common Chart Stack cosmetics parameters.

   Refer Common OHLCvs Chart Stack Properties Grid for further details.

6.5.3.4 Aroon Label Properties Grid

The following Aroon Label Properties Grid is accessed via a left mouse click over the Aroon chart label.



1. **[Wiki Button URL**] grid item.
   URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

3. **[Lookback Periods]** grid item.
   Number lookback periods used in the Aroon calculation.

4. **[Aroon Up Pen]** grid item.
   Pen used to draw the Aroon up line.

5. **[Aroon Down Pen]** grid item.
   Pen used to draw the Aroon down line.

6. **[Buy Signal Pen]** grid item.
   Pen used to draw buy (X-Over) signals.

7. **[Buy Signal Pen]** grid item.
   Pen used to draw sell (X-Over) signals.

8. **[Signal Radius]** grid item.
   Radius of drawn circular buy-sell signal image in pixels.

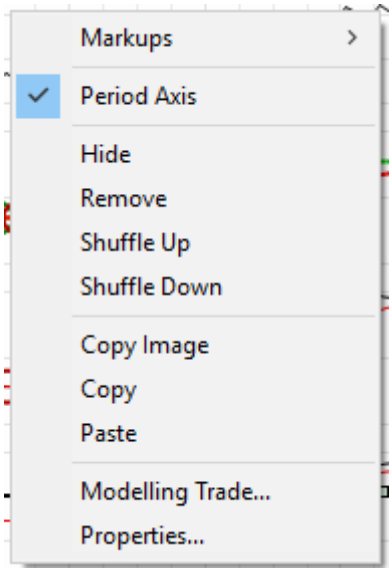
9. **[Labels]** grid items.
   Cosmetics common across all labels in this chart stack.

6.5.4 Average True Range (ATR)



6.5.4.1 ATR Chart Context Menu

The following ATR Chart Context Menu is accessed via a right mouse click over the active chart area exclusive of prioritised objects such as labels, regression curves, mark-ups, drawing objects.



1. **[Markups]** button item.
   Common chart stack context sub-menu items.

2. **[Period Axis]** button item.
   Common chart stack context menu item.

3. **[Hide]**, **[Remove]**, **[Shuffle Up]**, **[Shuffle Down]** button item.
   Common chart stack context menu items.

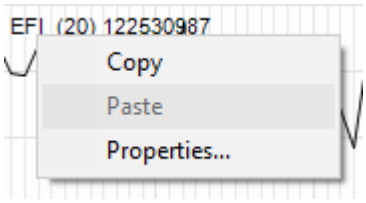
4. **[Copy Image]**, **[Copy]**, **[Paste** *object type***]** button item.
   Common chart stack clipboard related menu items.

5. **[Modelling Trade…]** menu item.
   Common chart stack trade modelling item.

6. **[Properties]** menu item.
   Activates the ATR Chart Properties Grid.

6.5.4.2 ATR Label Context Menu

The following ATR Label Context Menu is accessed via a right mouse click over the EFI chart label.



1. **[Signaline]** menu item
   Toggles Signaline overlay on (checked) and off.

2. **[Copy]** menu item
   Copies ATR calculation and cosmetic parameters from label to clipboard.

3. **[Paste** *object type***]** menu item
   Pastes ATR calculation and cosmetic parameters from clipboard to label.

Item is only enabled when clipboard contains content previously copied from ATR label.

4. **[Properties]** menu item.
Activates the ATR Label Properties Grid.

6.5.4.3 ATR Chart Properties Grid

The following EFI Chart Properties Grid is accessed via a right mouse click over the active chart area exclusive of prioritised objects such as labels, regression curves, mark-ups, drawing objects.

1. **[Wiki Button URL**] grid item.
URL to be activated upon **{Wiki}** button press.

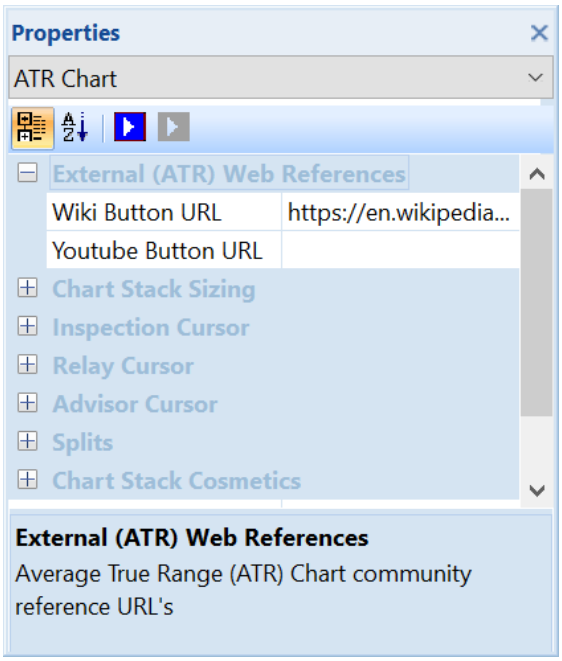
2. **[YouTube Button URL]** grid item.
URL to be activated upon **{YouTube}** button press.

3. **[Chart Stack Sizing]** grid item.
Common Chart Stack sizing parameters.

4. **[Inspection Cursor]** grid item.
Common Chart Stack inspection cursor parameters.

5. **[Replay Cursor]** grid item.
Common Chart Stack replay cursor parameters.

6. **[Advisor Cursor]** grid item.
Common Chart Stack advisor cursor parameters.



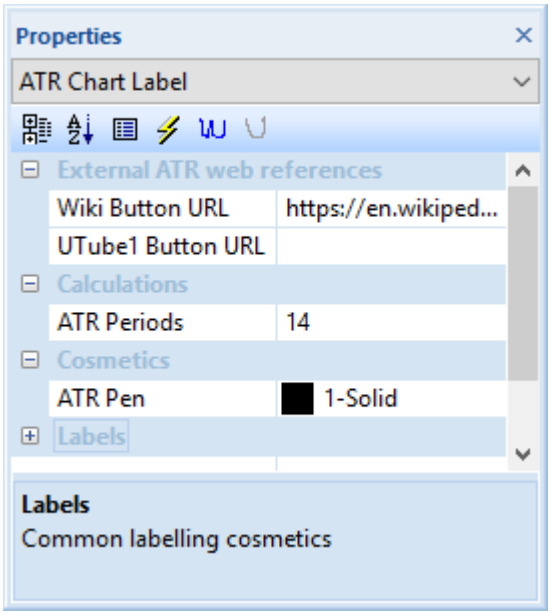
7. **[Splits Pen]** grid item.
Common to all charts within this chart stack.

8. **[Chart Stack Cosmetics]** grid items.
Common Chart Stack cosmetics parameters.

Refer Common OHLCvs Chart Stack Properties Grid for further details.

6.5.4.4 ATR Label Properties Grid

The following ATR Label Properties Grid is accessed via a left mouse click over the ATR chart label.



1. **[Wiki Button URL**] grid item.
   URL to be activated upon **{Wiki}** button press.

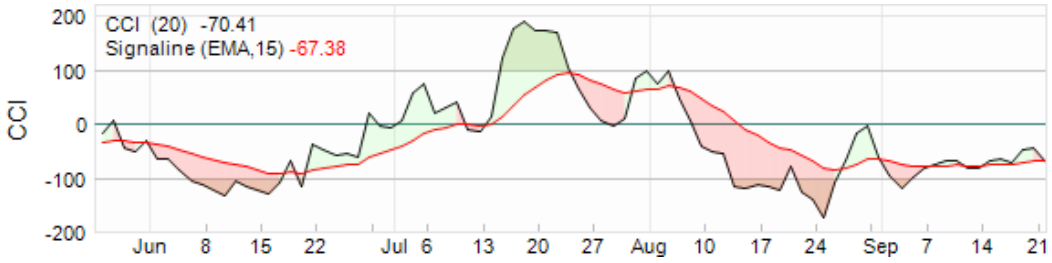
2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

3. **[ATR Periods]** grid item.
   Look back periods used to calculate Average True Range (ATR), usually 20.

4. **[ATR Pen]** grid item.
   Pen used to draw the calculated Average True Range (ATR).

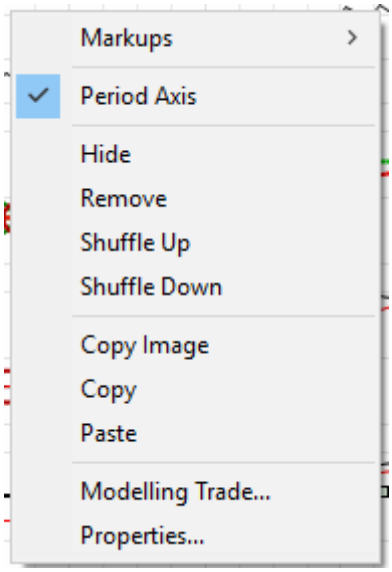
5. **[Labels]** grid items.
   Cosmetics common across all labels in this chart stack.

6.5.5 Commodity Channel Index (CCI)



6.5.5.1 CCI Chart Context Menus

The following CCI Chart Context Menu is accessed via a right mouse click over the active chart area exclusive of prioritised objects such as labels, regression curves, mark-ups, drawing objects.



1. **[Markups]** button item.
   Common chart stack context sub-menu items

2. **[Period Axis]** button item.
   Common chart stack context menu item.

3. **[Hide]**, **[Remove]**, **[Shuffle Up]**, **[Shuffle Down]**
   Common chart stack context menu items.

4. **[Copy Image]**, **[Copy]**, **[Paste** *object type*]
   button item.
   Common chart stack clipboard related menu

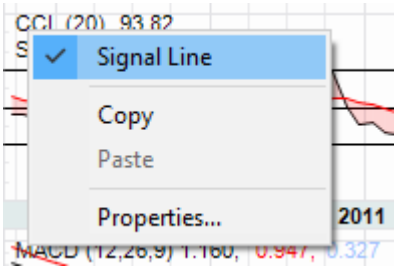
items.

5. **[Modelling Trade…]** menu item
   Common chart stack trade modelling item.

6. **[Properties]** menu item
   Activates the CCI Chart Properties Grid.

6.5.5.2 CCI Label Context Menu

The following CCI Label Context Menu is accessed via a right mouse click over the CCI chart label.



1. **[Signaline]** menu item
   Toggles Signaline overlay on (checked) and off.

2. **[Copy]** menu item
   Copies CCI calculation and cosmetic parameters from label to clipboard.

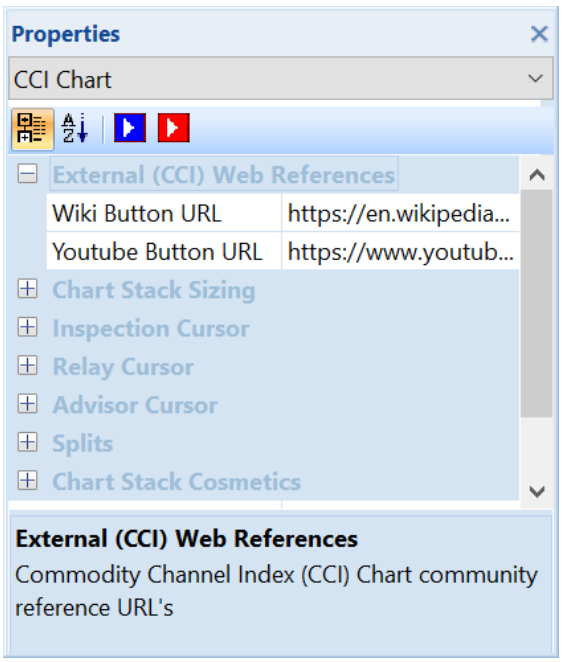
3. **[Paste** *object type***]** menu item
   Pastes CCI calculation and cosmetic parameters from clipboard to label.

   Item is only enabled when clipboard contains content previously copied from CCI label.

4. **[Properties]** menu item
   Activates the CCI Label Properties Grid.

6.5.5.3 CCI Chart Properties Grid

The following CCI Chart Properties Grid is accessed via a right mouse click over the active chart area exclusive of prioritised objects such as labels, regression curves, mark-ups, drawing objects.



1. **[Wiki Button URL**] grid item.
   URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

3. **[Chart Stack Sizing]** grid item.
   Common Chart Stack sizing parameters.

4. **[Inspection Cursor]** grid item.
   Common Chart Stack inspection cursor parameters.

5. **[Replay Cursor]** grid item.
   Common Chart Stack replay cursor parameters.

6. **[Advisor Cursor]** grid item.
   Common Chart Stack advisor cursor parameters.

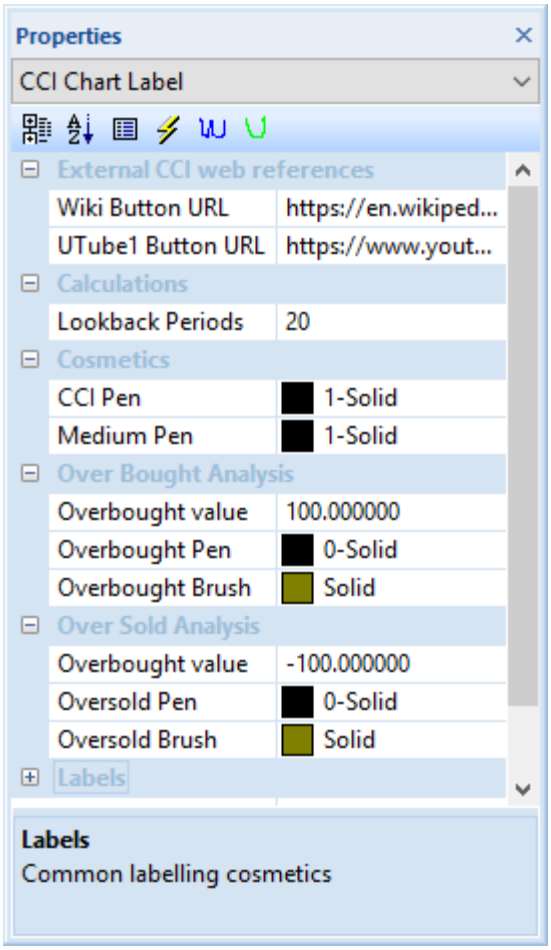
7. **[Splits Pen]** grid item.
   Common to all charts within this chart stack.

8. **[Chart Stack Cosmetics]** grid item.
   Common Chart Stack cosmetics parameters.

   Refer Common OHLCvs Chart Stack Properties Grid for further details.

6.5.5.4 CCI Label Properties Grid

The following CCI Label Properties Grid is accessed via a left mouse click over the CCI chart label.



1. **[Wiki Button URL**] grid item.
   URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

3. **[CCI Periods]** grid item.
   Look back periods used to calculate Commodity Channel Index (CCI) indicator, usually 20.

4. **[CCI Pen]** grid item.
   Pen used to draw the calculated Commodity Channel Index series line.

5. **[Medium Pen]** grid item.
   Pen used to draw the medium (0) Commodity Channel Index bar.

6. **[Overbought value]** grid item.
   Arbitrary over bought value, usually 100.

7. **[Overbought Pen]** grid item.
   Pen used to draw the overbought line.

8. **[Overbought Brush]** grid item.
   Brush used to fill regions above the overbought bar.

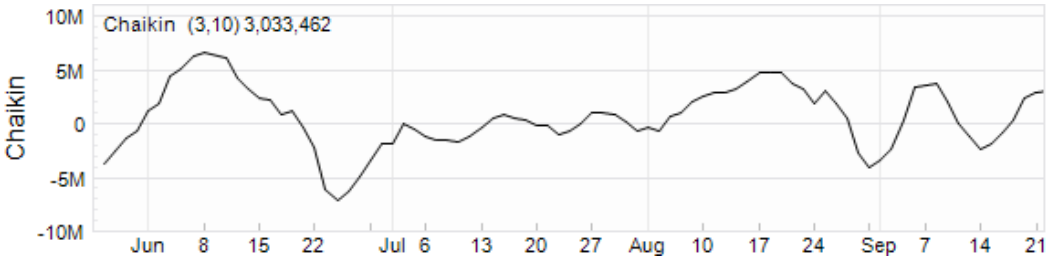
9. **[Oversold value]** grid item.
   Arbitrary oversold value, usually -100.

10. **[Oversold Pen]** grid item.
    Pen used to draw the oversold line

11. **[Oversold Brush]** grid item.
    Brush used to fill regions below the oversold bar.

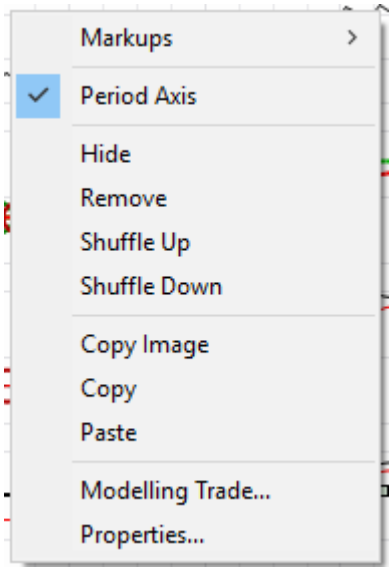
12. **[Labels]** grid items.
    Cosmetics common across all labels in this chart stack.

6.5.6 Chaikin



6.5.6.1 Chaikin Chart Context Menu

The following Chaikin Chart Context Menu is accessed via a right mouse click over the active chart area exclusive of prioritised objects such as labels, regression curves, mark-ups, drawing objects.



1. **[Markups]** button item.
   Common chart stack context sub-menu items

2. **[Period Axis]** button item.
   Common chart stack context menu item.

3. **[Hide]**, **[Remove]**, **[Shuffle Up]**, **[Shuffle Down]** button item.
   Common chart stack context menu items.

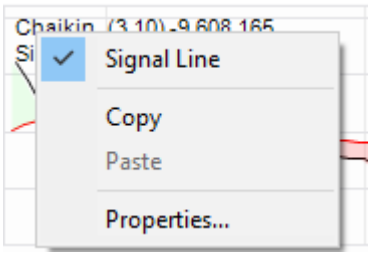
4. **[Copy Image]**, **[Copy]**, **[Paste** *object type***]** button item.
   Common chart stack clipboard related menu items.

5. **[Modelling Trade…]** menu item.
   Common chart stack trade modelling item.

6. **[Properties]** menu item.
   Activates the Chaikin Chart Properties Grid.

6.5.6.2 Chaikin Label Context Menu

The following Chaikin Label Context Menu is accessed via a right mouse click over the Chaikin chart label.



1. **[Signaline]** menu item
   Toggles Signaline overlay on (checked) and off.

2. **[Copy]** menu item
   Copies Chaikin calculation and cosmetic parameters from label to clipboard.

3. **[Paste** *object type***]** menu item
   Pastes Chaikin calculation and cosmetic parameters from clipboard to label.

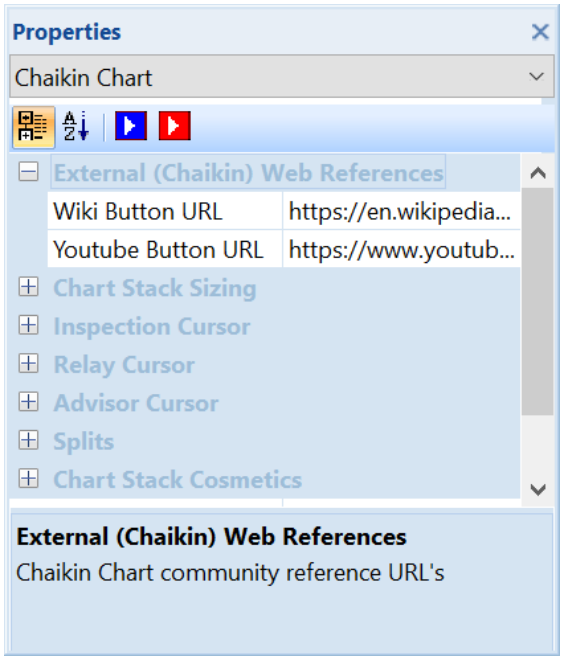
   Item is only enabled when clipboard contains content previously copied from

Chaikin label.

4. **[Properties]** menu item.
   Activates the Chaikin Label Properties Grid.

6.5.6.3 Chaikin Chart Properties Grid

The following Chaikin Chart Properties Grid is accessed via a right mouse click over the active chart area exclusive of prioritised objects such as labels, regression curves, mark-ups, drawing objects.



1. **[Wiki Button URL**] grid item.
   URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

3. **[Chart Stack Sizing]** grid item.
   Common Chart Stack sizing parameters.

4. **[Inspection Cursor]** grid item.
   Common Chart Stack inspection cursor parameters.

5. **[Replay Cursor]** grid item.
   Common Chart Stack replay cursor parameters.

6. **[Advisor Cursor]** grid item.
   Common Chart Stack advisor cursor parameters.

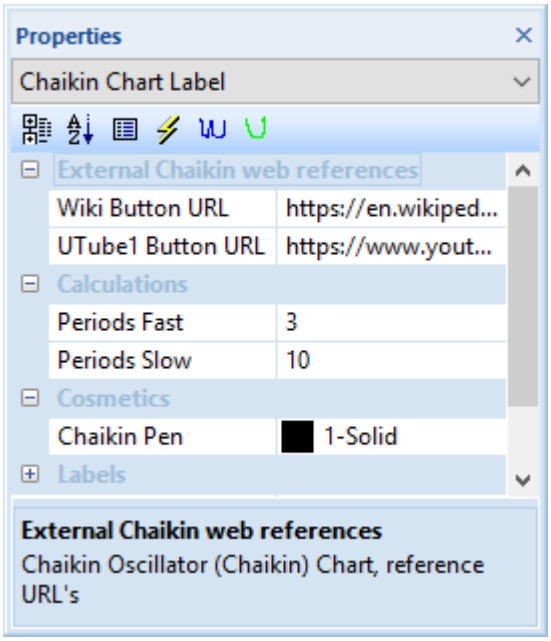
7. **[Splits Pen]** grid item.
   Common to all charts within this chart stack.

8. **[Chart Stack Cosmetics]** grid item.
   Common Chart Stack cosmetics parameters.

   Refer Common OHLCvs Chart Stack Properties Grid for further details.

6.5.6.4 Chaikin Label Properties Grid

The following Chaikin Label Properties Grid is accessed via a left mouse click over the Chaikin chart label.



1. **[Wiki Button URL**] grid item.
   URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

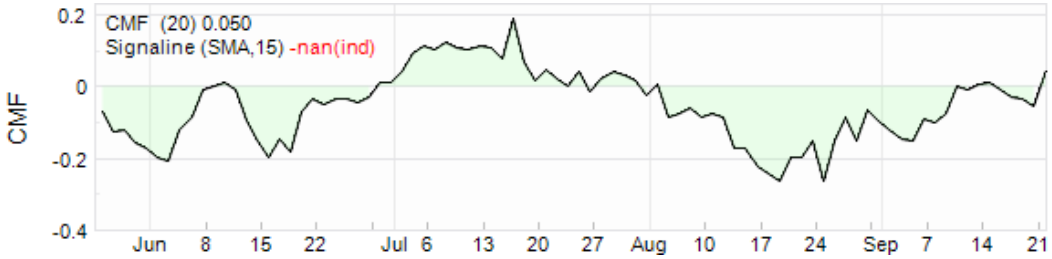
3. **[Periods Fast]** grid item.
   Look back periods used to calculate K, usually 3.

4. **[Periods Slow]** grid item.
   Smoothing periods used to calculate D, usually 10.

5. **[Chaikin Pen]** grid item.
   Pen used to draw the calculated Chaikin oscillator.

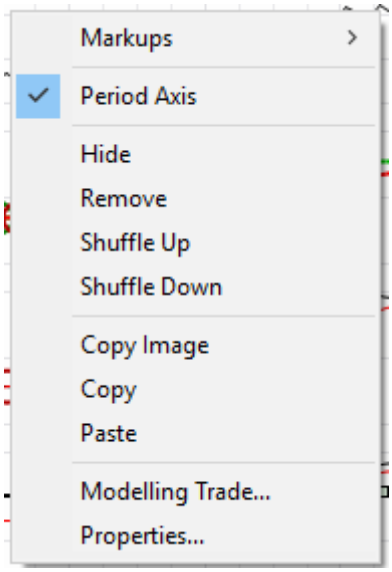
6. **[Labels]** grid items.
   Cosmetics common across all labels in this chart stack.

6.5.7 Chaikin Money Flow (CMF)



6.5.7.1 CMF Chart Context Menu

The following CMF Chart Context Menu is accessed via a right mouse click over the active chart area exclusive of prioritised objects such as labels, regression curves, mark-ups, drawing objects.



1. **[Markups]** menu item.
   Common chart stack context sub-menu items

2. **[Period Axis]** menu item.
   Common chart stack context menu item.

3. **[Hide]**, **[Remove]**, **[Shuffle Up]**, **[Shuffle Down]** menu items.
   Common chart stack context menu items.

4. **[Copy Image]**, **[Copy]**, **[Paste** *object type***]** menu items.
   Common chart stack clipboard related menu items.

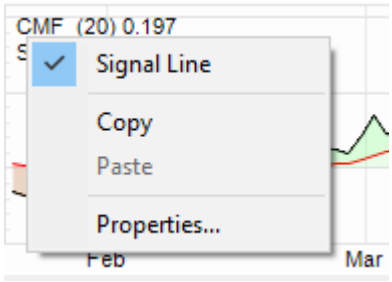
5. **[Modelling Trade…]** menu item.
   Common chart stack trade modelling item.

6. **[Properties]** menu item.
   Activates the CMF Chart Properties Grid.

6.5.7.2 CMF Label Context Menu

The following CMF Label Context Menu is accessed via a right mouse click over the CMF chart label.

1. **[Signaline]** menu item
   Toggles Signaline overlay on (checked) and off.



2. **[Copy]** menu item
   Copies CMF calculation and cosmetic parameters from label to clipboard.

3. **[Paste** *object type***]** menu item
   Pastes CMF calculation and cosmetic parameters from clipboard to label.

   Item is only enabled when clipboard contains content previously copied from CMF label.

4. **[Properties]** menu item.
   Activates the CMF Label Properties Grid.

6.5.7.3 CMF Chart Properties Grid

The following CMF Chart Properties Grid is accessed via a right mouse click over the active chart area exclusive of prioritised objects such as labels, regression curves, mark-ups, drawing objects.

1. **[Wiki Button URL**] grid item.
   URL to be activated upon **{Wiki}** button press.

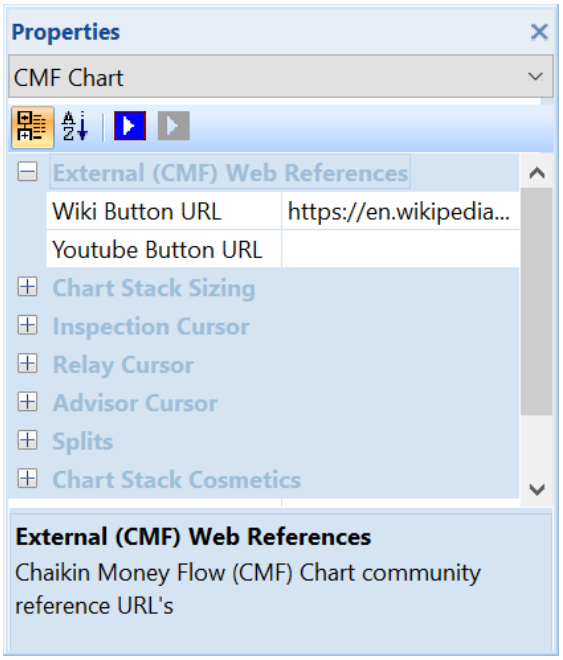
2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

3. **[Chart Stack Sizing]** grid item.
   Common Chart Stack sizing parameters.

4. **[Inspection Cursor]** grid item.
   Common Chart Stack inspection cursor parameters.

5. **[Replay Cursor]** grid item.
   Common Chart Stack replay cursor parameters.

6. **[Advisor Cursor]** grid item.
   Common Chart Stack advisor cursor parameters.



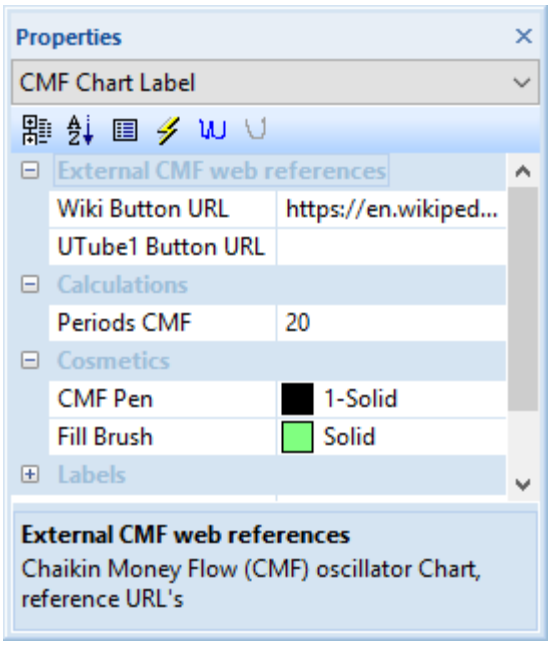
7. **[Splits Pen]** grid item.
   Common to all charts within this chart stack.

8. **[Chart Stack Cosmetics]** grid items.
   Common Chart Stack cosmetics parameters.

   Refer Common OHLCvs Chart Stack Properties Grid for further details.

6.5.7.4 CMF Label Properties Grid

The following CMF Label Properties Grid is accessed via a left mouse click over the CMF chart label.



1. **[Wiki Button URL**] grid item.
   URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

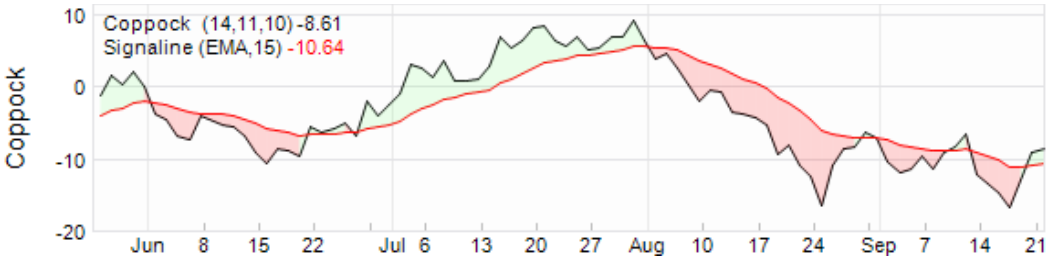
3. **[Periods CMF]** grid item.
   Look back periods used to calculate Chaikin Money Flow, usually 20.

4. **[CMF Pen]** grid item.
   Pen used to draw the calculated CMF oscillator.

5. **[Fill Brush]** grid item.
   Brush used to fill regions above and below the CMF neutral or zero axis.

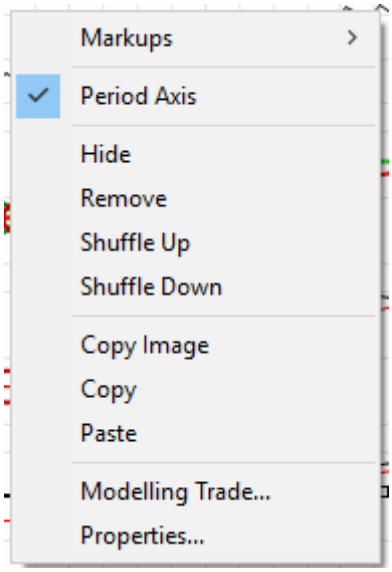
6. **[Labels]** grid items.
   Cosmetics common across all labels in this chart stack.

6.5.8 Coppock



6.5.8.1 Coppock Chart Context Menu

The following Coppock Chart Context Menu is accessed via a right mouse click over the active chart area exclusive of prioritised objects such as labels, regression curves, mark-ups, drawing objects.



1. **[Markups]** button item.
   Common chart stack context sub-menu items

2. **[Period Axis]** button item.
   Common chart stack context menu item.

3. **[Hide]**, **[Remove]**, **[Shuffle Up]**, **[Shuffle Down]** button item.
   Common chart stack context menu items.

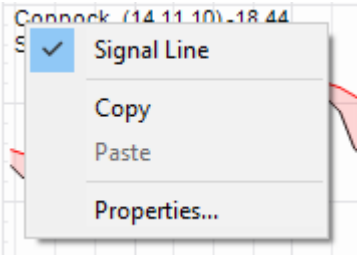
4. **[Copy Image]**, **[Copy]**, **[Paste** *object type*]
   button item.
   Common chart stack clipboard related menu items.

5. **[Modelling Trade…]** button item.
   Common chart stack trade modelling item.

6. **[Properties]** button item.
   Activates the Coppock Chart Properties Grid.

6.5.8.2 Coppock Label Context Menu

The following Coppock Label Context Menu is accessed via a right mouse click over the Coppock chart label.



1. **[Signaline]** menu item
   Toggles Signaline overlay on (checked) and off.

2. **[Copy]** menu item
   Copies Coppock calculation and cosmetic parameters from label to clipboard.

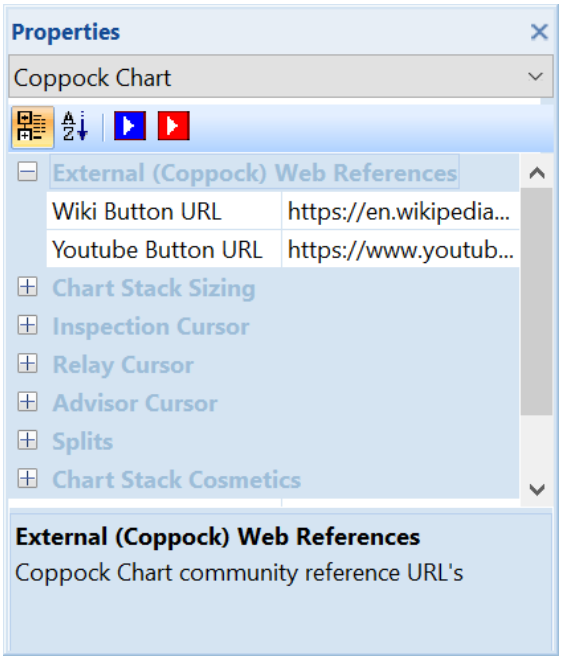
3. **[Paste** *object type*] menu item
   Pastes Coppock calculation and cosmetic parameters from clipboard to label.

   Item is only enabled when clipboard contains content previously copied from Coppock label.

4. **[Properties]** menu item
   Activates the Coppock Label Properties Grid.

6.5.8.3 Coppock Chart Properties Grid

The following Coppock Chart Properties Grid is accessed via a right mouse click over the active chart area exclusive of prioritised objects such as labels, regression curves, mark-ups, drawing objects.



1. **[Wiki Button URL**] grid item.
   URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

3. **[Chart Stack Sizing]** grid item.
   Common Chart Stack sizing parameters.

4. **[Inspection Cursor]** grid item.
   Common Chart Stack inspection cursor parameters.

5. **[Replay Cursor]** grid item.
   Common Chart Stack replay cursor parameters.

6. **[Advisor Cursor]** grid item.
   Common Chart Stack advisor cursor parameters.

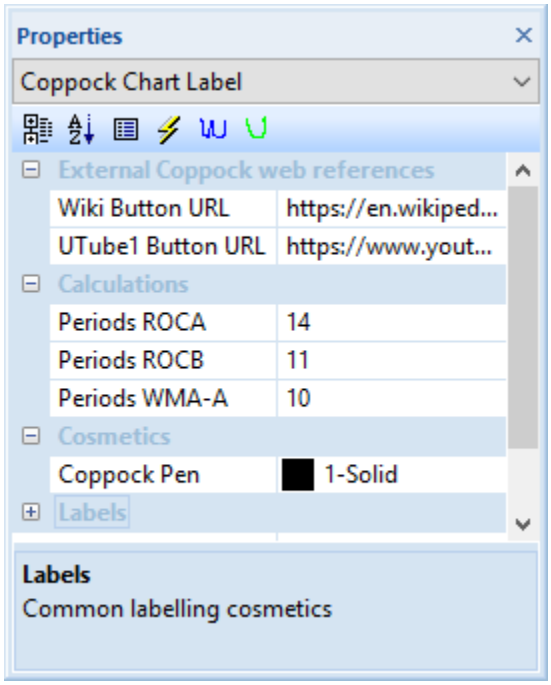
7. **[Splits Pen]** grid item.
   Common to all charts within this chart stack.

8. **[Chart Stack Cosmetics]** grid items.
   Common Chart Stack cosmetics parameters.

   Refer Common OHLCvs Chart Stack Properties Grid for further details.

6.5.8.4 Coppock Label Properties Grid

The following Coppock Label Properties Grid is accessed via a left mouse click over the Coppock chart label.



1. **[Wiki Button URL**] grid item.
   URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

3. **[Periods ROCA]** grid item.
   Coppock curve lookback periods A, usually 14.

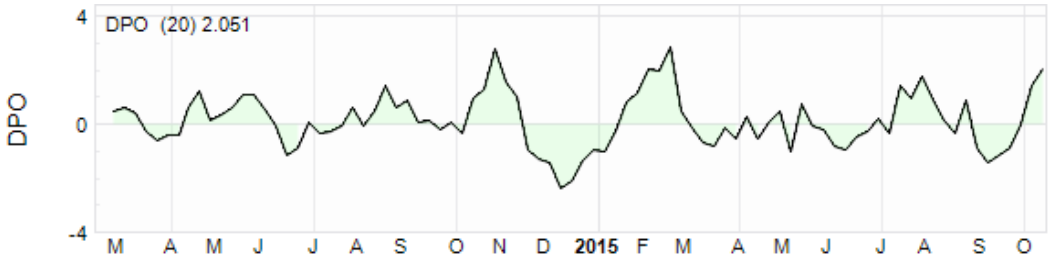
4. **[Periods ROCB]** grid item.
   Coppock curve lookback periods A, usually 14.

5. **[Periods WMA-A]** grid item.
   Weighted moving average period of Rate of Change A, usually 10.

6. **[Coppock Pen]** grid item.
   Pen used to draw the calculated Coppock curve.

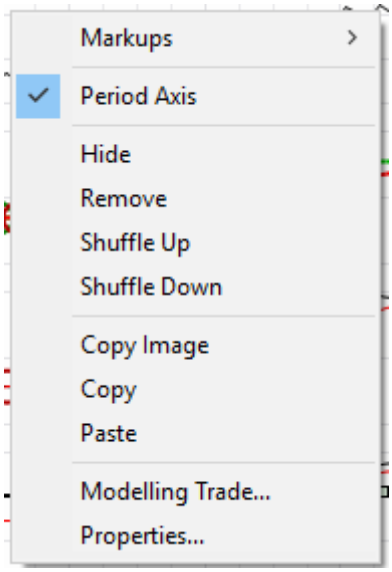
7. **[Labels]** grid items.
   Cosmetics common across all labels in this chart stack.

6.5.9 Detrended Price Oscillator (DPO)



6.5.9.1 DPO Chart Context Menu

The following DPO Chart Context Menu is accessed via a right mouse click over the active chart area exclusive of prioritised objects such as labels, regression curves, mark-ups, drawing objects.



1. **[Markups]** button item.
   Common chart stack context sub-menu items

2. **[Period Axis]** button item.
   Common chart stack context menu item.

3. **[Hide]**, **[Remove]**, **[Shuffle Up]**, **[Shuffle Down]** button item.
   Common chart stack context menu items.

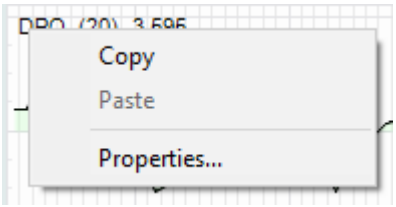
4. **[Copy Image]**, **[Copy]**, **[Paste** *object type*]
   button item.
   Common chart stack clipboard related menu items.

5. **[Modelling Trade…]** menu item
   Common chart stack trade modelling item.

6. **[Properties]** menu item
   Activates the DPO Chart Properties Grid.

6.5.9.2 DPO Label Context Menu

The following DPO Label Context Menu is accessed via a right mouse click over the DPO chart label.



1. **[Signaline]** menu item
   Toggles Signaline overlay on (checked) and off.

2. **[Copy]** menu item
   Copies DPO calculation and cosmetic parameters from label to clipboard.

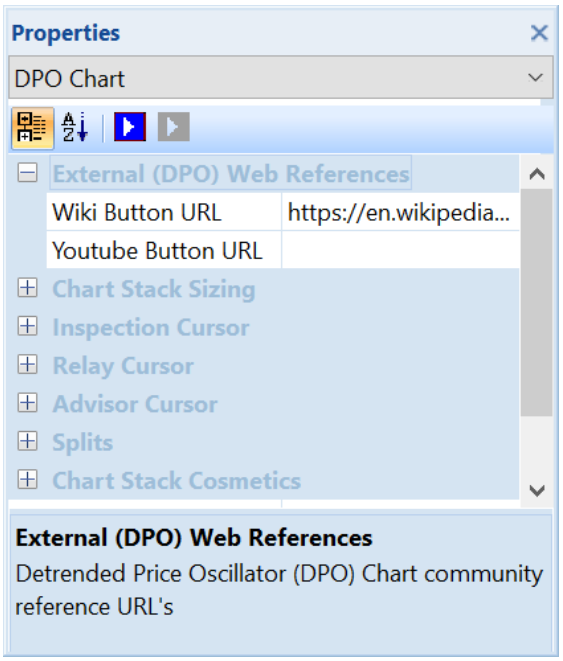
3. **[Paste** *object type*] menu item
   Pastes DPO calculation and cosmetic parameters from clipboard to label.

   Item is only enabled when clipboard contains content previously copied from DPO label.

4. **[Properties]** menu item
   Activates the DPO Label Properties Grid.

6.5.9.3 DPO Chart Properties Grid

The following DPO Chart Properties Grid is accessed via a right mouse click over the active chart area exclusive of prioritised objects such as labels, regression curves, mark-ups, drawing objects.



1. **[Wiki Button URL**] grid item.
   URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

3. **[Chart Stack Sizing]** grid item.
   Common Chart Stack sizing parameters.

4. **[Inspection Cursor]** grid item.
   Common Chart Stack inspection cursor parameters.

5. **[Replay Cursor]** grid item.
   Common Chart Stack replay cursor parameters.

6. **[Advisor Cursor]** grid item.
   Common Chart Stack advisor cursor parameters.

7. **[Splits Pen]** grid item.
   Common to all charts within this chart stack.

8. **[Chart Stack Cosmetics]** grid items.
   Common Chart Stack cosmetics parameters.

   Refer Common OHLCvs Chart Stack Properties Grid for further details.

6.5.9.4 DPO Label Properties Grid

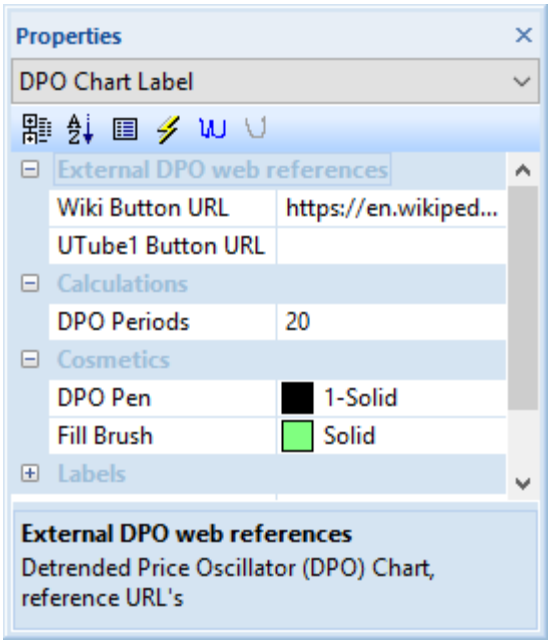
The following DPO Label Properties Grid is accessed via a left mouse click over the DPO chart label.

1. **[Wiki Button URL**]
   URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

3. **[DPO Periods]** grid item.
   Look back periods for Detrended Price Oscillator (DPO) calculation, usually 20.

4. **[DPO Pen]** grid item.
   Pen used to draw the Detrended Price Oscillator (DPO).



5. **[Fill Brush]** grid item.
   Brush used to fill regions above and below the DPO neutral or zero axis.

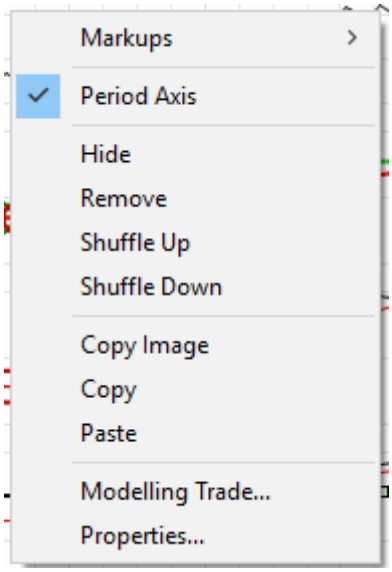
6. **[Labels]** grid items.
   Cosmetics common across all labels in this chart stack.

6.5.10 Elder Force Index (EFI)



6.5.10.1 EFI Chart Context Menu

The following EFI Chart Context Menu is accessed via a right mouse click over the active chart area exclusive of prioritised objects such as labels, regression curves, mark-ups, drawing objects.



1. **[Markups]** button item.
   Common chart stack context sub-menu items

2. **[Period Axis]** button item.
   Common chart stack context menu item.

3. **[Hide]**, **[Remove]**, **[Shuffle Up]**, **[Shuffle Down]** button item.
   Common chart stack context menu items.

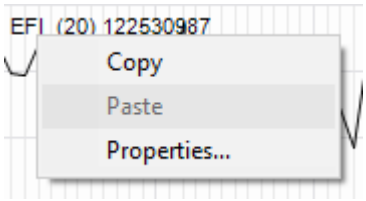
4. **[Copy Image]**, **[Copy]**, **[Paste** *object type***]** button item.
   Common chart stack clipboard related menu items.

5. **[Modelling Trade…]** menu item
   Common chart stack trade modelling item.

6. **[Properties]** menu item
   Activates the EFI Chart Properties Grid.

6.5.10.2 EFI Label Context Menu

The following EFI Label Context Menu is accessed via a right mouse click over the EFI chart label.



1. **[Copy]** menu item
   Copies EFI calculation and cosmetic parameters from label to clipboard.

2. **[Paste** *object type***]** menu item
   Pastes EFI calculation and cosmetic parameters from clipboard to label.

   Item is only enabled when clipboard contains content previously copied from EFI label.

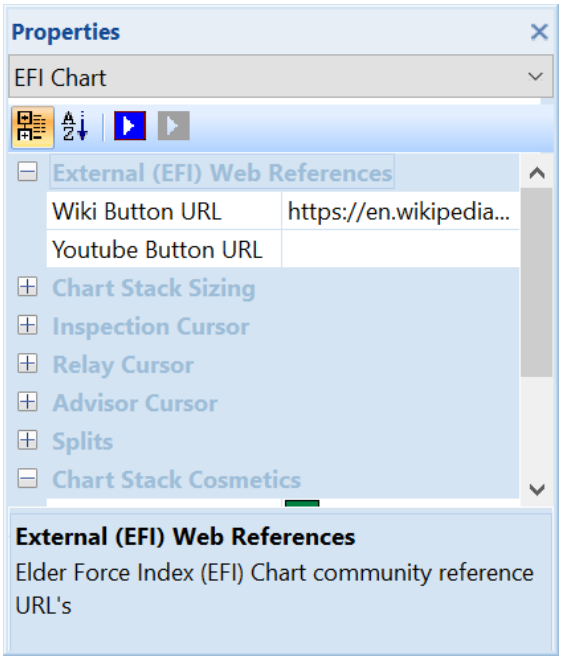
3. **[Properties]** menu item
   Activates the EFI Label Properties Grid.

6.5.10.3 EFI Chart Properties Grid

The following EFI Chart Properties Grid is accessed via a right mouse click over the active chart area exclusive of prioritised objects such as labels, regression curves, mark-ups, drawing objects.

1. **[Wiki Button URL**] grid item.
   URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.



3. **[Chart Stack Sizing]** grid item.
   Common Chart Stack sizing parameters.

4. **[Inspection Cursor]** grid item.
   Common Chart Stack inspection cursor parameters.

5. **[Replay Cursor]** grid item.
   Common Chart Stack replay cursor parameters.

6. **[Advisor Cursor]** grid item.
   Common Chart Stack advisor cursor parameters.

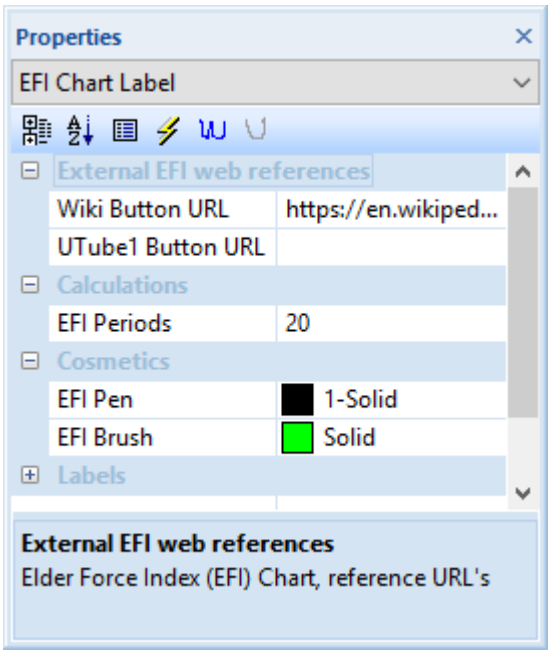
7. **[Splits Pen]** grid item.
   Common to all charts within this chart stack.

8. **[Chart Stack Cosmetics]** grid items.
   Common Chart Stack cosmetics parameters.

   Refer Common OHLCvs Chart Stack Properties Grid for further details.

6.5.10.4 EFI Label Properties Grid

The following EFI Label Properties Grid is accessed via a left mouse click over the EFI chart label.



1. **[Wiki Button URL**] grid item.
   URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

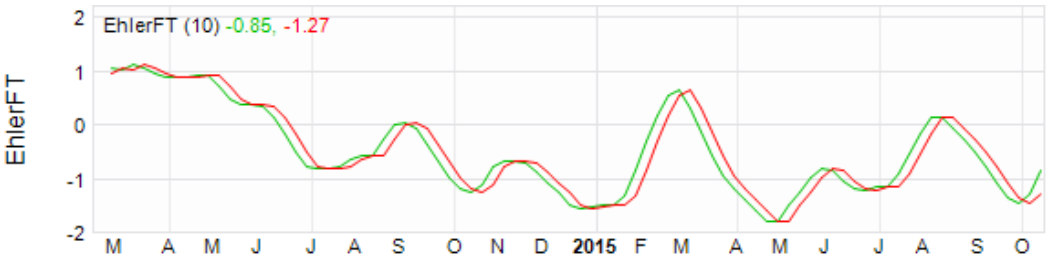
3. **[EFI Periods]** grid item.
   Number of volume bars or EFI periods, usually 20.

4. **[EFI Pen]** grid item.
   Pen used to draw the calculated Elder Force Index (EFI) line.

5. **[EFI Brush]** grid item.
   Brush used to fill the positive and negative regions.

6. **[Labels]** grid items.
   Cosmetics common across all labels in this chart stack.

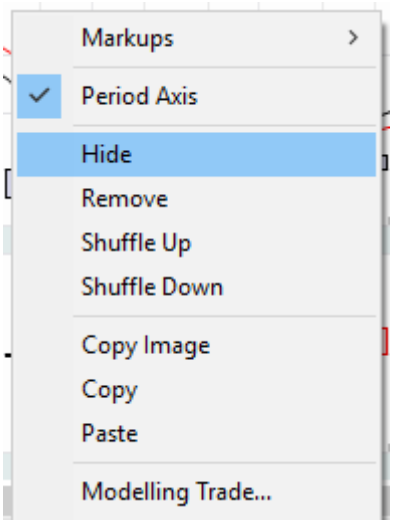
6.5.11 Ehlers Fisher Transform (EhlerFT)



Calculation details:

6.5.11.1 EhlerFT Chart Context Menu

The following EhlerFT Chart Context Menu is accessed via a right mouse click over the active chart area exclusive of prioritised objects such as labels, regression curves, mark-ups, drawing objects.



1. **[Markups]** menu item
   Common chart stack context sub-menu items

2. **[Period Axis]** button item.
   Common chart stack context menu item.

3. **[Hide]**, **[Remove]**, **[Shuffle Up]**, **[Shuffle Down]** menu items
   Common chart stack context menu items.

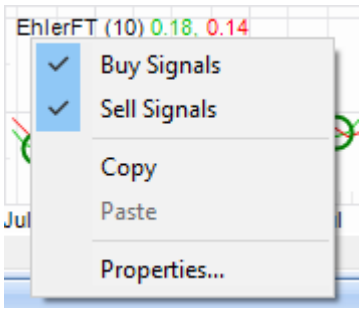
4. **[Copy Image]**, **[Copy]**, **[Paste** *object type***]** menu item
   Common chart stack clipboard related menu items.

5. **[Modelling Trade…]** menu item
   Common chart stack trade modelling item.

6. **[Properties]** menu item
   Activates the EhlerFT Chart Properties Grid.

6.5.11.2 EhlerFT Label Context Menu

The following EhlerFT Label Context Menu is accessed via a right mouse click over the EhlerFT chart label.



1. **[Buy Signals]** menu item
   Toggles the display of buy signals on (checked) and off.

   Buy signal is defined as when the signal lines passed from above the EhlerFT line to below the EhlerFT line.

2. **[Sell Signals]** menu item
   Toggles the display of sell signals on (checked) and off.

   Sell signal is defined as when the signal line passes from below the EhlerFT line to above the EhlerFT line.

3. **[Smoothing]** menu item
   Smooths the EhlerFT and associated Signal lines.

4. **[Copy]** menu item
   Copies EhlerFT calculation and cosmetic parameters from label to clipboard.

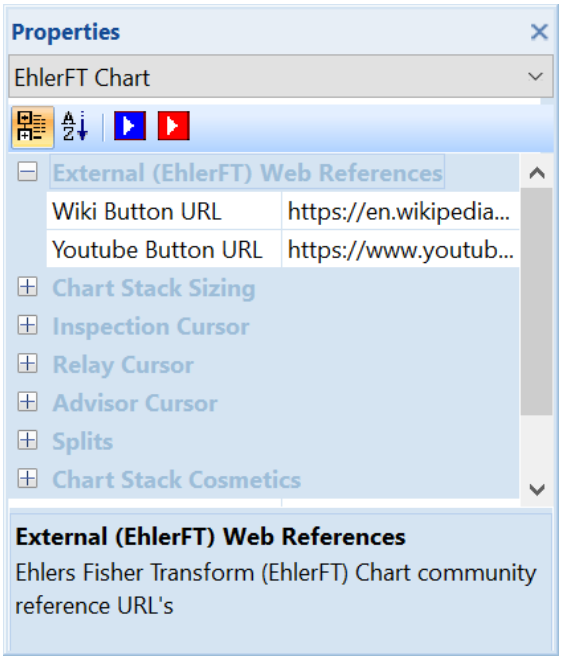
5. **[Paste** *object type*] menu item
   Pastes EhlerFT calculation and cosmetic parameters from clipboard to label.

   Item is only enabled when clipboard contains content previously copied from EhlerFT label.

6. **[Properties]** menu item
   Activates the EhlerFT Label Properties Grid.

6.5.11.3 EhlerFT Chart Properties Grid

The following EhlerFT Chart Properties Grid is activated via a left mouse click over the active chart area exclusive of prioritised objects such as labels, regression curves, mark-ups, drawing objects.



1. **[Wiki Button URL**] grid item.
   URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

3. **[Chart Stack Sizing]** grid item.
   Common Chart Stack sizing parameters.

4. **[Inspection Cursor]** grid item.
   Common Chart Stack inspection cursor parameters.

5. **[Replay Cursor]** grid item.
   Common Chart Stack replay cursor parameters.

6. **[Advisor Cursor]** grid item.
   Common Chart Stack advisor cursor parameters.

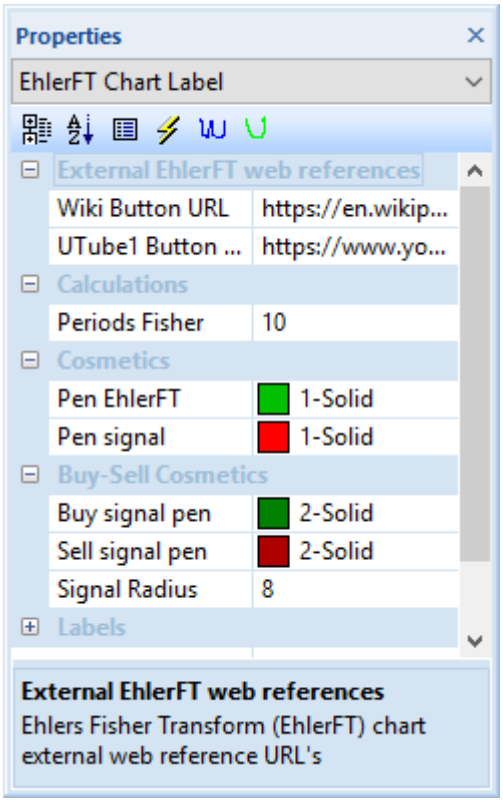
7. **[Splits Pen]** grid item.
   Common to all charts within this chart stack.

8. **[Chart Stack Cosmetics]** grid item.
   Common Chart Stack cosmetics parameters.

   Refer Common OHLCvs Chart Stack Properties Grid for further details.

6.5.11.4 EhlerFT Label Properties Grid

The following EhlerFT Label Properties Grid is accessed via a left mouse click over the EhlerFT chart label.



1. **[Wiki Button URL**] grid item.
   URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

3. **[Fisher Periods]** grid item.
   Periods used to calculate the Fisher Transform, usually 10.

4. **[Ehler Pen]** grid item.
   Pen used to draw the calculated EhlerFT line.

5. **[Signal Pen]** grid item.
   Pen used to draw the calculated Ehler Fisher Transform (EhlerFT) signal line.

6. **[Buy Signal Pen]** grid item.
   Pen that will be used to mark-up EhlerFT buy (X-over) signals.

7. **[Sell Signal Pen]** grid item.
   Pen that will be used to mark-up EhlerFT sell (X-over) signals.

8. **[Signal Radius]** grid item.
   Radius of drawn circular buy-sell signal image in pixels.

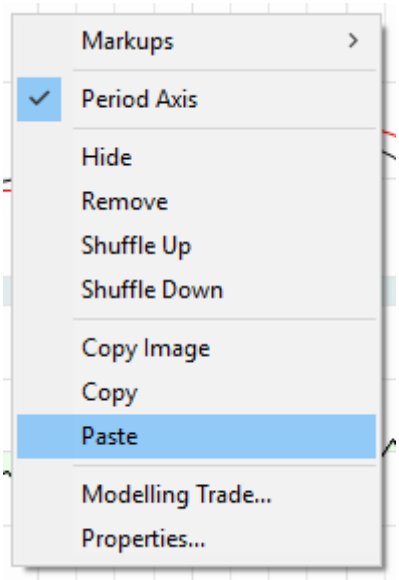
9. **[Labels]** grid items.
   Cosmetics common across all labels in this chart stack.

6.5.12 Pring's Know Sure Thing (KST)



6.5.12.1 KST Chart Context Menu

The following KST Chart Context Menu is accessed via a right mouse click over the active chart area exclusive of prioritised objects such as labels, regression curves, mark-ups, drawing objects.



1. **[Markups]** menu item
   Common chart stack context sub-menu items

2. **[Period Axis]** menu item
   Common chart stack context menu item.

3. **[Hide], [Remove], [Shuffle Up], [Shuffle Down]**
   Common chart stack context menu items.

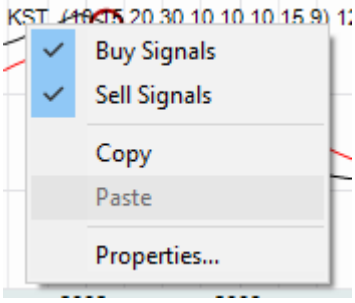
4. **[Copy Image], [Copy], [Paste** *object type***]** menu items
   Common chart stack clipboard related menu items.

5. **[Modelling Trade…]** menu item
   Common chart stack trade modelling item.

6. **[Properties]** menu item
   Activates the KST Chart Properties Grid.

6.5.12.2 KST Label Context Menu

The following KST Label Context Menu is accessed via a right mouse click over the KST chart label.



1. **[Buy Signals]** menu item
   Toggles the display of buy signals on (checked) and off.

   Buy signal is defined as when the signal lines passed from above the KST line to below the KST line.

2. **[Sell Signals]** menu item
   Toggles the display of sell signals on (checked) and off.

Sell signal is defined as when the signal line passes from below the KST line to above the KST line.

3. **[Copy]** menu item
   Copies KST calculation and cosmetic parameters from label to clipboard.

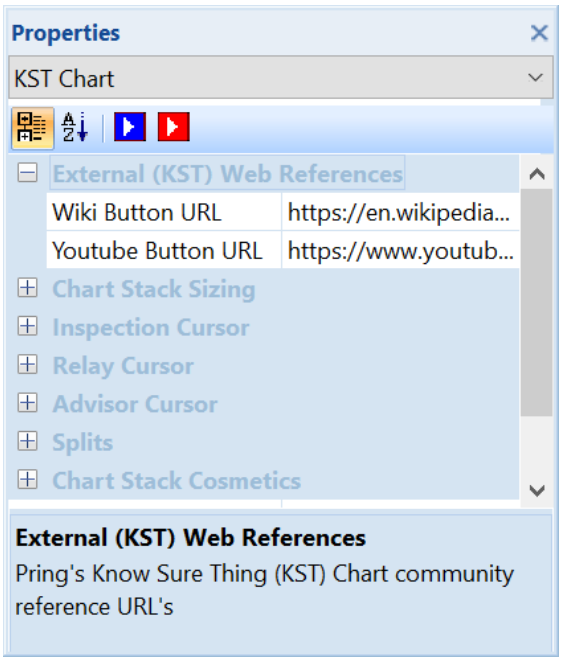
4. **[Paste** *object type***]** menu item
   Pastes KST calculation and cosmetic parameters from clipboard to label.

   Item is only enabled when clipboard contains content previously copied from KST label.

5. **[Properties]** menu item
   Activates the KST Label Properties Grid.

6.5.12.3 KST Chart Properties Grid

The following KST Chart Properties Grid is activated via a left mouse click over the active chart area exclusive of prioritised objects such as labels, regression curves, mark-ups, drawing objects.



1. **[Wiki Button URL**] grid item.
   URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

3. **[Chart Stack Sizing]** grid item.
   Common Chart Stack sizing parameters.

4. **[Inspection Cursor]** grid item.
   Common Chart Stack inspection cursor parameters.

5. **[Replay Cursor]** grid item.
   Common Chart Stack replay cursor parameters.

6. **[Advisor Cursor]** grid item.
   Common Chart Stack advisor cursor parameters.

7. **[Splits Pen]** grid item.
   Common to all charts within this chart stack.

8. **[Chart Stack Cosmetics]** grid items.
   Common Chart Stack cosmetics parameters.

Refer Common OHLCvs Chart Stack Properties Grid for further details.

6.5.12.4 KST Label Properties Grid

The following KST Label Properties Grid is accessed via a left mouse click over the KST chart label.

1. **[Wiki Button URL**] grid item.
   URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

3. **[Periods ROC1, 2, 3, 4]** grid item.
   Look back periods for Rate of Change (ROC1,2,3,4) calculation, usually 10, 15, 20, 30.

4. **[Periods SMA1, 2, 3, 4]** grid item.
   Periods used for Rate of Change ROC1, Simple Moving Average (SMA1,2,3,4) calculation, usually 10, 10, 10, 15.

5. **[Periods Signal]** grid item.
   Periods used for signal line, Simple Moving Average calculation, usually 9.

6. **[Pen KST]** grid item.
   Pen used to draw the Know Sure Thing (KST) line.

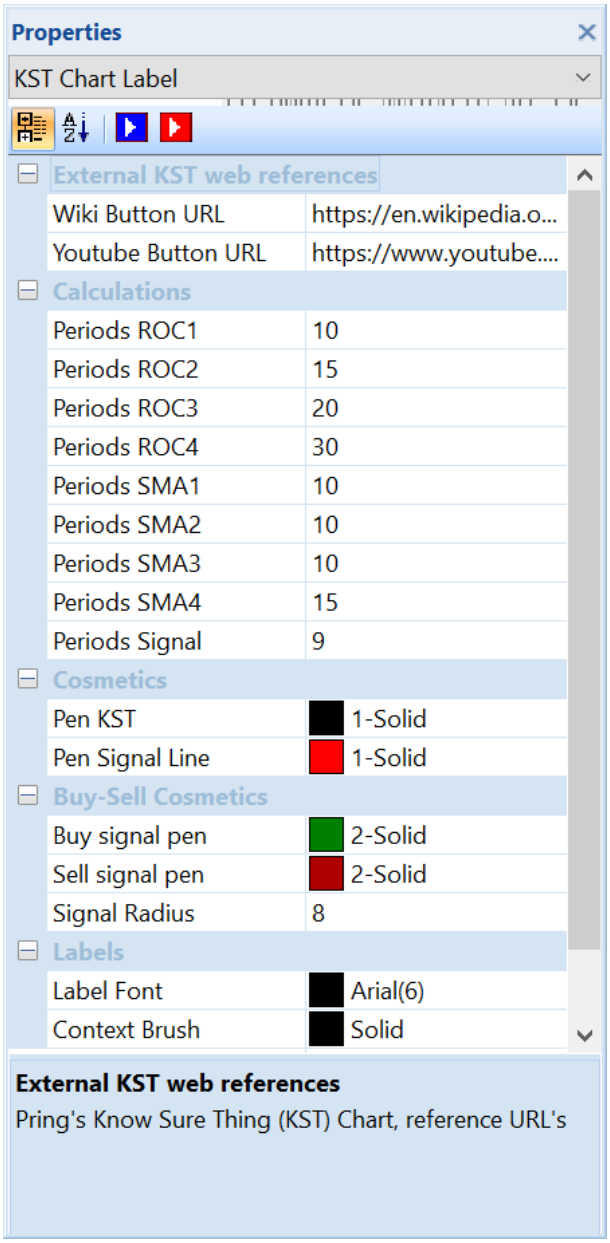
7. **[Pen Signal Line]** grid item.
   Pen used to draw the KST signal line.

8. **[Buy Signal Pen]** grid item.
   Pen that will be used to mark-up KST buy (X-over) signals.

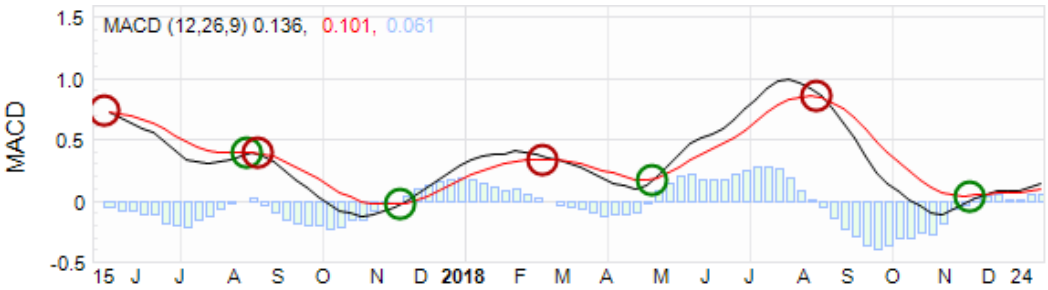
9. **[Sell Signal Pen]** grid item.
   Pen that will be used to mark-up KST sell (X-over) signals.

10. **[Signal Radius]** grid item.
    Radius of drawn circular buy-sell signal image in pixels.

11. **[Labels]** grid items.
    Cosmetics common across all labels in this chart stack.



6.5.13 Moving Average Cumulative Distribution (MACD)



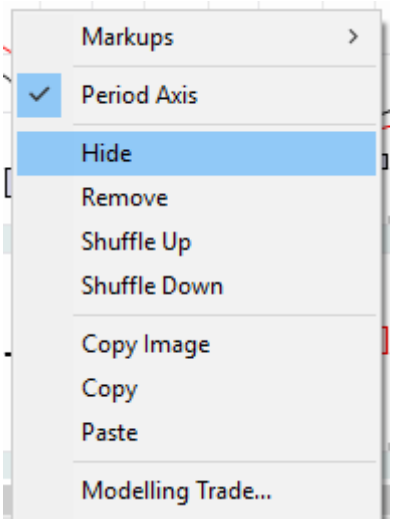
Calculation details:
MACD Line = (12Period EMA - 26Period EMA)

Signal Line = 9Period EMA of MACD Line

MACD Histogram = MACD Line - Signal Line

6.5.13.1 MACD Chart Context Menu

The following MACD Chart Context Menu is accessed via a right mouse click over the active chart area exclusive of prioritised objects such as labels, regression curves, mark-ups, drawing objects.



1. **[Markups]** menu item
   Common chart stack context sub-menu items

2. **[Period Axis]** button item.
   Common chart stack context menu item.

3. **[Hide]**, **[Remove]**, **[Shuffle Up]**, **[Shuffle Down]** menu items
   Common chart stack context menu items.

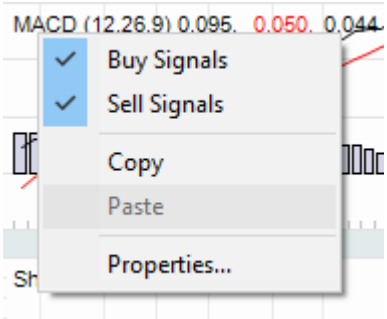
4. **[Copy Image]**, **[Copy]**, **[Paste** *object type***]** menu item
   Common chart stack clipboard related menu items.

5. **[Modelling Trade…]** menu item
   Common chart stack trade modelling item.

6. **[Properties]** menu item
   Activates the MACD Chart Properties Grid.

6.5.13.2 MACD Label Context Menu

The following MACD Label Context Menu is accessed via a right mouse click over the MACD chart label.



1. **[Buy Signals]** menu item
   Toggles the display of buy signals on (checked) and off.

   Buy signal is defined as when the signal lines passed from above the MACD line to below the MACD line.

2. **[Sell Signals]** menu item
   Toggles the display of sell signals on (checked) and off.

   Sell signal is defined as when the signal line passes from below the MACD line to above the MACD line.

3. **[Smoothing]** menu item
   Smooths the MACD and associated Signal lines.

4. **[Copy]** menu item
   Copies MACD calculation and cosmetic parameters from label to clipboard.

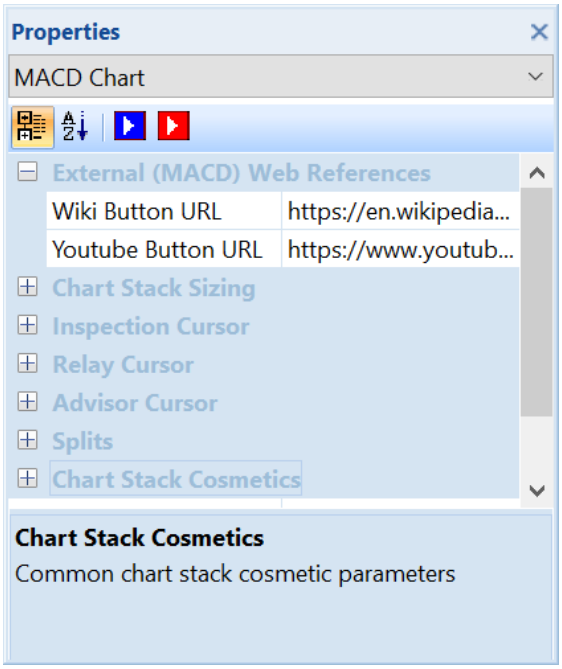
5. **[Paste** *object type***]** menu item
Pastes MACD calculation and cosmetic parameters from clipboard to label.

   Item is only enabled when clipboard contains content previously copied from MACD label.

6. **[Properties]** menu item
Activates the MACD Label Properties Grid.

6.5.13.3 MACD Chart Properties Grid

The following MACD Chart Properties Grid is activated via a left mouse click over the active chart area exclusive of prioritised objects such as labels, regression curves, mark-ups, drawing objects.



1. **[Wiki Button URL**] grid item.
URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
URL to be activated upon **{YouTube}** button press.

3. **[Chart Stack Sizing]** grid item.
Common Chart Stack sizing parameters.

4. **[Inspection Cursor]** grid item.
Common Chart Stack inspection cursor parameters.

5. **[Replay Cursor]** grid item.
Common Chart Stack replay cursor parameters.

6. **[Advisor Cursor]** grid item.
Common Chart Stack advisor cursor parameters.

7. **[Splits Pen]** grid item.
Common to all charts within this chart stack.

8. **[Chart Stack Cosmetics]** grid items.
Common Chart Stack cosmetics parameters.

   Refer Common OHLCvs Chart Stack Properties Grid for further details.

6.5.13.4 MACD Label Properties Grid

The following MACD Label Properties Grid is accessed via a left mouse click over the MACD chart label.

1. **[Wiki Button URL**] grid item.
   URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

3. **[EMA Periods Low]** grid item.
   Low exponential moving average periods, usually 12.

4. **[EMA Periods High]** grid item.
   High exponential moving average periods, usually 26.

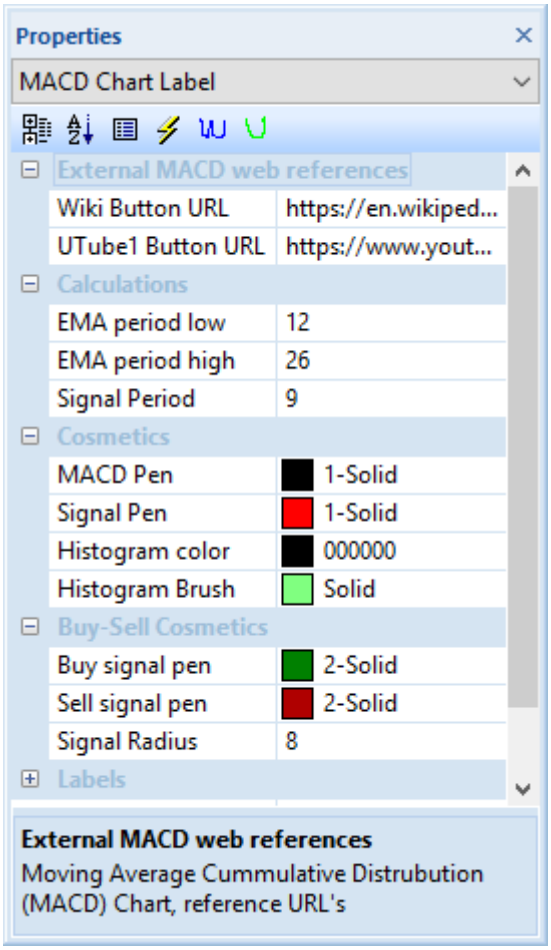
5. **[Signal Periods]** grid item.
   MACD signal periods, usually 9.

6. **[MACD Pen]** grid item.
   Pen used to draw the MACD series line.

7. **[Signal Pen]** grid item.
   Pen used to draw the Signal series line.

8. **[Histogram color]** grid item.
   Color used to draw the MACD series histogram bars.

9. **[Histogram Brush]** grid item.
   Brush used to fill the MACD series histogram bars.



10. **[Buy Signal Pen]** grid item.
    Pen that will be used to mark-up MACD buy (X-over) signals.

11. **[Sell Signal Pen]** grid item.
    Pen that will be used to mark-up MACD sell (X-over) signals.

12. **[Signal Radius]** grid item.
    Radius of drawn circular buy-sell signal image in pixels.

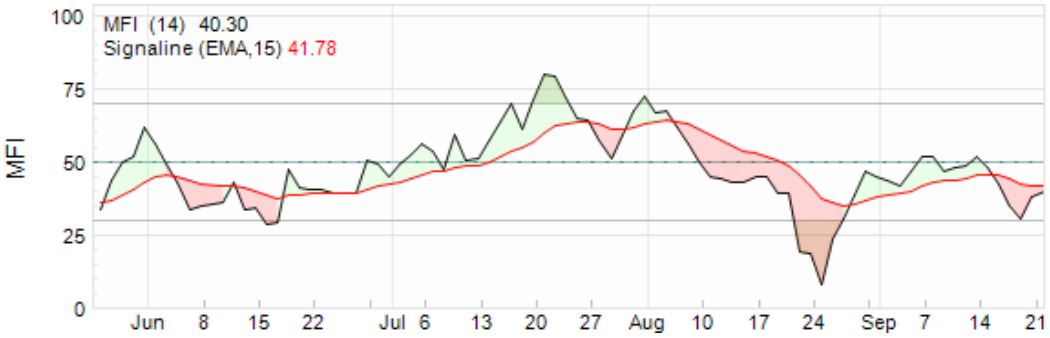
13. **[Smoothing]** grid item.
    Toggles MACD Signal line smoothing on and off

14. **[Alpha]** grid item.
    Exponential smoothing alpha value 0.01(minimal), 1.0(maximum).

15. **[Labels]** grid items.
    Cosmetics common across all labels in this chart stack.

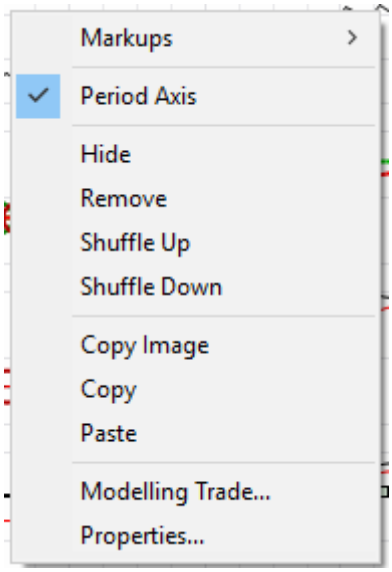
6.5.14 Markups

6.5.15 Money Flow Index (MFI)



6.5.15.1 MFI Chart Context Menu

The following MFI Chart Context Menu is accessed via a right mouse click over the active chart area exclusive of prioritised objects such as labels, regression curves, mark-ups, drawing objects.



1. **[Markups]** button item.
   Common chart stack context sub-menu items

2. **[Period Axis]** button item.
   Common chart stack context menu item.

3. **[Hide]**, **[Remove]**, **[Shuffle Up]**, **[Shuffle Down]** button items.
   Common chart stack context menu items.

4. **[Copy Image]**, **[Copy]**, **[Paste** *object type*] button items.
   Common chart stack clipboard related menu items.

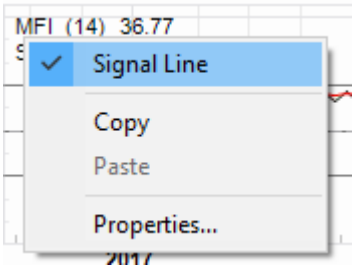
5. **[Modelling Trade…]** menu item
   Common chart stack trade modelling item.

6. **[Properties]** menu item
   Activates the MFI Chart Properties Grid.

6.5.15.2 MFI Label Context Menu

The following MFI Label Context Menu is accessed via a right mouse click over the MFI chart label.

1. **[Signaline]** menu item
   Toggles Signaline overlay on (checked) and off.



2. **[Copy]** menu item
   Copies MFI calculation and cosmetic parameters from label to clipboard.

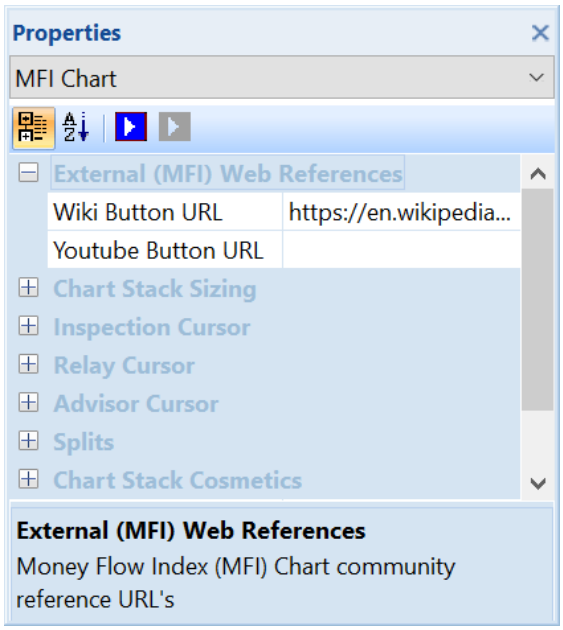
3. **[Paste** *object type***]** menu item
   Pastes MFI calculation and cosmetic parameters from clipboard to label.

   Item is only enabled when clipboard contains content previously copied from MFI label.

4. **[Properties]** menu item
   Activates the MFI Label Properties Grid.

6.5.15.3 MFI Chart Properties Grid

The following MFI Chart Properties Grid is activated via a left mouse click over the active chart area exclusive of prioritised objects such as labels, regression curves, mark-ups, drawing objects.



1. **[Wiki Button URL**] grid item.
   URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

3. **[Chart Stack Sizing]** grid item.
   Common Chart Stack sizing parameters.

4. **[Inspection Cursor]** grid item.
   Common Chart Stack inspection cursor parameters.

5. **[Replay Cursor]** grid item.
   Common Chart Stack replay cursor parameters.

6. **[Advisor Cursor]** grid item.
   Common Chart Stack advisor cursor parameters.

7. **[Splits Pen]** grid item.
   Common to all charts within this chart stack.

8. **[Chart Stack Cosmetics]** grid items.
   Common Chart Stack cosmetics parameters.

Refer Common OHLCvs Chart Stack Properties Grid for further details.

6.5.15.4 MFI Label Properties Grid

The following MFI Label Properties Grid is accessed via a left mouse click over the MFI chart label.

1. **[Wiki Button URL**] grid item.
   URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

3. **[MFI Periods]** grid item.
   Money Flow Index (MFI) calculation period, usually 14. Range (7 - 21).

4. **[MFI Pen]** grid item.
   Pen used to draw the calculated MFI series line.

5. **[Medium Pen]** grid item.
   Pen used to draw the Medium (0) MFI bar.

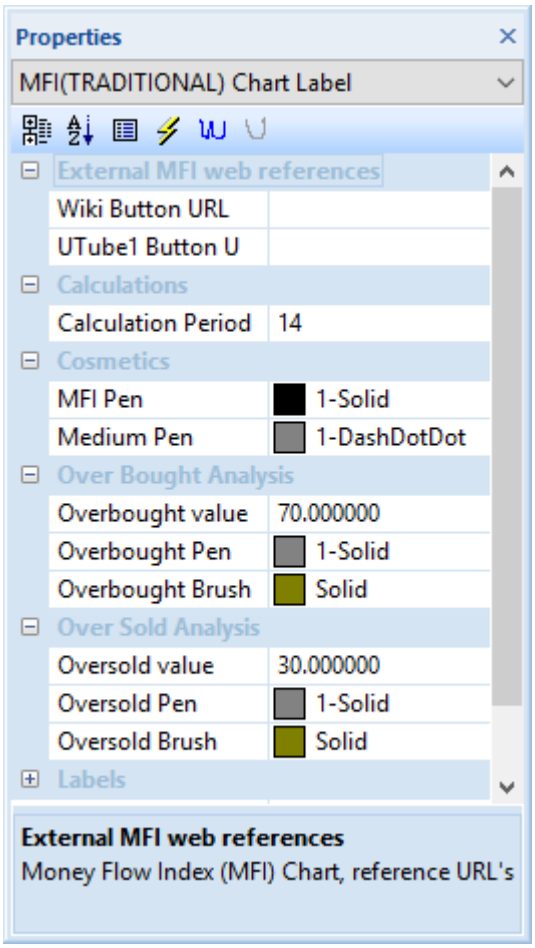
6. **[Overbought value]** grid item.
   Money Flow Index (MFI) Overbought analysis settings.

7. **[Overbought Pen]** grid item.
   Pen used to draw the Overbought bar.

8. **[Overbought Brush]** grid item.
   Brush used to fill MFI regions above the overbought bar.

9. **[Oversold value]** grid item.
   Arbitrary over sold value, usual values (10,20,30).

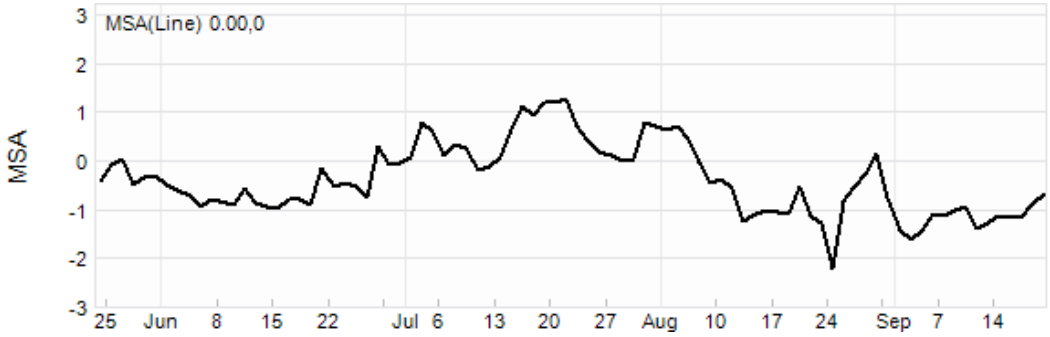
10. **[Oversold Pen]** grid item.
    Pen used to draw the oversold bar.



11. **[Oversold Brush]** grid item.
    Brush used to fill MFI regions below the over sold bar.

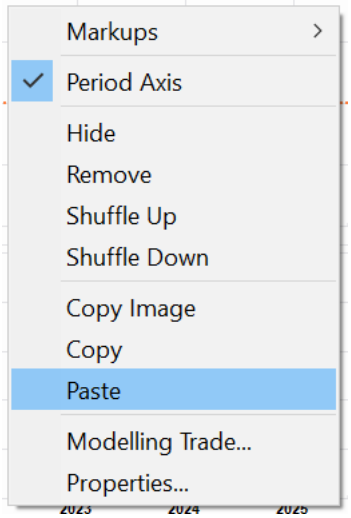
12. **[Labels]** grid items.
    Cosmetics common across all labels in this chart stack.

6.5.16 Momentum Structural Analysis (MSA)



6.5.16.1 MSA Chart Context Menu

The following MSA Chart Context Menu is accessed via a right mouse click over the active chart area exclusive of prioritised objects such as labels, regression curves, mark-ups, drawing objects.



1. **[Markups]** button item.
   Common chart stack context sub-menu items

2. **[Period Axis]** button item.
   Common chart stack context menu item.

3. **[Hide]**, **[Remove]**, **[Shuffle Up]**, **[Shuffle Down]** button items.
   Common chart stack context menu items.

4. **[Copy Image]**, **[Copy]**, **[Paste** *object type*]
   button items.
   Common chart stack clipboard related menu items.

5. **[Modelling Trade…]** menu item
   Common chart stack trade modelling item.

6. **[Properties]** menu item
   Activates the MSA Chart Properties Grid.

6.5.16.2 MSA Label Context Menu

The following MSA Label Context Menu is accessed via a right mouse click over the MSA chart label.

1. **[Signaline]** menu item
   Toggles Signaline overlay on (checked) and off.

2. **[Simple Moving Average]** menu item
   Use Simple Moving Averages for MSA calculations.

3. **[Exponential Moving Average]** menu item
   Use Exponential Moving Averages for MSA calculations.

4. **[Price offsets]** menu item
   Use Price Offsets in MSA calculations.

5. **[Percent offsets]** menu item
   Use Percent Offsets in MSA calculations.

6. **[Hi Lo]** menu item.
   Select (checked) HI-LO display of the calculated MSA data set.

7. **[Open-Hi-Lo-Close]** menu item.
   Select (checked) OPEN-HI-LO-CLOSED display of the calculated data set.

8. **[Candles]** menu item.
   Select (checked) traditional candles display of the calculated MSA data set.

9. **[Heikin-Ashi]** menu item.
   Select (checked) Heikin-Ashi display of the calculated MSA data set.

10. **[Line]** menu item.
    Select (checked) line display of the calculated MSA data set.

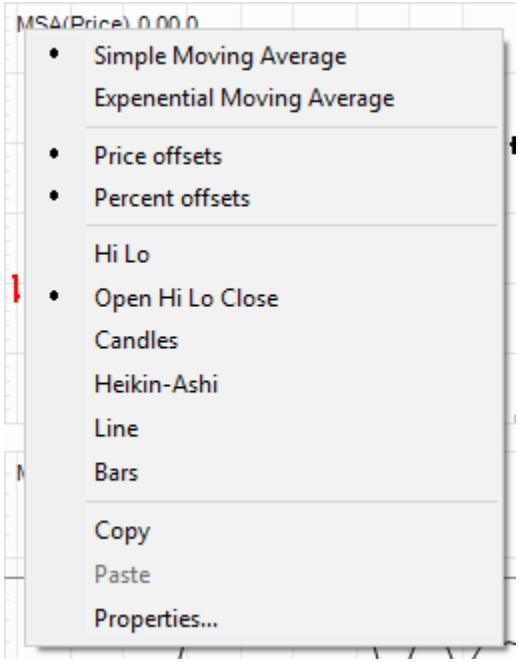
11. **[Bars]** menu item.
    Select (checked) Bars display of the calculated MSA data set.

12. **[Copy]** menu item
    Copies MSA calculation and cosmetic parameters from label to clipboard.

13. **[Paste** *object type***]** menu item
    Pastes MSA calculation and cosmetic parameters from clipboard to label.

    Item is only enabled when clipboard contains content previously copied from MSA label.

14. **[Properties]** menu item
    Activates the MSA Label Properties Grid.



6.5.16.3 MSA Chart Properties Grid

The following MSA Chart Properties Grid is activated via a left mouse click over the active chart area exclusive of prioritised objects such as labels, regression curves, mark-ups, drawing objects.

1. **[Wiki Button URL**] grid item.
   URL to be activated upon **{Wiki}** button press.

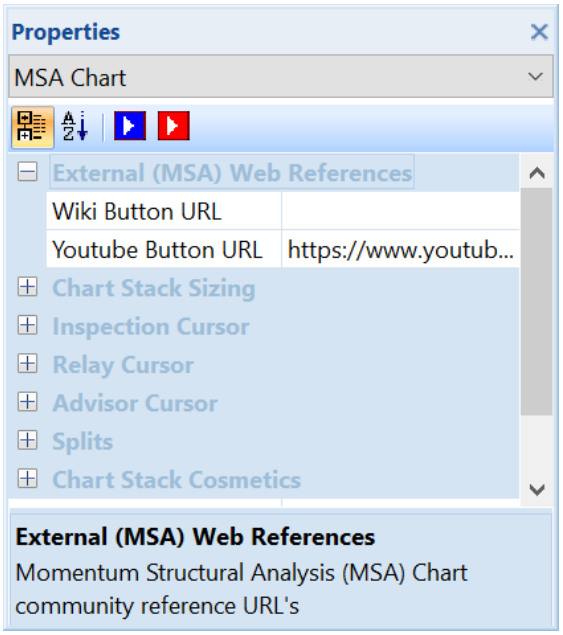
2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

3. **[Chart Stack Sizing]** grid item.
   Common Chart Stack sizing parameters.

4. **[Inspection Cursor]** grid item.
   Common Chart Stack inspection cursor parameters.

5. **[Replay Cursor]** grid item.
   Common Chart Stack replay cursor parameters.

6. **[Advisor Cursor]** grid item.
   Common Chart Stack advisor cursor parameters.



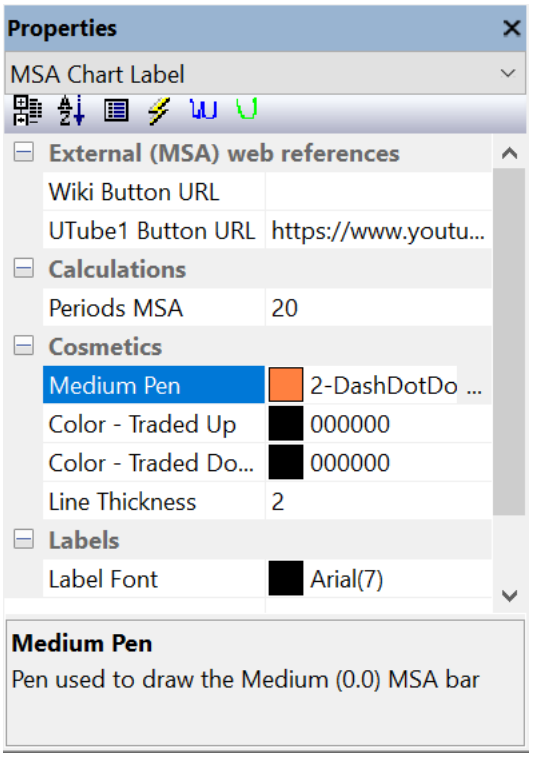
7. **[Splits Pen]** grid item.
   Common to all charts within this chart stack.

8. **[Chart Stack Cosmetics]** grid items.
   Common Chart Stack cosmetics parameters.

   Refer Common OHLCvs Chart Stack Properties Grid for further details.

6.5.16.4 MSA Label Properties Grid

The following MSA Label Properties Grid is accessed via a left mouse click over the MSA chart label.



1. **[Wiki Button URL**] grid item.
   URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

3. **[Periods MSA]** grid item.
   Number periods used in the MSA calculations.

4. **[Medium Pen]** grid item.
   Pen used to draw the Medium (0.0) MSA bar.

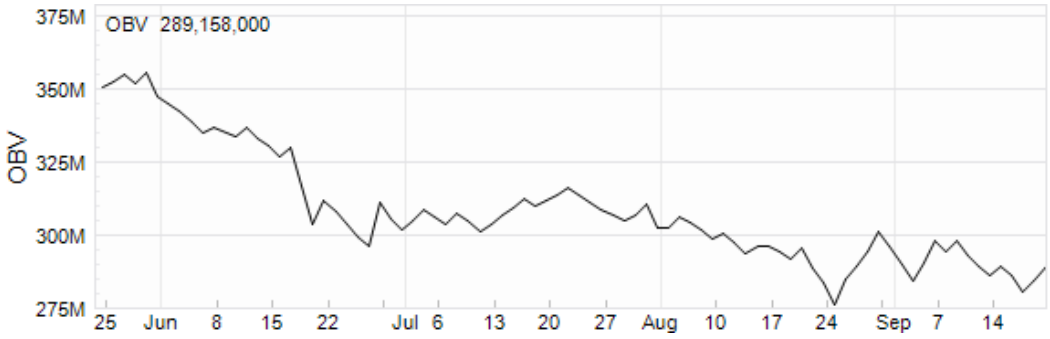
5. **[Color – Traded Up]** grid item.
   Color used for MSA traded up line.

6. **[Color – Traded Down]** grid item.
   Color used for MSA traded down line.

7. **[Line Thickness]** grid item.
   Pen thickness used for drawing lines.

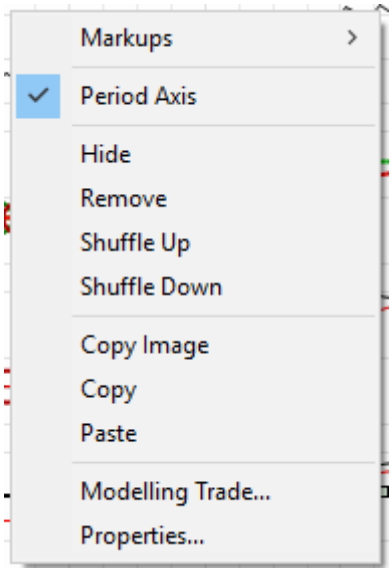
8. **[Labels]** grid items.
   Cosmetics common across all labels in this chart stack.

6.5.17 On Balance Volume (OBV)



6.5.17.1 OBV Chart Context Menu

The following OBV Chart Context Menu is accessed via a right mouse click over the active chart area exclusive of prioritised objects such as labels, regression curves, mark-ups, drawing objects.



1. **[Markups]** button item.
   Common chart stack context sub-menu items

2. **[Period Axis]**
   Common chart stack context menu item.

3. **[Hide]**, **[Remove]**, **[Shuffle Up]**, **[Shuffle Down]** button items.
   Common chart stack context menu items.

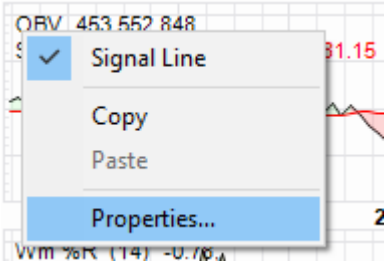
4. **[Copy Image]**, **[Copy]**, **[Paste** *object type***]** button items.
   Common chart stack clipboard related menu items.

5. **[Modelling Trade…]** menu item
   Common chart stack trade modelling item.

6. **[Properties]** menu item
   Activates the OBV Chart Properties Grid.

6.5.17.2 OBV Label Context Menu

The following OBV Label Context Menu is accessed via a right mouse click over the OBV chart label.



1. **[Signaline]** menu item
   Toggles Signaline overlay on (checked) and off.

2. **[Copy]** menu item
   Copies OBV calculation and cosmetic parameters from label to clipboard.

3. **[Paste** *object type***]** menu item
   Pastes OBV calculation and cosmetic parameters from clipboard to label.

   Item is only enabled when clipboard contains content previously copied from OBV label.

4. **[Properties]** menu item
   Activates the OBV Label Properties Grid.

6.5.17.3 OBV Chart Properties Grid

The following OBV Chart Properties Grid is activated via a left mouse click over the active chart area exclusive of prioritised objects such as labels, regression curves, mark-ups, drawing objects.

1. **[Wiki Button URL**] grid item.
   URL to be activated upon **{Wiki}** button press.

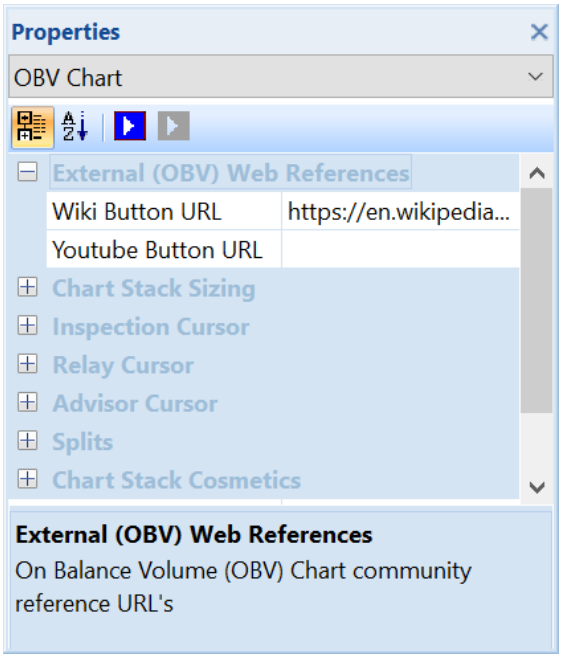
2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

3. **[Chart Stack Sizing]** grid item.
   Common Chart Stack sizing parameters.

4. **[Inspection Cursor]** grid item.
   Common Chart Stack inspection cursor parameters.

5. **[Replay Cursor]** grid item.
   Common Chart Stack replay cursor parameters.

6. **[Advisor Cursor]** grid item.
   Common Chart Stack advisor cursor parameters.



7. **[Splits Pen]** grid item.
   Common to all charts within this chart stack.

8. **[Chart Stack Cosmetics]** grid items.
   Common Chart Stack cosmetics parameters.

   Refer Common OHLCvs Chart Stack Properties Grid for further details.

6.5.17.4 OBV Label Properties Grid

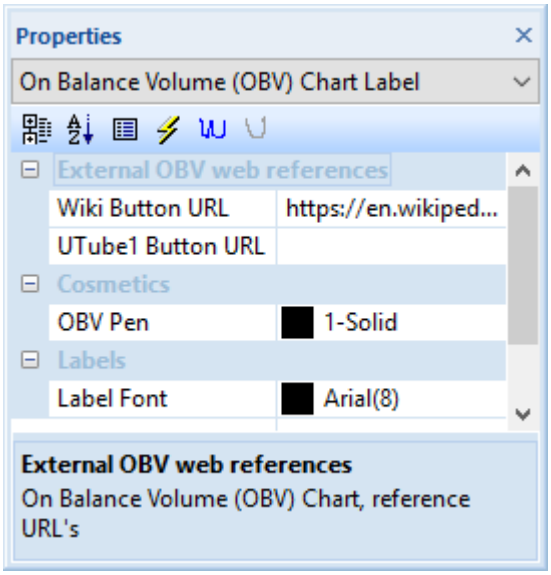
The following OBV Label Properties Grid is accessed via a left mouse click over the OBV chart label.

1. **[Wiki Button URL**] grid item.
   URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

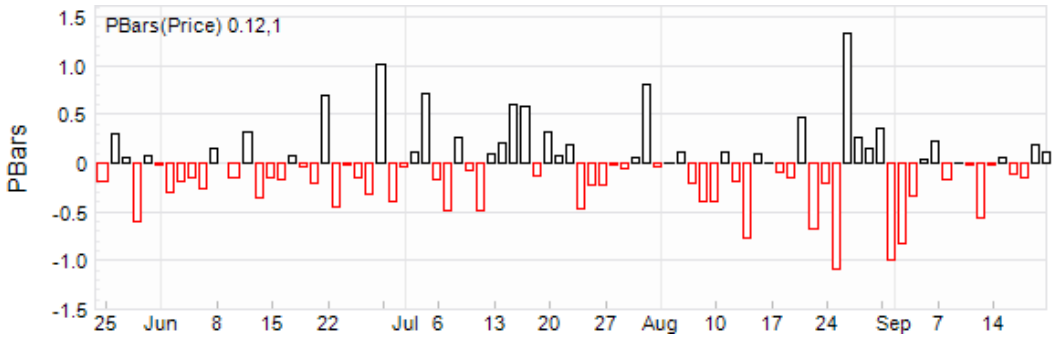
3. **[OBV Pen]** grid item.
   Pen used to draw the calculated OBV series data.

4. **[Labels]** grid items.
   Cosmetics common across all



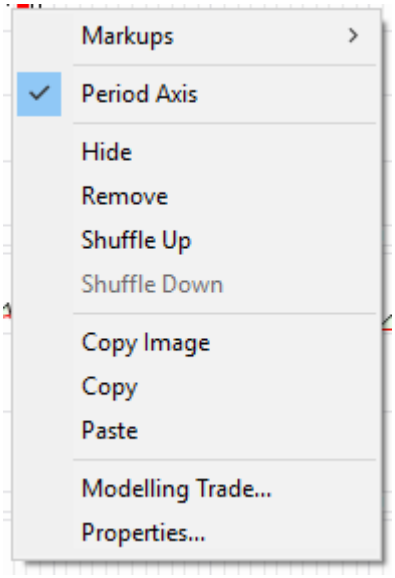
labels in this chart stack.

6.5.18 Price Bars (PBars)



6.5.18.1 Price Bars Chart Context Menu

The following Price Bars Chart Context Menu is accessed via a right mouse click over the active chart area exclusive of prioritised objects such as labels, regression curves, mark-ups, drawing objects.



1. **[Markups]** menu item
   Common chart stack context sub-menu items

2. **[Period Axis]** menu item
   Common chart stack context menu item.

3. **[Hide]**, **[Remove]**, **[Shuffle Up]**, **[Shuffle Down]** menu items.
   Common chart stack context menu items.

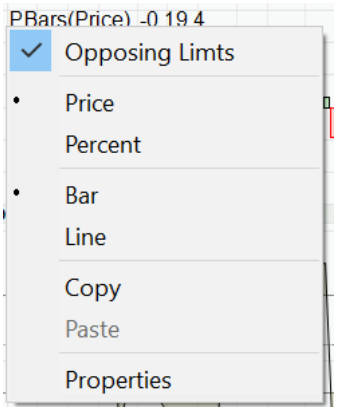
4. **[Copy Image]**, **[Copy]**, **[Paste** *object type*]
   menu items.
   Common chart stack clipboard related menu items.

5. **[Modelling Trade…]** menu item.
   Common chart stack trade modelling item.

6. **[Properties]** menu item
   Activates the Price Bars Chart Properties Grid.

6.5.18.2 Price Bars Label Context Menu

The following PBars Label Context Menu is accessed via a right mouse click over the PBars chart label.



1. [Price] menu item
   Use raw price when calculating difference for bars.

2. [Percent]
   Use percent price when calculating difference for bars.

3. [Bar] menu item.
   Selects adjacent price difference bars display mode.

4. [Opposing Bars] menu item.
   Selects opposing price difference bars display mode.

5. [Line] menu item.
   Selects line joining adjacent price difference display mode.

6. **[Copy]** menu item
   Copies PBars calculation and cosmetic parameters from label to clipboard.

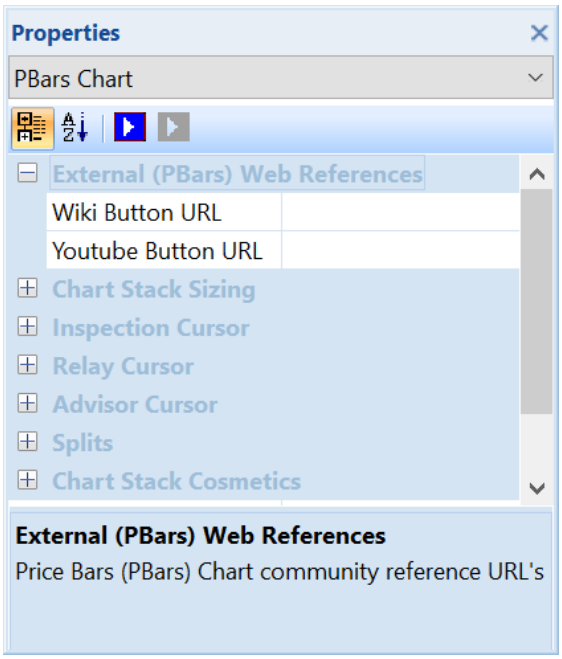
7. **[Paste** *object type***]** menu item
   Pastes Price Bars calculation and cosmetic parameters from clipboard to label.

   Item is only enabled when clipboard contains content previously copied from Price Bars label.

8. **[Properties]** menu item
   Activates the Price Bars Label Properties Grid.

6.5.18.3 Price Bars Chart Properties Grid

The following PBars Chart Properties Grid is activated via a left mouse click over the active chart area exclusive of prioritised objects such as labels, regression curves, mark-ups, drawing objects.



1. **[Wiki Button URL**] grid item.
   URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

3. **[Chart Stack Sizing]** grid item.
   Common Chart Stack sizing parameters.

4. **[Inspection Cursor]** grid item.
   Common Chart Stack inspection cursor parameters.

5. **[Replay Cursor]** grid item.
   Common Chart Stack replay cursor parameters.

6. **[Advisor Cursor]** grid item.
   Common Chart Stack advisor cursor parameters.

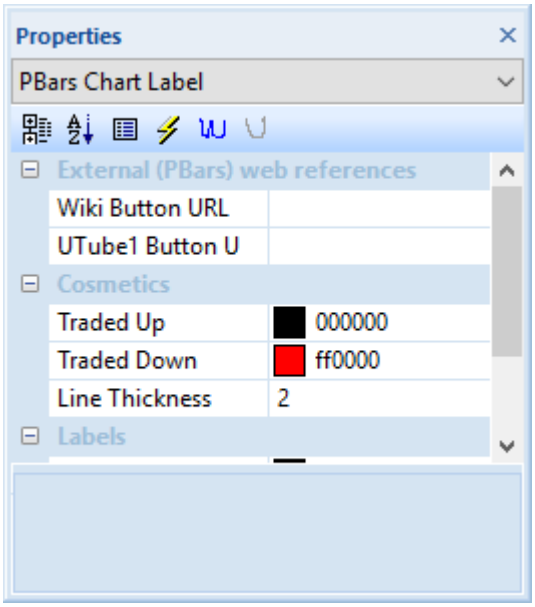
7. **[Splits Pen]** grid item.
   Common to all charts within this chart stack.

8. **[Chart Stack Cosmetics]** grid items.
   Common Chart Stack cosmetics parameters.

   Refer Common OHLCvs Chart Stack Properties Grid for further details.

6.5.18.4 Price Bars Label Properties Grid

The following PBars Label Properties Grid is accessed via a left mouse click over the PBars chart label.



1. **[Wiki Button URL**] grid item.
   URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

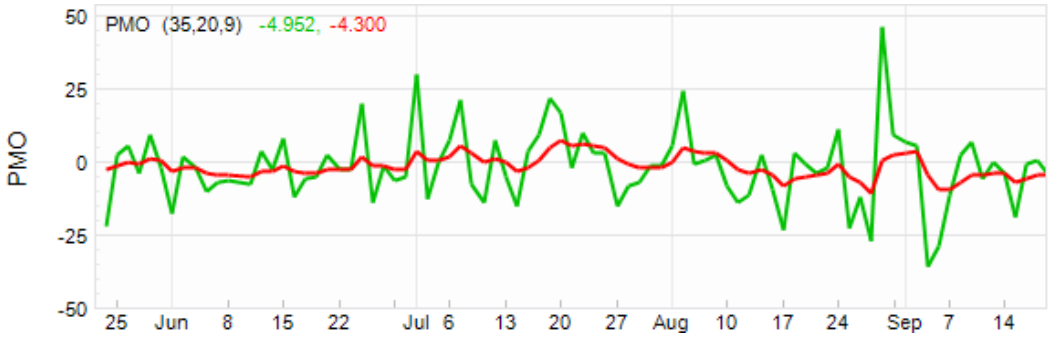
3. **[Color Traded Up]** grid item.
   Color used to annotate close greater than open data sets.

4. **[Color Traded Down]** grid item.
   Color used to annotate close less than open data sets.

5. **[Line Thickness]** grid item.
   Line thickness in pixels (1-12).

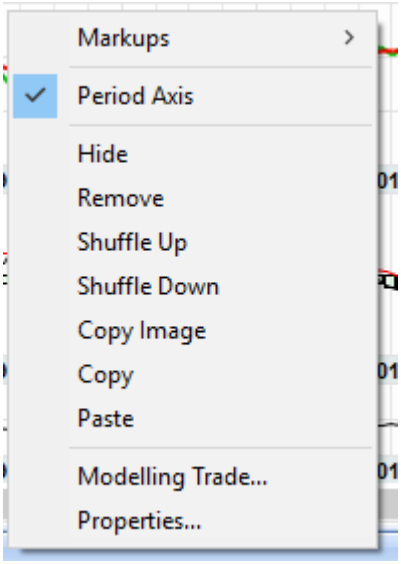
6. **[Labels]** grid item.
   Cosmetics common across all labels in this chart stack.

6.5.19 Price Momentum Oscillator (PMO)



6.5.19.1 PMO Chart Context Menu

The following PMO Chart Context Menu is accessed via a right mouse click over the active chart area exclusive of prioritised objects such as labels, regression curves, mark-ups, drawing objects.



1. **[Markups]** button item.
   Common chart stack context sub-menu items

2. **[Period Axis]**
   Common chart stack context menu item.

3. **[Hide]**, **[Remove]**, **[Shuffle Up]**, **[Shuffle Down]** button items.
   Common chart stack context menu items.

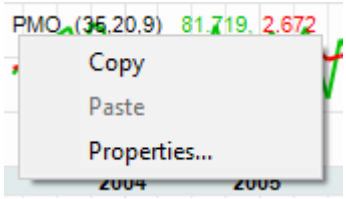
4. **[Copy Image]**, **[Copy]**, **[Paste** *object type***]** button items.
   Common chart stack clipboard related menu items.

5. **[Modelling Trade…]** menu item
   Common chart stack trade modelling item.

6. **[Properties]** menu item
   Activates the PMO Chart Properties Grid.

6.5.19.2 PMO Label Context Menu

The following PMO Label Context Menu is accessed via a right mouse click over the PMO Chart Label.



1. **[Copy]** menu item
   Copies PMO calculation and cosmetic parameters from label to clipboard.

2. **[Paste** *object type***]** menu item
   Pastes PMO calculation and cosmetic parameters from clipboard to label.

   Item is only enabled when clipboard contains content previously copied from

PMO label.

3. **[Properties]** menu item
   Activates the PMO Label Properties Grid.

6.5.19.3 PMO Chart Properties Grid

The following PMO Chart Properties Grid is activated via a left mouse click over the active chart area exclusive of prioritised objects such as labels, regression curves, mark-ups, drawing objects.

1. **[Wiki Button URL**] grid item.
   URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

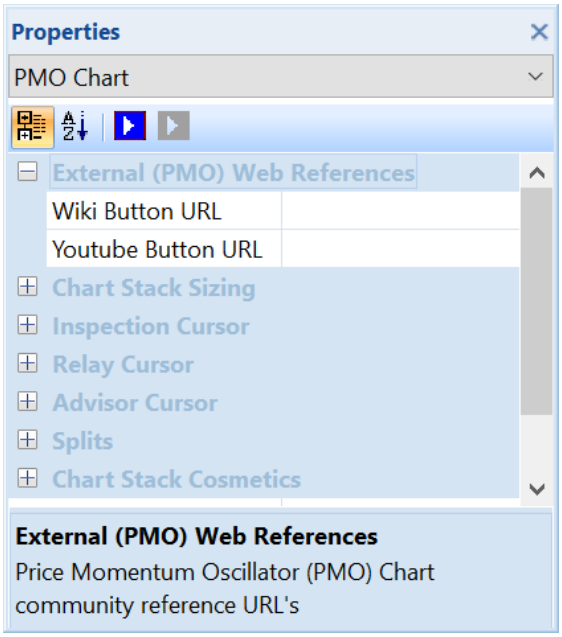
3. **[Chart Stack Sizing]** grid item.
   Common Chart Stack sizing parameters.

4. **[Inspection Cursor]** grid item.
   Common Chart Stack inspection cursor parameters.

5. **[Replay Cursor]** grid item.
   Common Chart Stack replay cursor parameters.

6. **[Advisor Cursor]** grid item.
   Common Chart Stack advisor cursor parameters.

7. **[Splits Pen]** grid item.
   Common to all charts within this chart stack.



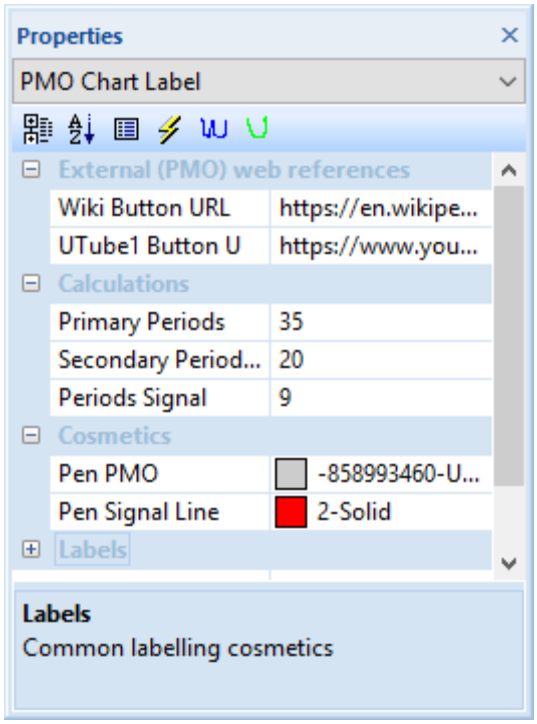
8. **[Chart Stack Cosmetics]** grid items.
   Common Chart Stack cosmetics parameters.

   Refer Common OHLCvs Chart Stack Properties Grid for further details.

6.5.19.4 PMO Label Properties Grid

The following PMO Label Properties Grid is accessed via a left mouse click over the PMO chart label.

1. **[Wiki Button URL**] grid item.
   URL to be activated upon **{Wiki}** button press.



2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

3. **[Primary Periods]** grid item.
   Primary number of smoothing periods used to calculate PMO, usually 35.

4. **[Secondary Periods]** grid item.
   Secondary number of smoothing periods used to calculate PMO, usually 20.

5. **[Periods Signal]** grid item.
   Exponentially Smoothed (PMO) signal line periods, usually 10.

6. **[Pen PMO]** grid item.
   Pen used to draw the PMO indicator.

7. **[Pen Signal]** grid item.
   Pen used to draw the PMO indicator signal line.

8. **[Labels]** grid items.
   Cosmetics common across all labels in this chart stack.

6.5.20 Percentage Price Oscillator (PPO)



Calculation details:

6.5.20.1 PPO Chart Context Menu

The following PPO Chart Context Menu is accessed via a right mouse click over the active chart area exclusive of prioritised objects such as labels, regression curves, mark-ups, drawing objects.

1. **[Markups]** menu item
   Common chart stack context sub-menu items

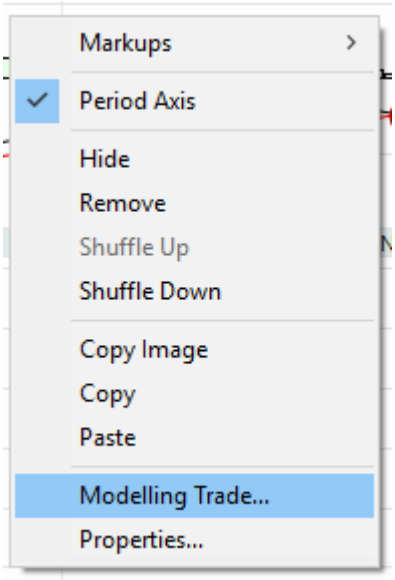
2. **[Period Axis]** button item.
   Common chart stack context menu item.

3. **[Hide]**, **[Remove]**, **[Shuffle Up]**, **[Shuffle Down]** menu items
   Common chart stack context menu items.

4. **[Copy Image]**, **[Copy]**, **[Paste** *object type***]** menu item
   Common chart stack clipboard related menu items.

5. **[Modelling Trade…]** menu item
   Common chart stack trade modelling item.

6. **[Properties]** menu item
   Activates the PPO Chart Properties Grid.



6.5.20.2 PPO Label Context Menu

The following PPO Label Context Menu is accessed via a right mouse click over the PPO chart label.

1. **[Buy Signals]** menu item
   Toggles the display of buy signals on (checked) and off.

   Buy signal is defined as when the signal lines passed from above the PPO line to below the PPO line.

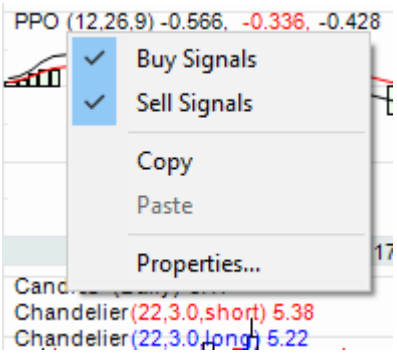
2. **[Sell Signals]** menu item
   Toggles the display of sell signals on (checked) and off.

   Sell signal is defined as when the signal line passes from below the PPO line to above the PPO line.

3. **[Smoothing]** menu item
   Smooths the PPO and associated Signal lines.

4. **[Copy]** menu item
   Copies PPO calculation and cosmetic parameters from label to clipboard.

5. **[Paste** *object type***]** menu item
   Pastes PPO calculation and cosmetic parameters from clipboard to label.



Item is only enabled when clipboard contains content previously copied from PPO label.

6. **[Properties]** menu item
   Activates the PPO Label Properties Grid.

6.5.20.3 PPO Chart Properties Grid

The following PPO Chart Properties Grid is activated via a left mouse click over the active chart area exclusive of prioritised objects such as labels, regression curves, mark-ups, drawing objects.

1. **[Wiki Button URL**] grid item.
   URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

3. **[Chart Stack Sizing]** grid item.
   Common Chart Stack sizing parameters.

4. **[Inspection Cursor]** grid item.
   Common Chart Stack inspection cursor parameters.

5. **[Replay Cursor]** grid item.
   Common Chart Stack replay cursor parameters.

6. **[Advisor Cursor]** grid item.
   Common Chart Stack advisor cursor parameters.

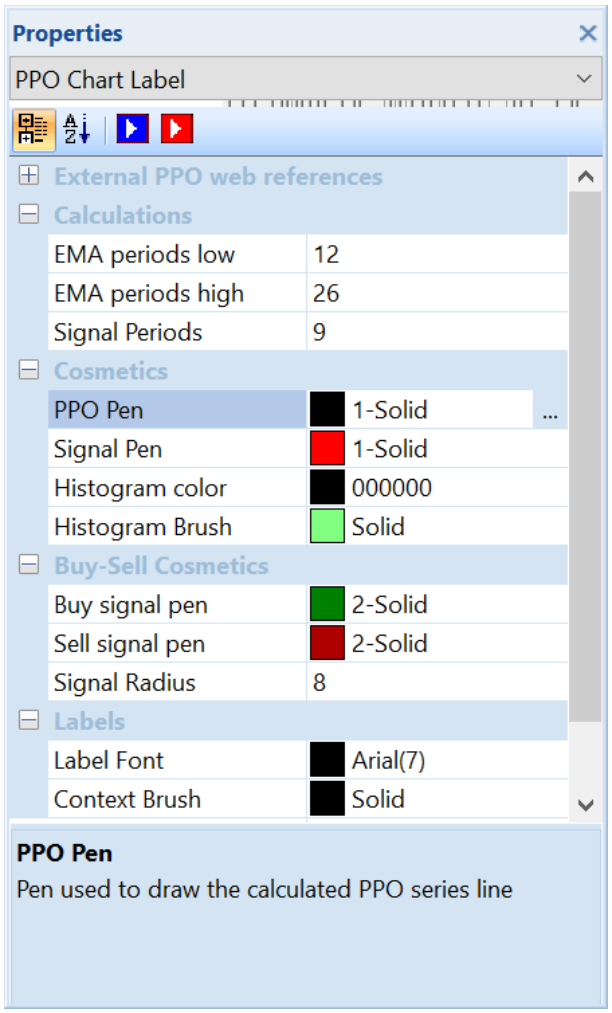
7. **[Splits Pen]** grid item.
   Common to all charts within this chart stack.

8. **[Chart Stack Cosmetics]** grid items.
   Common Chart Stack cosmetics parameters.

   Refer Common OHLCvs Chart Stack Properties Grid for further details.

6.5.20.4 PPO Label Properties Grid

The following PPO Label Properties Grid is accessed via a left mouse click over the PPO chart label.



1. **[Wiki Button URL**] grid item.
   URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

3. **[EMA Periods Low]** grid item.
   Low exponential moving average periods, usually 12.

4. **[EMA Periods High]** grid item.
   High exponential moving average periods, usually 26.

5. **[Periods Signal]** grid item.
   PPO signal periods, usually 9.

6. **[PPO Pen]** grid item.
   Pen used to draw the calculated PPO series line.

7. **[Signal Pen]** grid item.
   Pen used to draw the calculated PPO Signal series line.

8. **[Histogram Color]** grid item.
   Color used to draw the calculated PPO series histogram bars.

9. **[Histogram Brush]** grid item.
   Brush used to fill the calculated PPO series histogram bars.

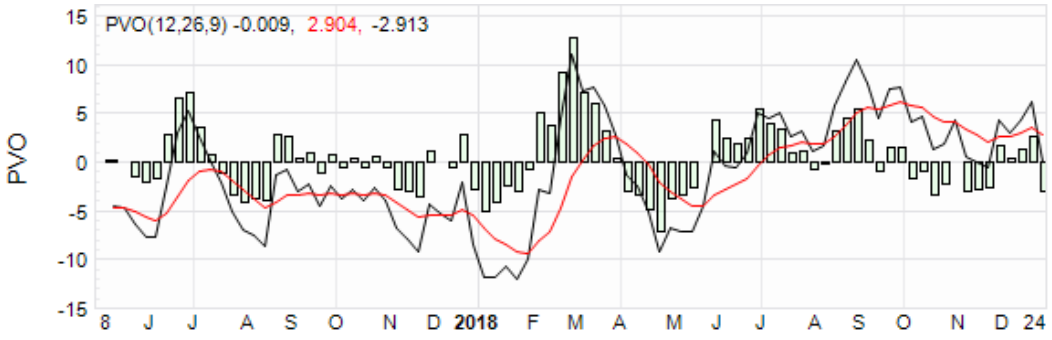
10. **[Buy Signal Pen]** grid item.
    Pen that will be used to mark-up PPO buy (X-over) signals.

11. **[Sell Signal Pen]** grid item.
    Pen that will be used to mark-up PPO sell (X-over) signals.

12. **[Signal Radius]** grid item.
    Radius of drawn circular buy-sell signal image in pixels.

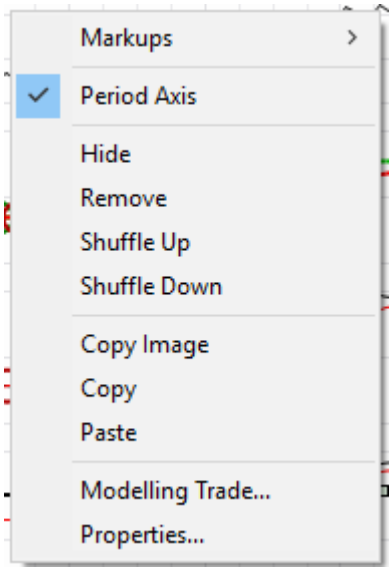
13. **[Labels]** grid items.
    Cosmetics common across all labels in this chart stack.

6.5.21 Percentage Volume Oscillator (PVO)



6.5.21.1 PVO Chart Context Menu

The following PVO Chart Context Menu is accessed via a right mouse click over the active chart area exclusive of prioritised objects such as labels, regression curves, mark-ups, drawing objects.



1. **[Markups]** button item.
   Common chart stack context sub-menu items

2. **[Period Axis]**
   Common chart stack context menu item.

3. **[Hide]**, **[Remove]**, **[Shuffle Up]**, **[Shuffle Down]** button items.
   Common chart stack context menu items.

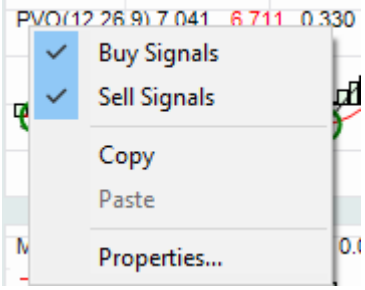
4. **[Copy Image]**, **[Copy]**, **[Paste** *object type*]
   button items.
   Common chart stack clipboard related menu items.

5. **[Modelling Trade…]** menu item
   Common chart stack trade modelling item.

6. **[Properties]** menu item
   Activates the PVO Chart Properties Grid.

6.5.21.2 PVO Label Context Menu

The following PVO Label Context Menu is accessed via a right mouse click over the PVO Chart Label.



1. **[Buy Signals]** menu item
   Toggles the display of buy signals on (checked) and off.

   Buy signal is defined as when the signal lines passed from above the PVO line to below the PVO line.

2. **[Sell Signals]** menu item
   Toggles the display of sell signals on (checked) and off.

Sell signal is defined as when the signal line passes from below the PVO line to above the PVO line.

3. **[Copy]** menu item
Copies PVO calculation and cosmetic parameters from label to clipboard.

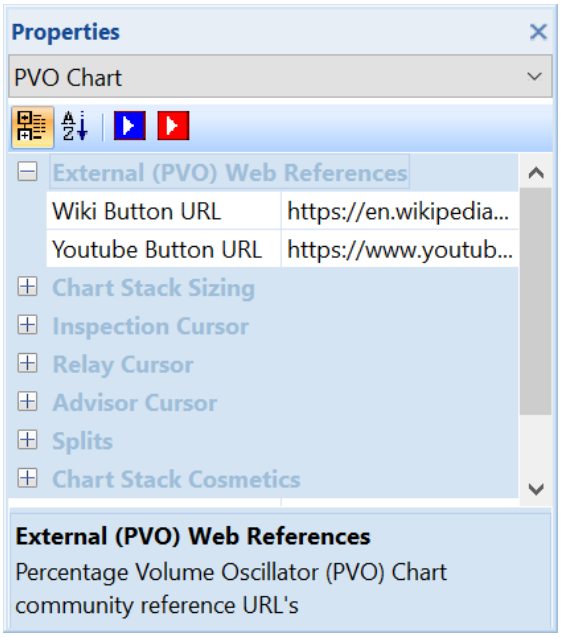
4. **[Paste** *object type***]** menu item
Pastes PVO calculation and cosmetic parameters from clipboard to label.

Item is only enabled when clipboard contains content previously copied from PVO label.

5. **[Properties]** menu item
Activates the PVO Label Properties Grid.

6.5.21.3 PVO Chart Properties Grid

The following PVO Chart Properties Grid is activated via a left mouse click over the active chart area exclusive of prioritised objects such as labels, regression curves, mark-ups, drawing objects.



1. **[Wiki Button URL**] grid item.
URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
URL to be activated upon **{YouTube}** button press.

3. **[Chart Stack Sizing]** grid item.
Common Chart Stack sizing parameters.

4. **[Inspection Cursor]** grid item.
Common Chart Stack inspection cursor parameters.

5. **[Replay Cursor]** grid item.
Common Chart Stack replay cursor parameters.

6. **[Advisor Cursor]** grid item.
Common Chart Stack advisor cursor parameters.

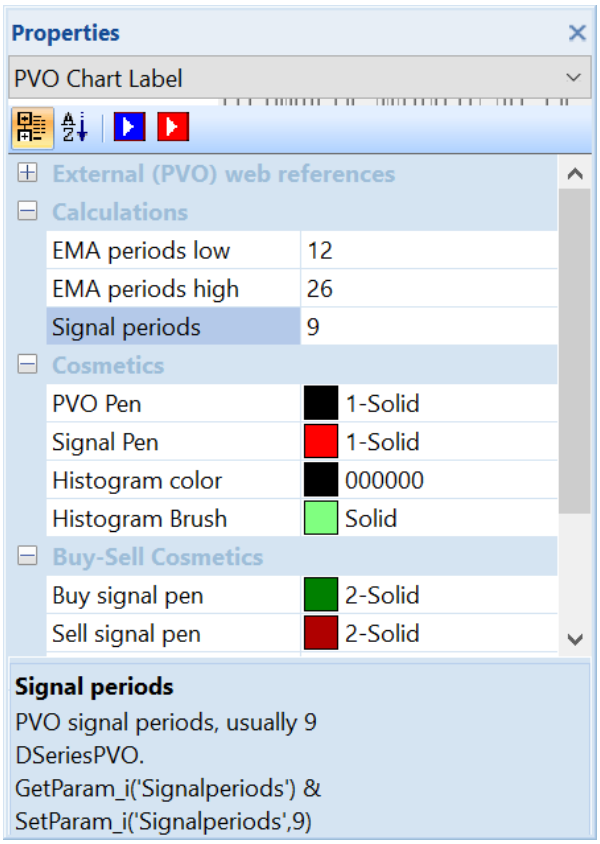
7. **[Splits Pen]** grid item.
Common to all charts within this chart stack.

8. **[Chart Stack Cosmetics]** grid items.
Common Chart Stack cosmetics parameters.

Refer Common OHLCvs Chart Stack Properties Grid for further details.

6.5.21.4 PVO Label Properties Grid

The following PVO Label Properties Grid is accessed via a left mouse click over the PVO chart label.



1. **[Wiki Button URL**] grid item.
   URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

3. **[EMA Periods Low]** grid item.
   Low exponential moving average periods, usual 12.

4. **[EMA Periods High]** grid item.
   High exponential moving average periods, usually 26.

5. **[Signal Periods]** grid item.
   PVO signal periods, usually 9.

6. **[PVO Pen]** grid item.
   Pen used to draw the calculated PVO series line.

7. **[Signal Pen]** grid item.
   Pen used to draw the calculated PVO Signal series line.

8. **[Histogram Color]** grid item.
   Color used to draw the calculated PVO series histogram bars.

9. **[Histogram Brush]** grid item.
   Brush used to fill the calculated PVO series histogram bars.

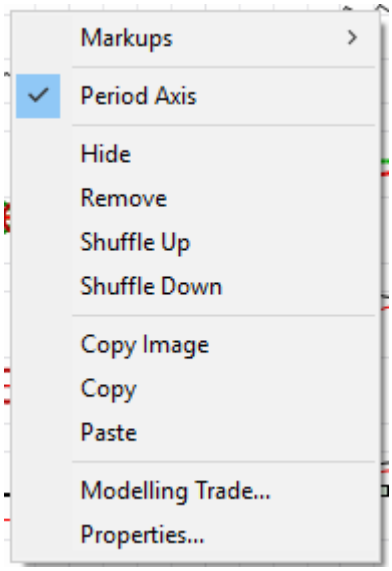
10. **[Labels]** grid items.
    Cosmetics common across all labels in this chart stack.

6.5.22 Rate of Change (ROC)



6.5.22.1 ROC Chart Context Menu

The following ROC Chart Context Menu is accessed via a right mouse click over the active chart area exclusive of prioritised objects such as labels, regression curves, mark-ups, drawing objects.



1. **[Markups]** button item.
   Common chart stack context sub-menu items

2. **[Period Axis]** button item.
   Common chart stack context menu item.

3. **[Hide]**, **[Remove]**, **[Shuffle Up]**, **[Shuffle Down]** button items.
   Common chart stack context menu items.

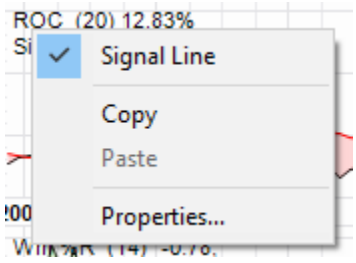
4. **[Copy Image]**, **[Copy]**, **[Paste** *object type***]** button items.
   Common chart stack clipboard related menu items.

5. **[Modelling Trade…]** menu item
   Common chart stack trade modelling item.

6. **[Properties]** menu item
   Activates the ROC Chart Properties Grid.

6.5.22.2 ROC Label Context Menu

The following ROC Label Context Menu is accessed via a right mouse click over the ROC chart label.



1. **[Signaline]** menu item
   Toggles Signaline overlay on (checked) and off.

2. **[Copy]** menu item
   Copies ROC calculation and cosmetic parameters from label to clipboard.

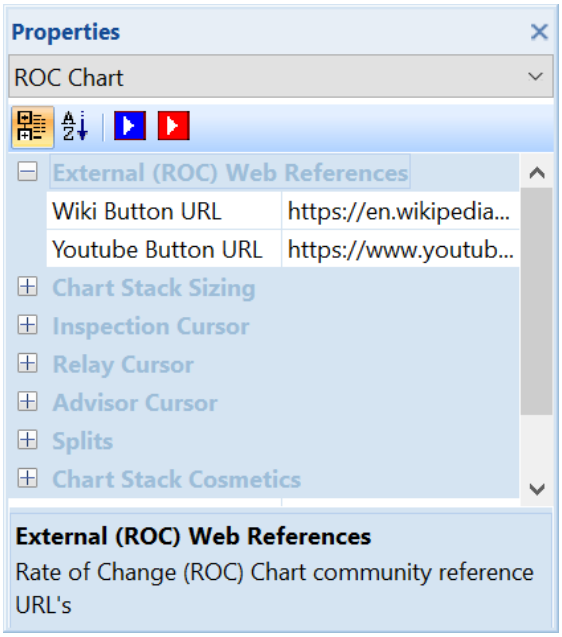
3. **[Paste** *object type***]** menu item
   Pastes ROC calculation and cosmetic parameters from clipboard to label.

Item is only enabled when clipboard contains content previously copied from ROC label.

4. **[Properties]** menu item
Activates the ROC Label Properties Grid.

6.5.22.3 ROC Chart Properties Grid

The following ROC Chart Properties Grid is activated via a left mouse click over the active chart area exclusive of prioritised objects such as labels, regression curves, mark-ups, drawing objects.



1. **[Wiki Button URL]** grid item.
URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
URL to be activated upon **{YouTube}** button press.

3. **[Chart Stack Sizing]** grid items.
Common Chart Stack sizing parameters.

4. **[Inspection Cursor]** grid item.
Common Chart Stack inspection cursor parameters.

5. **[Replay Cursor]** grid item.
Common Chart Stack replay cursor parameters.

6. **[Advisor Cursor]** grid item.
Common Chart Stack advisor cursor parameters.

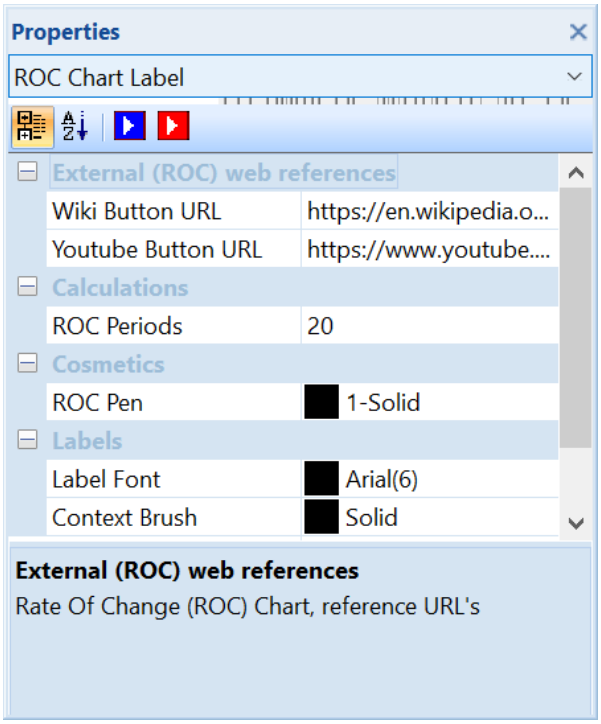
7. **[Splits Pen]** grid item.
Common to all charts within this chart stack.

8. **[Chart Stack Cosmetics]** grid items.
Common Chart Stack cosmetics properties grid items.

Refer Common OHLCvs Chart Stack Properties Grid for further details.

6.5.22.4 ROC Label Properties Grid

The following ROC Label Properties Grid is accessed via a left mouse click over the ROC chart label.



1. **[Wiki Button URL]** grid item.
   URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

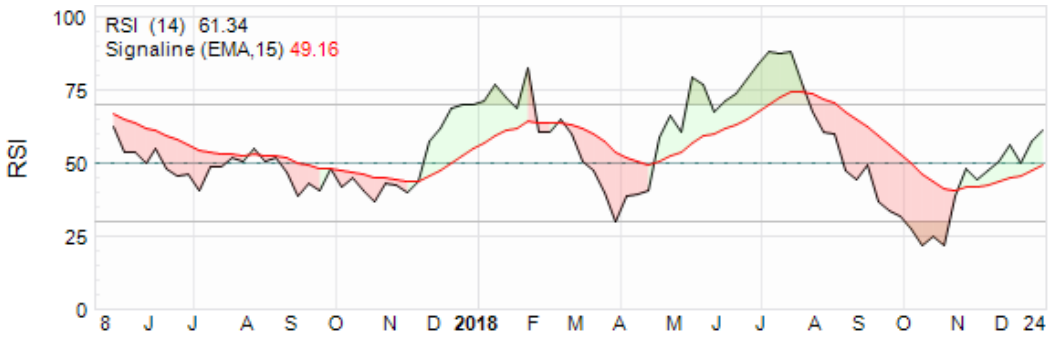
3. **[ROC Periods]** grid item.
   Look back periods used to calculate Rate-of-Change (ROC) oscillator, usually 12.

4. **[ROC Pen]** grid item.
   Pen used to draw the Rate-of-Change (ROC) oscillator.

5. **[Labels]** grid items.
   Cosmetics common across all labels in this chart stack.

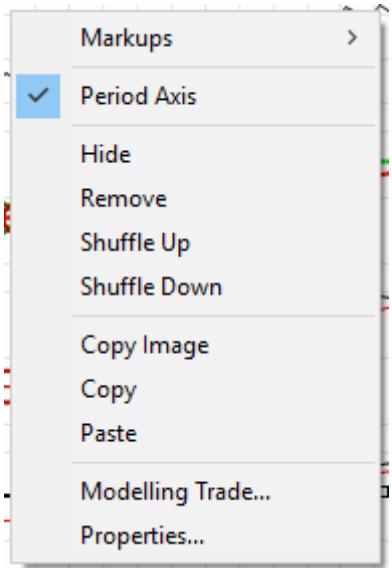
6.5.23 Ratio

6.5.24 Relative Strength Index (RSI)



6.5.24.1 RSI Chart Context Menu

The following RSI Chart Context Menu is accessed via a right mouse click over the active chart area exclusive of prioritised objects such as labels, regression curves, mark-ups, drawing objects.



1. **[Markups]** button item.
   Common chart stack context sub-menu items

2. **[Period Axis]** button item.
   Common chart stack context menu item.

3. **[Hide]**, **[Remove]**, **[Shuffle Up]**, **[Shuffle Down]** button items.
   Common chart stack context menu items.

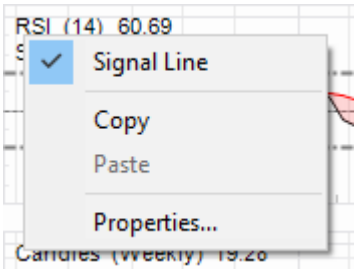
4. **[Copy Image]**, **[Copy]**, **[Paste** *object type***]** button items.
   Common chart stack clipboard related menu items.

5. **[Modelling Trade…]** menu item
   Common chart stack trade modelling item.

6. **[Properties]** menu item
   Activates the RSI Chart Properties Grid.

6.5.24.2 RSI Label Context Menu

The following RSI Label Context Menu is accessed via a right mouse click over the RSI chart label.



1. **[Signaline]** menu item
   Toggles Signaline overlay on (checked) and off.

2. **[Copy]** menu item
   Copies RSI calculation and cosmetic parameters from label to clipboard.

3. **[Paste** *object type***]** menu item
   Pastes RSI calculation and cosmetic parameters from clipboard to label.

   Item is only enabled when clipboard contains content previously copied from RSI label.

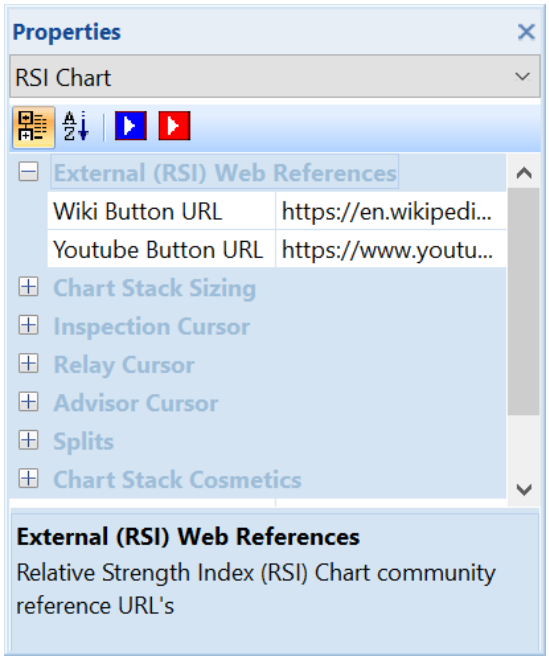
4. **[Properties]** menu item
   Activates the RSI Label Properties Grid.

6.5.24.3 RSI Chart Properties Grid

The following RSI Chart Properties Grid is activated via a left mouse click over the active chart area exclusive of prioritised objects such as labels, regression curves, mark-ups, drawing objects.

1. **[Wiki Button URL]** grid item.
   URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.



3. **[Chart Stack Sizing]** grid items.
   Common Chart Stack sizing parameters.

4. **[Inspection Cursor]** grid item.
   Common Chart Stack inspection cursor parameters.

5. **[Replay Cursor]** grid item.
   Common Chart Stack replay cursor parameters.

6. **[Advisor Cursor]** grid item.
   Common Chart Stack advisor cursor parameters.

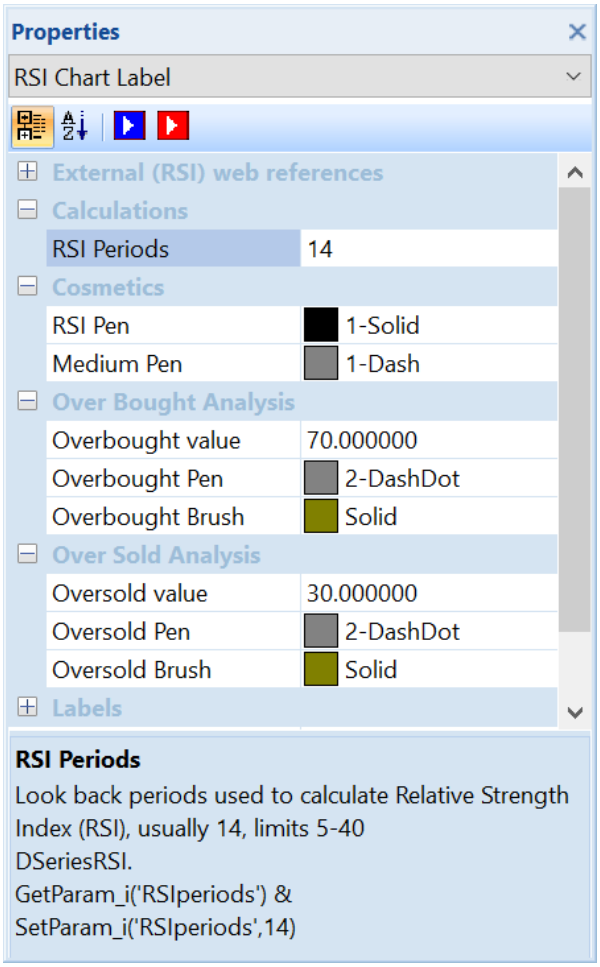
7. **[Splits Pen]** grid item.
   Common to all charts within this chart stack.

8. **[Chart Stack Cosmetics]** grid items.
   Common Chart Stack cosmetics parameters.

   Refer Common OHLCvs Chart Stack Properties Grid for further details.

6.5.24.4 RSI Label Properties Grid

The following RSI Label Properties Grid is accessed via a left mouse click over the RSI chart label.



1. **Wiki Button URL**.
   URL to be activated upon **{Wiki}** button press.

2. **UTube Button URL**
   URL to be activated upon **{YouTube}** button press.

3. **RSI Periods**
   Look back periods used to calculator Relative Strength Index (RSI), usually 14, limits 5-40.

4. **RSI Pen**
   Pen used to draw the calculated RSI series line.

5. **Medium Pen**
   Pen used to draw the Medium (0) RSI line.

6. **Overbought value**
   Arbitrary over bought value, usual values (70,80,90).

7. **[Overbought Pen]** grid item.
   Pen used to annotate the Overbought line

8. **[Overbought Brush]** grid item.
   Brush used to fill those regions above the overbought line.

9. **[Oversold value]** grid item.
   Arbitrary over sold value, usual values (10,20,30).

10. **[Oversold Pen]** grid item.
    Pen used to annotate the Oversold line

11. **[Oversold Brush]** grid item.
    Brush used to fill over sold regions beneath the oversold line.

12. **[Labels]** grid items.
    Cosmetics common across all labels in this chart stack.

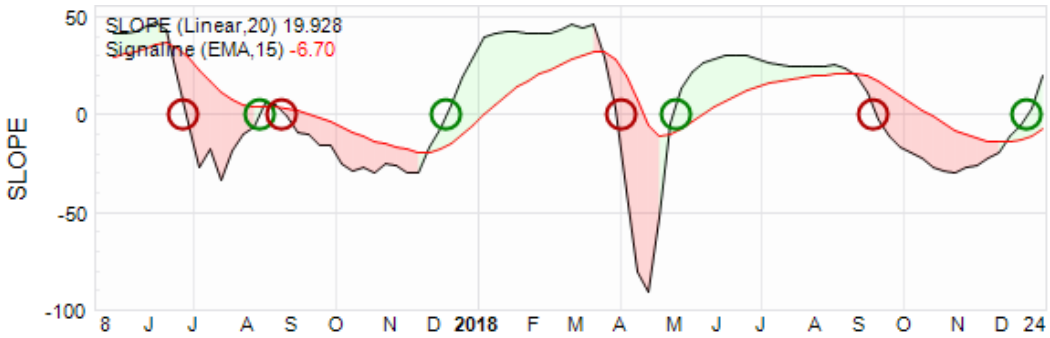
6.5.25 Shades

6.5.25.1 Shades Chart Context Menu

6.5.25.2 Shades Properties Grid

6.5.26 Linear Regression Slope Oscillator (SLOPE)

The linear regression oscillator (aka SLOPE) measures the gradient (rise-over-run) of a linear regression fitted to a trailing price series interval. Fluctuating above and below zero, the Slope indicator best resembles a momentum oscillator without boundaries. It is not well suited for overbought/oversold levels, but can measure the direction and strength of a trend. It can also be used with other indicators to identify potential entry points within an ongoing trend.



Calculation details:

6.5.26.1 SLOPE Chart Context Menu

The following SLOPE Chart Context Menu is accessed via a right mouse click over the active chart area exclusive of prioritised objects such as labels, regression curves, mark-ups, drawing objects.

1. **[Markups]** menu item
   Common chart stack context sub-menu items

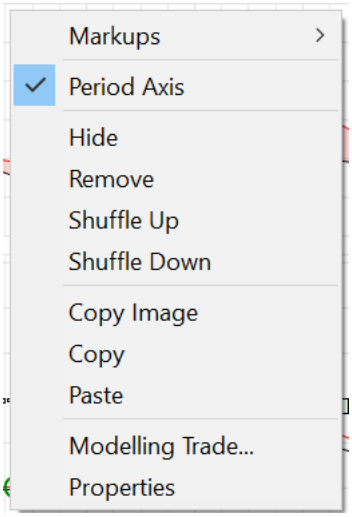
2. **[Period Axis]** button item.
   Common chart stack context menu item.

3. **[Hide]**, **[Remove]**, **[Shuffle Up]**, **[Shuffle Down]** menu items
   Common chart stack context menu items.

4. **[Copy Image]**, **[Copy]**, **[Paste** *object type***]** menu item
   Common chart stack clipboard related menu items.

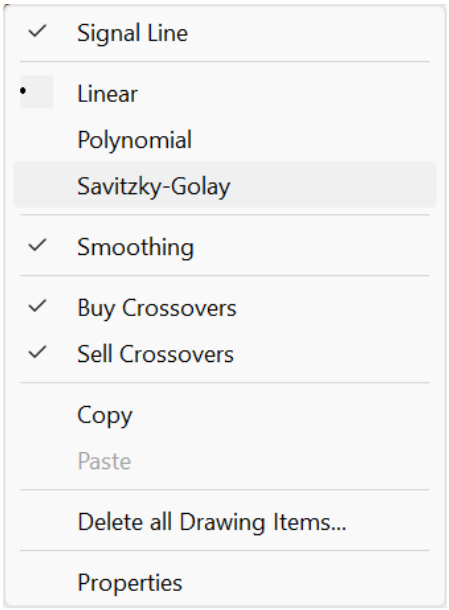
5. **[Modelling Trade…]** menu item
   Common chart stack trade modelling item.

6. **[Properties]** menu item
   Activates the SLOPE Chart Properties Grid.



6.5.26.2 SLOPE Label Context Menu

The following SLOPE Label Context Menu is accessed via a right mouse click over the SLOPE chart label.



1. **[Signaline]** menu item
   Toggles Signaline overlay on (checked) and off.

2. **[Linear]** menu item
   Selects linear regression for slope calculations

3. **[Polynomial]** menu item
   Selects polynomial, 2nd degree, regression for slope calculations.

4. **[Savitzky-Golay]** menu item
   Selects a polynomial smoothing that keeps trend shape and highlights real momentum shifts.

5. **[Buy Signals]** menu item
   Toggles the display of buy signals on (checked) and off.

   Buy signal is defined as when the signal lines passed from above the SLOPE line to below the SLOPE line.

6. **[Sell Signals]** menu item
   Toggles the display of sell signals on (checked) and off.

   Sell signal is defined as when the signal line passes from below the SLOPE line to above the SLOPE line.

7. **[Smoothing]** menu item
   Smooths the SLOPE and associated Signal lines.

8. **[Copy]** menu item
   Copies SLOPE calculation and cosmetic parameters from label to clipboard.

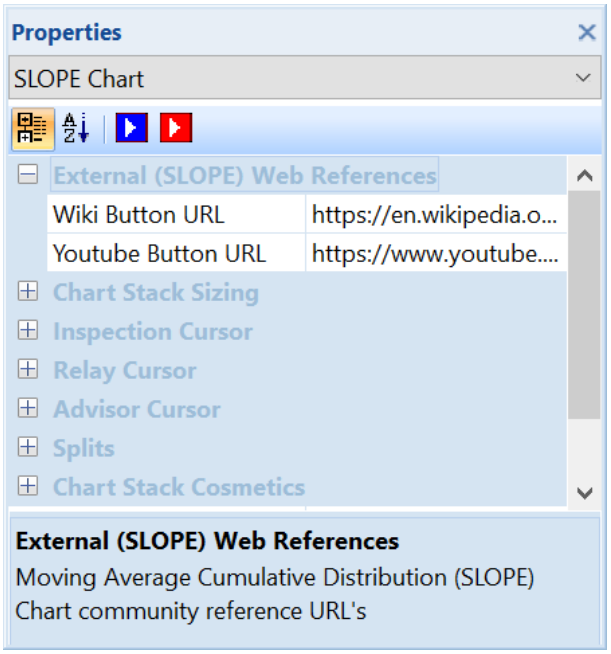
9. **[Paste** *object type***]** menu item
   Pastes SLOPE calculation and cosmetic parameters from clipboard to label.

   Item is only enabled when clipboard contains content previously copied from SLOPE label.

10. **[Properties]** menu item
    Activates the SLOPE Label Properties Grid.

6.5.26.3 SLOPE Chart Properties Grid

The following SLOPE Chart Properties Grid is activated via a left mouse click over the active chart area exclusive of prioritised objects such as labels, regression curves, mark-ups, drawing objects.



1. **[Wiki Button URL]** grid item.
   URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

3. **[Chart Stack Sizing]** grid items.
   Common Chart Stack sizing parameters.

4. **[Inspection Cursor]** grid item.
   Common Chart Stack inspection cursor parameters.

5. **[Replay Cursor]** grid item.
   Common Chart Stack replay cursor parameters.

6. **[Advisor Cursor]** grid item.
   Common Chart Stack advisor cursor parameters.

7. **[Splits Pen]** grid item.
   Common to all charts within this chart stack.

8. **[Chart Stack Cosmetics]** grid items.
   Common Chart Stack cosmetics parameters.

   Refer Common OHLCvs Chart Stack Properties Grid for further details.

6.5.26.4 SLOPE Label Properties Grid

The following SLOPE Label Properties Grid is accessed via a left mouse click over the SLOPE chart label.

1. **[Wiki Button URL]** grid item.
   URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

3. **[LINEAR Periods], [POPY2 Periods], [SAVITZKY-GOLAY Periods]** grid items.
   Regression lookback periods over which SLOPE oscillator is calculated,

varies according to calculation type.

4. **[Smoothing Periods]** grid item.
Number of periods used to smooth above calculations. Only used if smoothing SLOPE Label context menu >> **Smoothing** item toggled on.

5. **[SLOPE Pen]** grid item.
Pen used to draw the SLOPE series line.

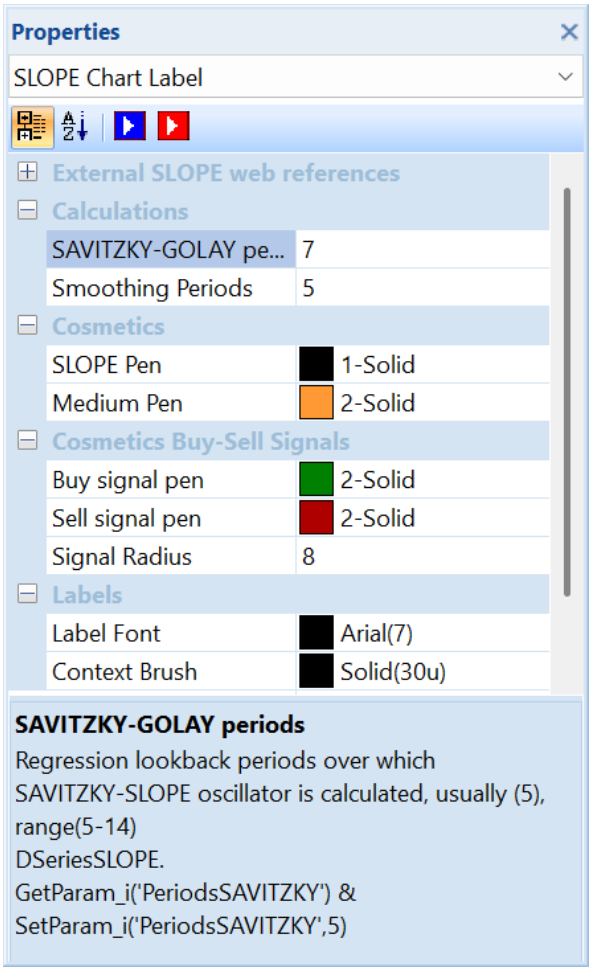
6. **[Medium Pen]** grid item.
Pen used to draw the medium or zero horizontal line.

7. **[Buy Signal Pen]** grid item.
Pen that will be used to mark-up SLOPE buy signals.

8. **[Sell Signal Pen]** grid item.
Pen that will be used to mark-up SLOPE sell (X-over) signals.

9. **[Signal Radius]** grid item.
Radius of drawn circular buy-sell signal image in pixels.

10. **[Labels]** grid items.
Cosmetics common across all labels in this chart stack.

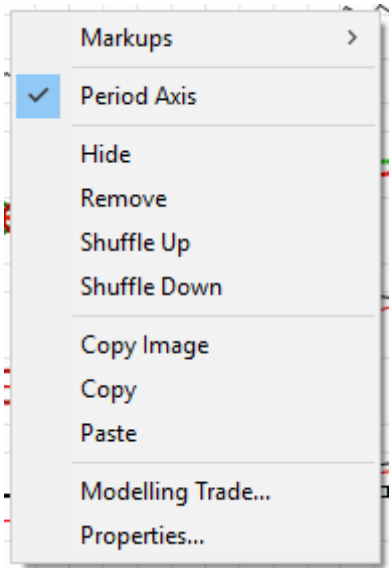


6.5.27 Volatility or Standard Deviation (STDEV)



6.5.27.1 STDEV Chart Context Menu

The following STDEV Chart Context Menu is accessed via a right mouse click over the active chart area exclusive of prioritised objects such as labels, regression curves, mark-ups, drawing objects.



1. **[Markups]** button item.
   Common chart stack context sub-menu items

2. **[Period Axis]** button item.
   Common chart stack context menu item.

3. **[Hide]**, **[Remove]**, **[Shuffle Up]**, **[Shuffle Down]** button items.
   Common chart stack context menu items.

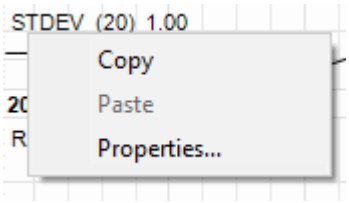
4. **[Copy Image]**, **[Copy]**, **[Paste** *object type***]** button items.
   Common chart stack clipboard related menu items.

5. **[Modelling Trade…]** menu item
   Common chart stack trade modelling item.

6. **[Properties]** menu item
   Activates the STDEV Chart Properties Grid.

6.5.27.2 STDEV Label Context Menu

The following STDEV Label Context Menu is accessed via a right mouse click over the STDEV chart label.



1. **[Copy]** menu item
   Copies STDEV calculation and cosmetic parameters from label to clipboard.

2. **[Paste** *object type***]** menu item
   Pastes STDEV calculation and cosmetic parameters from clipboard to label.

   Item is only enabled when clipboard contains content previously copied from STDEV label.

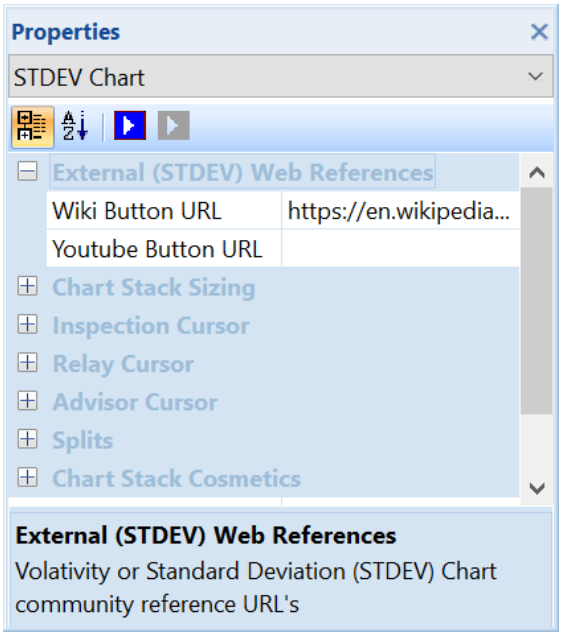
3. **[Properties]** menu item
   Activates the STDEV Label Properties Grid.

6.5.27.3 STDEV Chart Properties Grid

The following STDEV Chart Properties Grid is activated via a left mouse click over the active chart area exclusive of prioritised objects such as labels, regression curves, mark-ups, drawing objects.

1. **[Wiki Button URL**] grid item.
   URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.



3. **[Chart Stack Sizing]** grid item.
   Common Chart Stack sizing parameters.

4. **[Inspection Cursor]** grid item.
   Common Chart Stack inspection cursor parameters.

5. **[Replay Cursor]** grid item.
   Common Chart Stack replay cursor parameters.

6. **[Advisor Cursor]** grid item.
   Common Chart Stack advisor cursor parameters.

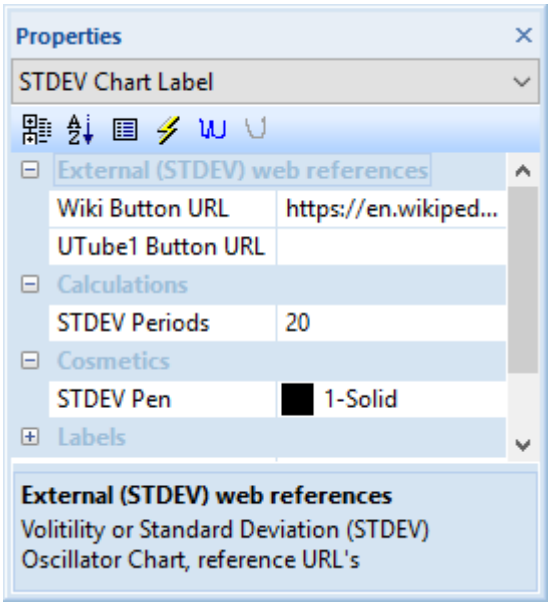
7. **[Splits Pen]** grid item.
   Common to all charts within this chart stack.

8. **[Chart Stack Cosmetics]** grid items.
   Common Chart Stack cosmetics parameters.

   Refer Common OHLCvs Chart Stack Properties Grid for further details.

6.5.27.4 STDEV Label Properties Grid

The following STDEV Label Properties Grid is accessed via a left mouse click over the STDEV chart label.



1. **[Wiki Button URL**] grid item.
   URL to be activated upon **{Wiki}** button press.

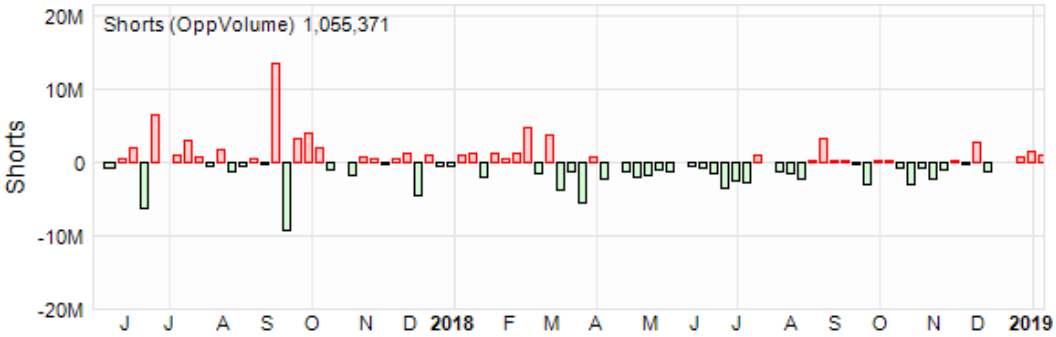
2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

3. **[STDEV Periods]** grid item.
   Volatility or Standard Deviation Oscillator lookback period, usually 20.

4. **[STDEV Pen]** grid item.
   Pen used to draw the standard deviation Volatility Oscillator.

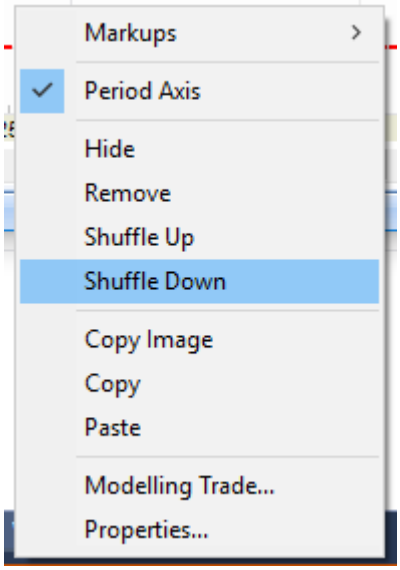
5. **[Labels]** grid items.
   Cosmetics common across all labels in this chart stack.

6.5.28 Shorts



6.5.28.1 Shorts Chart Context Menu

The following Shorts Chart Context Menu is accessed via a right mouse click over the active chart area exclusive of prioritised objects such as labels, regression curves, mark-ups, drawing objects.



1. **[Markups]** menu item
   Common chart stack context sub-menu items

2. **[Period Axis]** menu item
   Common chart stack context menu item.

3. **[Hide]**, **[Remove]**, **[Shuffle Up]**, **[Shuffle Down]** menu items.
   Common chart stack context menu items.

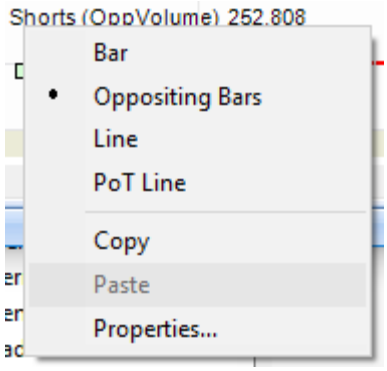
4. **[Copy Image]**, **[Copy]**, **[Paste** *object type***]** menu items.
   Common chart stack clipboard related menu items.

5. **[Modelling Trade…]** menu item.
   Common chart stack trade modelling item.

6. **[Properties]** menu item
   Activates the Shorts Chart Properties Grid.

6.5.28.2 Shorts Label Context Menu

The following Shorts Label Context Menu is accessed via a right mouse click over the Shorts chart label.



1. **[Bar]** menu item.
   Shorts as adjacent bars.

2. **[Opposing Bars]** menu item.
   Shorts as opposing bars.

3. **[Line]** menu item.
   Total shorts as a single line.

4. **[PoTotal Line]** menu item.
   Shorts as a Percentage of Total shares on issue line.

5. **[Copy]** menu item
   Copies Shorts calculation and cosmetic parameters from label to clipboard.

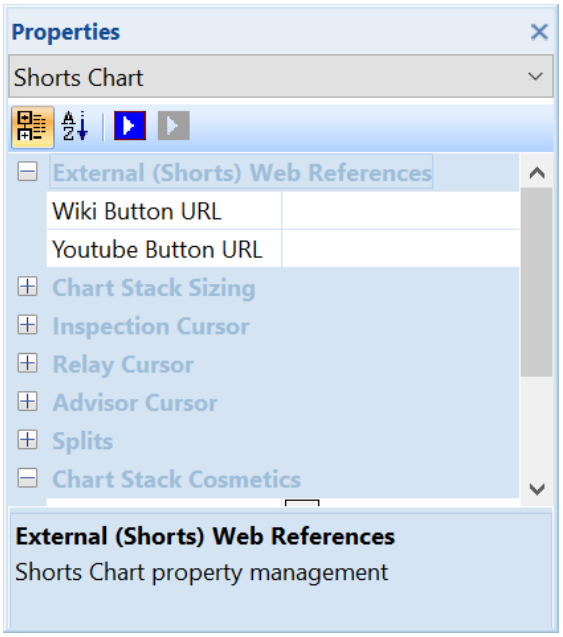
6. **[Paste** *object type***]** menu item
   Pastes Shorts calculation and cosmetic parameters from clipboard to label.

   Item is only enabled when clipboard contains content previously copied from Shorts label.

7. **[Properties]** menu item
   Activates the Shorts Label Properties Grid.

6.5.28.3 Shorts Chart Properties Grid

The following Shorts Chart Properties Grid is activated via a left mouse click over the active chart area exclusive of prioritised objects such as labels, regression curves, mark-ups, drawing objects.



1. **[Wiki Button URL]** grid item.
   URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

3. **[Chart Stack Sizing]** grid item.
   Common Chart Stack sizing parameters.

4. **[Inspection Cursor]** grid item.
   Common Chart Stack inspection cursor parameters.

5. **[Replay Cursor]** grid item.
   Common Chart Stack replay cursor parameters.

6. **[Advisor Cursor]** grid item.
   Common Chart Stack advisor cursor parameters.

7. **[Splits Pen]** grid item.
   Common to all charts within this chart stack.

8. **[Chart Stack Cosmetics]** grid item.
   Common Chart Stack cosmetics parameters.

   Refer Common OHLCvs Chart Stack Properties Grid for further details.

6.5.28.4 Shorts Label Properties Grid

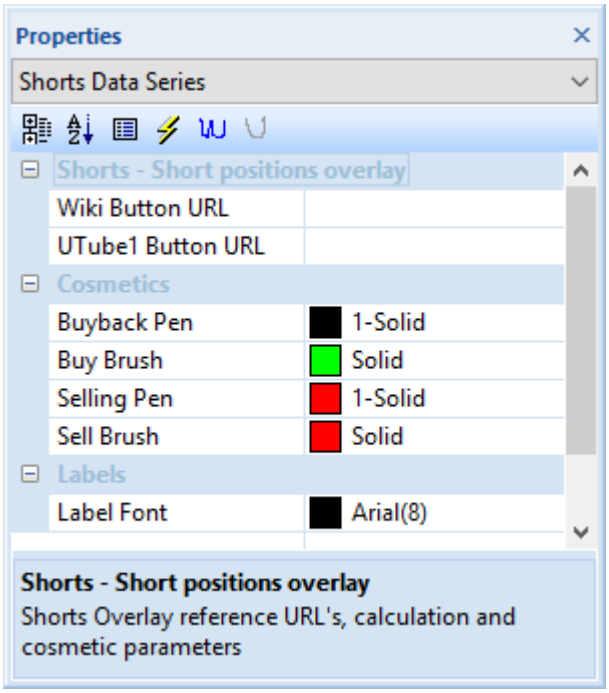
The following Shorts Label Properties Grid is accessed via a left mouse click over the chart Shorts Label.

1. **[Wiki Button URL**] grid item.
   URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

3. **[Buyback Pen]** grid item.
   Pen used to annotate buy back or a reduction in shorts.

4. **[Buyback Brush]** grid item.
   Brush used to fill buyback bars.



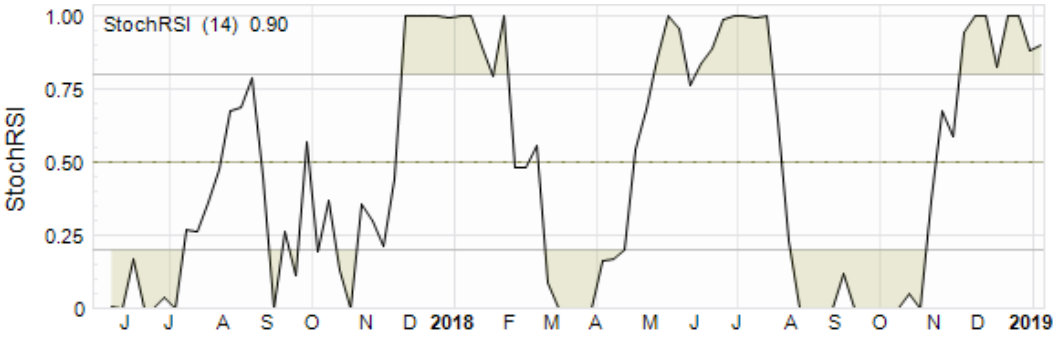
5. **[Selling Pen]** grid item.
   Pen used to annotate selling or an increase in shorts.

6. **[Sell Brush]** grid item.
   Brush used to fill selling bars.

7. **[Labels]** grid items.
   Cosmetics common across all labels in this chart stack.

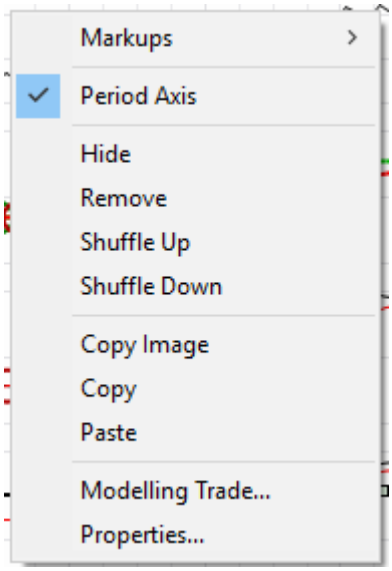
6.5.29 Stochastic Fast, Slow & Full (STO)

6.5.30 Stochastic Relative Strength Index (StochRSI)



6.5.30.1 StochRSI Chart Context Menu

The following StochRSI Chart Context Menu is accessed via a right mouse click over the active chart area exclusive of prioritised objects such as labels, regression curves, mark-ups, drawing objects.



1. **[Markups]** button item.
   Common chart stack context sub-menu items

2. **[Period Axis]** button item.
   Common chart stack context menu item.

3. **[Hide]**, **[Remove]**, **[Shuffle Up]**, **[Shuffle Down]** button items.
   Common chart stack context menu items.

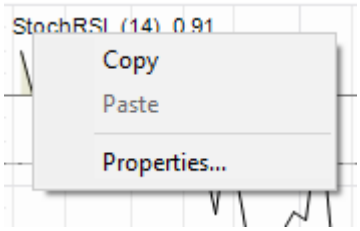
4. **[Copy Image]**, **[Copy]**, **[Paste** *object type***]** button items.
   Common chart stack clipboard related menu items.

5. **[Modelling Trade…]** menu item
   Common chart stack trade modelling item.

6. **[Properties]** menu item
   Activates the StochRSI Chart Properties Grid.

6.5.30.2 StochRSI Label Context Menu

The following StochRSI Label Context Menu is accessed via a right mouse click over the StochRSI chart label.



1. **[Copy]** menu item
   Copies StochRSI calculation and cosmetic parameters from label to clipboard.

2. **[Paste** *object type***]** menu item
   Pastes StochRSI calculation and cosmetic parameters from clipboard to label.

   Item is only enabled when clipboard contains content previously copied from

StochRSI label.

3. **[Properties]** menu item
   Activates the StochRSI Label Properties Grid.

6.5.30.3 StochRSI Chart Properties Grid

The following StochRSI Chart Properties Grid is activated via a left mouse click over the active chart area exclusive of prioritised objects such as labels, regression curves, mark-ups, drawing objects.

1. **[Wiki Button URL**] grid item.
   URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

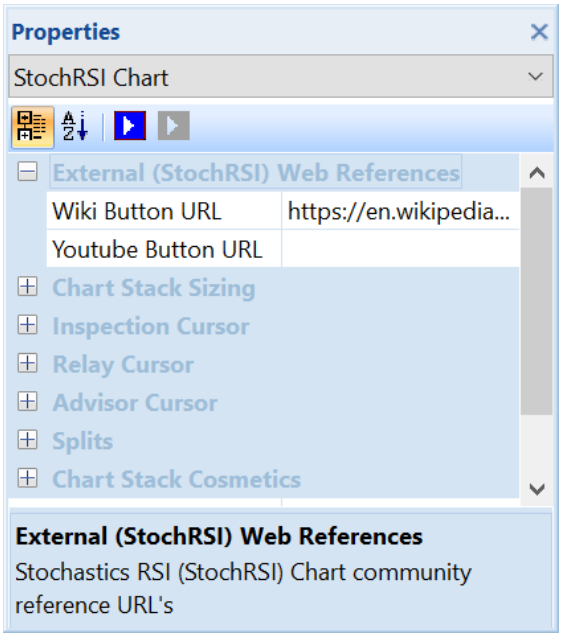
3. **[Chart Stack Sizing]** grid item.
   Common Chart Stack sizing parameters.

4. **[Inspection Cursor]** grid item.
   Common Chart Stack inspection cursor parameters.

5. **[Replay Cursor]** grid item.
   Common Chart Stack replay cursor parameters.

6. **[Advisor Cursor]** grid item.
   Common Chart Stack advisor cursor parameters.

7. **[Splits Pen]** grid item.
   Common to all charts within this chart stack.



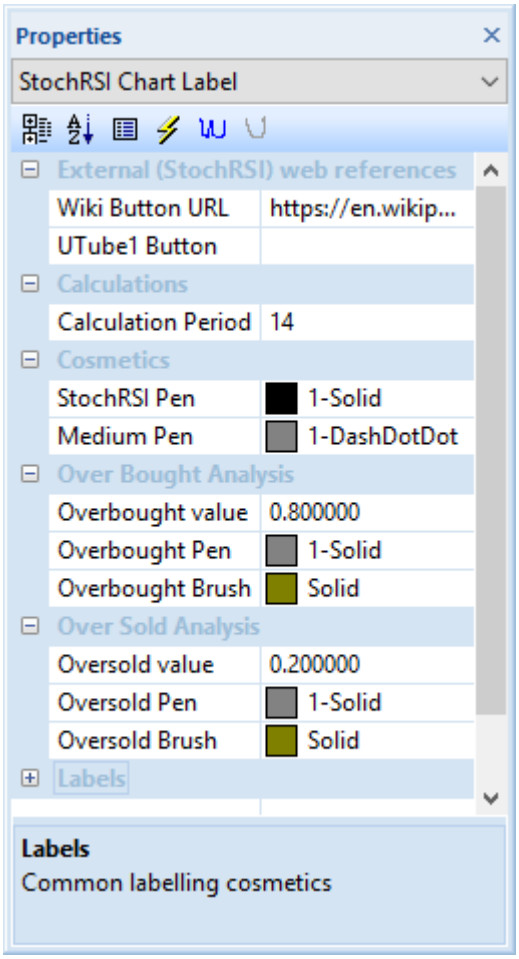
8. **[Chart Stack Cosmetics** grid items.
   Common Chart Stack cosmetics parameters.

   Refer Common OHLCvs Chart Stack Properties Grid for further details.

6.5.30.4 StochRSI Label Properties Grid

The following StochRSI Label Properties Grid is accessed via a left mouse click over the StochRSI chart label.

1. **[Wiki Button URL**] grid item.
   URL to be activated upon **{Wiki}** button press.



2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

3. **[StochRSI Periods]** grid item.
   Look back periods used to calculate Relative Strength Index (RSI), usually 14, limits 5-40.

4. **[StochRSI Pen]** grid item.
   Pen used to draw the calculated StochRSI series line.

5. **[Medium Pen]** grid item.
   Pen used to draw the Medium (0.5) StochRSI bar.

6. **[Overbought value]** grid item.
   Arbitrary over bought value, usually 0.8.

7. **[Overbought Pen]** grid item.
   Pen used to draw the overbought bar.

8. **[Overbought Brush]** grid item.
   Brush used to fill those regions above the overbought bar.

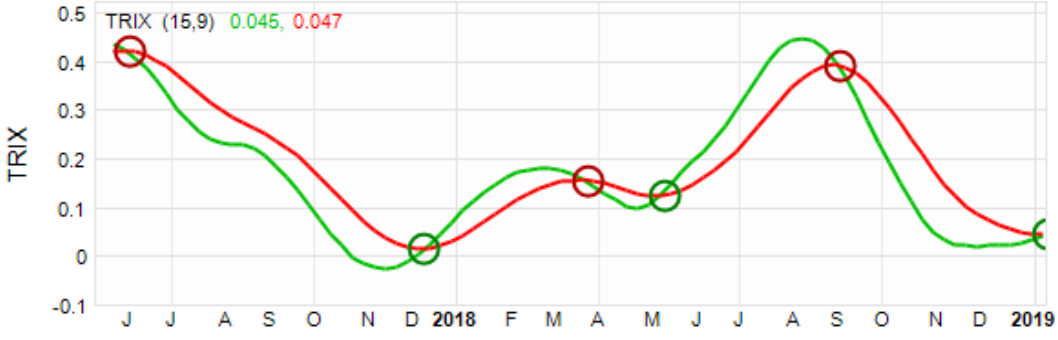
9. **[Oversold value]** grid item.
   Arbitrary over sold value, usually 0.20.

10. **[Oversold Pen]** grid item.
    Pen used to draw the oversold bar.

11. **[Oversold Brush]** grid item.
    Brush used to fill those regions below the oversold bar.

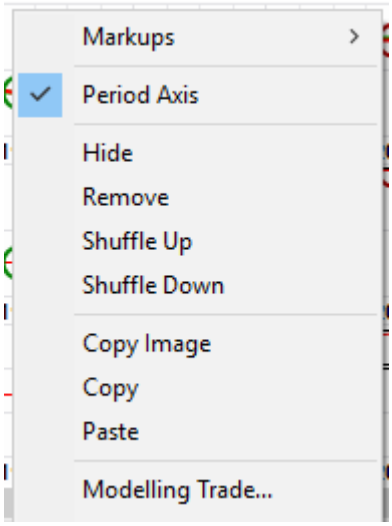
12. **[Labels]** grid items.
    Cosmetics common across all labels in this chart stack.

6.5.31 TRIX



6.5.31.1 TRIX Chart Context Menu

The following TRIX Chart Context Menu is accessed via a right mouse click over the active chart area exclusive of prioritised objects such as labels, regression curves, mark-ups, drawing objects.



1. **[Markups]** menu item
   Common chart stack context sub-menu items

2. **[Period Axis]** menu item
   Common chart stack context menu item.

3. **[Hide]**, **[Remove]**, **[Shuffle Up]**, **[Shuffle Down]** button items.
   Common chart stack context menu items.

4. **[Copy Image]**, **[Copy]**, **[Paste** *object type***]** button items.
   Common chart stack clipboard related menu items.

5. **[Modelling Trade…]** menu item
   Common chart stack trade modelling item.

6. **[Properties]** menu item
   Activates the TRIX Chart Properties Grid.

6.5.31.2 TRIX Label Context Menu

The following TRIX Label Context Menu is accessed via a right mouse click over the TRIX chart label.

1. **[Buy Signals]** button item.
   Toggles the display of buy signals on (checked) and off.

   Buy signal is defined as when the signal lines passed from above the TRIX line to below the TRIX line.

2. **[Sell Signals]** button item.
   Toggles the display of sell signals on (checked) and off.

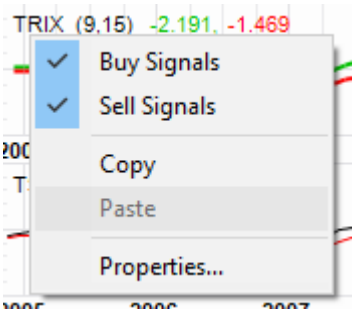
   Sell signal is defined as when the signal line passes from below the TRIX line to above the TRIX line.

3. [Copy] menu item
Copies TRIX calculation and cosmetic parameters from label to clipboard.

4. **[Paste** *object type***]** menu item
Pastes TRIX calculation and cosmetic parameters from clipboard to label.

Item is only enabled when clipboard contains content previously copied from TRIX label.

5. **[Properties]** menu item
Activates the TRIX Label Properties Grid.



6.5.31.3 TRIX Chart Properties Grid

The following TRIX Chart Properties Grid is activated via a left mouse click over the active chart area exclusive of prioritised objects such as labels, regression curves, mark-ups, drawing objects.

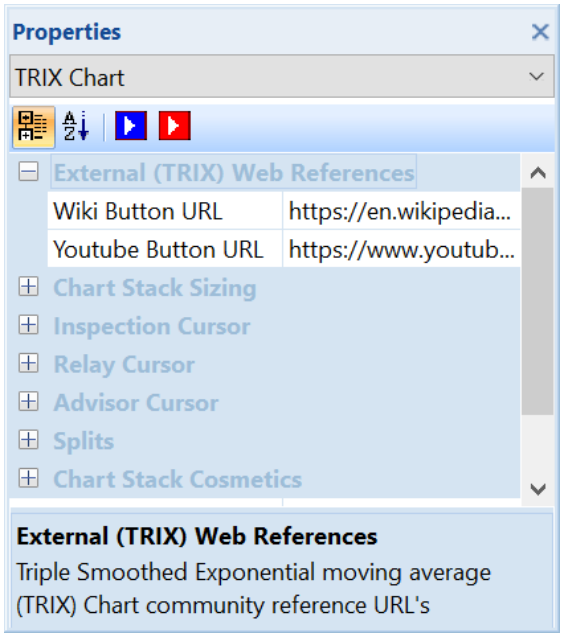
1. **[Wiki Button URL**] grid item.
URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
URL to be activated upon **{YouTube}** button press.

3. **[Chart Stack Sizing]** grid items.
Common Chart Stack sizing parameters.

4. **[Inspection Cursor]** grid item.
Common Chart Stack inspection cursor parameters.

5. **[Replay Cursor]** grid item.
Common Chart Stack replay cursor parameters.



6. **[Advisor Cursor]** grid item.
Common Chart Stack advisor cursor parameters.

7. **[Splits Pen]** grid item.
Common to all charts within this chart stack.

8. **[Chart Stack Cosmetics]** grid items.
Common Chart Stack cosmetics parameters.

Refer Common OHLCvs Chart Stack Properties Grid for further details.

6.5.31.4 TRIX Label Properties Grid

The following TRIX Label Properties Grid is accessed via a left mouse click over the TRIX chart label.

1. **[Wiki Button URL**] grid item.
   URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

3. **[Periods TRIX]** grid item.
   Look back periods used to calculate TRIX, usually 15.

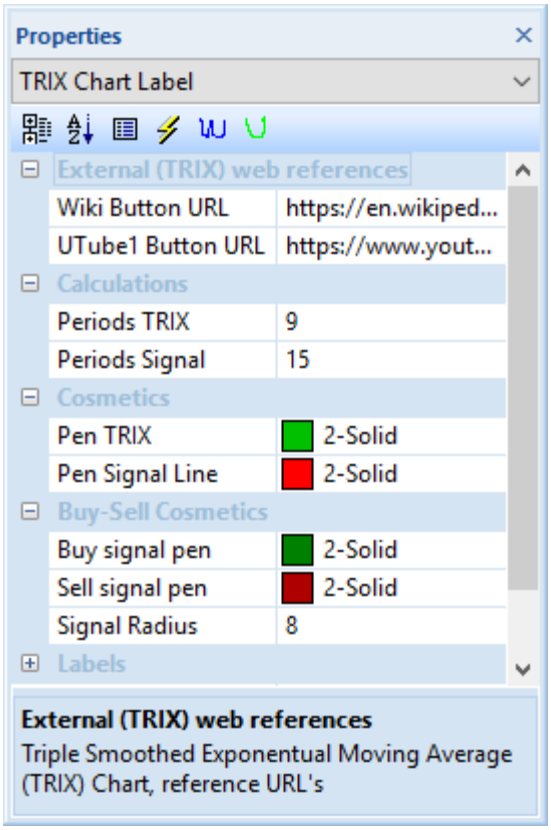
4. **[Periods Signal]** grid item.
   Triple Smoothed Exponential Moving Average (TRIX) signal line periods, usually 9.

5. **[Pen TRIX]** grid item.
   Pen used to draw the TRIX indicator.

6. **[Pen Signal Line]** grid item.
   Pen used to draw the TRIX indicator signal line.

7. **[Buy Signal Pen]** grid item.
   Pen that will be used to mark-up TRIX buy signals.

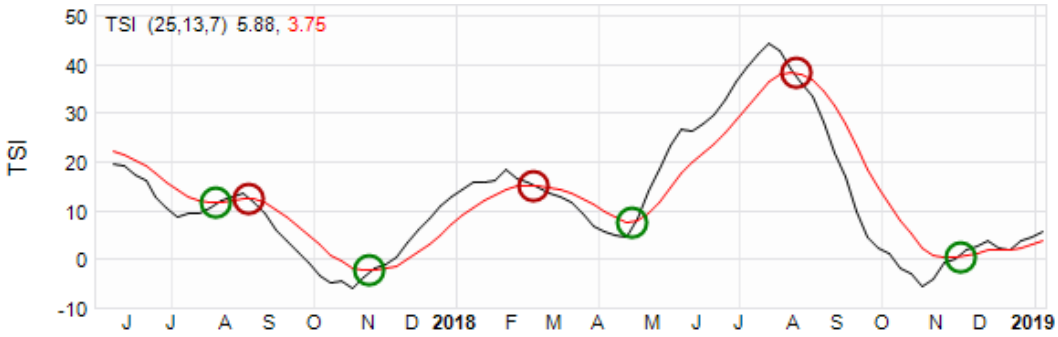
8. **[Sell Signal Pen]** grid item.
   Pen that will be used to mark-up TRIX sell (X-over) signals.



9. **[Signal Radius]** grid item.
   Radius of drawn circular buy-sell signal image in pixels.

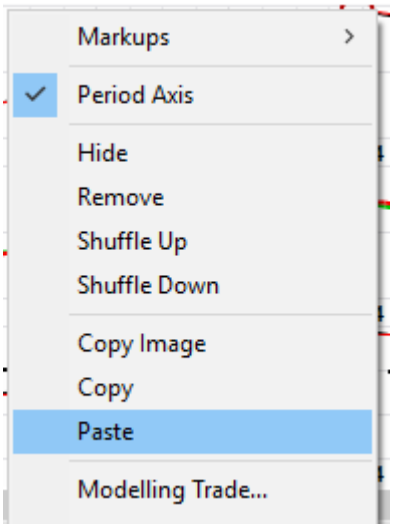
10. **[Labels]** grid items.
    Cosmetics common across all labels in this chart stack.

6.5.32 True Strength Index (TSI)



6.5.32.1 TSI Chart Context Menu

The following TSI Chart Context Menu is accessed via a right mouse click over the active chart area exclusive of prioritised objects such as labels, regression curves, mark-ups, drawing objects.



1. **[Markups]** button item.
   Common chart stack context sub-menu items

2. **[Period Axis]** button item.
   Common chart stack context menu item.

3. **[Hide]**, **[Remove]**, **[Shuffle Up]**, **[Shuffle Down]** button item.
   Common chart stack context menu items.

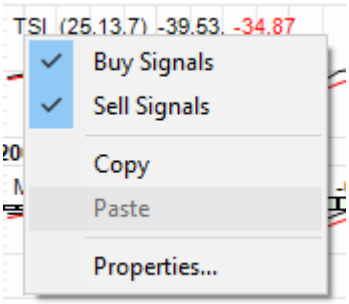
4. **[Copy Image]**, **[Copy]**, **[Paste** *object type*]
   button item.
   Common chart stack clipboard related menu items.

5. **[Modelling Trade…]** menu item
   Common chart stack trade modelling item.

6. **[Properties]** menu item
   Activates the TSI Chart Properties Grid.

6.5.32.2 TSI Label Context Menu

The following TSI Label Context Menu is accessed via a right mouse click over the TSI chart label.



1. **[Buy Signals]** button item.
   Toggles the display of buy signals on (checked) and off.

   Buy signal is defined as when the signal lines passed from above the TSI line to below the TSI line.

2. **[Sell Signals]** button item.
   Toggles the display of sell signals on (checked) and off.

Sell signal is defined as when the signal line passes from below the TSI line to above the TSI line.

3. **[Copy]** menu item
Copies TSI calculation and cosmetic parameters from label to clipboard.

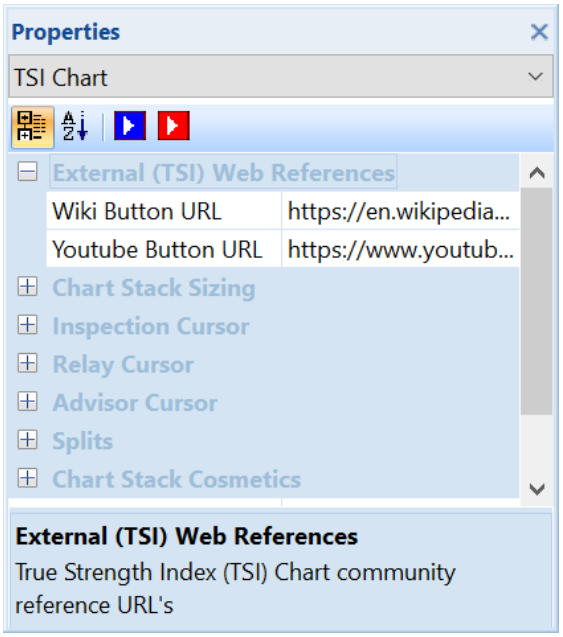
4. **[Paste** *object type***]** menu item
Pastes TSI calculation and cosmetic parameters from clipboard to label.

Item is only enabled when clipboard contains content previously copied from TSI label.

5. **[Properties]** menu item
Activates the TSI Label Properties Grid.

6.5.32.3 TSI Chart Properties Grid

The following TSI Chart Properties Grid is activated via a left mouse click over the active chart area exclusive of prioritised objects such as labels, regression curves, mark-ups, drawing objects.



1. **[Wiki Button URL]** grid item.
URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
URL to be activated upon **{YouTube}** button press.

3. **[Chart Stack Sizing]** grid item.
Common Chart Stack sizing parameters.

4. **[Inspection Cursor]** grid item.
Common Chart Stack inspection cursor parameters.

5. **[Replay Cursor]** grid item.
Common Chart Stack replay cursor parameters.

6. **[Advisor Cursor]** grid item.
Common Chart Stack advisor cursor parameters.

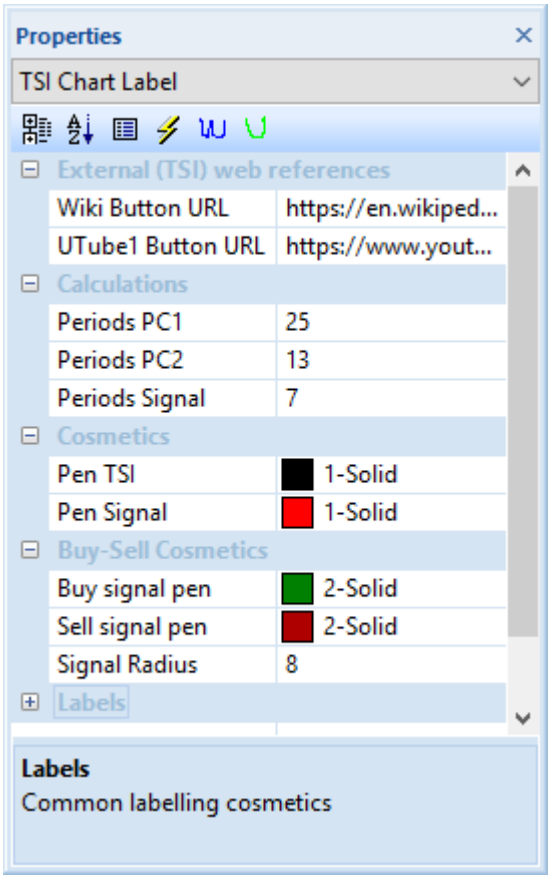
7. **[Splits Pen]** grid item.
Common to all charts within this chart stack.

8. **[Chart Stack Cosmetics]** grid items.
Common Chart Stack cosmetics parameters.

Refer Common OHLCvs Chart Stack Properties Grid for further details.

6.5.32.4 TSI Label Properties Grid

The following TSI Label Properties Grid is accessed via a left mouse click over the TSI chart label.



1. **[Wiki Button URL**] grid item.
   URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

3. **[Periods PC1]** grid item.
   Look back periods used to exponentially smooth price change 1, usually 25.

4. **[Periods PC2]** grid item.
   Look back periods used to exponentially smooth price change 2, usually 13.

5. **[Periods Signal]** grid item.
   Look back periods used to exponentially smooth calculated TSI for signal line, usually 7.

6. **[Pen TSI]** grid item.
   Pen used to draw the calculated TSI series.

7. **[Pen Signal]** grid item.
   Pen used to draw the calculated TSI signal line.

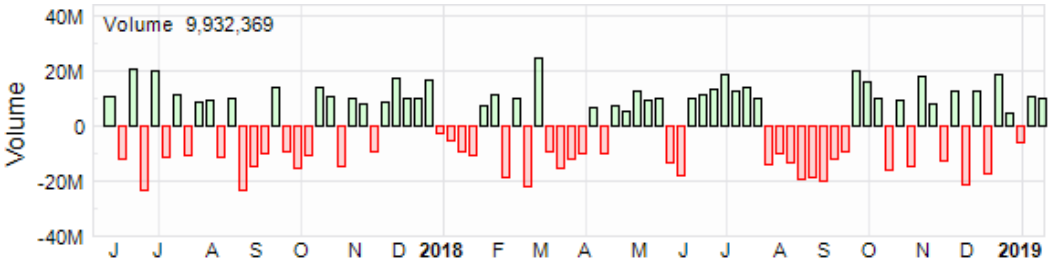
8. **[Buy Signal Pen]** grid item.
   Pen that will be used to mark-up TSI buy (X-over) signals.

9. **[Sell Signal Pen]** grid item.
   Pen that will be used to mark-up TSI sell (X-over) signals.

10. **[Signal Radius]** grid item.
    Radius of drawn circular buy-sell signal image in pixels.

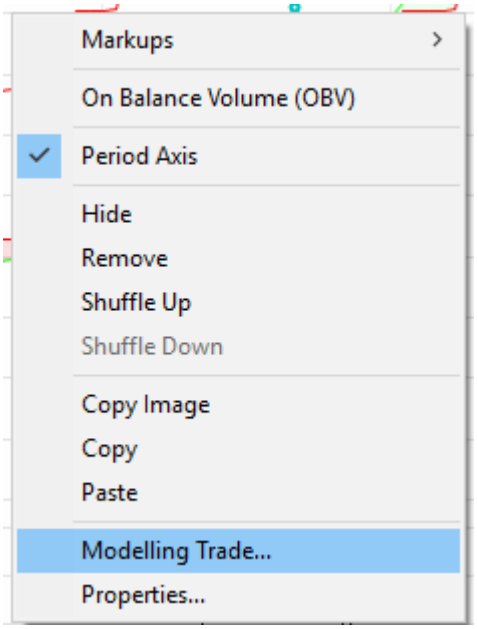
11. **[Labels]** grid items.
    Cosmetics common across all labels in this chart stack.

6.5.33 Volume



6.5.33.1 Volume Chart Context Menu

The following Volume Chart Context Menu is accessed via a right mouse click over the active chart area exclusive of prioritised objects such as labels, regression curves, mark-ups, drawing objects.



1. **[On Balance Volume (OBV)]** menu item.
   Activates the On-Balance-Volume (OBV) overlay.

2. **[Markups]** menu item
   Common chart stack context sub-menu items

3. **[Period Axis]** menu item
   Common chart stack context menu item.

4. **[Hide]**, **[Remove]**, **[Shuffle Up]**, **[Shuffle Down]** menu items.
   Common chart stack context menu items.

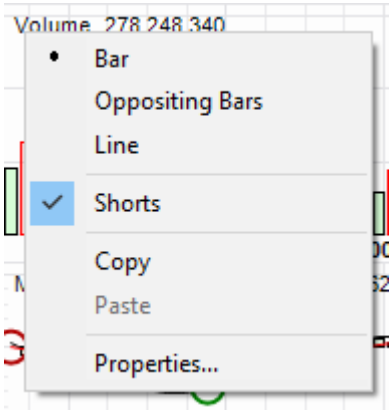
5. **[Copy Image]**, **[Copy]**, **[Paste** *object type***]** menu items.
   Common chart stack clipboard related menu items.

6. **[Modelling Trade…]** menu item.
   Common chart stack trade modelling item.

7. **[Properties]** menu item
   Activates Volume Chart Properties Grid.

6.5.33.2 Volume Label Context Menu

The following Volume Label Context Menu is accessed via a right mouse click over the Volume chart label.



1. **[Bar]** menu item.
   Selects display (checked) of adjacent period volume bars for the chart.

2. **[Opposing Bars]** menu item.
   Selects display (checked) of line joining period volumes for the chart.

3. **[Line]** menu item.
   Selects display (checked) of opposing period volume bars for the chart.

4. **[Shorts]** menu item.
   Toggles display of shorts overlay on volume representation for the period.

5. **[Copy]** menu item
   Copies Volume calculation and cosmetic parameters from label to clipboard.

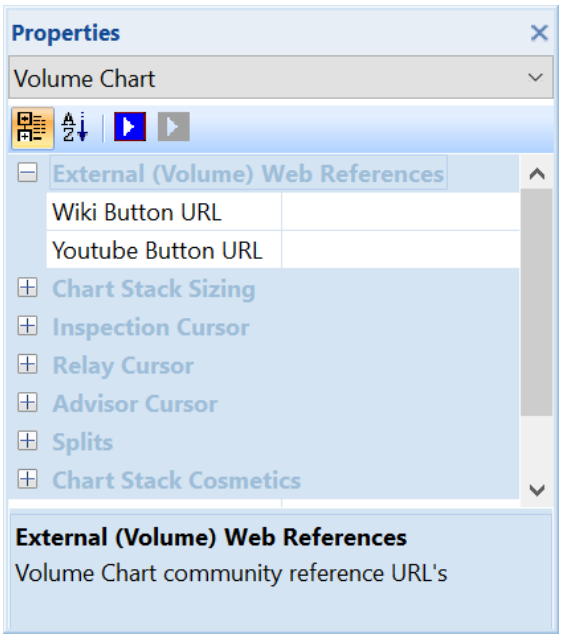
6. **[Paste** *object type***]** menu item
   Pastes Volume calculation and cosmetic parameters from clipboard to label.

   Item is only enabled when clipboard contains content previously copied from Volume label.

7. **[Properties]** menu item
   Activates Volume Label Properties Grid.

6.5.33.3 Volume Chart Properties Grid

The following Volume Chart Properties Grid is activated via a left mouse click over the active chart area exclusive of prioritised objects such as labels, regression curves, mark-ups, drawing objects.



1. **[Wiki Button URL**] grid item.
   URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

3. **[Chart Stack Sizing]** grid item.
   Common Chart Stack sizing parameters.

4. **[Inspection Cursor]** grid item.
   Common Chart Stack inspection cursor parameters.

5. **[Replay Cursor]** grid item.
   Common Chart Stack replay cursor parameters.

6. **[Advisor Cursor]** grid item.
   Common Chart Stack advisor cursor parameters.

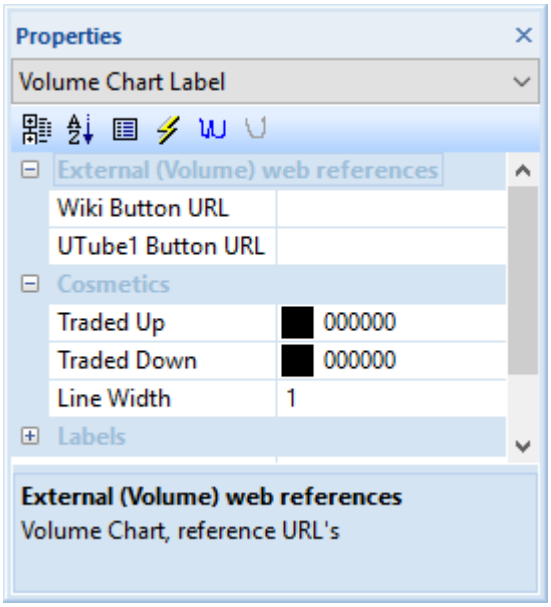
7. **[Splits Pen]** grid item.
   Common to all charts within this chart stack.

8. **[Chart Stack Cosmetics]** grid items.
   Common Chart Stack cosmetics parameters.

   Refer Common OHLCvs Chart Stack Properties Grid for further details.

6.5.33.4 Volume Label Properties Grid

The following Volume Label Properties Grid is accessed via a left mouse click over the Volume chart label.



1. **[Wiki Button URL**] grid item.
   URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

3. **[Traded Up]** grid item.
   Color used to draw bars with current closing price greater than previous closing price.

4. **[Traded Up Brush]** grid item.
   Brush used to fill the traded-up bars.

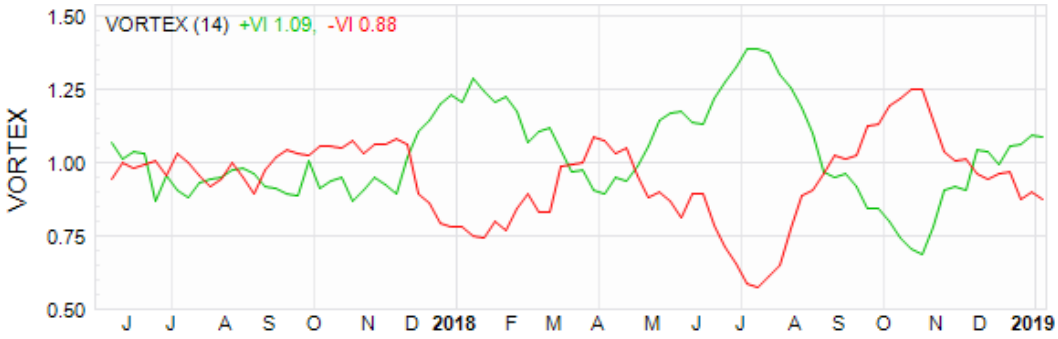
5. **[Traded Down]** grid item.
   Color used to draw bars with current closing price less than previous closing price.

6. **[Traded Down Brush]** grid item.
   Brush used to fill the traded down bars.

7. **[Line Width]** grid item.
   Pen used to draw the positive (+ve) directional index line.

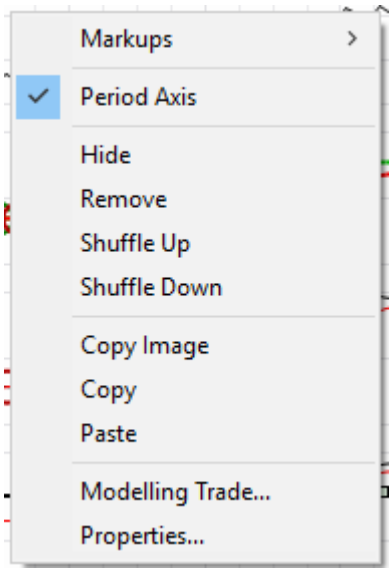
8. **[Labels]** grid items.
   Cosmetics common across all labels in this chart stack.

6.5.34 Vortex Indicators (VORTEX)



6.5.34.1 VORTEX Chart Context Menu

The following VORTEX Chart Context Menu is accessed via a right mouse click over the active chart area exclusive of prioritised objects such as labels, regression curves, mark-ups, drawing objects.



1. **[Markups]** menu item.
   Common chart stack context sub-menu items

2. **[Period Axis]** menu item.
   Common chart stack context menu item.

3. **[Hide]**, **[Remove]**, **[Shuffle Up]**, **[Shuffle Down]** menu items.
   Common chart stack context menu items.

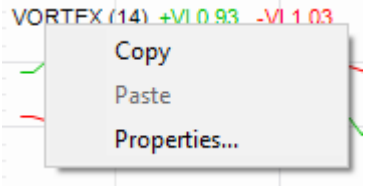
4. **[Copy Image]**, **[Copy]**, **[Paste** *object type***]** menu items.
   Common chart stack clipboard related menu items.

5. **[Modelling Trade…]** menu item
   Common chart stack trade modelling item.

6. **[Properties]** menu item
   Activates the VORTEX Chart Properties Grid.

6.5.34.2 VORTEX Label Context Menu

The following VORTEX Label Context Menu is accessed via a right mouse click over the VORTEX chart label.



1. **[Copy]** menu item
   Copies VORTEX calculation and cosmetic parameters from label to clipboard.

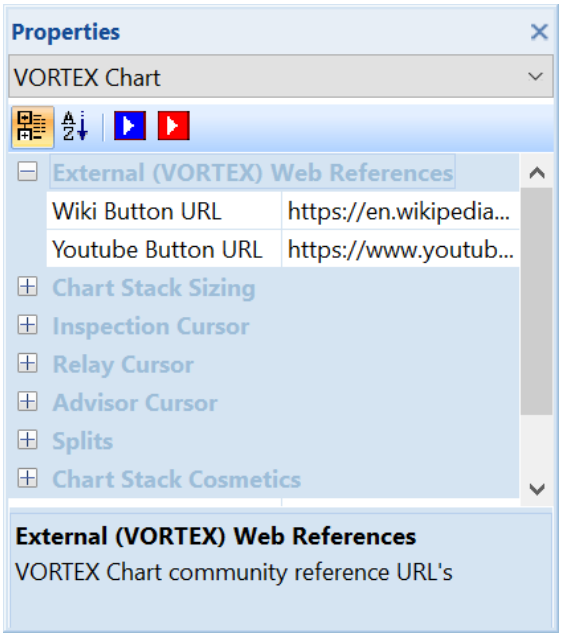
2. **[Paste** *object type***]** menu item
   Pastes VORTEX calculation and cosmetic parameters from clipboard to label.

Item is only enabled when clipboard contains content previously copied from VORTEX label.

3. **[Properties]** menu item
Activates the VORTEX Label Properties Grid.

6.5.34.3 VORTEX Chart Properties Grid

The following VORTEX Chart Context Menu is accessed via a right mouse click over the active chart area exclusive of prioritised objects such as labels, regression curves, mark-ups, drawing objects.



1. **[Wiki Button URL**] grid item.
URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
URL to be activated upon **{YouTube}** button press.

3. **[Chart Stack Sizing]** grid item.
Common Chart Stack sizing parameters.

4. **[Inspection Cursor]** grid item.
Common Chart Stack inspection cursor parameters.

5. **[Replay Cursor]** grid item.
Common Chart Stack replay cursor parameters.

6. **[Advisor Cursor]** grid item.
Common Chart Stack advisor cursor parameters.

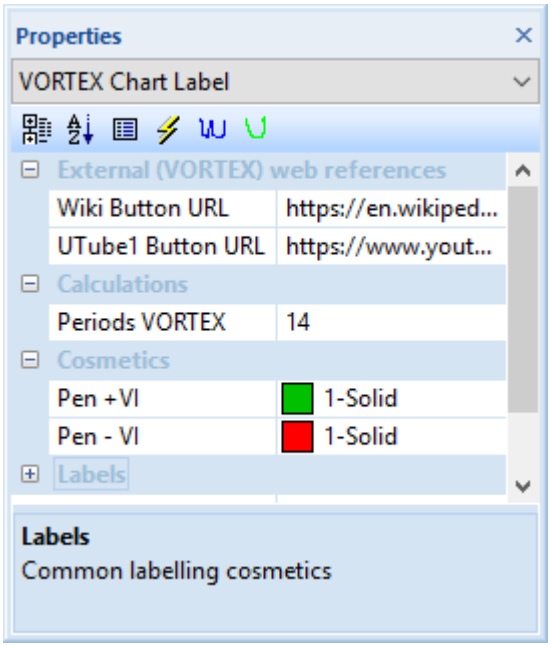
7. **[Splits Pen]** grid item.
Common to all charts within this chart stack.

8. **[Chart Stack Cosmetics]** grid items.
Common Chart Stack cosmetics parameters.

   Refer Common OHLCvs Chart Stack Properties Grid for further details.

6.5.34.4 VORTEX Label Properties Grid

The following VORTEX Label Properties Grid is accessed via a left mouse click over the VORTEX chart label.



1. **[Wiki Button URL**] grid item.
   URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

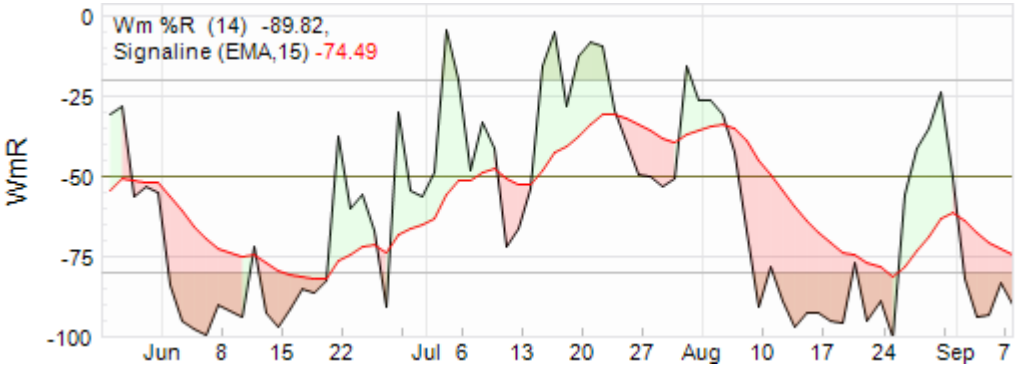
3. **[Periods VORTEX]** grid item.
   Look back periods used to calculate VORTEX Indicator, usually 14.

4. **[Pen +VI]** grid item.
   Pen used to draw the positive (+ve) VORTEX indicator.

5. **[Pen –VI]** grid item.
   Pen used to draw the negative (-ve) VORTEX indicator.

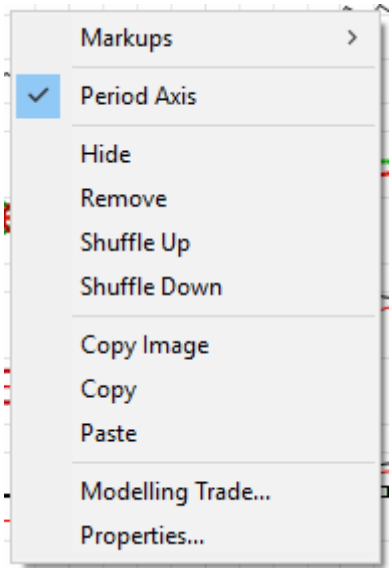
6. **[Labels]** grid item.
   Cosmetics common across all labels in this chart stack.

6.5.35 Williams %R



6.5.35.1 WmR Chart Context Menu

The following WmR Chart Context Menu is accessed via a right mouse click over the active chart area exclusive of prioritised objects such as labels, regression curves, mark-ups, drawing objects.



1. **[Markups]** menu item.
   Common chart stack context sub-menu items

2. **[Period Axis]** menu item.
   Common chart stack context menu item.

3. **[Hide]**, **[Remove]**, **[Shuffle Up]**, **[Shuffle Down]** menu items.
   Common chart stack context menu items.

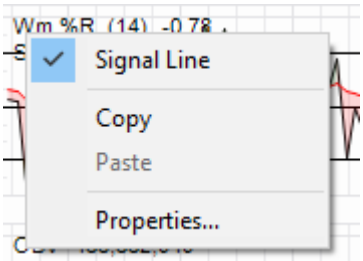
4. **[Copy Image]**, **[Copy]**, **[Paste** *object type*]
   menu items.
   Common chart stack clipboard related menu items.

5. **[Modelling Trade…]** menu item
   Common chart stack trade modelling item.

6. **[Properties]** menu item
   Activates the WmR Chart Properties Grid.

6.5.35.2 WmR Label Context Menu

The following WmR Label Context Menu is accessed via a right mouse click over the WmR chart label.



1. **[Signaline]** menu item
   Toggles Signaline overlay on (checked) and off.

2. **[Copy]** menu item
   Copies WmR calculation and cosmetic parameters from label to clipboard.

3. **[Paste** *object type*] menu item
   Pastes WmR calculation and cosmetic parameters from clipboard to label.

   Item is only enabled when clipboard contains content previously copied from WmR label.

4. **[Properties]** menu item
   Activates the WmR Label Properties Grid.

6.5.35.3 WmR Chart Properties Grid

The following WmR Chart Properties Grid is accessed via a right mouse click over the active chart area exclusive of prioritised objects such as labels, regression curves, mark-ups, drawing objects.

1. **[Wiki Button URL**] grid item.
   URL to be activated upon **{Wiki}** button press.

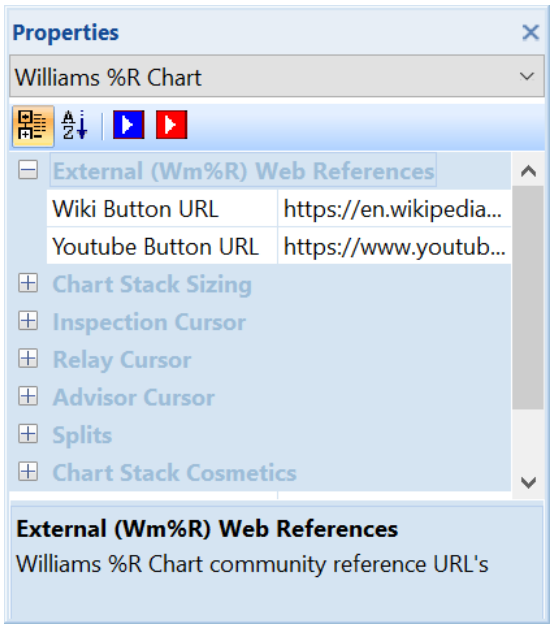
2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

3. **[Chart Stack Sizing]** grid item.
   Common Chart Stack sizing parameters.

4. **[Inspection Cursor]** grid item.
   Common Chart Stack inspection cursor parameters.

5. **[Replay Cursor]** grid item.
   Common Chart Stack replay cursor parameters.

6. **[Advisor Cursor]** grid item.
   Common Chart Stack advisor cursor parameters.



7. **[Splits Pen]** grid item.
   Common to all charts within this chart stack.

8. **[Chart Stack Cosmetics]** grid items.
   Common Chart Stack cosmetics parameters.

   Refer Common OHLCvs Chart Stack Properties Grid for further details.

6.5.35.4 WmR Label Properties Grid

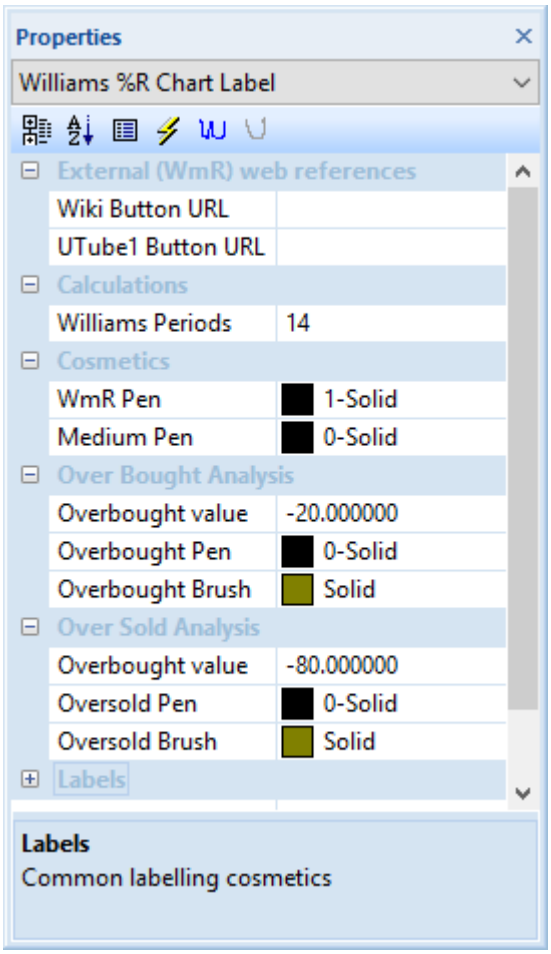
The following WmR Label Properties Grid is accessed via a left mouse click over the WmR chart label.

1. **[Wiki Button URL**] grid item.
   URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

3. **[Williams Periods]** grid item.
   Look back periods used to calculate Williams Momentum (WmR) indicator, usually 14.

4. **[WmR Pen]** grid item.
   Pen used to draw the calculated Williams series line.



5. **[Medium Pen]** grid item.
   Pen used to draw the Williams medium (0) bar.

6. **[Overbought value]** grid item.
   Arbitrary over bought value, usual values (70,80,90).

7. **[Overbought Pen]** grid item.
   Pen used to annotate the overbought bar.

8. **[Overbought Brush]** grid item.
   Brush used to fill over bought regions above the overbought bar.

9. **[Oversold value]** grid item.
   Arbitrary oversold value, usual values (10,20,30).

10. **[Oversold Pen]** grid item.
    Pen used to annotate the oversold bar.

11. **[Oversold Brush]** grid item.
    Brush used to fill over sold regions below the oversold bar.

12. **[Labels]** grid items.
    Cosmetics common across all labels in this chart stack.

6.6 Mark-ups

6.6.1 Announcements

6.6.2 Events

6.6.3 Timelines

6.6.4 Portfolio Positions

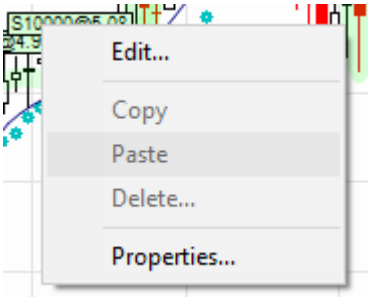
Portfolio Trade positions can be annotated over any chart supporting selection via **[Markup]** item in the Chart Context Menu. For Oscillator and Indicator charts without price axis the primary calculated ordinate (RSI, MACD, TRIX, etc) is substituted for price at the trade date.

Portfolio trade data is sourced from a Transactions folder from an attached Portfolio Explorer.



6.6.4.1 Portfolio Trade Context Menu

The Portfolio Trade Context Menu is activated by a right mouse click over an annotated Portfolio Trade.



1. **[Edit…]** menu item.
   Edits trade parameters.

   Activates the modal Portfolio Trade Dialog.

2. **[Copy]** menu item
   Copies annotated trade cosmetics to the clipboard.

3. **[Paste** *object type***]** menu item
   Pastes previously copied annotated trade cosmetics from the clipboard.

   Item is only enabled when clipboard contains content previously copied from annotated trade.

4. **[Properties]** menu item.
   Activates the Properties Grid for the annotated trade.

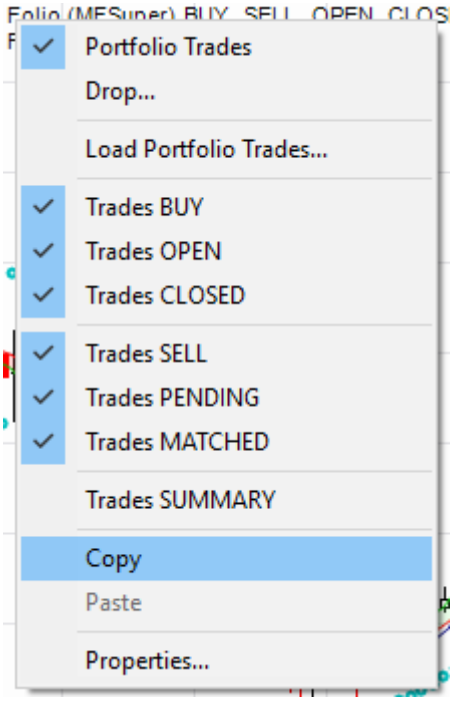
6.6.4.2 Portfolio Trades Label Context Menu

The following Portfolio Trades Label Context Menu is accessed via a right mouse click over the Trades label.

1. **[Portfolio Trades]** menu item.
   Toggles display of the Portfolio Trades mark-up on (checked) and off.

   Logically label will not exist when mark-up display toggled off. Trades

mark-up display is toggled from the equivalent [Markup] item from the Chart Context Menu.



2. **[Drop…]** menu item.
Permanently drops display of annotated trades from the chart.

3. **[Load Portfolio Trades…]** menu item.
Load Portfolio trade set data.

4. **[Trades BUY]** menu item.
Toggles annotation of BUY trades on (checked) and off.

5. **[Trades OPEN]** menu item.
Toggles annotation of OPEN – BUY trades on (checked) and off.

6. **[Trades CLOSED]** menu item.
Toggles annotation of CLOSED – BUY trades on (checked) and off.

7. **[Trades SELL]** menu item.
Toggles annotation of SELL trades on (checked) and off.

8. **[Trades PENDING]** menu item.
Toggles annotation of PENDING – SELL (still to be matched) trades on (checked) and off.

9. **[Trades MATCHED]** menu item.
Toggles annotation of SELL - MATCHED trades on (checked) and off.

10. **[Trades SUMMARY]** menu item.
Toggles annotation of trade SUMMARY on (checked) and off.

11. **[Copy]** menu item
Copies trade calculation and cosmetic parameters from label to clipboard.

12. **[Paste** *object type***]** menu item
Pastes trade calculation and cosmetic parameters from clipboard to label.

    Item is only enabled when clipboard contains content previously copied from Trades label.

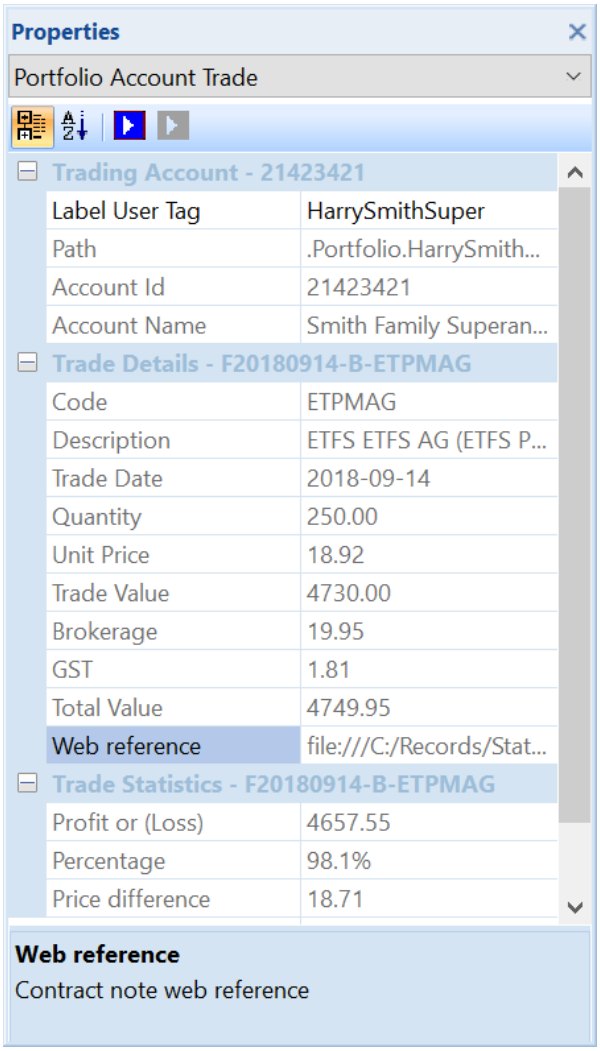
13. **[Properties]** menu item
Activates Portfolio Trades Label Properties Grid.

6.6.4.3 Portfolio Trade Properties Grid

Activated via the **[Properties]** menu item from the Portfolio Trade Context Menu or a left mouse click over the annotated Portfolio Trade.

Provides a display of the cosmetic settings used to annotate the Trade on the chart, within the defined limits. All parameters are localised to this annotated instance of the Trades.

The following cosmetic parameters define the annotated trades.



1. **[Code]** grid item.
   Stock code.

2. **[Description]** grid item.
   Stock description.

3. **[Trade Date]** grid item.
   Portfolio trade date.

4. **[Quantity]** grid item.
   Portfolio trade quantity.

5. **[Unit Price]** grid item.
   Portfolio trade unit price.

6. **[Trade Value]** grid item.
   Portfolio trade value.

7. **[Brokerage]** grid item.
   Portfolio trade brokerage amount.

8. **[GST]** grid item.
   Portfolio trade GST or tax.

9. **[Total Value]** grid item.
   Total Portfolio trade value.

10. **[Web reference]** grid item.
    Portfolio trade web reference etc.

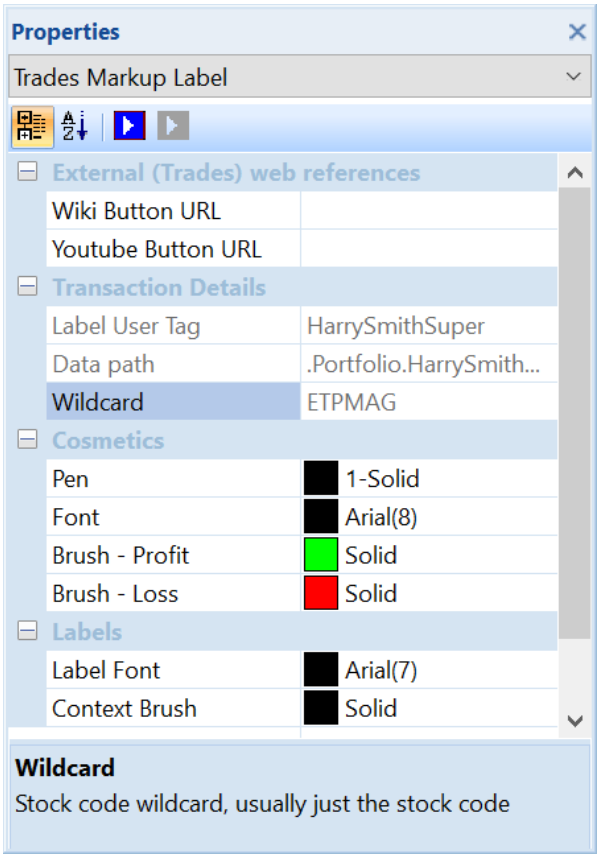
11. **[Profit or (Loss)]** grid item.
    Trade profit or loss.

12. **[Percentage]** grid item.
    Percentage profit or loss.

13. **[Price difference]** grid item.
    Current market price difference.

6.6.4.4 Portfolio Trades Label Properties Grid

The following Portfolio Trades Label Properties Grid is accessed via a left mouse click over the Trades Mark-up Label.



1. **[Wiki Button URL**] grid item.
   URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

3. **[Label User Tag]** grid item.
   Label menu user tag.

4. **[Data Path]** grid item.
   Annotated Mark-up Trades data path.

5. **[Wildcard]** grid item.
   Stock code wildcard, usually just the stock code.

6. **[Pen]** grid item.
   Pen used to annotate the trades box.

7. **[Font]** grid item.
   Font used to label the trade.

8. **[Brush – Profit]** grid item.
   Brush used to fill profitable trades box.

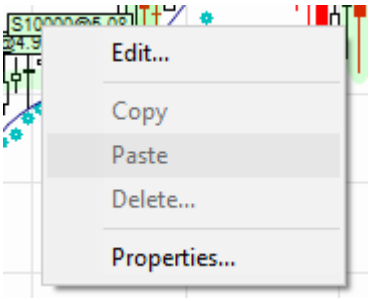
9. **[Brush – Loss]** grid item.
   Brush used to fill un-profitable trades box.

10. **[Labels]** grid item.
    Cosmetics common across all labels in this chart stack.

6.6.5 Modelling Positions

6.6.5.1 Modelling Trade Context Menu

The Modelling Trade Context Menu is activated by a right mouse click over an annotated Modelling Trade.



1. **[Edit…]** menu item.
   Edits trade parameters.

   Activates the modal Modelling Trade Dialog.

2. **[Copy]** menu item
   Copies annotated trade cosmetics to the clipboard.

3. **[Paste** *object type***]** menu item
   Pastes previously copied annotated trade cosmetics from the clipboard.

   Item is only enabled when clipboard contains content previously copied from annotated trade.

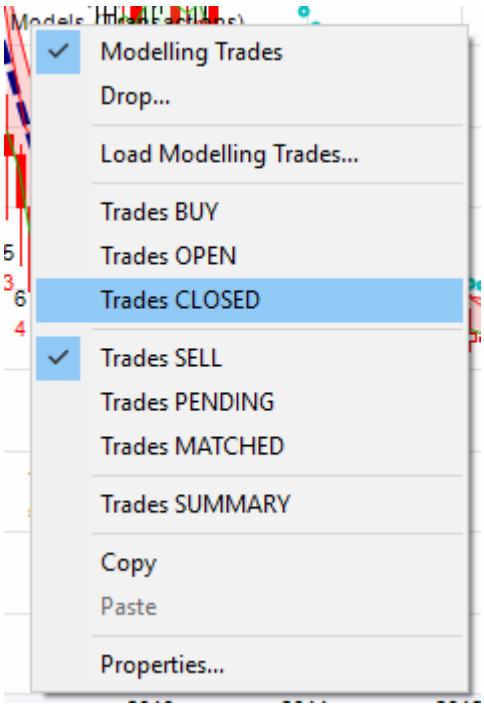
4. **[Properties]** menu item.
   Activates the Properties Grid for the annotated trade.

6.6.5.2 Modelling Trades Label Context Menu

The following Modelling Trades Label Context Menu is accessed via a right mouse click over the Trades label.

1. **[Modelling Trades]** menu item.
   Toggles display of the Modelling Trades mark-up on (checked) and off.

   Logically label will not exist when mark-up display toggled off. Modelling Trades mark-up display is toggled from the equivalent [Markup] item from the Chart Context Menu.



2. **[Drop…]** menu item.
   Permanently drops display of annotated trades from the chart.

3. **[Load Modelling Trades…]** menu item.
   Load Modelling trade set data.

4. **[Trades BUY]** menu item.
   Toggles annotation of BUY trades on (checked) and off.

5. **[Trades OPEN]** menu item.
   Toggles annotation of OPEN – BUY trades on (checked) and off.

6. **[Trades CLOSED]** menu item.
   Toggles annotation of CLOSED – BUY trades on (checked) and off.

7. **[Trades SELL]** menu item.
   Toggles annotation of SELL trades on (checked) and off.

8. **[Trades PENDING]** menu item.
   Toggles annotation of PENDING – SELL (still to be matched) trades on (checked) and off.

9. **[Trades MATCHED]** menu item.
   Toggles annotation of SELL - MATCHED trades on (checked) and off.

10. **[Trades SUMMARY]** menu item.
    Toggles annotation of trade SUMMARY on (checked) and off.

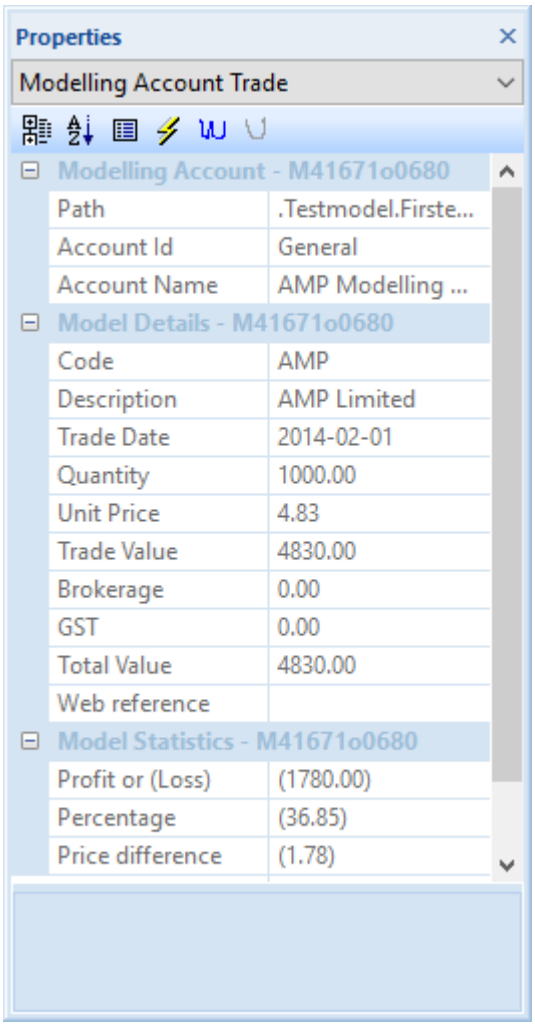
11. **[Copy]** menu item
    Copies trade calculation and cosmetic parameters from label to clipboard.

12. **[Paste** *object type***]** menu item
    Pastes trade calculation and cosmetic parameters from clipboard to label.

    Item is only enabled when clipboard contains content previously copied from Trades label.

13. **[Properties]** menu item
    Activates Modelling Trades Label Properties Grid.

6.6.5.3 Modelling Trade Properties Grid



Activated via the **[Properties]** menu item from the Modelling Trade Context Menu or a left mouse click over the annotated Modelling Trade.

Provides a display of the cosmetic settings used to annotate the Trade on the chart, within the defined limits. All parameters are localised to this annotated instance of the Trades.

The following cosmetic parameters define the annotated trades.

1. **[Code]** grid item.
   Stock code.

2. **[Description]** grid item.
   Stock description.

3. **[Trade Date]** grid item.
   Modelling trade date.

4. **[Quantity]** grid item.
   Modelling trade quantity.

5. **[Unit Price]** grid items.
   Modelling trade unit price.

6. **[Trade Value]** grid item.
   Modelling trade value.

7. **[Brokerage]** grid item.
   Modelling trade brokerage amount.

8. **[GST]** grid item.
   Modelling trade GST or tax.

9. **[Total Value]** grid item.
   Total Modelling trade value.

10. **[Web reference]** grid item.
    Modelling trade web reference etc.

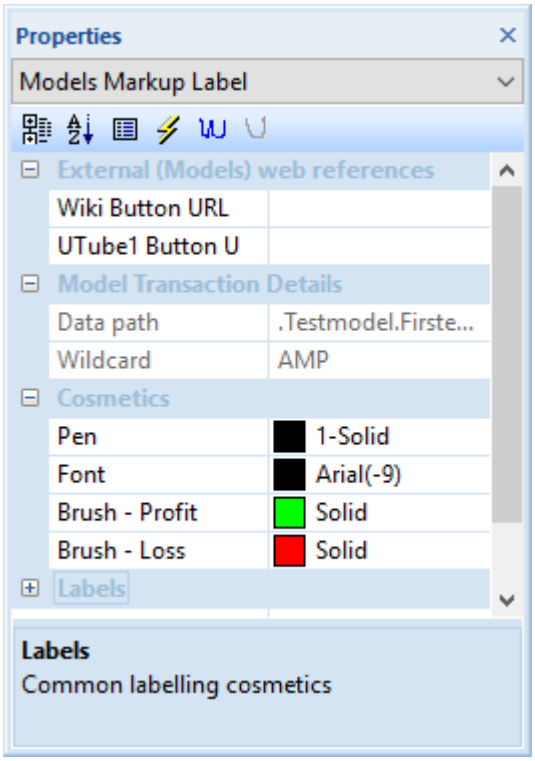
11. **[Profit or (Loss)]** grid item.
    Trade profit or loss.

12. **[Percentage]** grid item.
    Percentage profit or loss.

13. **[Price difference]** grid item.
    Current market price difference.

6.6.5.4 Modelling Trades Label Properties Grid

The following Modelling Trades Label Properties Grid is accessed via a left mouse click over the Models Mark-up Label.



1. **[Wiki Button URL]** grid item.
   URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

3. **[Data Path]** grid item.
   Annotated Mark-up Trades data path.

4. **[Wildcard]** grid item.
   Stock code wildcard, usually just the stock code.

5. **[Pen]** grid item.
   Pen used to annotate the trades box.

6. **[Font]** grid item.
   Font used to label the trade.

7. **[Brush – Profit]** grid item.
   Brush used to fill profitable trades box.

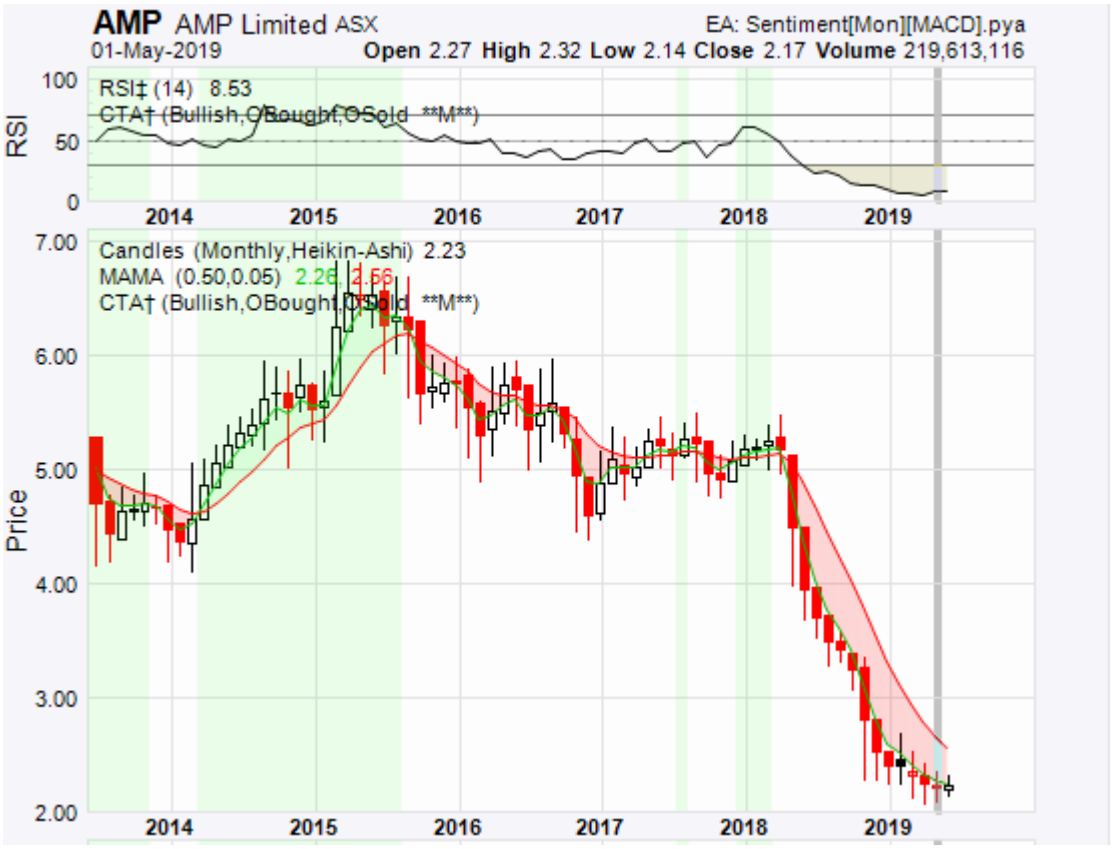
8. **[Brush – Loss]** grid item.
   Brush used to fill un-profitable trades box.

9. **[Labels]** grid item.
   Cosmetics common across all labels in this chart stack.

6.6.6 Python Advisor (Advisor)

Python Advisor mark-ups can be activated from Advisor scripts for any chart within the Chart Stack. The mark-ups enable scripts to provide visual feedback on the Chart Stack whilst the Advisor Label Context Menu and Property Grid facilitate some control over the script behaviour.

Such mark-ups only exist whilst the Python Advisor script is active. Markups are immediately cleared upon script cancellation or displacement by another script.



6.6.6.1 Python Advisor Shaded Regions

Advisor Shaded-Regions exist as vertical bars that extend through the whole Chart Stack or limited to selected charts within the stack.

Region types are identified by unique brushes with a transparency of around 20percent. The colour legend is managed through the Advisor Label Properties Grid and is common across all charts in the stack.

6.6.6.1.1 Bullish Momentum

6.6.6.1.2 Overbought

6.6.6.1.3 Sell

6.6.6.1.4 Bearish Momentum

6.6.6.1.5 Oversold

6.6.6.1.6 Buy

6.6.6.2 Python Advisor Tags

6.6.6.2.1 Python Advisor Tag Properties Grid

6.6.6.3 Python Advisor Model Trades

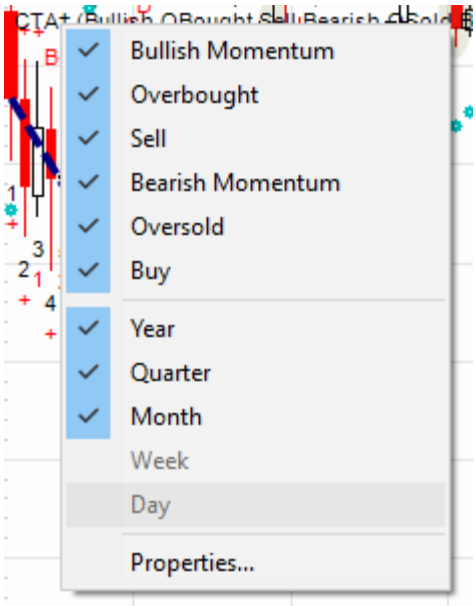
6.6.6.3.1 Python Advisor Model Trade Properties Grid

6.6.6.4 Python Advisor Label Context Menu

The following Python Advisor Label Context Menu is accessed via a right mouse click over the Advisor overlay label.

1. **[Bullish Momentum]** menu item.
   Toggles display of Bullish Momentum shades generated by the Python Advisor script on (checked) and off.

   Shaded bullish momentum periods are the results of subjective calculation performed within the Advisor script itself. Such shaded periods are only displayed whilst the script is active.



2. **[Overbought]** menu item
   Toggles display of Overbought shaded regions generated by the Python Advisor script on (checked) and off.

3. **[Sell]** menu item
   Toggles display of Sell shaded regions generated by the Python Advisor script on (checked) and off.

4. **[Bearish Momentum]** menu item.
   Toggles display of Bearish Momentum shades generated by the Python Advisor script on (checked) and off.

   Shaded bearish momentum periods are the results of subjective calculation performed within the Advisor script itself. Such shaded periods are only displayed whilst the script is active.

5. **[Oversold]** menu item
   Toggles display of Oversold shaded regions generated by the Python Advisor script on (checked) and off.

6. **[Buy]** menu item
   Toggles display of Buy shaded regions generated by the Python Advisor script on (checked) and off.

7. **[Year]** menu item
   Toggles display of shaded regions, with Yearly period units, generated by the Python Advisor script on (checked) and off.

   Logically Yearly period unit shades can be displayed on Charts with Yearly

and less period units. Selection is unique to current period units.

8. **[Quarter]** menu item
   Toggles display of shaded regions, with Quarterly period units, generated by the Python Advisor script on (checked) and off.

   Logically Quarterly period unit shades can be displayed on Charts with Quarter and less period units. Selection is unique to current period units.

9. **[Month]** menu item
   Toggles display of shaded regions, with Monthly period units, generated by the Python Advisor script on (checked) and off.

   Logically Monthly period unit shades can be displayed on Charts with Monthly and less period units. Selection is unique to current period units

10. **[Week]** menu item
    Toggles display of shaded regions, with Weekly period units, generated by the Python Advisor script on (checked) and off.

    Logically Weekly period unit shades can be displayed on Charts with Weekly and less period units. Selection is unique to current period units.

11. **[Day]** menu item
    Toggles display of shaded regions, with Daily period units, generated by the Python Advisor script on (checked) and off.

    Logically Daily period unit shades can be displayed on Charts with Daily and less period units. Selection is unique to current period units.

12. **[Properties]** menu item.
    Activates Python Advisor Label Properties Grid.

6.6.6.5 Python Advisor Label Properties Grid

The following Python Advisor Label Properties Grid is accessed via a left mouse click over the Advisor mark-up label.

1. **[Wiki Button URL]** grid item.
   URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

3. **[Bullish Shades Brush]** grid item.
   Brush used to fill declared bullish regions.

4. **[Overbought Brush]** grid item.
   Brush used to fill declared overbought regions.

5. **[Sell]** grid item.
   Brush used to fill declared sell regions.

6. **[Bearish Shades Brush]** grid item.
   Brush used to fill declared bearish regions.

7. **[Oversold Brush]** grid item.
   Brush used to fill declared oversold regions.

8. **[Buy Brush]** grid item.
   Brush used to fill declared buy regions.

9. **[Tags Pen]** grid item.
   Pen used to draw Advisor tags.

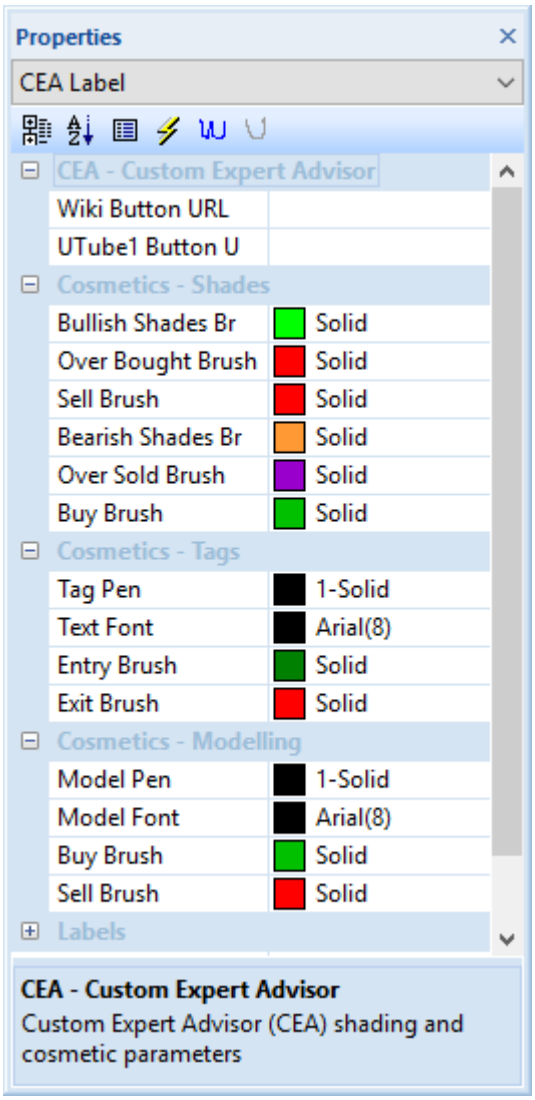
10. **[Text Font]** grid item.
    Font used to annotate Advisor tags.

11. **[Entry Brush]** grid item.
    Brush used for entry backgrounds.

12. **[Exit Brush]** grid item.
    Brush used for exit backgrounds.

13. **[Model Pen]** grid item.
    Pen used to draw Advisor model trades.

14. **[Model Font]** grid item.
    Pen used to label Advisor model trades.



15. **[Buy Brush]** grid item.
    Brush used for model buy trade background.

16. **[Sell Brush]** grid item.
    Brush used for model sell trade background.

17. **[Labels]** grid item.
    Cosmetics common across all labels in this chart stack.

6.7 Drawing Tools

Select desired Drawing Tool menu item from the ribbon bar, then move cursor over Chart Stack, with left mouse click to fix or ESCAPE to abandon

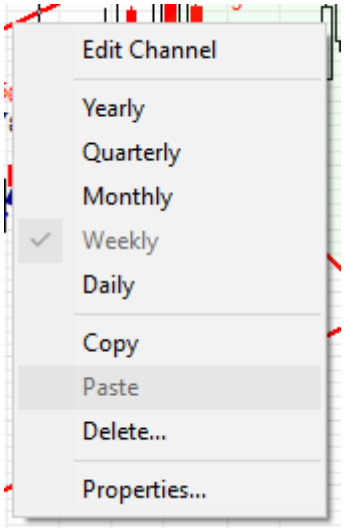
6.7.1 Trends

6.7.1.1 Channels



6.7.1.1.1 Channels Context Menu

The Channels Context Menu is activated by a right mouse click over the displayed channel.



1. **[Edit Channel]** menu item.
   Toggles edit mode on(checked) and off for this Drawing Tool, alternatively use ESCAPE to terminate edit mode.

   When edit mode is switched on the annotation colour changes and circular grab points appear.

The following Period Units items define those charts on which the Channel - Trend will be displayed. Logically the primary Channel units will be always checked and disabled.

2. Yearly
   Toggles display of this Channel -Trend Drawing Tool on(checked) and off for Yearly charts.

3. Quarterly
   Toggles display of this Channel -Trend Drawing Tool on(checked) and off for Quarterly charts.

4. Monthly
   Toggles display of this Channel -Trend Drawing Tool on(checked) and off for Monthly charts.

5. Weekly
   Toggles display of this Channel -Trend Drawing Tool on(checked) and off for Weekly charts.

6. Daily
   Toggles display of this Channel -Trend Drawing Tool on(checked) and off for Daily charts.

7. [Copy] menu item.
   Copies Channel – Trend Drawing Tools item to the clipboard.

8. [**Paste** *object type*] menu item.
   Pastes Channel – Trend Drawing Tools item from clipboard to chart.

   Item is only ever enabled when application clipboard is populated with contents sourced, **[Cut]** or **[Copy]**, from another instance of this context menu.

   Channel is immediately re- drawn with the pasted properties.

9. **[Delete…]** menu item
   Removes Channel - Trend Drawing Tool item from the chart.

   Confirmation prompt will be made upon selection. Deleted Channels cannot be recovered but may be re-established via the Ribbon Bar >> Drawing Tools Panel.

10. **[Properties]** menu item
    Activates the Channel - Trend Drawing Tool Properties Grid.

    Alternatively a left mouse clicks over an annotated Channel – Trend will produce the same results.

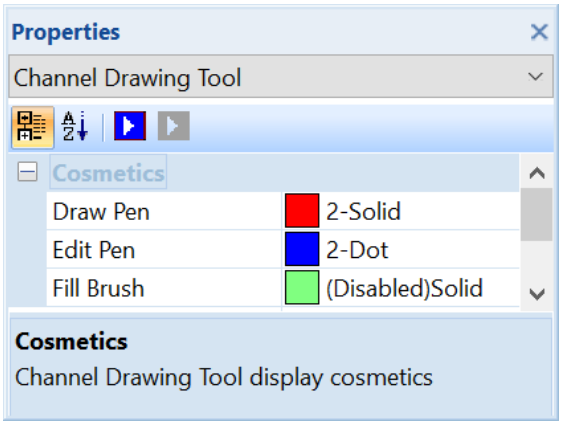
Primary channel units are those period units under which the channel was first created.

6.7.1.1.2 Channels Properties Grid

Activated via the **[Properties]** menu item from the Trendline-Channel Context Menu or a left mouse click over the annotated Channel.

Provides a display of the cosmetic settings used to annotate the Channel on the chart, within the defined limits. All parameters are localised to this instance of the Channel.

The following cosmetic parameters define the annotated channel.



1. **[Draw Pen]** grid item.
   Pen used to draw upper and lower channel lines

2. **[Edit Pen]** grid item.
   Edit mode Pen used to draw upper and lower channel lines and annotations.

3. **[Fill Brush]** grid item.
   Brush used to fill internal channel space.

6.7.1.2 Lines



6.7.1.2.1 Lines Context Menu

The Lines Context Menu is activated by a right mouse click over the displayed line.

1. **[Edit Line]** menu item.
   Toggles edit mode on(checked) and off for this Drawing Tool, alternatively use ESCAPE to terminate edit mode.

   When edit mode is switched on the annotation colour changes and circular grab points appear.

The following Period Units items define those charts on which the Line - Trendline will be displayed. Logically the primary Line units will be always checked and disabled.

2. Yearly
   Toggles display of this Line -Trend Drawing Tool on(checked) and off for

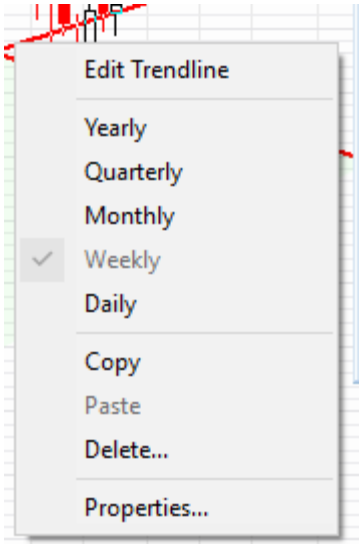
Yearly charts.

3. Quarterly
   Toggles display of this Line -Trend Drawing Tool on(checked) and off for Quarterly charts.

4. Monthly
   Toggles display of this Line -Trend Drawing Tool on(checked) and off for Monthly charts.

5. Weekly
   Toggles display of this Line -Trend Drawing Tool on(checked) and off for Weekly charts.

6. Daily
   Toggles display of this Line -Trend Drawing Tool on(checked) and off for Daily charts.



7. **[Copy]** menu item.
   Copies Line – Trend Drawing Tools item to the clipboard.

8. **[Paste** *object type***]** menu item.
   Pastes Line – Trend Drawing Tools item from clipboard to chart.

   Item is only ever enabled when application clipboard is populated with contents sourced, **[Cut]** or **[Copy]**, from another instance of this context menu.

   Line is immediately re- drawn with the pasted properties.

9. **[Delete…]** menu item.
   Removes Line - Trend Drawing Tool item from the chart.

   Confirmation prompt will be made upon selection. Deleted Lines cannot be recovered but may be re-established via the Ribbon Bar >> Drawing Tools Panel.

10. **[Properties]** menu item
    Activates the Lines - Trend Drawing Tool Properties Grid.

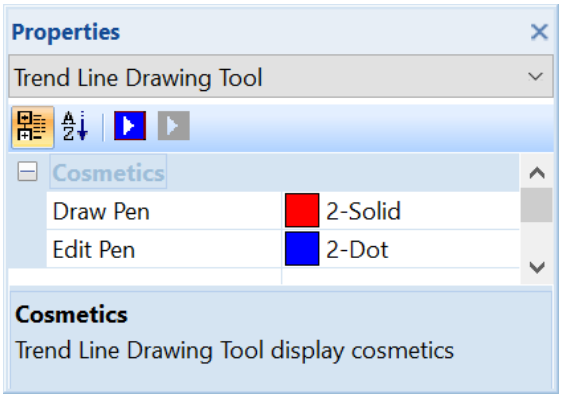
    Alternatively a left mouse clicks over an annotated Channel – Trend will produce the same results.

Primary line units are those period units under which the line was first created.

6.7.1.2.2 Lines Properties Grid

Activated via the **[Properties]** menu item from the Trendline-Line Context Menu or a left mouse click over the annotated Wedge.

Provides a display of the cosmetic settings used to annotate the Line on the chart, within the defined limits. All parameters are localised to this instance of the Line.



The following cosmetic parameters define the displayed Line.

1. **[Draw Pen]** grid item.
   Pen used to draw Trend Line.

2. **[Edit Pen]** grid item.
   Edit mode Pen used to draw Trend Line and annotations.

6.7.1.3 Flags



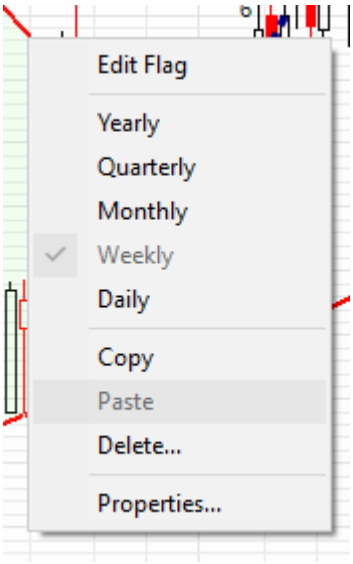
6.7.1.3.1 Flags Context Menu

The Flags Context Menu is activated by a right mouse click over the displayed converging lines.

1. **[Edit Flag]** menu item.
   Toggles edit mode on(checked) and off for this Drawing Tool, alternatively use ESCAPE to terminate edit mode.

   When edit mode is switched on the annotation colour changes and circular grab points appear.

The following Period Units items define those charts on which the Flag - Trendline will be displayed. Logically the primary Flag units will be always checked and disabled.



2. Yearly
   Toggles display of this Flag -Trend Drawing Tool on(checked) and off for Yearly charts.

3. Quarterly
   Toggles display of this Flag -Trend Drawing Tool on(checked) and off for Quarterly charts.

4. Monthly
   Toggles display of this Flag -Trend Drawing Tool on(checked) and off for Monthly charts.

5. Weekly
   Toggles display of this Flag -Trend Drawing Tool on(checked) and off for Weekly charts.

6. Daily
   Toggles display of this Flag -Trend Drawing Tool on(checked) and off for Daily charts.

7. Copy
   Copies Flag – Trend Drawing Tools item to the clipboard.

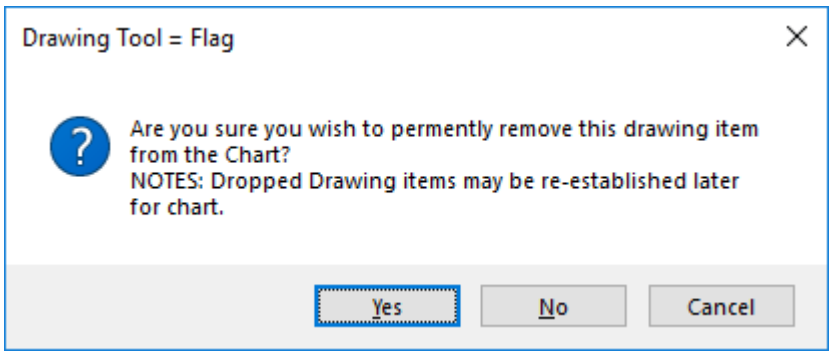
8. **[Paste** *object type***]** menu item.
   Pastes Flag – Trend Drawing Tools item from clipboard to chart.

   Item is only ever enabled when application clipboard is populated with contents sourced, **[Cut]** or **[Copy]**, from another instance of this context menu.

   Flag is immediately re- drawn with the pasted properties.

9. **[Delete…]** menu item.
   Removes Flag - Trend Drawing Tool item from the chart.

   Confirmation prompt will be made upon selection. Deleted Flags cannot be recovered but may be re-established via the Ribbon Bar >> Drawing Tools Panel.



10. **[Properties]** menu item
    Activates the Flag - Trend Drawing Tool Properties Grid.

Alternatively a left mouse clicks over an annotated Channel – Trend will produce the same results.

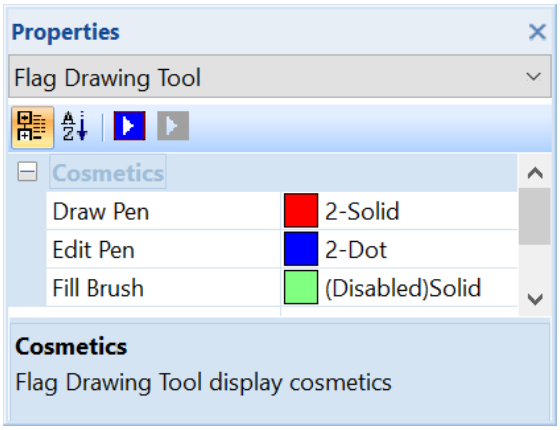
Primary Flag units are those period units under which the curve was first created.

6.7.1.3.2 Flags Properties Grid

Activated via the **[Properties]** menu item from the Trendline-Flag Context Menu or a left mouse click over the annotated Flag.

Provides a display of the cosmetic settings used to annotate the Flag on the chart, within the defined limits. All parameters are localised to this instance of the Flag.

The following cosmetic parameters define the annotated flag.



1. **[Draw Pen]** grid item.
   Pen used to draw upper and lower flag lines.

2. **[Edit Pen]** grid item.
   Edit mode Pen used to draw and annotate flag lines.

3. **[Fill Brush]** grid item.
   Brush used to fill internal flag space.

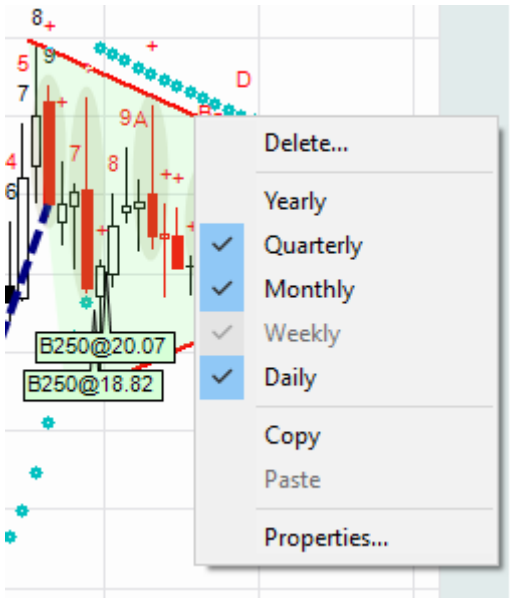
6.7.1.4 Pennants

6.7.1.4.1 Pennants Context Menu

The Pennants Context Menu is activated by a right mouse click over the displayed converging lines.

1. **[Edit Pennants]** menu item.
   Toggles edit mode on(checked) and off for this Drawing Tool, alternatively use ESCAPE to terminate edit mode.

   When edit mode is switched on the annotation colour changes and circular grab points appear.



The following Period Units items define those charts on which the Pennant - Trend will be displayed. Logically the primary Pennant units will be always checked and disabled.

2. Yearly
   Toggles display of this Pennant -Trend Drawing Tool on(checked) and off for Yearly charts.

3. Quarterly
   Toggles display of this Pennant -Trend Drawing Tool on(checked) and off for Quarterly charts.

4. Monthly
   Toggles display of this Pennant -Trend Drawing Tool on(checked) and off for Monthly charts.

5. Weekly
   Toggles display of this Pennant -Trend Drawing Tool on(checked) and off for Weekly charts.

6. Daily
   Toggles display of this Pennant -Trend Drawing Tool on(checked) and off for Daily charts.

7. [Copy] menu item.
   Copies Pennants – Trend Drawing Tools item to the clipboard.

8. [**Paste** *object type*] menu item.
   Pastes Pennant – Trend Drawing Tools item from clipboard to chart.

   Item is only ever enabled when application clipboard is populated with contents sourced, **[Cut]** or **[Copy]**, from another instance of this context menu.

   Pennant is immediately re- drawn with the pasted properties.

9. **[Delete…]** menu item.
   Removes Pennant - Trend Drawing Tool item from the chart.

   Confirmation prompt will be made upon selection. Deleted Pennants cannot be recovered but may be re-established via the Ribbon Bar >> Drawing Tools Panel.

10. **[Properties]** menu item
    Activates the Pennants - Trend Drawing Tool Properties Grid.

    Alternatively a left mouse clicks over an annotated Channel – Trend will produce the same results.

Primary Pennant units are those period units under which the Pennant was first created.

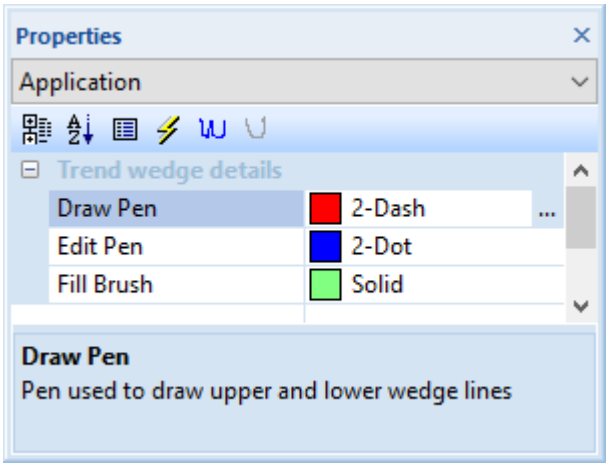
6.7.1.4.2 Pennants Properties Grid

Activated via the **[Properties]** menu item from the Trendline-Pennants Context Menu or a left mouse click over the annotated Pennant.

Provides a display of the cosmetic settings used to annotate the Pennant on the chart, within the defined limits. All parameters are localised to this instance of the Pennant.

The following cosmetic parameters define the annotated pennant.

1. **[Draw Pen]** grid item.
   Pen used to draw Pennant
2. **[Edit Pen]** grid item.
   Pen used to draw Pennant in edit mode.
3. **[Fill Brush]** grid item.
   Brush used to fill internal regions of the Pennant.

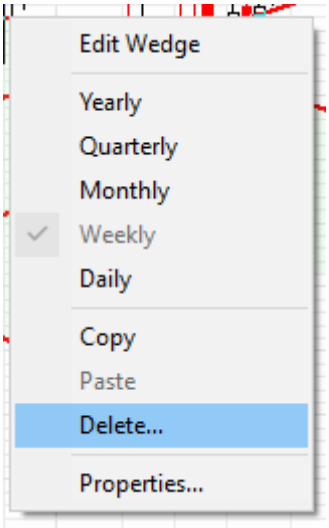


6.7.1.5 Wedges



6.7.1.5.1 Wedges Context Menu

The Wedges Context Menu is activated by a right mouse click over the displayed converging lines.



1. **[Edit Wedge]** menu item.
   Toggles edit mode on(checked) and off for this Drawing Tool, alternatively use ESCAPE to terminate edit mode.

   When edit mode is switched on the annotation colour changes and circular grab points appear.

The following Period Units items define those charts on which the Wedge - Trend will be displayed. Logically the primary Wedge units will be always checked and disabled.

2. Toggles display of this Block-Trend Drawing Tool on(checked) and off for Yearly charts.

3. Quarterly
   Toggles display of this Wedge -Trend Drawing Tool on(checked) and off for Quarterly charts.

4. Monthly
   Toggles display of this Wedge -Trend Drawing Tool on(checked) and off for Monthly charts.

5. Weekly
   Toggles display of this Wedge -Trend Drawing Tool on(checked) and off for Weekly charts.

6. Daily
   Toggles display of this Wedge -Trend Drawing Tool on(checked) and off for Daily charts.

7. [Copy] menu item.
   Copies Wedge – Trend Drawing Tools item to the clipboard.

8. [**Paste** *object type*] menu item.
   Pastes Wedge – Trend Drawing Tools item from clipboard to chart.

   Item is only ever enabled when application clipboard is populated with contents sourced, **[Cut]** or **[Copy]**, from another instance of this context menu.

   Wedge is immediately re-painted with the pasted properties.

9. **[Delete…]** menu item
   Removes Wedge - Trend Drawing Tool item from the chart.

   Confirmation prompt will be made upon selection. Deleted Wedges cannot be recovered but may be re-established via the Ribbon Bar >> Drawing

Tools Panel.

10. **[Properties]** menu item
Activates the Wedge - Trend Drawing Tool Properties Grid.

Alternatively a left mouse clicks over an annotated Channel – Trend will produce the same results.

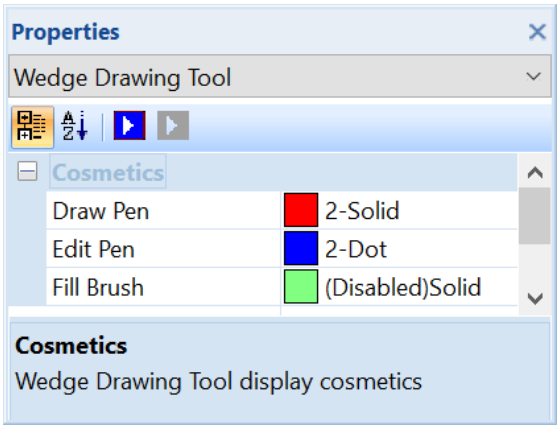
Primary Wedge units are those period units under which the curve was first created.

6.7.1.5.2 Wedge Properties Grid

Activated via the **[Properties]** menu item from the Trendline-Wedge Context Menu or a left mouse click over the annotated Wedge.

Provides a display of the cosmetic settings used to annotate the Wedge on the chart, within the defined limits. All parameters are localised to this instance of the Wedge.

The following cosmetic parameters define the annotated Wedge.



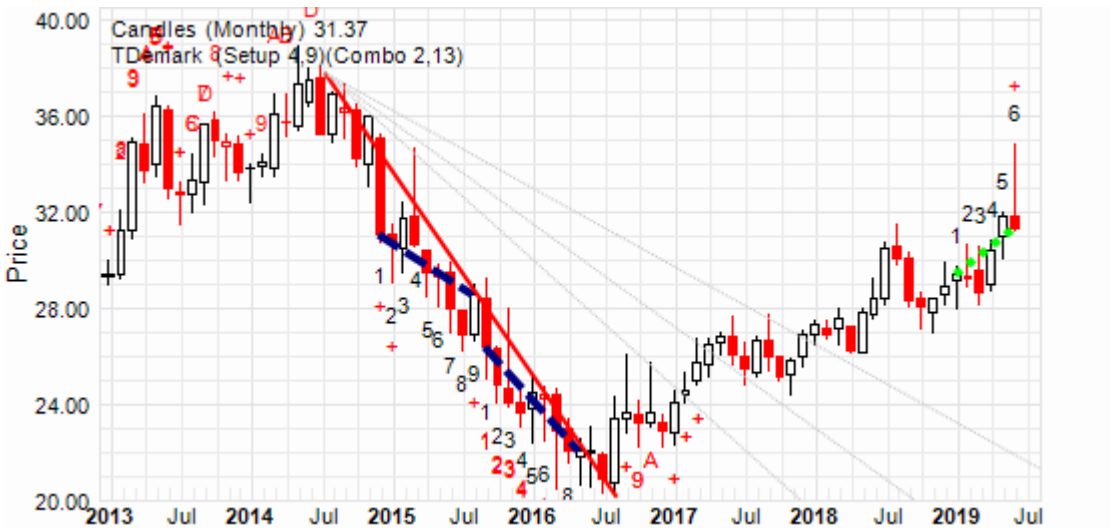
1. **[Draw Pen]** grid item.
Pen used to draw upper and lower flag lines.

2. **[Edit Pen]** grid item.
Edit mode Pen used to draw and annotate flag lines.

3. **[Fill Brush]** grid item.
Brush used to fill internal wedge space.

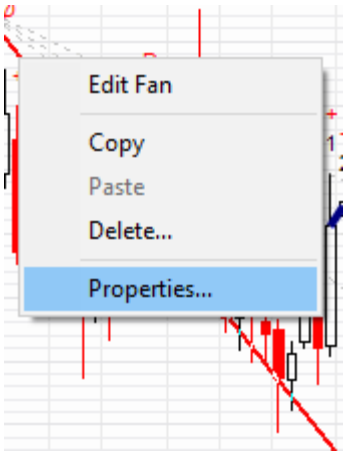
6.7.2 Fibonacci

6.7.2.1 Fans



6.7.2.1.1 Fans Context Menu

The Fibonacci-Fans Context Menu is activated by a right mouse click over the displayed Fibonacci-Fan lines.



1. **[Edit Fan]** menu item.
   Toggles edit mode on(checked) and off for this Drawing Tool, alternatively use ESCAPE to terminate edit mode.

   When edit mode is switched on the annotation colour changes and circular grab points appear.

The following Period Units items define those charts on which the Fibonacci-Fan will be displayed. Logically the primary Fan units will be always checked and disabled.

2. Yearly
   Toggles display of this Fibonacci- Fans Drawing Tool on(checked) and off for Yearly charts.

3. Quarterly
   Toggles display of this Fibonacci- Fans Drawing Tool on(checked) and off for Quarterly charts.

4. Monthly
   Toggles display of this Fibonacci- Fans Drawing Tool on(checked) and off for Monthly charts.

5. Weekly
   Toggles display of this Fibonacci- Fans Drawing Tool on(checked) and off for Weekly charts.

6. Daily
   Toggles display of this Fibonacci- Fans Drawing Tool on(checked) and off for Daily charts.

7. **[Copy]** menu item.
   Copies Fibonacci – Fan Drawing Tools item to the clipboard.

8. **[Paste** *object type***]** menu item.
   Pastes Fibonacci – Fan Drawing Tools item from clipboard to chart.

   Item is only ever enabled when application clipboard is populated with contents sourced, **[Cut]** or **[Copy]**, from another instance of this context menu.

   Fan is immediately re-drawn with the pasted properties.

9. **[Delete…]** menu item.
   Removes Fan - Fibonacci Drawing Tool item from the chart.

   Confirmation prompt will be made upon selection. Deleted Fans cannot be recovered but may be re-established via the Ribbon Bar >> Drawing Tools Panel.

10. **[Properties]** menu item.
    Activates the Fibonacci - Fan Drawing Tool Properties Grid.

    Alternatively a left mouse clicks over an annotated Channel – Trend will produce the same results.

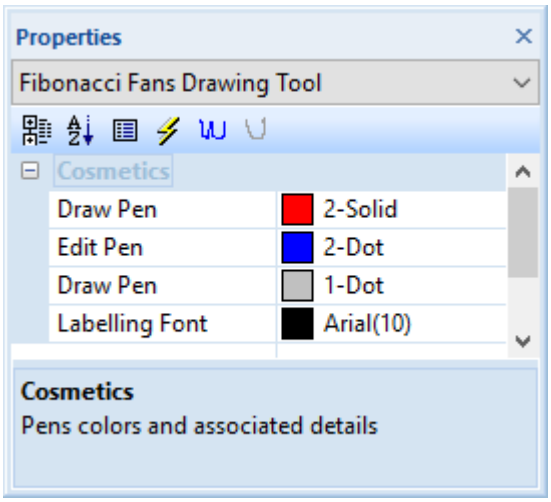
Primary Fan units are those period units under which the Fan was first created.

6.7.2.1.2 Fans Properties Grid

Activated via the **[Properties]** menu item from the Fibonacci-Fans Context Menu or a left mouse click over the annotated Fibonacci-Fans.

Provides a display of the cosmetic settings used to annotate the Fibonacci-Fans on the chart, within the defined limits. All parameters are localised to this instance of the Fibonacci-Fans.

The following cosmetic parameters define the annotated Fibonacci-Fans.

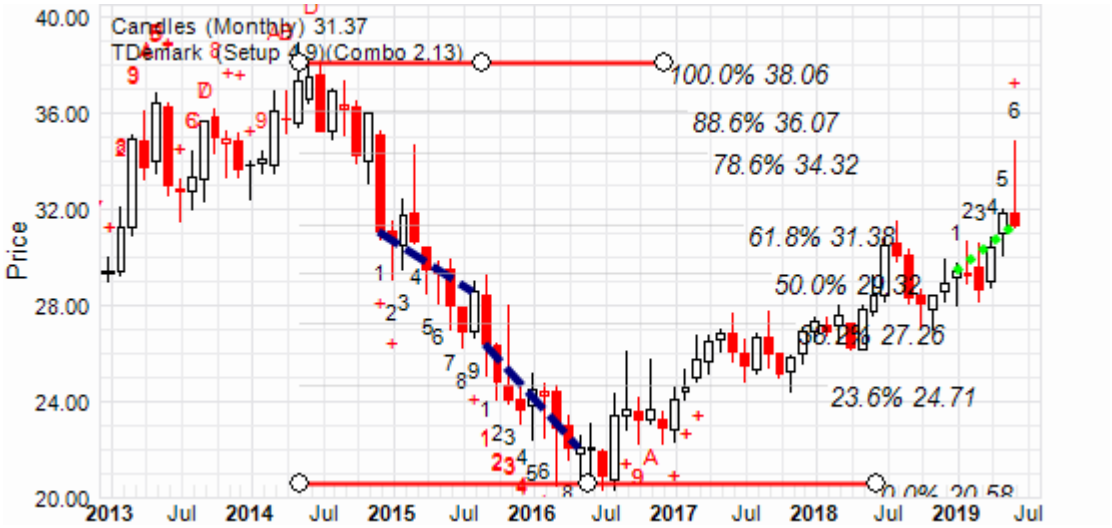


1. **[Draw Pen]** grid item.
   Pen used to draw upper and lower Fibonacci Fan boundaries.

2. **[Edit Pen]** grid item.
   Edit mode Pen used to draw upper and lower Fibonacci Fan boundaries and annotations.

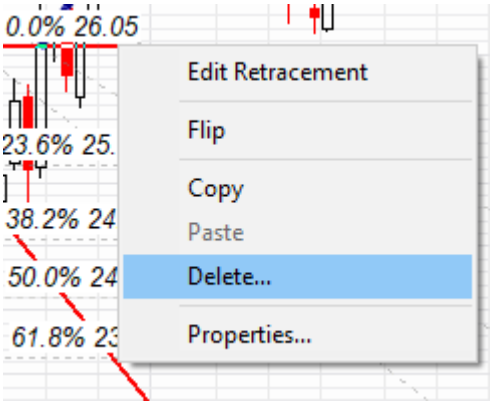
3. **[Labelling Brush]** grid item.
   Font used to label Fibonacci retracement lines.

6.7.2.2 Retracements



6.7.2.2.1 Retracements Context Menu

The Fibonacci- Retracements Context Menu is activated by a right mouse click over the displayed Fibonacci-Retracements lines.



1. **[Edit Fibonacci- Retracements]** menu item
   Toggles edit mode on(checked) and off for this Drawing Tool, alternatively use ESCAPE to terminate edit mode.

   When edit mode is switched on the annotation colour changes and circular grab points appear.

2. **[Flip]** menu item
   Flips display of the Fibonacci retracement limits (0 and 100 percent)

The following Period Units items define those charts on which the Fibonacci-Retracements will be displayed. Logically the primary Retracement units will be always checked and disabled.

3. Yearly
   Toggles display of this Fibonacci- Retracements Drawing Tool on(checked) and off for Yearly charts.

4. Quarterly
   Toggles display of this Fibonacci- Retracements Drawing Tool on(checked) and off for Quarterly charts.

5. Monthly
   Toggles display of this Fibonacci- Retracements Drawing Tool on(checked) and off for Monthly charts.

6. Weekly
   Toggles display of this Fibonacci- Retracements Drawing Tool on(checked) and off for Weekly charts.

7. Daily
   Toggles display of this Fibonacci- Retracements Drawing Tool on(checked) and off for Daily charts.

8. **[Copy]** menu item.
   Copies Fibonacci – Retracements Drawing Tools item to the clipboard.

9. **[Paste** *object type***]** menu item.
   Pastes Fibonacci – Retracement Drawing Tools item from clipboard to chart.

   Item is only ever enabled when application clipboard is populated with contents sourced, **[Cut]** or **[Copy]**, from another instance of this context menu.

   Retracement is immediately re-drawn with the pasted properties.

10. **[Delete…]** menu item.
    Removes Retracements - Fibonacci Drawing Tool item from the chart.

    Confirmation prompt will be made upon selection. Deleted Retracements cannot be recovered but may be re-established via the Ribbon Bar >> Drawing Tools Panel.

11. **[Properties]** menu item.
    Activates the Fibonacci - Retracements Drawing Tool Properties Grid.

    Alternatively a left mouse clicks over an annotated Channel – Trend will produce the same results.

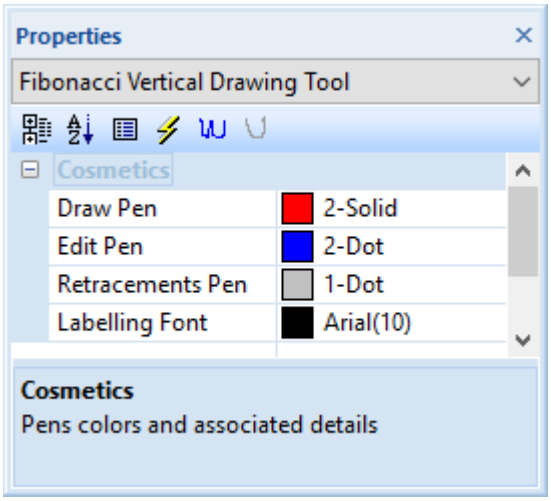
Primary Retracements units are those period units under which the Retracements was first created.

6.7.2.2.2 Retracements Properties Grid

Activated via the **[Properties]** menu item from the Fibonacci-Retracements Context Menu or a left mouse click over the annotated Fibonacci-Retracements.

Provides a display of the cosmetic settings used to annotate the Fibonacci-Retracements on the chart, within the defined limits. All parameters are localised to this instance of the Fibonacci-Retracements.

The following cosmetic parameters define the annotated Fibonacci-Retracements.



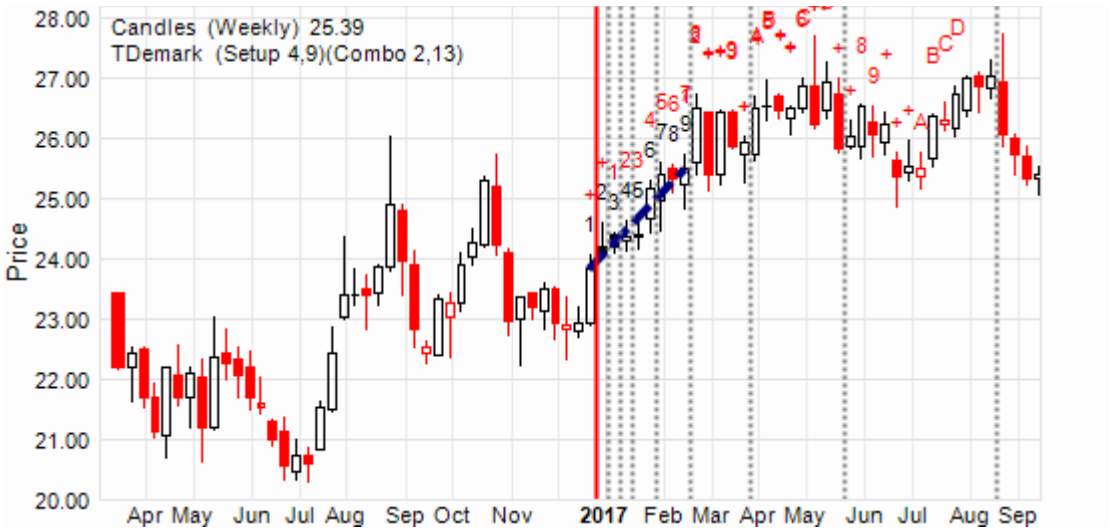
1. **[Draw Pen]** grid item.
   Pen used to draw upper and lower Vertical Fibonacci boundaries.

2. **[Edit Pen]** grid item.
   Edit mode Pen used to draw upper and lower Vertical Fibonacci boundaries and annotations.

3. **[Retracements Pen]** grid item.
   Pen used to draw Vertical Fibonacci retracement lines.

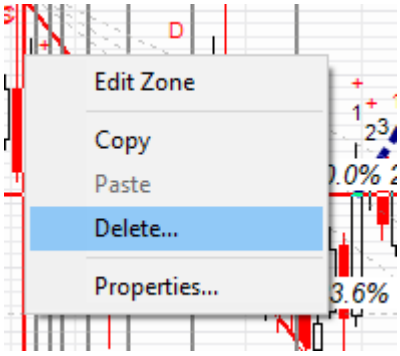
4. **[Labelling Font]** grid item.
   Font used to label Vertical Fibonacci retracement lines.

6.7.2.3 Zones



6.7.2.3.1 Zones Context Menu

The Fibonacci-Zone Context Menu is activated by a right mouse click over the displayed Fibonacci-Zone lines.



1. **[Edit Fibonacci-Zone]** menu item
   Toggles edit mode on(checked) and off for this Drawing Tool, alternatively use ESCAPE to terminate edit mode.

   When edit mode is switched on the annotation colour changes and circular grab points appear.

The following Period Units items define those charts on which the Fibonacci-Zones will be displayed. Logically the primary Retracement units will be always checked and disabled.

2. Yearly
   Toggles display of this Fibonacci-Zones Drawing Tool on(checked) and off for Yearly charts.

3. Quarterly
   Toggles display of this Fibonacci-Zones Drawing Tool on(checked) and off for Quarterly charts.

4. Monthly
   Toggles display of this Fibonacci-Zones Drawing Tool on(checked) and off for Monthly charts.

5. Weekly
   Toggles display of this Fibonacci-Zones Drawing Tool on(checked) and off for Weekly charts.

6. Daily
   Toggles display of this Fibonacci-Zones Drawing Tool on(checked) and off for Daily charts.

7. **[Copy]** menu item.
   Copies Fibonacci – Zones Drawing Tools item to the clipboard.

8. **[Paste** *object type***]** menu item.
   Pastes Fibonacci – Zones Drawing Tools item from clipboard to chart.

   Item is only ever enabled when application clipboard is populated with contents sourced, **[Cut]** or **[Copy]**, from another instance of this context menu.

   Zones are immediately re-drawn with the pasted properties.

9. **[Delete…]** menu item
   Removes Zones - Fibonacci Drawing Tool item from the chart.

   Confirmation prompt will be made upon selection. Deleted Zones cannot be recovered but may be re-established via the Ribbon Bar >> Drawing Tools

Panel.

10. **[Properties]** menu item
Activates the Fibonacci - Zones Drawing Tool Properties Grid.

Alternatively a left mouse clicks over an annotated Channel – Trend will produce the same results.

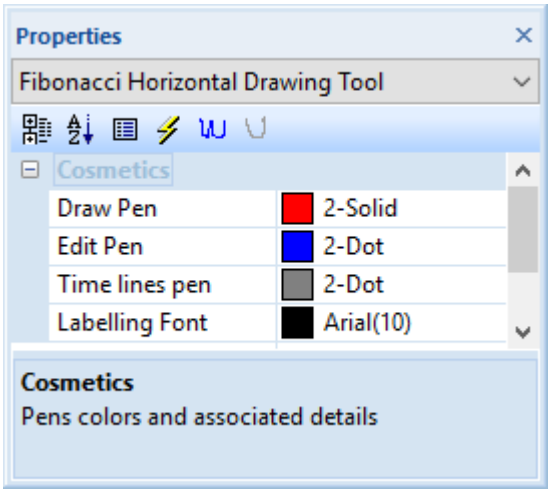
Primary Zones units are those period units under which the Zones was first created.

6.7.2.3.2 Zones Properties Grid

Activated via the **[Properties]** menu item from the Fibonacci-Zones Context Menu or a left mouse click over the annotated Fibonacci-Zones.

Provides a display of the cosmetic settings used to annotate the Fibonacci-Zones on the chart, within the defined limits. All parameters are localised to this instance of the Fibonacci-Zones.

The following cosmetic parameters define the annotated Fibonacci-Zones.



1. **[Draw Pen]** grid item.
Pen used to draw base line for Horizontal Fibonacci time line.

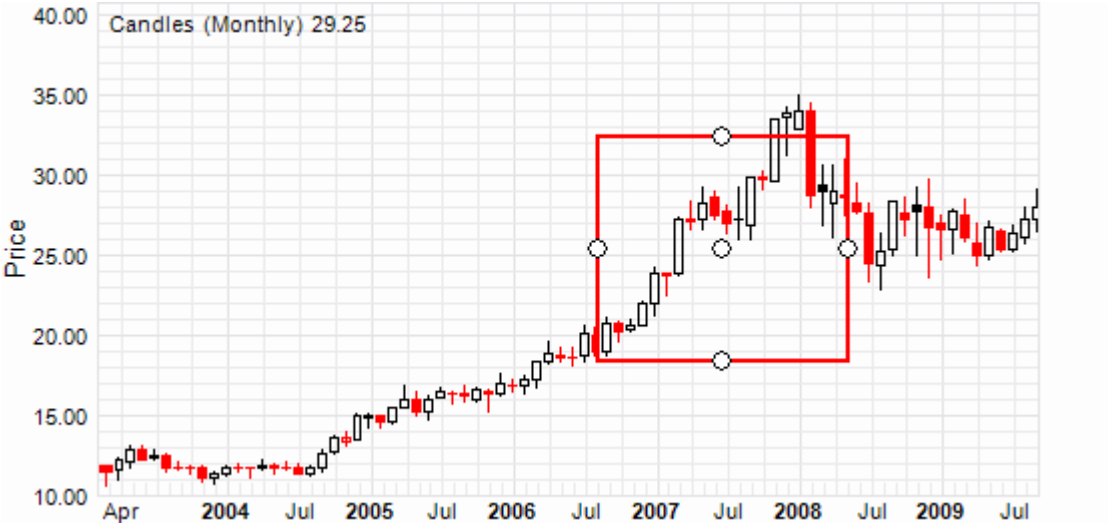
2. **[Edit Pen]** grid item.
Edit mode Pen used to draw base line for Fibonacci time line and annotations.

3. **[Zones Pen]** grid item.
Pen used to draw zones or Horizontal Fibonacci time lines.

4. **[Labelling Font]** grid item.
Font used to label zones or Horizontal Fibonacci time lines.

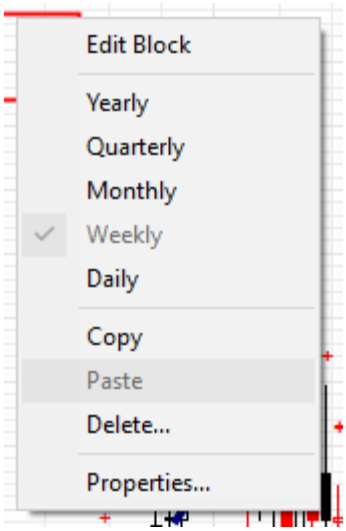
6.7.3 Shapes

6.7.3.1 Blocks



6.7.3.1.1 Block Context Menu

The Block Context Menu is activated by a right mouse click over the displayed boundary lines.



1. **[Edit Block]** menu item.
   Toggles edit mode on(checked) and off for this Drawing Tool, alternatively use ESCAPE to terminate edit mode.

   When edit mode is switched on the annotation colour changes and circular grab points appear.

The following Period Units items define those charts on which the Block - Shape will be displayed. Logically the primary Wedge units will be always checked and disabled.

2. Yearly
   Toggles display of this Block-Shape Drawing Tool on(checked) and off for Yearly charts.

3. Quarterly
   Toggles display of this Block-Shape Drawing Tool on(checked) and off for Quarterly charts.

4. Monthly
   Toggles display of this Block-Shape Drawing Tool on(checked) and off for Monthly charts.

5. Weekly
   Toggles display of this Block-Shape Drawing Tool on(checked) and off for Weekly charts.

6. Daily
   Toggles display of this Block-Shape Drawing Tool on(checked) and off for

Daily charts.

7. **[Copy]** menu item.
   Copies Block – Shape Drawing Tools item to the clipboard.

8. **[Paste** *object type***]** menu item.
   Pastes Block – Shapes Drawing Tools item from clipboard to chart.

   Item is only ever enabled when application clipboard is populated with contents sourced, **[Cut]** or **[Copy]**, from another instance of this context menu.

   Block is immediately re-drawn with the pasted properties.

9. **[Delete…]** menu item
   Removes Block - Shape Drawing Tool item from the chart.

   Confirmation prompt will be made upon selection. Deleted Blocks cannot be recovered but may be re-established via the Ribbon Bar >> Drawing Tools Panel.

10. **[Properties]** menu item
    Activates the Block - Shape Drawing Tool Properties Grid.

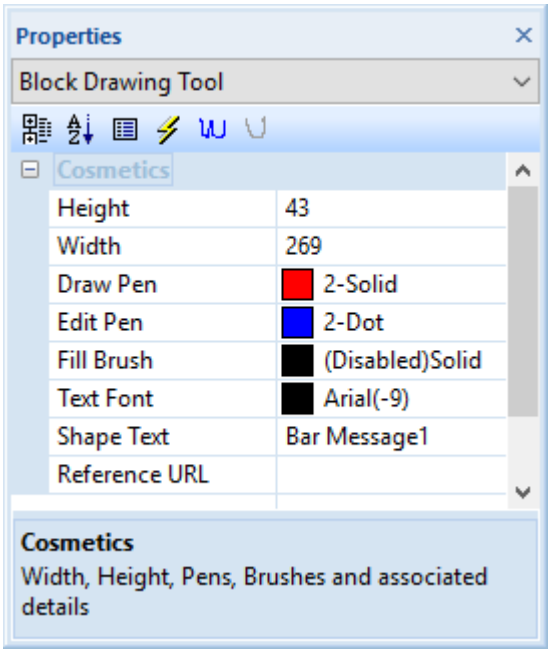
    Alternatively a left mouse clicks over an annotated Channel – Trend will produce the same results.

Primary Block units are those period units under which the curve was first created.

6.7.3.1.2 Block Properties Grid

Activated via the **[Properties]** menu item from the Shapes-Block Context Menu or a left mouse click over the annotated Block.

Provides a display of the cosmetic settings used to annotate the Block on the chart, within the defined limits. All parameters are localised to this instance of the Block.



The following cosmetic parameters define the annotated Block.

1. **[Height]** grid item.
   Fixed height of block shape.

2. **[Width]** grid item.
   Fixed width of block shape.

3. **[Draw Pen]** grid item.
   Pen used to draw block shape boundary.

4. **[Edit Pen]** grid item.
   Edit mode Pen used to draw block shape boundary and annotations.

5. **[Fill Brush]** grid item.
   Brush used to fill the block shape.

6. **[Text Font]** grid item.
   Font used to generate block shape text.

7. **[Block Text]** grid item.
   Internal block labelling text.

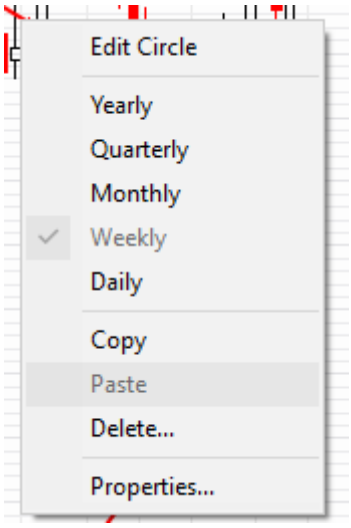
8. **[Reference URL]** grid item.
   Reference URL with direct relationship to block shape.
   Double left mouse clicks to activate.

6.7.3.2 Circles

6.7.3.2.1 Circle Context Menu



The Circle Context Menu is activated by a right mouse click over the displayed boundary lines.



1. **[Edit Circle]** menu item.
   Toggles edit mode on(checked) and off for this Drawing Tool, alternatively use ESCAPE to terminate edit mode.

   When edit mode is switched on the annotation colour changes and circular grab points appear.

The following Period Units items define those charts on which the Circle - Shape will be displayed. Logically the primary Circle units will be always checked and disabled.

2. Yearly
   Toggles display of this Circle-Shape Drawing Tool on(checked) and off for Yearly charts.

3. Quarterly
   Toggles display of this Circle-Shape Drawing Tool on(checked) and off for Quarterly charts.

4. Monthly
   Toggles display of this Circle-Shape Drawing Tool on(checked) and off for Monthly charts.

5. Weekly
   Toggles display of this Circle-Shape Drawing Tool on(checked) and off for Weekly charts.

6. Daily
   Toggles display of this Circle-Shape Drawing Tool on(checked) and off for Daily charts.

7. **[Copy]** menu item.
   Copies Circle – Shape Drawing Tools item to the clipboard.

8. **[Paste** *object type***]** menu item.
   Pastes Circle – Shapes Drawing Tools item from clipboard to chart.

   Item is only ever enabled when application clipboard is populated with contents sourced, **[Cut]** or **[Copy]**, from another instance of this context menu.

   Circle is immediately re-painted with the pasted properties.

9. **[Delete…]** menu item.
   Removes Circle - Shape Drawing Tool item from the chart.

   Confirmation prompt will be made upon selection. Deleted Blocks cannot be recovered but may be re-established via the Ribbon Bar >> Drawing Tools

Panel.

10. **[Properties]** menu item.
Activates the Circle - Shape Drawing Tool Properties Grid.

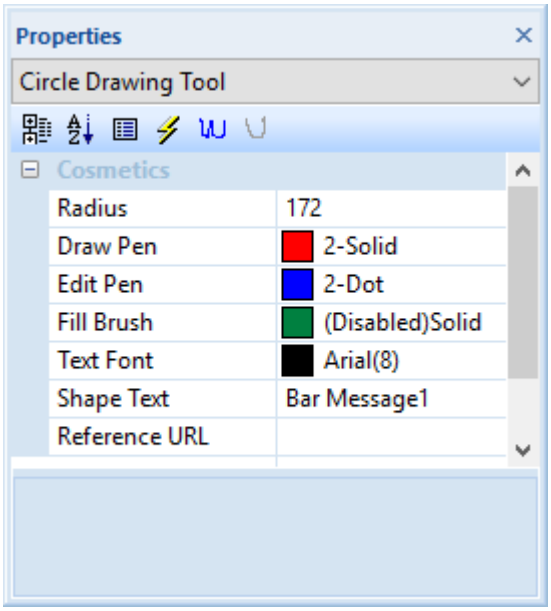
Alternatively a left mouse clicks over an annotated Channel – Trend will produce the same results.

Primary Circle units are those period units under which the curve was first created.

6.7.3.2.2 Circle Properties Grid

Activated via the **[Properties]** menu item from the Shape-Circle Context Menu or a left mouse click over the annotated Circle.

Provides a display of the cosmetic settings used to annotate the Circle on the chart, within the defined limits. All parameters are localised to this instance of the Circle.



The following cosmetic parameters define the annotated Circle.

1. **[Radius]** grid item.
Fixed radius of circular shape.

2. **[Draw Pen]** grid item.
Pen used to draw circular shape boundary.

3. **[Edit Pen]** grid item.
Edit mode Pen used to draw circular shape boundary and annotations.

4. **[Fill Brush]** grid item.
Brush used to fill the circular shape.

5. **[Text Font]** grid item.
Font used to generate circular shape text.

6. **[Circle Text]** grid item.
Internal shape labelling text.

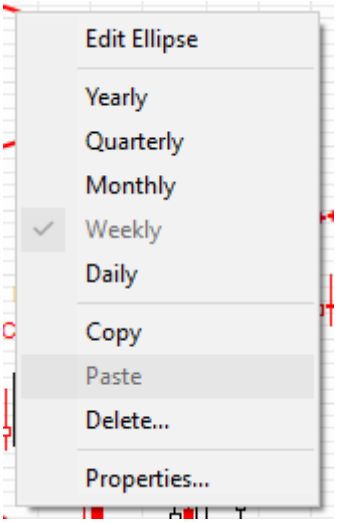
7. **[Reference URL]** grid item.
Reference URL with direct relationship to circular shape.
Double left mouse clicks to activate.

6.7.3.3 Ellipse



6.7.3.3.1 Ellipse Context Menu

The Ellipse Context Menu is activated by a right mouse click over the displayed boundary lines.



1. **[Edit Ellipse]** menu item.
   Toggles edit mode on(checked) and off for this Drawing Tool, alternatively use ESCAPE to terminate edit mode.

   When edit mode is switched on the annotation colour changes and circular grab points appear.

The following Period Units items define those charts on which the Ellipse - Shape will be displayed. Logically the primary Ellipse units will be always checked and disabled.

2. Yearly
   Toggles display of this Ellipse-Shape Drawing Tool on(checked) and off for Yearly charts.

3. Quarterly
   Toggles display of this Ellipse-Shape Drawing Tool on(checked) and off for Quarterly charts.

4. Monthly
   Toggles display of this Ellipse-Shape Drawing Tool on(checked) and off for Monthly charts.

5. Weekly
   Toggles display of this Ellipse-Shape Drawing Tool on(checked) and off for Weekly charts.

6. Daily
   Toggles display of this Ellipse-Shape Drawing Tool on(checked) and off for Daily charts.

7. **[Copy]** menu item.
   Copies Ellipse – Shape Drawing Tools item to the clipboard.

8. **[Paste** *object type***]** menu item.
   Pastes Ellipse – Shapes Drawing Tools item from clipboard to chart.

   Item is only ever enabled when application clipboard is populated with contents sourced, **[Cut]** or **[Copy]**, from another instance of this context menu.

   Ellipse is immediately re-drawn with the pasted properties.

9. **[Delete…]** menu item.
   Removes Ellipse - Shape Drawing Tool item from the chart.

   Confirmation prompt will be made upon selection. Deleted Ellipses cannot be recovered but may be re-established via the Ribbon Bar >> Drawing Tools Panel.

10. **[Properties]** menu item.
    Activates the Ellipse - Shape Drawing Tool Properties Grid.

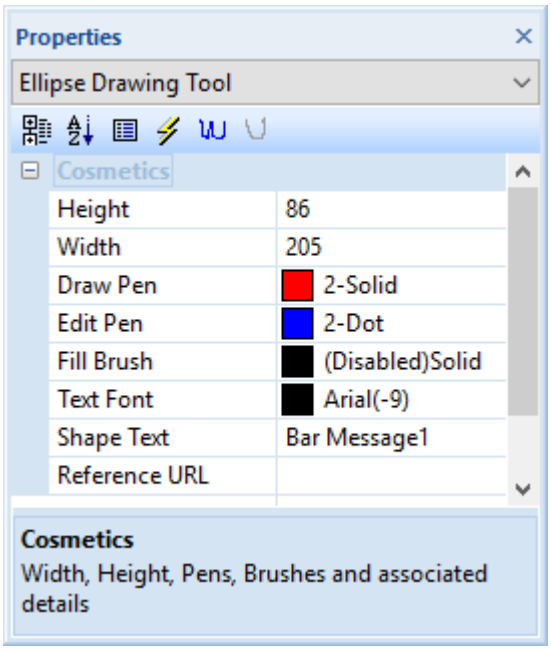
    Alternatively a left mouse clicks over an annotated Channel – Trend will produce the same results.

Primary Ellipse units are those period units under which the curve was first created.

6.7.3.3.2 Ellipse Properties Grid

Activated via the **[Properties]** menu item from the Shapes-Ellipse Context Menu or a left mouse click over the annotated Ellipse.

Provides a display of the cosmetic settings used to annotate the Ellipse on the chart, within the defined limits. All parameters are localised to this instance of the Ellipse.



The following cosmetic parameters define the annotated Ellipse.

1. **[Height]** grid item.
   Fixed height of ellipse shape.

2. **[Width]** grid item.
   Fixed width of ellipse shape.

3. **[Draw Pen]** grid item.
   Pen used to draw ellipse shape boundary.

4. **[Edit Pen]** grid item.
   Edit mode Pen used to draw ellipse shape boundary and annotations.

5. **[Fill Brush]** grid item.
   Brush used to fill the ellipse shape.

6. **[Text Font]** grid item.
   Font used to generate ellipse shape text.

7. **[Block Text]** grid item.
   Internal ellipse labelling text.

8. **[Reference URL]** grid item.
   Reference URL with direct relationship to ellipse shape.
   Double left mouse clicks to activate.

6.7.4 Bars

6.7.4.1 Support Resistance



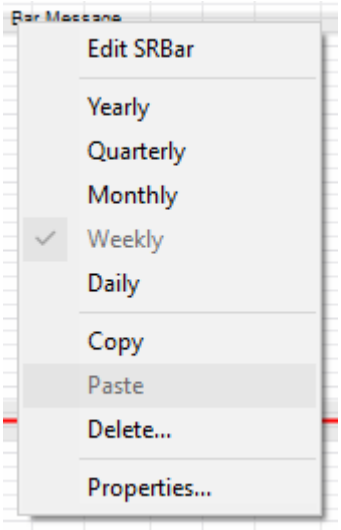
6.7.4.1.1 Support-Resistance Bars Context Menu

The Support-Resistance Bar Context Menu is activated by a right mouse click over the displayed boundary lines.

1. **[Edit Support-Resistance bar]** menu item
   Toggles adjustment of Left, Right and Extension limits on (checked) and off.

   When edit mode is switched on the annotation colour changes and circular grab points appear.

The following Period Units items define those charts on which the Support-Resistance Bar will be displayed. Logically the primary Period Bar units will be always checked and disabled.



2. Yearly
   Toggles display of this Support-Resistance Bar Drawing Tool on(checked) and off for Yearly charts.

3. Quarterly
   Toggles display of this Support-Resistance Bar Drawing Tool on(checked) and off for Quarterly charts.

4. Monthly
   Toggles display of this Support-Resistance Bar Drawing Tool on(checked) and off for Monthly charts.

5. Weekly
   Toggles display of this Support-Resistance Bar Drawing Tool on(checked) and off for Weekly charts.

6. Daily
   Toggles display of this Support-Resistance Bar Drawing Tool on(checked) and off for Daily charts.

7. **[Copy]** menu item.
   Copies Support Resistance – Bar Drawing Tools item to the clipboard.

8. **[Paste** *object type***]** menu item.
   Pastes Support Resistance – Bar Drawing Tools item from clipboard to chart.

   Item is only ever enabled when application clipboard is populated with contents sourced, **[Cut]** or **[Copy]**, from another instance of this context menu.

   Bar is immediately re-drawn with the pasted properties.

9. **[Delete…]** menu item.
   Removes Support Resistance - Bars Drawing Tool item from the chart.

   Confirmation prompt will be made upon selection. Deleted Blocks cannot be recovered but may be re-established via the Ribbon Bar >> Drawing Tools Panel.

10. **[Properties]** menu item.
    Activates the Support Resistance - Bar Drawing Tool Properties Grid.

    Alternatively a left mouse clicks over an annotated Channel – Trend will

produce the same results.

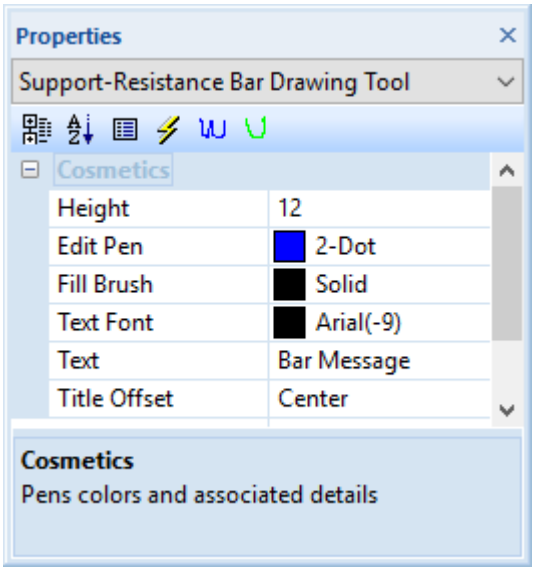
Primary Support-Resistance Bar units are those period units under which the curve was first created.

6.7.4.1.2 Support Resistance Bars Properties Grid

Activated via the [Properties] menu item from the Support-Resistance Bar Context Menu or a left mouse click over the annotated Support-Resistance Bar.

Provides a display of the cosmetic settings used to annotate the Support-Resistance Bar on the chart, within the defined limits. All parameters are localised to this instance of the Support-Resistance Bar.

The following cosmetic parameters define the annotated Support-Resistance Bar.



1. **[Fixed Height]** grid item.
   Fixed height of the Support-Resistance bar.

2. **[Draw Pen]** grid item.
   Pen used to draw Support-Resistance bar boundary.

3. **[Edit Pen]** grid item.
   Edit mode Pen used to draw and annotate Support-Resistance bar boundary.

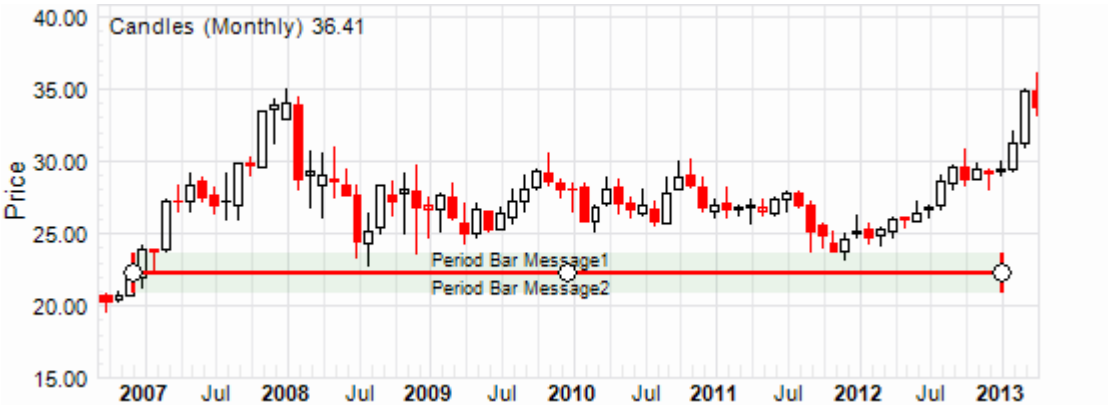
4. **[Fill Brush]** grid item.
   Brush used to fill the Support-Resistance bar.

5. **[Text Font]** grid item.
   Font used to generate Support-Resistance bar text.

6. **[Label Text]** grid item.
   Support-Resistance bar labelling text.

7. **[Label Offset]** grid item.
   Offset that will be used for Support-Resistance bar label.

6.7.4.2 Period



6.7.4.2.1 Period Bars Context Menu

The Period Bar Context Menu is activated by a right mouse click over the displayed boundary lines.

1. **[Edit Period bar]** menu item.
   Toggles adjustment of Left, Right and Extension limits on (checked) and off.

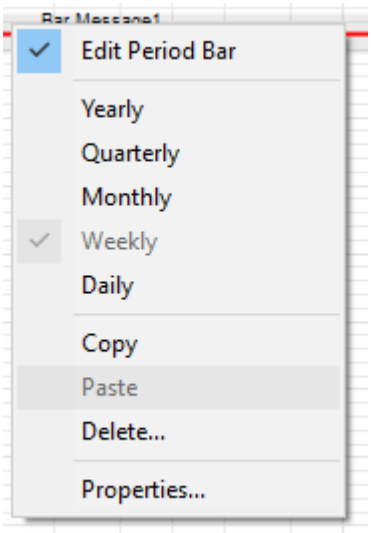
   When edit mode is switched on the annotation colour changes and circular grab points appear.

The following Period Units items define those charts on which the Period Bar will be displayed. Logically the primary Period Bar units will be always checked and disabled.

2. Yearly
   Toggles display of this Period Bar Drawing Tool on(checked) and off for Yearly charts.

3. Quarterly
   Toggles display of this Period Bar Drawing Tool on(checked) and off for Quarterly charts.

4. Monthly
   Toggles display of this Period Bar Drawing Tool on(checked) and off for Monthly charts.



5. Weekly
   Toggles display of this Period Bar Drawing Tool on(checked) and off for Weekly charts.

6. Daily
   Toggles display of this Period Bar Drawing Tool on(checked) and off for Daily charts.

7. **[Copy]** menu item.
   Copies Period – Bar Drawing Tools item to the clipboard.

8. **[Paste** *object type***]** menu item.
   Pastes Period – Bar Drawing Tools item from clipboard to chart.

   Item is only ever enabled when application clipboard is populated with contents sourced, **[Cut]** or **[Copy]**, from another instance of this context menu.

   Bar is immediately re-drawn with the pasted properties.

9. **[Delete…]** menu item.
   Removes Period - Bars Drawing Tool item from the chart.

   Confirmation prompt will be made upon selection. Deleted Periods cannot be recovered but may be re-established via the Ribbon Bar >> Drawing Tools Panel.

10. **[Properties]** menu item.
    Activates the Period - Bar Drawing Tool Properties Grid.

    Alternatively a left mouse clicks over an annotated Channel – Trend will produce the same results.

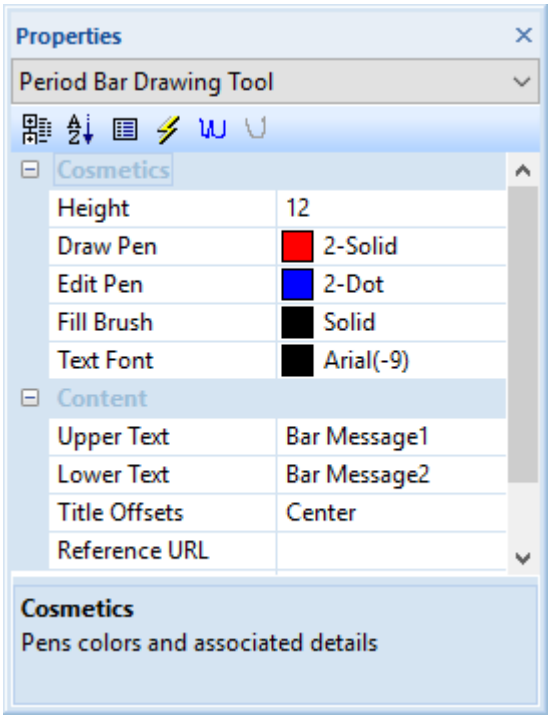
Primary Period Bar units are those period units under which the curve was first created.

6.7.4.2.2 Period Bars Properties Grid

Activated via the [Properties] menu item from the Period Bar Context Menu or a left mouse click over the annotated Period Bar.

Provides a display of the cosmetic settings used to annotate the Period Bar on the chart, within the defined limits. All parameters are localised to this instance of the Period Bar.

The following cosmetic parameters define the annotated Period Bar.



1. **[Height]** grid item.
   Pen used to draw Period Bar

2. **[Draw Pen]** grid item.
   Pen used to draw Period with bar normal annotations.

3. **[Edit Pen]** grid item.
   Edit mode Pen used to draw Period bar and edit annotations.

4. **[Fill Brush]** grid item.
   Brush used to fill the Period bar.

5. **[Text Font]** grid item.
   Font used to generate Period bar text

6. **[Upper Text]** grid item.
   Upper or above Period bar labelling text.

7. **[Lower Text]** grid item.
   Lower or below bar labelling text.

8. **[Text Offsets]** grid item.
   Offset that will be used for Label bar text (left | centre | right)

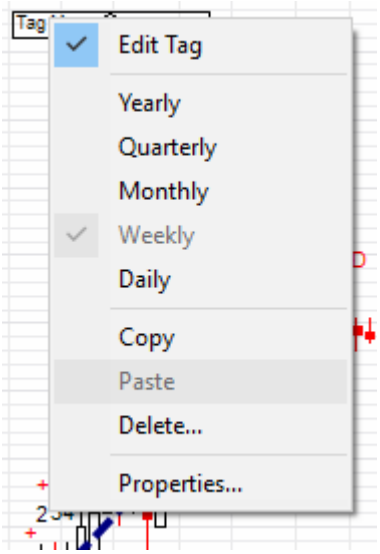
9. **[Reference URL]** grid item.
   Reference URL with direct relationship to Period Bar.
   Double left mouse clicks to activate.

6.7.5 Words

6.7.5.1 Tags

6.7.5.1.1 Tags Context Menu

The Tags Context Menu is activated by a right mouse click over the displayed boundary lines.



1. **[Edit Tags]** menu item.
   Toggles adjustment of Left, Right and Extension limits on (checked) and off.

   When edit mode is switched on the annotation colour changes and circular grab points appear.

The following Period Units items define those charts on which the Words - Tag will be displayed. Logically the primary Tag units will be always checked and disabled.

2. Yearly
   Toggles display of this Tags Drawing Tool on(checked) and off for Yearly charts.

3. Quarterly
   Toggles display of this Tags Drawing Tool on(checked) and off for Quarterly charts.

4. Monthly
   Toggles display of this Tags Drawing Tool on(checked) and off for Monthly charts.

5. Weekly
   Toggles display of this Tags Drawing Tool on(checked) and off for Weekly charts.

6. Daily
   Toggles display of this Tags Drawing Tool on(checked) and off for Daily charts.

7. **[Copy]** menu item.
   Copies Tag – Words Drawing Tools item to the clipboard.

8. **[Paste** *object type***]** menu item.
   Pastes Tag – Word Drawing Tools item from clipboard to chart.

   Item is only ever enabled when application clipboard is populated with contents sourced, **[Cut]** or **[Copy]**, from another instance of this context menu.

   Tag is immediately re-drawn with the pasted properties.

9. **[Delete…]** menu item.
   Removes Word - Tags Drawing Tool item from the chart.

Confirmation prompt will be made upon selection. Deleted Tags cannot be recovered but may be re-established via the Ribbon Bar >> Drawing Tools Panel.

10. **[Properties]** menu item.
Activates the Tag – Word Bar Drawing Tool Properties Grid.

Alternatively a left mouse clicks over an annotated Channel – Trend will produce the same results.

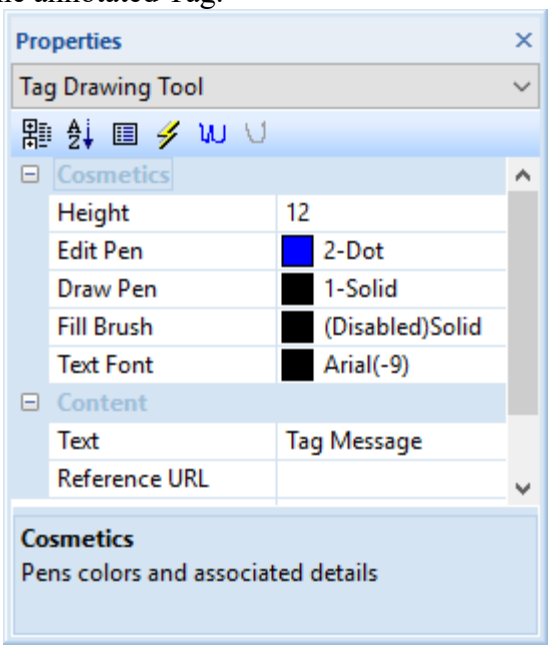
Primary Tag units are those period units under which the tag was first created.

6.7.5.1.2 Tags Properties Grid

Activated via the **[Properties]** menu item from the Words-Tag Context Menu or a left mouse click over the annotated Tag.

Provides a display of the cosmetic settings used to annotate the Tag on the chart, within the defined limits. All parameters are localised to this instance of the Tag.

The following cosmetic parameters define the annotated Tag.



1. **[Height]** grid item.
Fixed height of the tag.

2. **[Draw Pen]** grid item.
Pen used to draw tag boundary and annotations

3. **[Edit Pen]** grid item.
Edit mode Pen used to draw and annotate Tag boundary.

4. **[Fill Brush]** grid item.
Brush used to fill internal regions of the tag.

5. **[Text Font]** grid item.
Font used to generate tag message.

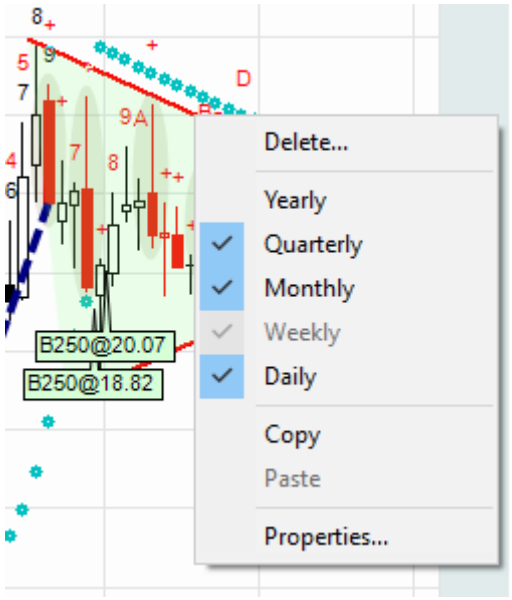
6. **[Content]** grid item.
Tag content message

7. **[Reference URL]** grid item.
Reference URL with direct relationship to this chart tag.
Double left mouse clicks to activate.

6.7.5.2 Notes

6.7.5.2.1 Notes Context Menu

The Notes Context Menu is activated by a right mouse click over the displayed boundary lines.



1. **[Edit Notes]** menu item.
   Toggles adjustment of Left, Right and Extension limits on (checked) and off.

   When edit mode is switched on the annotation colour changes and circular grab points appear.

The following Period Units items define those charts on which the Words - Notes will be displayed. Logically the primary Notes units will be always checked and disabled.

2. Yearly
   Toggles display of this Notes Drawing Tool on(checked) and off for Yearly charts

3. Quarterly
   Toggles display of this Notes Drawing Tool on(checked) and off for Quarterly charts.

4. Monthly
   Toggles display of this Notes Drawing Tool on(checked) and off for Monthly charts

5. Weekly
   Toggles display of this Notes Drawing Tool on(checked) and off for Weekly charts.

6. Daily
   Toggles display of this Notes Drawing Tool on(checked) and off for Daily charts.

7. **[Copy]** menu item.
   Copies Notes – Words Drawing Tools item to the clipboard.

8. **[Paste** *object type***]** menu item.
   Pastes Notes – Word Drawing Tools item from clipboard to chart.

   Item is only ever enabled when application clipboard is populated with contents sourced, **[Cut]** or **[Copy]**, from another instance of this context menu.

Notes are immediately re-drawn with the pasted properties.

9. **[Delete…]** menu item.
Removes Word - Notes Drawing Tool item from the chart.

   Confirmation prompt will be made upon selection. Deleted Notes cannot be recovered but may be re-established via the Ribbon Bar >> Drawing Tools Panel.

10. **[Properties]** menu item.
Activates the Notes - Words Drawing Tool Properties Grid.

    Alternatively a left mouse clicks over an annotated Channel – Trend will produce the same results.

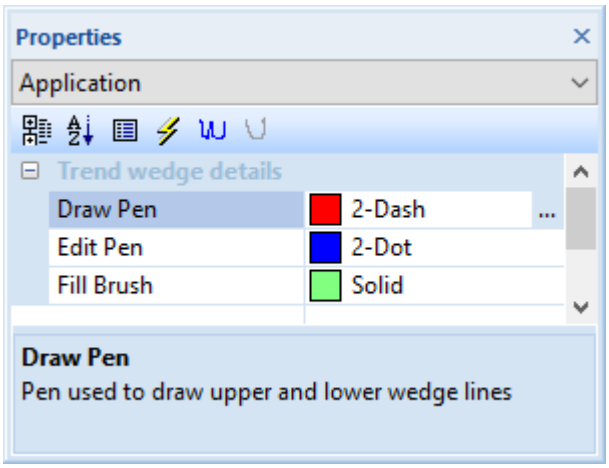
Primary Notes units are those period units under which the Notes were first created.

6.7.5.2.2 Notes Properties Grid

Activated via the **[Properties]** menu item from the Word-Notes Context Menu or a left mouse click over the annotated Notes.

Provides a display of the cosmetic settings used to annotate the Notes on the chart, within the defined limits. All parameters are localised to this instance of the Notes.

The following cosmetic parameters define the annotated Notes.



1. **[Height]** grid item.
Fixed height of the Notes region.

2. **[Draw Pen]** grid item.
Pen used to draw Notes boundary and annotations.

3. **[Edit Pen]** grid item.
Edit mode Pen used to draw Notes boundary and annotations.

4. **[Fill Brush]** grid item.
Brush used to fill the Notes region.

5. **[Text Font]** grid item.
Font used to generate Notes text.

6. **[Content]** grid item.
Notes content message

7. **[Reference URL]** grid item.
   Reference URL with direct relationship to this charts' Notes.
   Double left mouse clicks to activate.

6.8 Harmonic Tools

6.8.1 Bullish

6.8.2 Bearish

6.9 Regression Curve Fitting

Regression curves can be dragged onto any chart within the stack supporting a primary data series for all periods. Curves are fitted to the data contained between adjustable left and right limits. Fitted curves are annotated between these limits and may be projected to the extension limit.

Regression curves are created by selecting the desired curve type from the **Ribbon Bar [OHLCvs]** Tab >> **[Regressions]** Panel >> **[*type*]** button and dragging it onto the intended Chart within the stack. Use left button click to fix regression curve limits.

Curves are fixed to the Period Units under which they are created. Annotation for other Period units may be activated via the Context menu for the curve. Curves may be dropped or hidden via the Context Menu. Hidden curves are annotated as bars across the button of the chart.

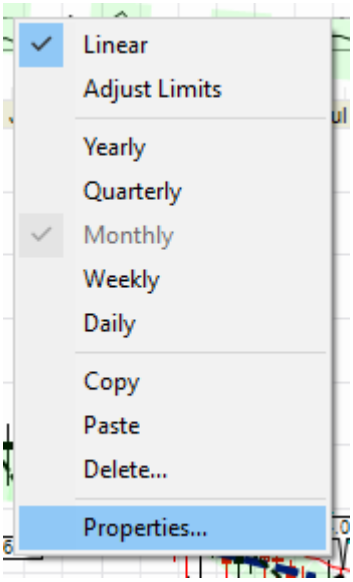
Regression curve limits editing is accomplished by the selecting **[Adjust Limits]** item from the context menu. Left, right and extension limits are subsequently dragged by selection the limit with the left button down and dragging to the new location. The ESCAPE key can be used to cancel edits. Edits are saved by toggling **[Adjust Limits]** mode off.

6.9.1 Linear



6.9.1.1 Linear Context Menu

The Linear Curve Context Menu is activated by a right mouse click over the displayed Linear regression curve or the projected bar at the base of the Chart when disabled.



1. **[Linear]** menu item.
   Toggles visibility of the regression curve on (checked) and off. When toggled off a projected bar at the base of the chart will be displayed.

2. **[Edit Limits]** menu item.
   Toggles edit of Left, Right and Extension limits on (checked) and off, alternatively use ESCAPE to terminate edit mode.

   When adjustment mode is switched on the vertical limit bars can be grabbed and dragged horizontally to new positions.

The following Period Units items define those charts on which the regression curve will be displayed. Logically the primary regression curve units will be always checked and disabled.

3. Yearly
   Toggles display of this Linear Regression Curve on(checked) and off for Yearly charts.

4. Quarterly
   Toggles display of this Linear Regression Curve on(checked) and off for Quarterly charts.

5. Monthly
   Toggles display of this Linear Regression Curve on(checked) and off for Monthly charts.

6. Weekly
   Toggles display of this Linear Regression Curve on(checked) and off for Weekly charts.

7. Daily
   Toggles display of this Linear Regression Curve on(checked) and off for Daily charts.

8. **[Copy]** menu item.
   Copies Linear regression curve properties grid to the clipboard.

9. **[Paste** *object type***]** menu item.
   Pastes linear regression curve cosmetic properties from the clipboard.

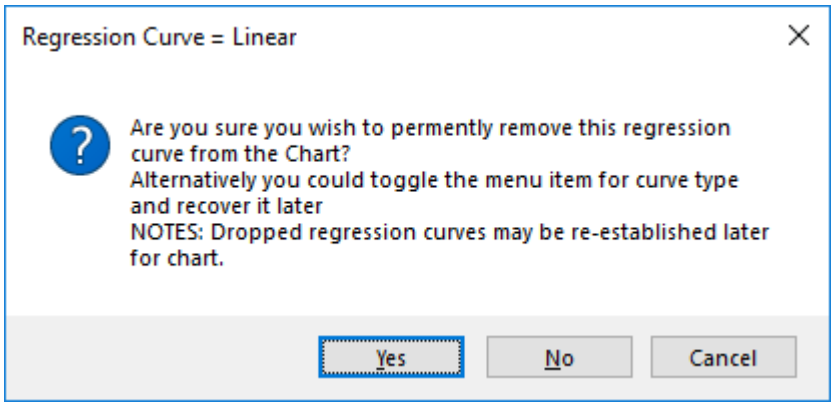
   Item is only ever enabled when application clipboard is populated with

contents sourced, **[Cut]** or **[Copy]**, from another instance of this context menu.

Curve is immediately re-painted with the pasted cosmetics.

10. **[Delete…]** menu item.
Deletes the Linear Regression curve from the chart.

The following confirmation prompt will be made upon selection. Deleted curves cannot be recovered. Alternatively, curves made be disabled by toggling the **[Linear]** menu item



11. **[Properties]** menu item.
Displays regression configuration properties in the Linear Regression Properties Grid Control.

Alternatively a left mouse click over an annotated regression curve will produce the same results.

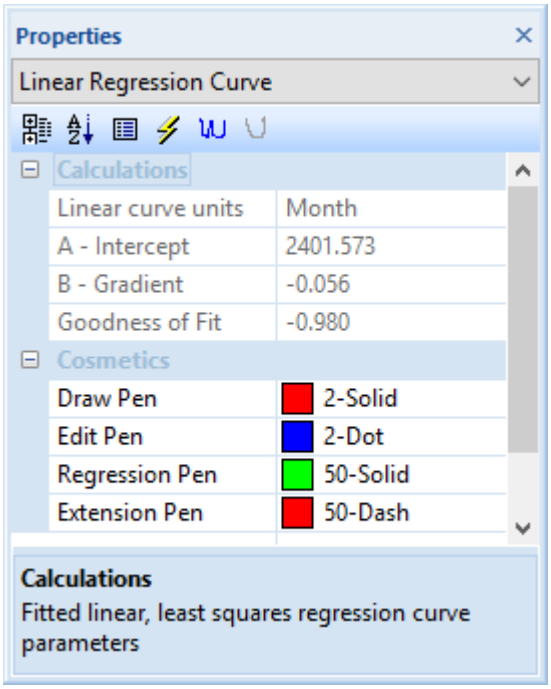
Primary regression units are those period units under which the curve was first created.

6.9.1.2 Linear Regression Properties Grid

Activated via the **[Properties]** menu item from the Linear Regression Context Menu or a left mouse click over the annotated regression curve.

Provides a display of the calculated regression curve parameters and the cosmetic settings used to annotate the curve on the chart, within the defined limits. All parameters are localised to this instance of the regression.

The following calculation parameters define the calculated regression curve.



1. **[Linear curve units]** grid item.
   Period units used to calculate linear regression curve

2. **[A – Intercept]** grid item.
   A – Intercept
   Intercept, y = A + B * x

3. **[B – Gradient]** grid item.
   B – Gradient
   Gradient, y = A + B * x

4. **[Goodness of Fit]** grid item.
   Goodness of fit taken from correlation coefficient.

Cosmetics used to display the fitted curve.

5. **[Draw Pen]** grid item.
   Pen used to draw the fitted left, right and extended curve limits.

6. **[Edit Pen]** grid item.
   Edit mode Pen used to draw the left, right and extended curve limits.

7. **[Regression Pen]** grid item.
   Pen used to draw the fitted regression curve.

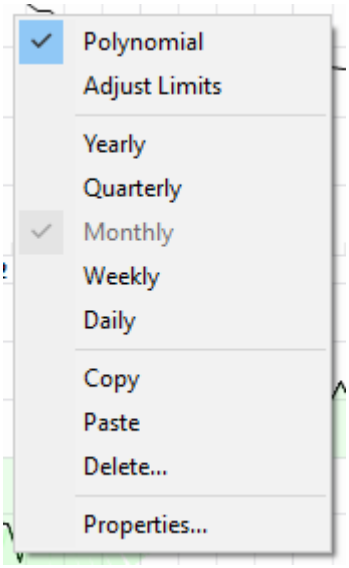
8. **[Extension Pen]** grid item.
   Pen used to draw the extended fitted regression curve.

6.9.2 Polynomial



6.9.2.1 Polynomial Context Menu

The Polynomial Curve Context Menu is activated by a right mouse click over the displayed Polynomial curve or the projected bar at the base of the Chart when disabled.



1. **[Polynomial]** menu item.
   Toggles visibility the Polynomial regression curve on (checked) and off. When toggled off a projected bar at the base of the chart will be displayed.

2. **[Edit Limits]** menu item.
   Toggles edit of Left, Right and Extension limits on (checked) and off, alternatively use ESCAPE to terminate edit mode.

   When adjustment mode is switched on the vertical limit bars can be grabbed and dragged horizontally to new positions.

The following Period Units items define those charts on which the regression curve will be displayed. Logically the primary regression curve units will be always checked and disabled.

3. Yearly
   Toggles display of this Polynomial Regression Curve on(checked) and off for Yearly charts.

4. Quarterly
   Toggles display of this Polynomial Regression Curve on(checked) and off for Quarterly charts.

5. Monthly
   Toggles display of this Polynomial Regression Curve on(checked) and off for Monthly charts.

6. Weekly
   Toggles display of this Polynomial Regression Curve on(checked) and off for Weekly charts.

7. Daily
   Toggles display of this Polynomial Regression Curve on(checked) and off for Daily charts.

8. **[Copy]** menu item.
   Copies Polynomial regression curve grid properties to the clipboard.

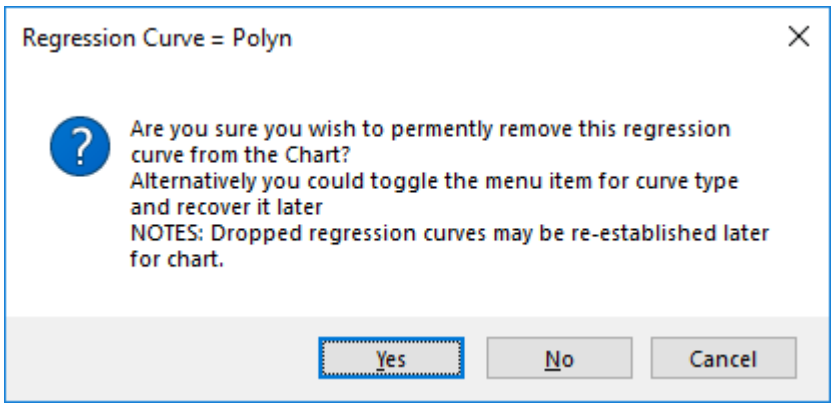
9. **[Paste** *object type***]** menu item.
   Pastes regression curve cosmetic properties from the clipboard.

Item is only ever enabled when application clipboard is populated with contents sourced, **[Cut]** or **[Copy]**, from another instance of this context menu.

Polynomial curve is immediately re-painted with the pasted cosmetics.

10. **[Delete…]** menu item.
Deletes Polynomial Regression curve from the chart.

The following confirmation prompt will be made upon selection. Deleted curves cannot be recovered. Alternatively, curves made be disabled by toggling the **[Polynomial]** menu item



11. **[Properties]** menu item.
Displays regression configuration properties in the Polynomial Regression Properties Grid Control.

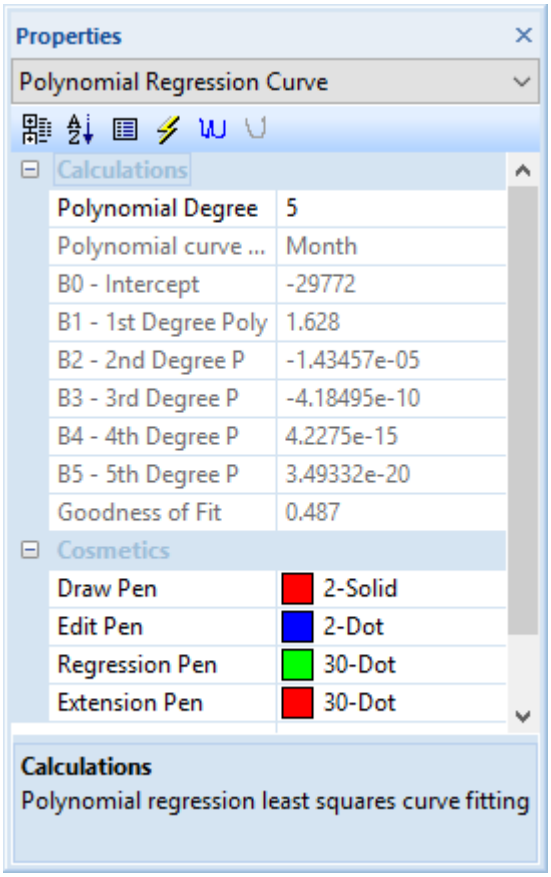
Alternatively a left mouse click over an annotated regression curve will produce the same results.

Primary regression units are those period units under which the curve was first created.

6.9.2.2 Polynomial Properties Grid

Activated via the **[Properties…]** menu item from the Polynomial Context Menu or a left mouse click over the annotated regression curve.

Provides a display of the calculated regression curve parameters and the cosmetic settings used to annotate the curve on the chart, within the defined limits. All parameters are localised to this instance of the regression.



The following calculation parameters define the calculated regression curve.

1. **[Polynomial Degree]** grid item.
   Regressed polynomial degree, Quadratic=2, Cubic=3, Quartic=4, Quintic=5, etc=9

2. **[Polynomial curve units]** grid item.
   Period units used to calculate polynomial regression curve

3. **[B0 – Intercept]** grid item.
   B0 - Intercept.
   Intercept, y = B0 + B1 * x + ...

4. **[B1 – 1st Degree Poly]** grid item.
   B1 - Intercept.
   Intercept, y = ... + B1 * x + ...

5. **[B2 – 2nd Degree Poly]** grid item.
   B2 - Intercept.
   Intercept, y = ... + B2 * x + ...

6. **[Goodness of Fit]** grid item.
   Goodness of fit calculated using 1.0 - RSS / TSS

Cosmetics used to display the fitted curve.

7. **[Draw Pen]** grid item.
   Pen used to draw the fitted left, right and extended curve limits.

8. **[Edit Pen]** grid item.
   Edit mode Pen used to draw the left, right and extended curve limits.

9. **[Regression Pen]** grid item.
   Pen used to draw the fitted regression curve.

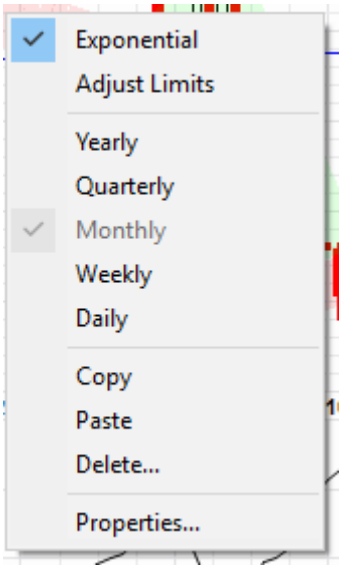
10. **[Extension Pen]** grid item.
    Pen used to draw the extended fitted regression curve.

6.9.3 Exponential



6.9.3.1 Exponential Context Menu

The Exponential Curve Context Menu is activated by a right mouse click over the displayed Exponential curve or the projected bar at the base of the Chart when disabled.



1. **[Exponential]** menu item.
   Toggles visibility of the Exponential regression curve on (checked) and off. When toggled off a projected bar at the base of the chart will be displayed.

2. **[Edit Limits]** menu item.
   Toggles edit of Left, Right and Extension limits on (checked) and off, alternatively use ESCAPE to terminate edit mode.

   When adjustment mode is switched on the vertical limit bars can be grabbed and dragged horizontally to new positions.

The following Period Units items define those charts on which the regression curve will be displayed. Logically the primary regression curve units will be always checked and disabled.

3. Yearly
   Toggles display of this Exponential Regression Curve on(checked) and off for Yearly charts.

4. Quarterly
   Toggles display of this Exponential Regression Curve on(checked) and off for Quarterly charts.

5. Monthly
   Toggles display of this Exponential Regression Curve on(checked) and off for Monthly charts.

6. Weekly
   Toggles display of this Exponential Regression Curve on(checked) and off for Weekly charts.

7. Daily
   Toggles display of this Exponential Regression Curve on(checked) and off for Daily charts.

8. **[Copy]** menu item.
   Copies Exponential regression curve properties grid to the clipboard.

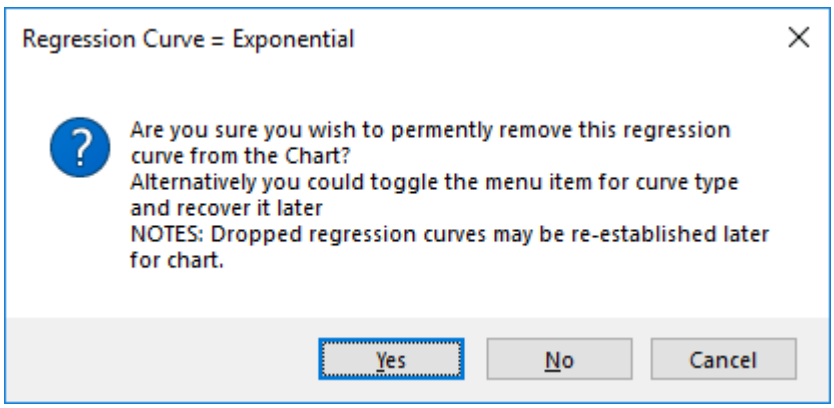
9. **[Paste** *object type***]** menu item.
   Pastes regression curve cosmetic properties from the clipboard.

   Item is only ever enabled when application clipboard is populated with contents sourced, **[Cut]** or **[Copy]**, from another instance of this context menu.

   Exponential curve is immediately re-painted with the pasted cosmetics.

10. **[Delete…]** menu item.
    Deletes the Exponential Regression curve from the chart.

    The following confirmation prompt will be made upon selection. Deleted curves cannot be recovered. Alternatively, curves made be disabled by toggling the **[Exponential]** menu item



11. **[Properties]** menu item.
    Displays regression configuration properties in the Exponential Regression Properties Grid Control.

    Alternatively a left mouse click over an annotated regression curve will produce the same results.

Primary regression units are those period units under which the curve was first created.

6.9.3.2 Exponential Properties Grid

Activated via the **[Properties…]** menu item from the Exponential Curve Context Menu or a left mouse click over the annotated regression curve.

Provides a display of the calculated regression curve parameters and the cosmetic settings used to annotate the curve on the chart, within the defined limits. All parameters are localised to this instance of the regression.

The following calculation parameters define the calculated regression curve.

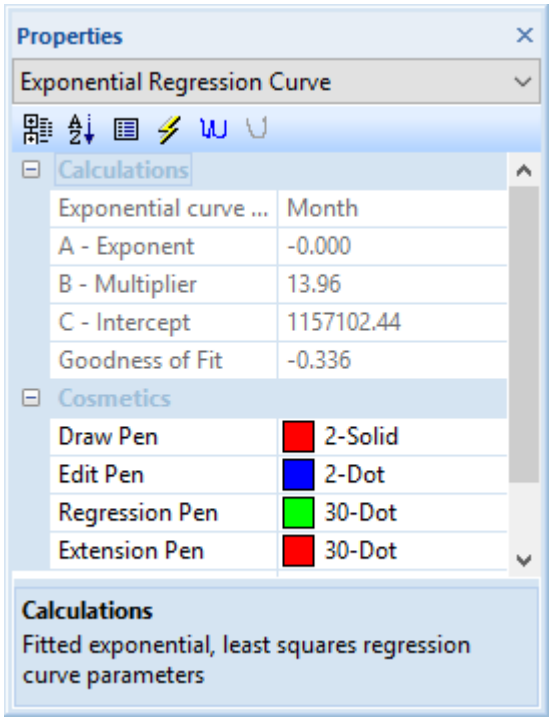
1. **[Exponential curve units]** grid item.
   Period units used to calculate exponential regression curve

2. **[A – Exponent]** grid item.
   Exponential growth curve exponent.
   y = B * x ** A + C

3. **[B – Multiplier]** grid item.
   Exponential growth curve multiplier.
   y = B * x ** A + C

4. **[C – Intercept]** grid item.
   Exponential growth curve intercept.
   y = B * x ** A + C

5. **[Goodness of Fit]** grid item.
   Goodness of fit calculated using 1.0 - RSS / TSS



Cosmetics used to display the fitted curve.

6. **[Draw Pen]** grid item.
   Pen used to draw the fitted left, right and extended curve limits

7. **[Edit Pen]** grid item.
   Edit mode Pen used to draw the left, right and extended curve limits.

8. **[Regression Pen]** grid item.
   Pen used to draw the fitted regression curve.

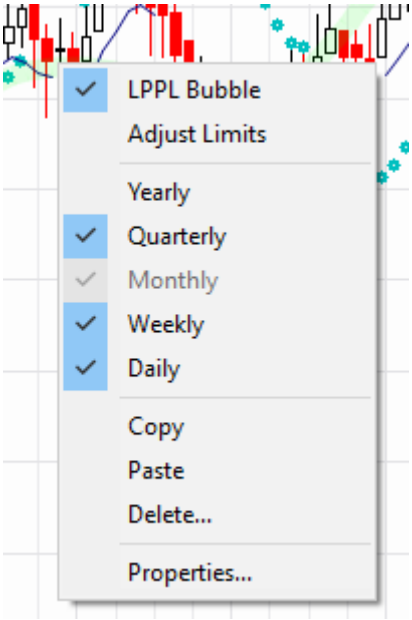
9. **[Extension Pen]** grid item.
   Pen used to draw the extended fitted regression curve.

6.9.4 Sornettes LPPL Spec-Bubble



6.9.4.1 Sornettes LPPL Spec-Bubble Context Menu

The Sornettes LPPL Spec-Bubble Curve Context Menu is activated by a right mouse click over the displayed LPPL regression curve or the projected bar at the base of the Chart when disabled.



1. **[LPPL Spec-Bubble]** menu item.
   Toggles visibility of the LPPL Spec-Bubble regression curve on (checked) and off. When toggled off a projected bar at the base of the chart will be displayed.

2. **[Edit Limits]** menu item.
   Toggles edit of Left, Right and Extension limits on (checked) and off, alternatively use ESCAPE to terminate edit mode.

   When adjustment mode is switched on, the vertical limit bars can be grabbed and dragged horizontally to new positions.

The following Period Units items define those charts on which the regression curve will be displayed.
Logically the primary regression curve units will be always checked and disabled.

3. Yearly
   Toggles display of this Sornettes Spec-Bubble Regression Curve on(checked) and off for Yearly charts.

4. Quarterly
   Toggles display of this Sornettes Spec-Bubble Regression Curve on(checked) and off for Quarterly charts.

5. Monthly
   Toggles display of this Sornettes Spec-Bubble Regression Curve

on(checked) and off for Monthly charts.

6. Weekly
Toggles display of this Sornettes Spec-Bubble Regression Curve on(checked) and off for Weekly charts.

7. Daily
Toggles display of this Sornettes Spec-Bubble Regression Curve on(checked) and off for Daily charts.

8. **[Copy]** menu item.
Copies LPPL Bubble regression curve properties grid to the clipboard.

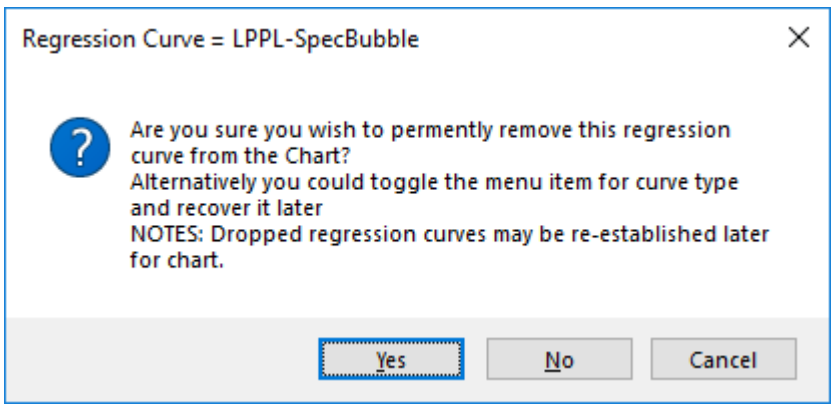
9. **[Paste** *object type***]** menu item.
Pastes LPPL Spec-Bubble regression curve cosmetic properties from the clipboard.

   Item is only ever enabled when application clipboard is populated with contents sourced, **[Cut]** or **[Copy]**, from another instance of this context menu.

   LPPL Spec-Bubble curve is immediately re-painted with the pasted cosmetics.

10. **[Delete…]** menu item.
Deletes the Sornettes LPPL Spec-Bubble Regression curve from the chart.

    The following confirmation prompt will be made upon selection. Deleted curves cannot be recovered. Alternatively, curves made be disabled by toggling the **[LPPL Spec-Bubble]** menu item



11. **[Properties]** menu item.
Displays regression configuration properties in the Sornettes LPPL Spec-Bubble Regression Properties Grid Control.

    Alternatively a left mouse click over an annotated regression curve will produce the same results.

Primary regression units are those period units under which the curve was first created.

6.9.4.2 Sornettes LPPL Spec-Bubble Properties Grid

Activated via the **[Properties…]** menu item from the Sornettes LPPL Spec-Bubble Context Menu or a left mouse click over the annotated regression curve.

Provides a display of the calculated regression curve parameters and the cosmetic settings used to annotate the curve on the chart, within the defined limits. All parameters are localised to this instance of the regression.

The following calculation parameters define the calculated regression curve.

1. **[Wiki Button URL**] grid item.
   URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

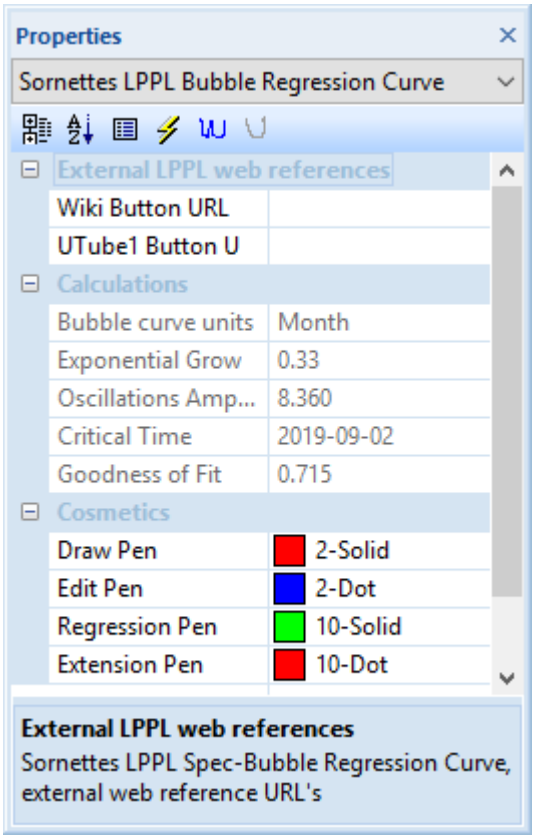
3. **[Bubble curve units]** grid item.
   Period units used to calculate LPPL Spec-Bubble regression curve

4. **[Exponential Growth]** grid item.
   LPPL curve exponential growth factor, range limited 0.1 <= z <= 0.9

5. **[Oscillations Amp]** grid item.
   LPPL curve oscillations amplitude factor, range limited 5.0 <= w <= 15.0

6. **[Critical Time]** grid item.
   Critical time right limit <= Tc <= extension limit

7. **[Goodness of Fit]** grid item.
   Goodness of fit calculated using 1.0 - RSS / TSS



Cosmetics used to display the fitted curve.

8. **[Draw Pen]** grid item.
   Pen used to draw the fitted left, right and extended curve limits.

9. **[Edit Pen]** grid item.
   Edit mode Pen used to draw the left, right and extended curve limits.

10. **[Regression Pen]** grid item.
    Pen used to draw the fitted regression curve.

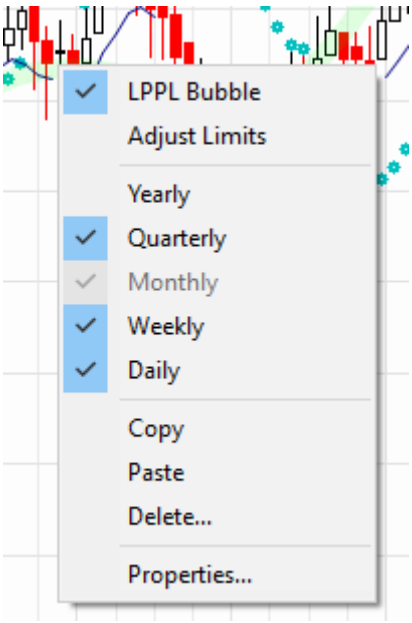
11. **[Extension Pen]** grid item.
    Pen used to draw the extended fitted regression curve.

6.9.5 Sornettes LPPL Anti-Bubble



6.9.5.1 Sornettes LPPL Anti-Bubble Context Menu

The Sornettes LPPL Anti-Bubble Curve Context Menu is activated by a right mouse click over the displayed LPPL regression curve or the projected bar at the base of the Chart when disabled.



1. **[LPPL Anti-Bubble]** menu item.
   Toggles visibility of the LPPL Anti-Bubble regression curve on (checked) and off. When toggled off a projected bar at the base of the chart will be displayed.

2. **[Edit Limits]** menu item.
   Toggles edit of Left, Right and Extension limits on (checked) and off, alternatively use ESCAPE to terminate edit mode.

   When adjustment mode is switched on the vertical limit bars can be grabbed and dragged horizontally to new positions.

The following Period Units items define those charts on which the regression curve will be displayed.
Logically the primary regression curve units will be always checked and disabled.

3. Yearly
   Toggles display of this Sornettes Anti-Bubble Regression Curve on(checked)

and off for Yearly charts.

4. Quarterly
Toggles display of this Sornettes Anti-Bubble Regression Curve on(checked) and off for Quarterly charts.

5. Monthly
Toggles display of this Sornettes Anti-Bubble Regression Curve on(checked) and off for Monthly charts.

6. Weekly
Toggles display of this Sornettes Anti-Bubble Regression Curve on(checked) and off for Weekly charts.

7. Daily
Toggles display of this Sornettes Anti-Bubble Regression Curve on(checked) and off for Daily charts.

8. **[Copy]** menu item.
Copies LPPL Anti-Bubble regression curve properties grid to the clipboard.

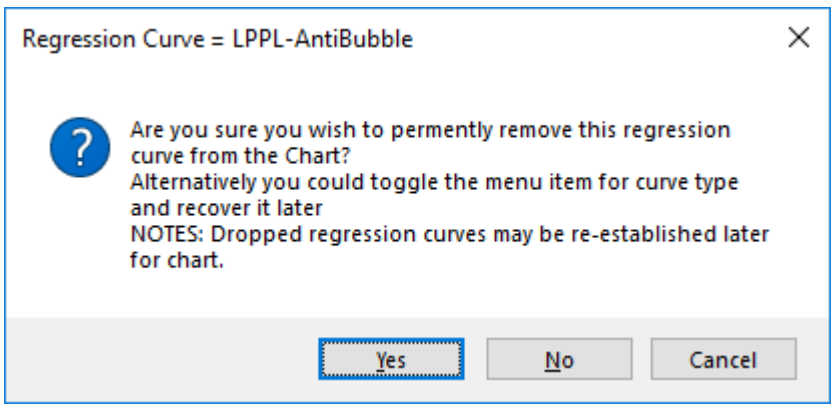
9. **[Paste** *object type***]** menu item.
Pastes regression curve cosmetic properties from the clipboard.

   Item is only ever enabled when application clipboard is populated with contents sourced, **[Cut]** or **[Copy]**, from another instance of this context menu.

   Anti-Bubble curve is immediately re-painted with the pasted cosmetics.

10. **[Delete…]** menu item.
Deletes the Sornettes LPPL Anti-Bubble Regression curve from the chart.

    The following confirmation prompt will be made upon selection. Deleted curves cannot be recovered. Alternatively, curves made be disabled by toggling the **[LPPL Anti-Bubble]** menu item



11. **[Properties]** menu item.
    Displays regression configuration properties in the Sornettes LPPL Anti-Bubble Regression Properties Grid Control.

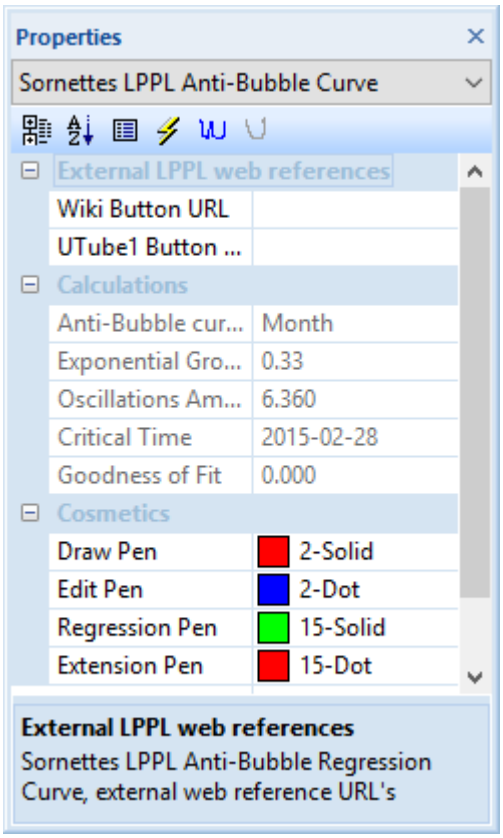
    Alternatively a left mouse click over an annotated regression curve will produce the same results.

Primary regression units are those period units under which the curve was first created.

6.9.5.2 Sornettes LPPL Anti-Bubble Properties Grid

Activated via the **[Properties…]** menu item from the Sornettes LPPL Anti-Bubble Context Menu or a left mouse click over the annotated regression curve.

Provides a display of the calculated regression curve parameters and the cosmetic settings used to annotate the curve on the chart, within the defined limits. All parameters are localised to this instance of the regression.
The following calculation parameters define the calculated regression curve.



1. **[Wiki Button URL**] grid item.
   URL to be activated upon **{Wiki}** button press.

2. **[YouTube Button URL]** grid item.
   URL to be activated upon **{YouTube}** button press.

3. **[Bubble curve units]** grid item.
   Period units used to calculate LPPL Anti-Bubble regression curve

4. **[Exponential Growth]** grid item.
   LPPL curve exponential growth factor, range limited 0.1 <= z <= 0.9

5. **[Oscillations Amp]** grid item.
   LPPL curve oscillations amplitude factor, range limited 5.0 <= w <= 15.0

6. **[Critical Time]** grid item.
   Critical time right limit <= Tc <= extension limit

7. **[Goodness of Fit]** grid item.
   Goodness of fit calculated using 1.0 - RSS / TSS

Cosmetics used to display the fitted curve.

8. **[Draw Pen]** grid item.
   Pen used to draw the fitted left, right and extended curve limits

9. **[Edit Pen]** grid item.
   Edit mode Pen used to draw the left, right and extended curve limits.

10. **[Regression Pen]** grid item.
    Pen used to draw the fitted LPPL Anti-Bubble regression curve.

11. **[Extension Pen]** grid item.
    Pen used to draw the extended fitted LPPL Anti-Bubble regression curve.

7. Dialogs

7.1 Windows Dialogs

7.1.1 Windows File Selection Dialog

Activated via the **[File | Open…** and **Save As]** main menu items. In addition, activation also occurs via **[Import]** and **[Export]** items from the various CBDatastore Explorer Context Menu's.

The Windows File Selection Dialog supports the following controls.

1. **[Open]** Button
   Opens the selected file and continues with the activating sequence.

2. **[Cancel]** Button
   Simply cancels selections and terminates the modal Windows File Selection Dialog and abandons the activating sequence.

7.1.2 Windows Print Dialog

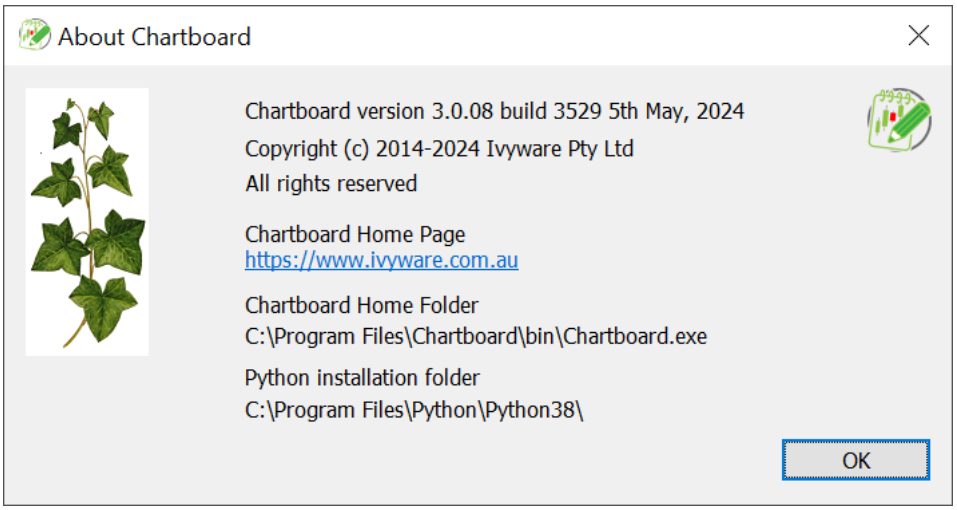
Activated via the **[File | Print…]** menu item.

1. **{OK}**
   Simply prints the contents of the selected view.

2. **{Cancel}** Button.
   Simply cancels selections and terminates the modal Windows Print Dialog.

7.2 About Chartboard Dialog

Activated via the **[Help | About Chartboard…]** menu item.

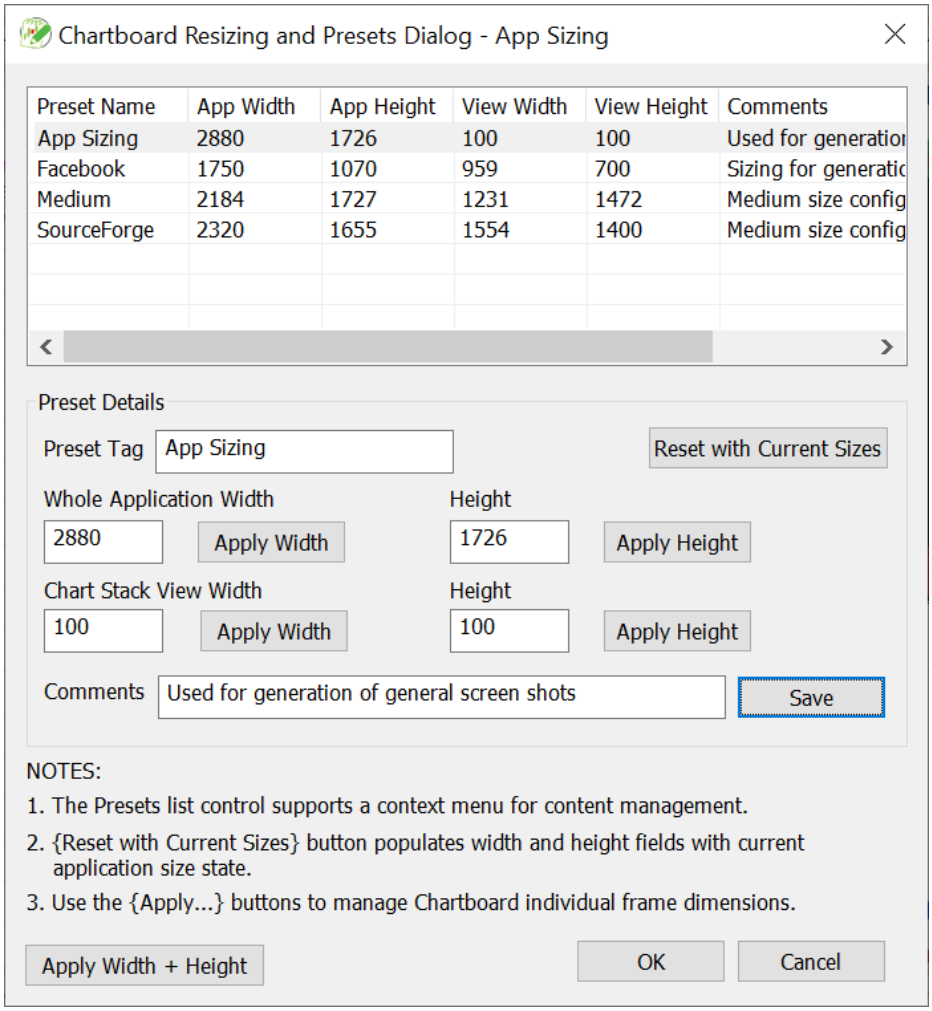


The About Chartboard Dialog supports the following control.

1. **{OK}** Button.
   Simply terminates the modal About Chartboard Dialog.

7.3 Chartboard Resizing and Presets Dialog

Activated via the **[Home | Tools | Resize Chartboard…]** menu item.



The Chartboard Resizing and Presets Dialog supports the following controls.

1. Preset Tag – Edit Control.
   Internal tag assigned to the sizing presets.

2. **{Reset with Current Sizes}** Button.
   Resets application and view fields with current values.

3. Whole Application Width – Edit Control.
   Width of the application in pixels.

4. **{ApplyWidth}** Button.
   Applies the configured application width.

5. Whole Application Height – Edit Control.
   Height of the application in pixels.

6. **{ApplyHeight}** Button.
   Applies the configured application height.

7. Chart Stack View Width – Edit Control.
   Width of the Chart Views in pixels.

8. **{ApplyWidth}** Button.
   Applies the configured chart stack view width.

9. Chart Stack View Height – Edit Control.
   Height of the Chart Views in pixels.

10. **{ApplyHeight}** Button.
    Applies the configured chart stack view height.

11. Comments – Edit Control.
    Comments assigned to the sizing presets.

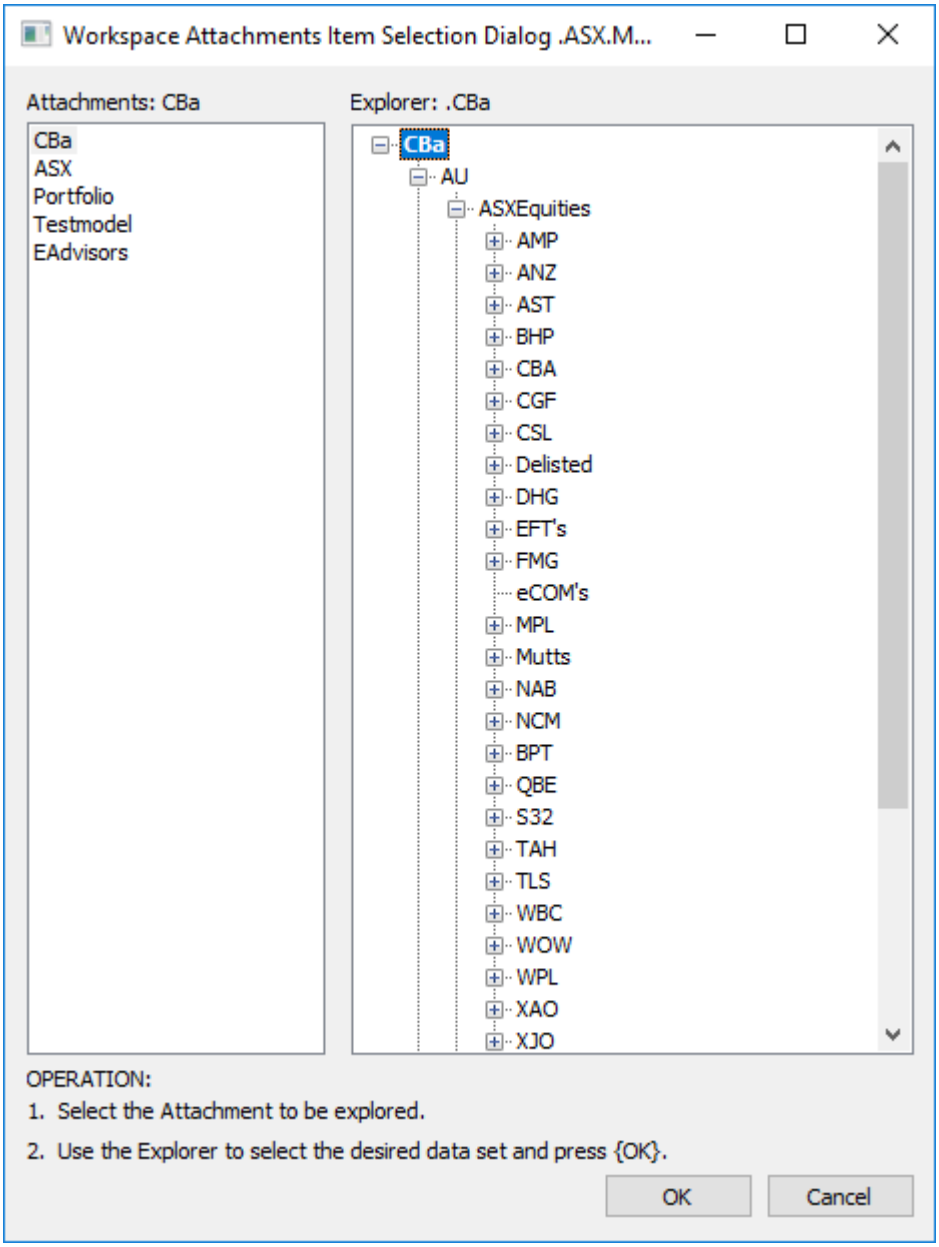
12. **{OK}** Button.
    Simply terminates the modal Chartboard Resizing and Presets Dialog.

13. **{Cancel}** – Button.
    Cancels selections and terminates the modal Chartboard Resizing and Presets Dialog.

7.4 Chartboard Attachment Explorer Dialogs

7.4.1 Workspace Attachments Item Selection Dialog

Facilitates the discrete selection of item from Workspace Attachments



The Workspace Attachments Item Selection Dialog supports the following data items and controls. The adopted values persist in the saved chart.

1. Attachments – List control.
   List of valid Workspace Attachments from which an item can be selected. Only those Attachments valid within the context of selection will be presented.

   Selected item in list will be hi-lighted and summarised as part of the List Control heading.

2. Attachment Explorer – Tree Control.
   Explorer tree exposing those items available for selection. Selected item in tree will be hi-lighted and summarised as part of the Tree Control heading.

Contents of the attachment list is filtered by the expectation of type.

3. **{OK}** – Button.
   Adopts the selected item and terminates the modal Workspace Attachments Item Selection Dialog.

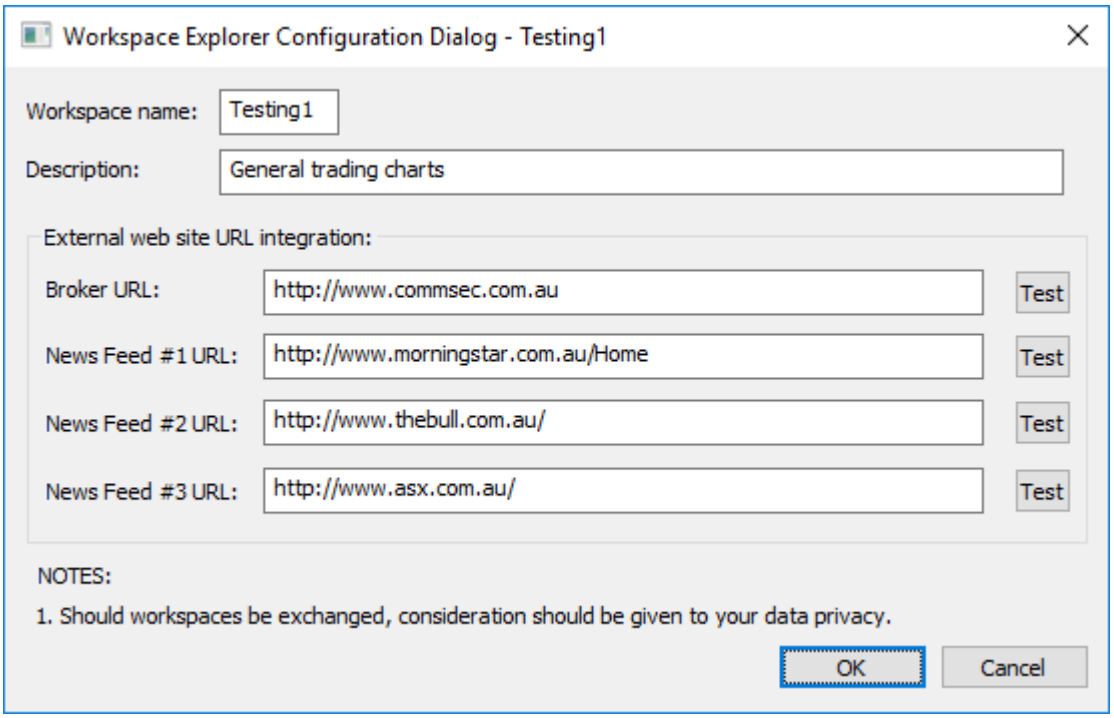
   Only enabled upon valid item selection. Explorer tree is synchronised with the selected Workspace Attachment.

4. **{Cancel}** – Button.
   Cancels selections and terminates the modal Workspace Attachments Item Selection Dialog.

7.4.2 Workspace Explorer Dialogs

7.4.2.1 Workspace Explorer Configuration Dialog

Activated via the Workspace Explorer Root Item Context Menu – **[Configuration…]** item.



Dialog supports the following fields serialised in the Workspace Explorer file.

1. Workspace Name – Edit Control
   Internal Workspace name.

   Workspace internal names are independent of external serialisation file names.

2. **[Description]** – Edit Control.
   Internal description allocated to the Workspace.

The External web site URL integration control contents are assigned to the Ribbon Bar **[Home]** Tab – **[Broker]** and **[News Feed]** Panels.

3. **[Broker URL]** – Edit Control and **{Test}** Button.
   Allocated Broker URL definition and associated {Test} button.

   Entered URL will be associated with the Ribbon Bar **[Home]** Tab – **[Broker]** Panel – **{Broker}** Button. When either the **{Broker}** Button or the local **{Test}** Button is pressed the URL page will be activated either locally in a **[URL View]** Tab or externally in the default browser according to External URL Spawn setting.

   Refer Ribbon Bar **[Home]** Tab – **[View]** Panel – **{External URL Spawn}** Check box setting for further details.

4. **[News Feed #1 URL]** – Edit Control and **{Test}** Button.
   Allocated News Feed #1 URL definition and associated **{Test}** button.

   Entered URL will be associated with the Ribbon Bar **[Home]** Tab – **[News Feeds]** Panel – **{News Feed#1}** Button. When either the **{News Feed#1}** Button or the local **{Test}** Button is pressed the URL page will be activated either locally in a **[URL View]** Tab or externally in the default browser according to External URL Spawn setting.

   Refer Ribbon Bar **[Home]** Tab – **[View]** Panel – **{External URL Spawn}** Check box setting for further details.

5. **[News Feed #2 URL]** – Edit Control and **{Test}** Button.
   Allocated News Feed #2 URL definition and associated **{Test}** button.

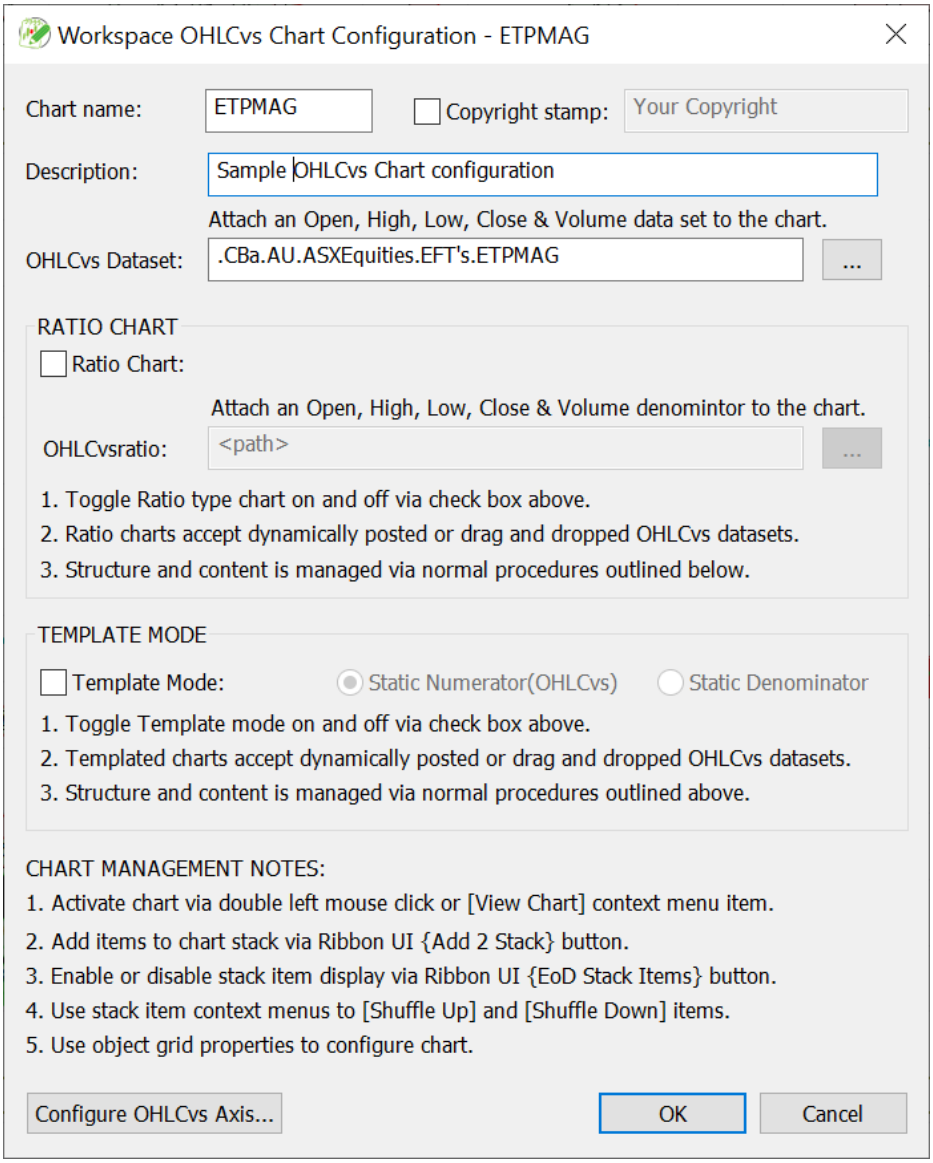
6. **[News Feed #3 URL]** – Edit Control and **{Test}** Button.
   Allocated News Feed #3 URL definition and associated **{Test}** button.

7. **{OK}** – Button.
   Applies any unsaved edits to the Workspace and terminates the modal Workspace Explorer Configuration Dialog.

8. **{Cancel}** – Button.
   Cancels any unsaved edits and terminates the modal Workspace Explorer Configuration Dialog.

7.4.2.2 Workspace Explorer OHLCvs Chart Configuration Dialog

Activated via the Workspace Explorer OHLCvs Chart Item Context Menu – **[Configuration…]** item. Alternatively, from the OHLCvs Chart View Tab Context Menu
[Configure OHLCvs Chart…] item.



The Workspace OHLCvs Chart Configuration Dialog supports the following data items and controls. The adopted values persist in the saved chart.

1. Chart name – Edit control.
   Arbitrary name allocated to chart. Usually reflects primary stock name and MUST be unique within context of folder

2. Copyright stamp – Check box.
   Toggles display of the Copyright notice in the chart legend.

3. Copyright – Edit control.
   Displayed copyright notice.

4. Description – Edit control.
   Chart description.

5. OHLCvs Dataset: - Edit control and {…} - Button.
   Primary OHLCvs dataset attached to the chart. Selection is facilitated via the

Workspace Attachments Item Selection Dialog activated via the **{…}** Button

Selected OHLCvs dataset is automatically edited into the Edit Control. The Workspace Attachments Item Selection Dialog will be configured for searching Attached Datastore's only.

6. **{…}** – OHLCvs dataset path selection button.
Selection is facilitated via the Workspace Attachments Item Selection Dialog activated via a button press.

   Selected OHLCvs dataset is automatically edited into the Edit Control. The Workspace Attachments Item Selection Dialog will be configured for searching Attached Datastore's only.

7. Ratio Chart – Check box.
Toggles Ratio Chart mode on (checked) and off.

   Charts in ratio mode will accept posted or drag and drop OHLCvs datasets either as nominator or denominator. Structure and content are managed via normal procedures

8. OHLCvsratio Dataset: - Edit control and {…} - Button.
Denominator OHLCvsratio dataset used to calculate the ratio chart dataset.
Selection is facilitated via the Workspace Attachments Item Selection Dialog activated via the **{…}** Button

   {…} – Denominator OHLCvs dataset path selection button.
Selection is facilitated via the Workspace Attachments Item Selection Dialog activated via a button press.

   Selected OHLCvsratio dataset is automatically edited into the Edit Control. The Workspace Attachments Item Selection Dialog will be configured for searching Attached Datastore's only.

9. Template mode – Check box.
Toggles template mode on (checked) and off.

   Charts in template mode will accept posted or drag and drop OHLCvs datasets. Structure and content is managed via normal procedures. Template mode is hi-lighted in Workspace Explorer by standard OHLCvs Chart icon with border.

10. Numerator (OHLCvs) or Denominator (OHLCvsratio) – Radio buttons.
Selects Numerator or Denominator as the static template OHLCvs data set.

11. **{Configure OHLCvs Axis…}** – Button.
Activates the modal OHLCvs Chart-Axis Configuration Dialog.

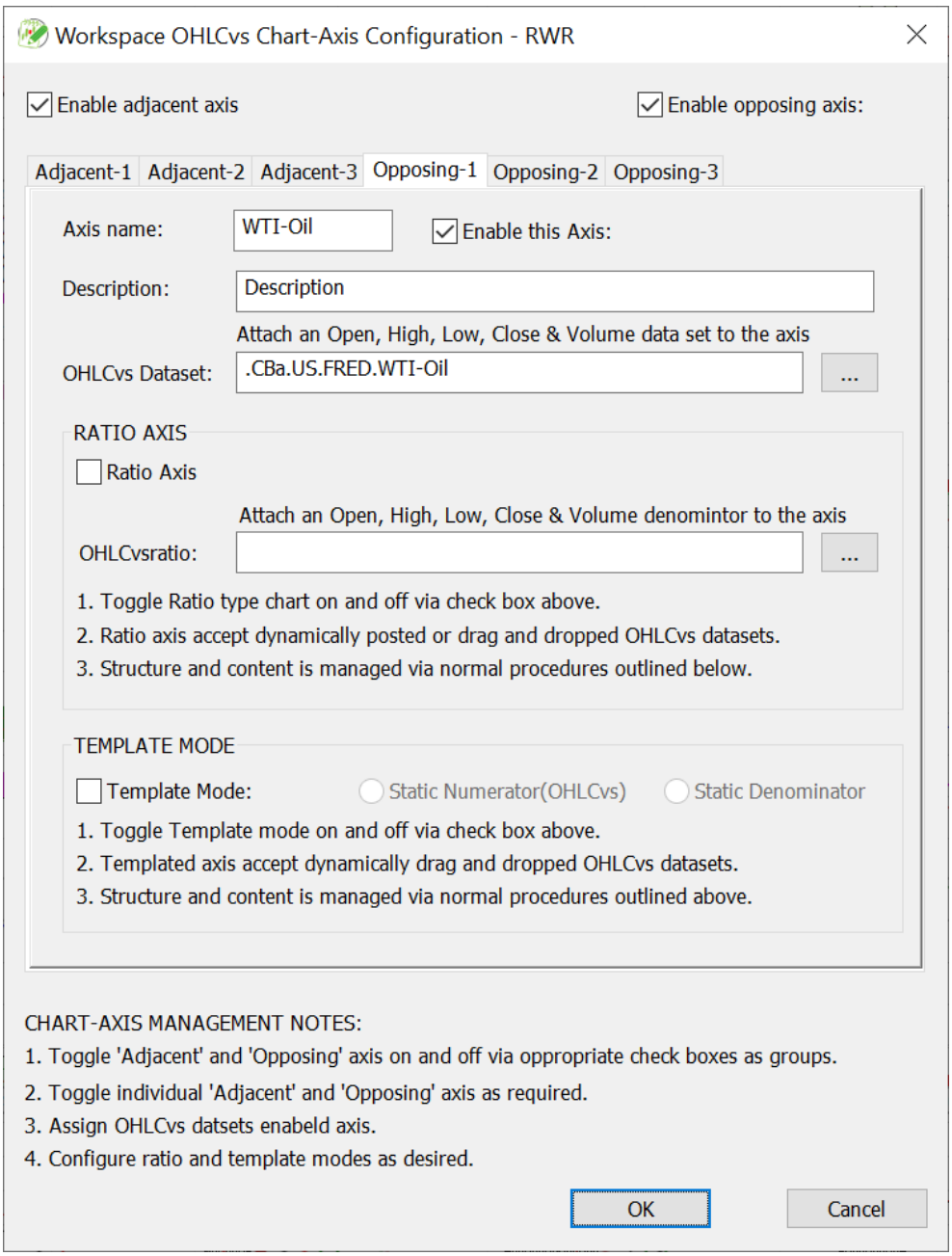
12. **{OK}** – Button.
Applies any unsaved edits to the chart and terminates the modal OHLCvs

Chart Configuration Dialog.

13. **{Cancel}** – Button.
Cancels any unsaved edits and terminates the modal OHLCvs Chart Configuration Dialog.

7.4.2.3 Workspace Explorer OHLCvs-Axis Chart Configuration Dialog

Activated via the Workspace Explorer OHLCvs Chart Configuration Dialog, **{Configure OHLCvs Axis…]** button. Alternatively, from the OHLCvs Chart View Tab Context Menu select **[Configure OHLCvs Chart…]** item.



The Workspace OHLCvs Chart-Axis Configuration Dialog supports the following data items and controls. The adopted values persist in the saved chart.

1. Enable adjacent axis – Check Box.
   Toggles additional adjacent, left side, axis on and off. Configuration of adjacent axis is preserved.

2. Enable opposing axis – Check Box.
   Toggles additional opposing, right side, axis on and off. Configuration of opposing axis is preserved.

3. Adjacent-1, 2 and 3 – Tabs.
   Configuration for the left most additional axis tabs. Adjacent-0 is the primary/default and mandatory Chart Axis.

4. Opposing-1, 2 and 3 – Tabs.
   Configuration for the right most additional axis tabs.

5. Axis Name – Edit control.
   Axis name. Forms part of the displayed axis label.

6. Enable this axis – Check Box.
   Toggles display of this axis on and off. Configuration of axis parameters are preserved.

7. Description – Edit control.
   Axis description.

8. **{Tab}**OHLCvs Dataset: - Edit control and {…} - Button.
   OHLCvs dataset attached to the axis. Selection is facilitated via the Workspace Attachments Item Selection Dialog activated via the **{…}** Button

   Selected OHLCvs dataset is automatically edited into the Edit Control. The Workspace Attachments Item Selection Dialog will be configured for searching Attached Datastore's only.

9. **{Tab}{…}** – OHLCvs dataset path selection button.
   Selection is facilitated via the Workspace Attachments Item Selection Dialog activated via a button press.

   Selected OHLCvs dataset is automatically edited into the Edit Control. The Workspace Attachments Item Selection Dialog will be configured for searching Attached Datastore's only.

10. **{Tab}**Ratio Axis – Check box.
    Toggles Ratio Axis mode on (checked) and off.

    Chart-Axis in ratio mode will accept posted or drag and drop OHLCvs datasets either as nominator or denominator. Structure and content are managed via normal procedures

11. **{Tab}**OHLCvsratio Dataset: - Edit control and {…} - Button.
    Denominator OHLCvsratio dataset used to calculate the ratio chart-axis

dataset. Selection is facilitated via the Workspace Attachments Item Selection Dialog activated via the **{…}** Button

{Tab}{…} – Denominator OHLCvs dataset path selection button.
Selection is facilitated via the Workspace Attachments Item Selection Dialog activated via a button press.

Selected OHLCvsratio dataset is automatically edited into the Edit Control. The Workspace Attachments Item Selection Dialog will be configured for searching Attached Datastore's only.

12. **{Tab}**Template mode – Check box.
Toggles template mode on (checked) and off.

Charts-Axis in template mode will accept posted or drag and drop OHLCvs datasets. Structure and content is managed via normal procedures. Template mode is hi-lighted in Workspace Explorer by standard OHLCvs Chart icon with border.

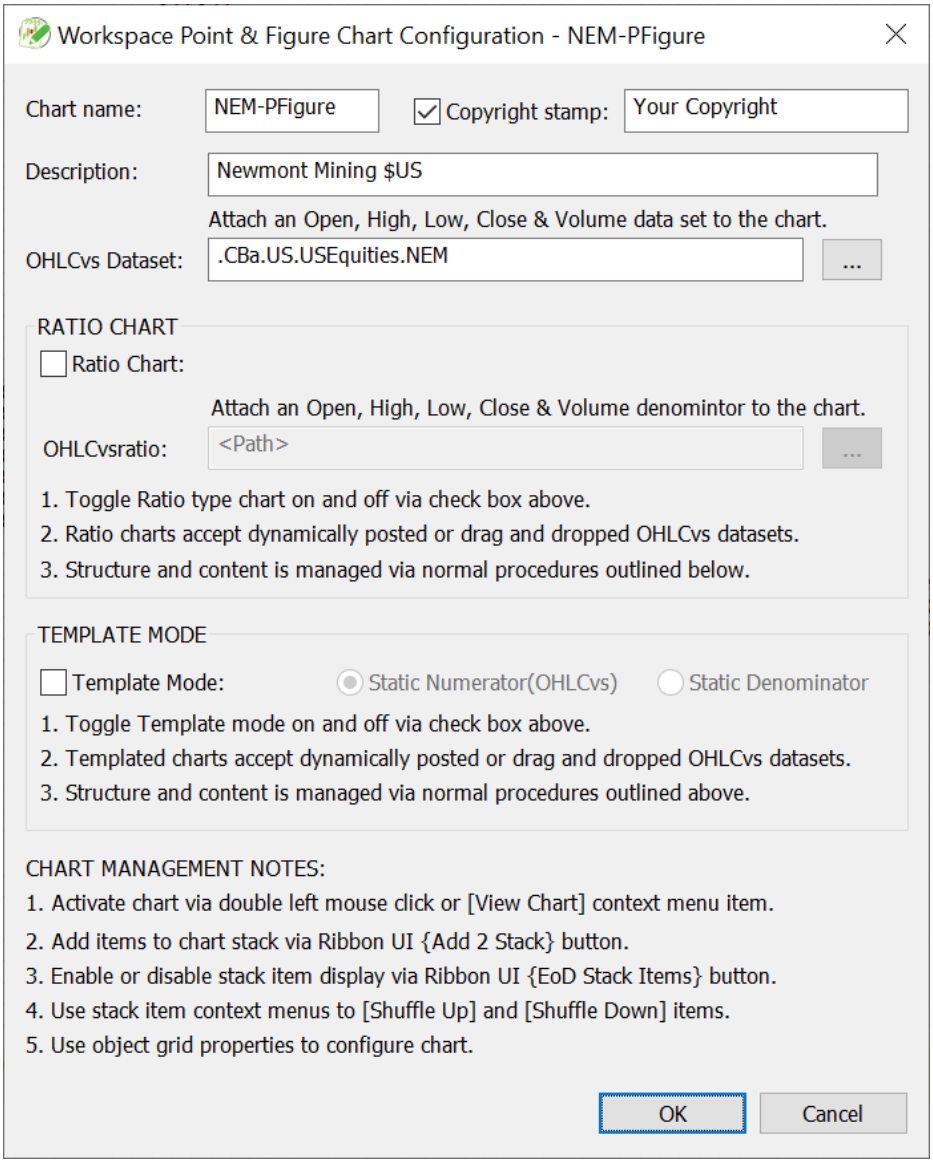
13. **{Tab}**Numerator (OHLCvs) or Denominator (OHLCvsratio) – Radio buttons.
Selects Numerator or Denominator as the static template OHLCvs data set.

14. **{OK}** – Button.
Applies any unsaved edits to the chart and terminates the modal OHLCvs Chart-Axis Configuration Dialog.

15. **{Cancel}** – Button.
Cancels any unsaved edits and terminates the modal OHLCvs Chart-Axis Configuration Dialog.

7.4.2.4 Workspace Explorer PFigure Chart Configuration Dialog

Activated via the Workspace Explorer PFigure Chart Item Context Menu – **[Configuration…]** item. Alternatively, from the OHLCvs Chart View Tab Context Menu
[Configure PFigure Chart…] item.



The PFigure Chart Configuration Dialog supports the following data items and controls. The adopted values persist in the saved chart.

1. Chart name – Edit control.
   Arbitrary name allocated to chart. Usually reflects primary stock name and MUST be unique within context of folder.

2. Copyright stamp – Check box.
   Toggles display of the Copyright notice in the chart legend.

3. Copyright – Edit control.
   Displayed copyright notice.

4. Description – Edit control.
   Chart description.

5. OHLCvs Dataset: - Edit control and {…} - Button.

Primary OHLCvs dataset attached to the chart. Selection is facilitated via the Workspace Attachments Item Selection Dialog activated via the **{…}** Button

Selected OHLCvs dataset is automatically edited into the Edit Control. The Workspace Attachments Item Selection Dialog will be configured for searching Attached Datastore's only.

6. **{…}** – OHLCvs dataset path selection button.

   Selection is facilitated via the Workspace Attachments Item Selection Dialog activated via a button press.

   Selected OHLCvs dataset is automatically edited into the Edit Control. The Workspace Attachments Item Selection Dialog will be configured for searching Attached Datastore's only.

7. Template mode – Check box.
   Toggles template mode on (checked) and off.

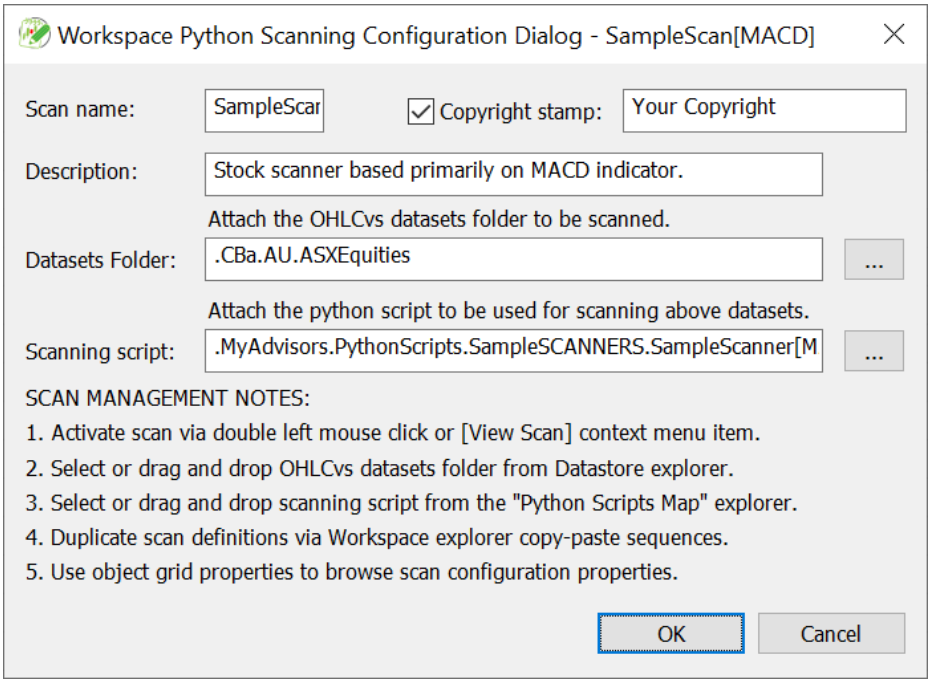
   Charts in template mode will accept posted or drag and drop OHLCvs datasets. Structure and content is managed via normal procedures. Template mode is hi-lighted in Workspace Explorer by standard OHLCvs Chart icon with border.

8. **{OK}** – Button.
   Applies any unsaved edits to the chart and terminates the modal PFigure Chart Configuration Dialog.

9. **{Cancel}** – Button.
   Cancels any unsaved edits and terminates the modal PFigure Chart Configuration Dialog.

7.4.2.5 Workspace Python Scanning Configuration Dialog

Activated via the Workspace Python Scanning Item Context Menu – **[Configuration…]** item. Alternatively, from the Python Scanner Tab Context Menu **[Configure Scanner…]** item.



The Workspace Python Scanning Configuration Dialog supports the following data items and controls. The adopted values persist in the saved chart.

1. Scan name – Edit control.
   Arbitrary name allocated to scan. Usually reflects primary scan objective and MUST be unique within context of folder

2. Copyright stamp – Check box.
   Toggles display of the Copyright notice in the scan legend.

3. Copyright – Edit control.
   Displayed copyright notice. Utility advice and comments only

4. Description – Edit control.
   Python Advisor scan description.

5. OHLCvs Dataset: - Edit control and {…} - Button.
   Primary OHLCvs dataset folder attached to the scan. Selection is facilitated via the Workspace Attachments Item Selection Dialog activated via the **{…}** Button

   Selected OHLCvs dataset is automatically edited into the Edit Control. The Workspace Attachments Item Selection Dialog will be configured for searching Attached Datastore's only.

6. **{…}** – OHLCvs dataset path selection button.
   Selection is facilitated via the Workspace Attachments Item Selection Dialog activated via a button press.

   Selected OHLCvs dataset is automatically edited into the Edit Control. The Workspace Attachments Item Selection Dialog will be configured for

searching Attached Datastore's only.

7. Scanning Script: - Edit control and {…} - Button.
   Primary Python script attached to the scan. Selection is facilitated via the Workspace Attachments Item Selection Dialog activated via the **{…}** Button.

   Selected Python Scanner is automatically edited into the Edit Control. The Workspace Attachments Item Selection Dialog will be configured for searching Attached Python Scanner's only.

8. **{…}** – Python Scanner path selection button.
   Selection is facilitated via the Workspace Attachments Item Selection Dialog activated via a button press.

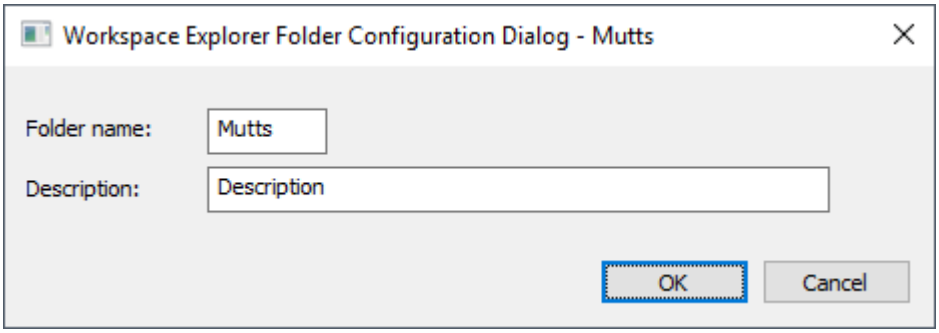
   Selected scanning script is automatically edited into the Edit Control. The Workspace Attachments Item Selection Dialog will be configured for searching Python Advisor's only.

9. **{OK}** – Button.
   Applies any unsaved edits to the chart and terminates the modal Python Scan Configuration Dialog.

10. **{Cancel}** – Button.
    Cancels any unsaved edits and terminates the modal Python Scan Configuration Dialog.

7.4.2.6 Workspace Explorer Folder Configuration Dialog.

Activated via the Workspace Explorer Folder Item Context Menu – **[Configuration…]** item.



Dialog supports the following fields serialised in the Workspace file.

1. **[Folder Name]** – Edit Control
   Workspace Folder name.

2. **[Description]** – Edit Control.
   Internal description allocated to the Folder.

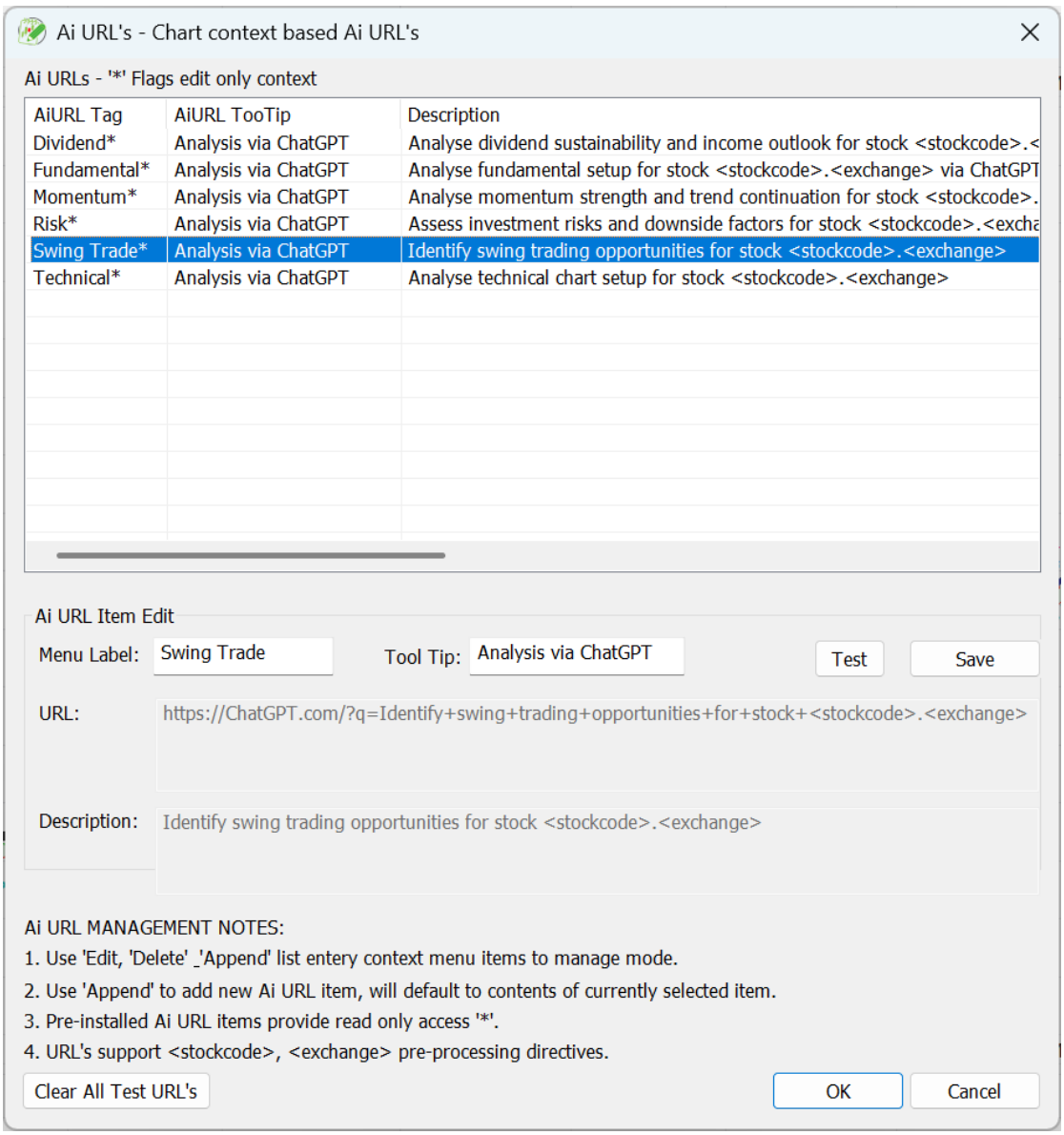
3. **{OK}** – Button.
   Applies any unsaved edits to the Workspace and terminates the modal

Workspace Explorer Folder Configuration Dialog.

4. **{Cancel}** – Button.
   Cancels any unsaved edits and terminates the modal Workspace Explorer Folder Configuration Dialog.

7.4.2.7 Manage Ai UTL's Dialog

Activated via the Datastore Explorer OHLCvs Item Context Menu – **[Manage Ai URL's…]** item. Alternatively, from the Ribbon Bar >> **[Ai URL's…]** Panel >> **{Manage Ai URL's…}** button.



The Manage Ai URL's Dialog supports the following data items and controls. The adopted values persist in the saved chart.

1. Ai URL's – List control.
   List of available commands, contains both pre-installed and subsequent

creations.

Ai URLColumn
URL command name as per menu's etc.

Description
User assigned description and or notes.

URL Command
Raw Ai URL command to be issued.

2. Menu Label – Edit Control.
   Menu label assigned to the entered URL.

3. Tool Tip – Edit Control.
   Tool tip associated with above Menu Label.

4. Test – Button.
   Tests the URL by issuing the URL and displaying the results in a View Tab.

   The Dialog is modal and as such the generated View Tab is blocked from access, but such access is available upon closure of the modal dialog.

5. Save – Button.
   Saves entered URL and associated parameters.

6. URL: - Edit control.
   Complete URL command to be issued, supports the following field substitutions relevant to context from which command is issued.
   <stockcode> As allocated by parent exchange
   <exchange> Parent exchange

   Selected URL command is automatically edited into the Edit Control.

7. {Description} – Edit Control.
   User description and notes associated with above URL command.

8. **{Clear All Test URL's}** – Buttons.
   Clears all test URL's generated from an instance of this Dialog.

   The **{Test}** button is available for testing the validity of entered URL's

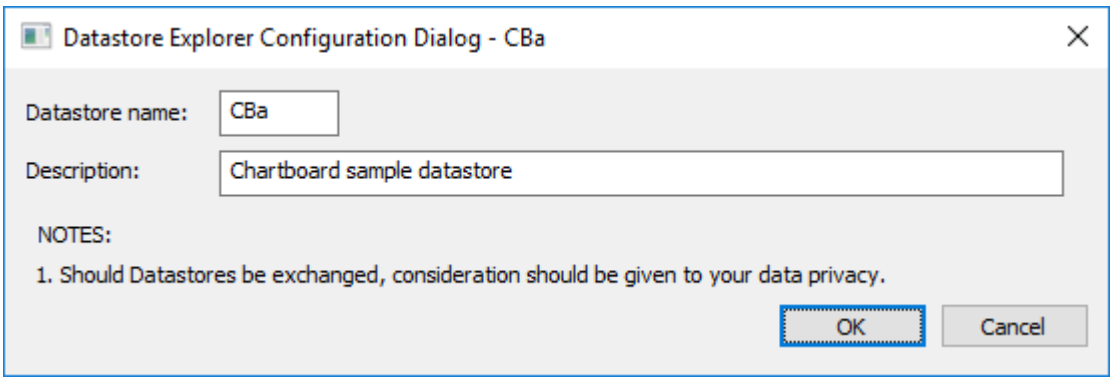
9. **{OK}** – Button.
   Applies any unsaved edits to the URL's and terminates the modal Manage Ai URL's Dialog.

10. **{Cancel}** – Button.
    Cancels any unsaved edits and terminates the modal Manage Ai URL's Dialog.

7.4.3 Datastore Explorer Dialogs

7.4.3.1 Datastore Explorer Configuration Dialog

Activated via the Datastore Explorer Root Item Context Menu – **[Configuration…]** item.



Dialog supports the following fields serialised in the Datastore Explorer file.

1. Datastore Name – Edit Control
   Internal Datastore name.

   Datastore internal names are independent of external serialisation file names but must be unique for all Datastore Attachments. Allocated name forms part of Dataset pathnames

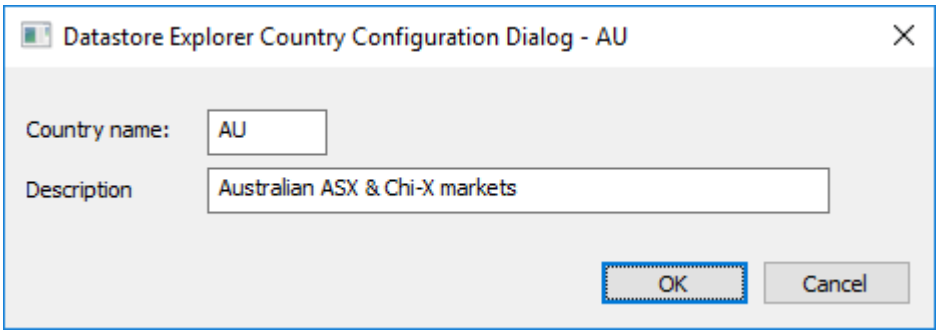
2. Description – Edit Control.
   Internal description allocated to the Datastore.

3. **{OK}** – Button.
   Applies any unsaved edits to the Datastore and terminates the modal Datastore Explorer Configuration Dialog.

4. **{Cancel}** – Button.
   Cancels any unsaved edits and terminates the modal Datastore Explorer Chart Configuration Dialog.

7.4.3.2 Datastore Explorer Country Configuration Dialog.

Activated via the Datastore Explorer Country Item Context Menu – **[Configuration…]** item.



Dialog supports the following fields serialised in the Datastore Attachment file.

1. **[Country Name]** – Edit Control
   Datastore Country name.

   Allocated name forms part of Datastore pathnames

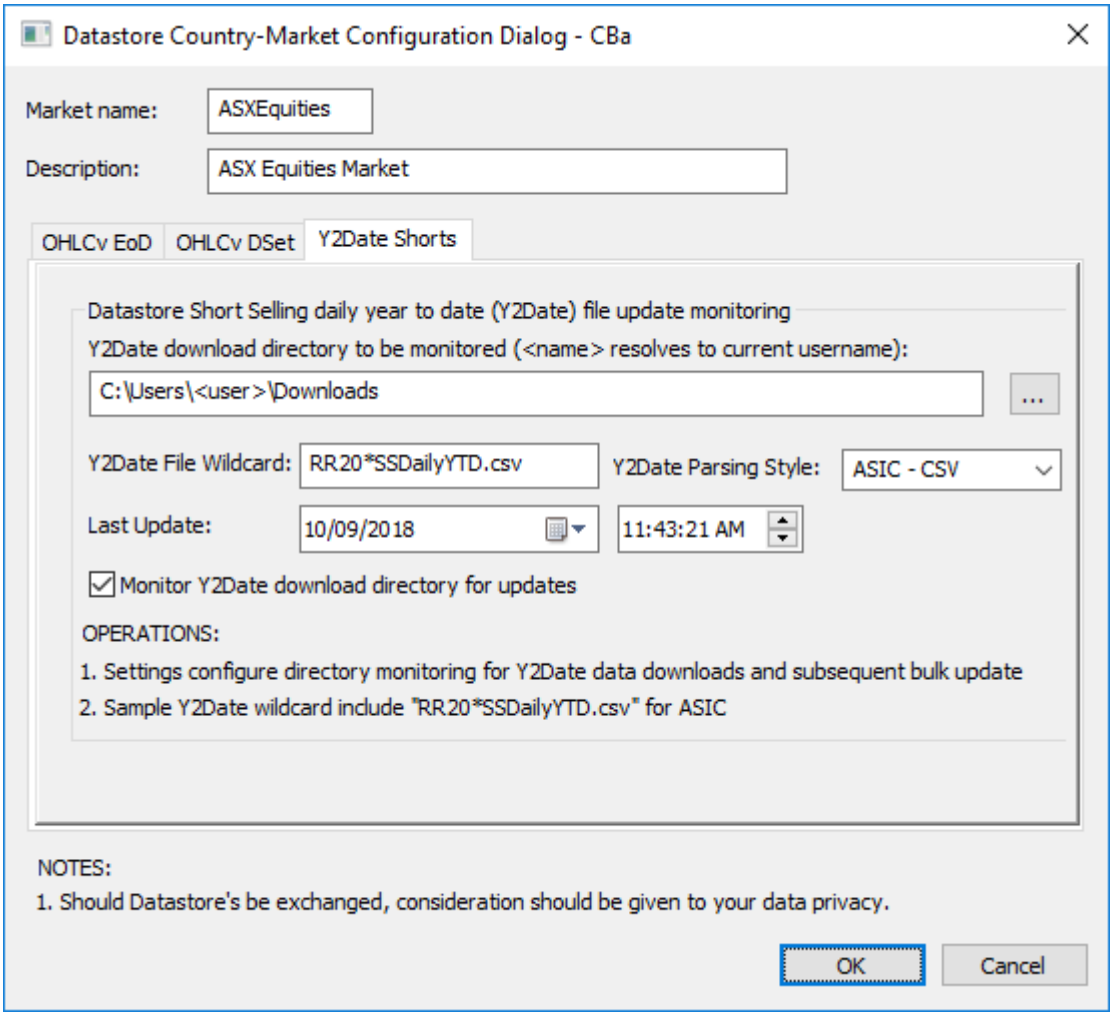
2. **[Description]** – Edit Control.
   Internal description allocated to the Country.

3. **{OK}** – Button.
   Applies any unsaved edits to the Datastore and terminates the modal Datastore Country Configuration Dialog.

4. **{Cancel}** – Button.
   Cancels any unsaved edits and terminates the modal Datastore Country Configuration Dialog.

7.4.3.3 Datastore Explorer Market Configuration Dialog

Activated via the Datastore Country-Market Item Context Menu – **[Configuration…]** item.



Dialog supports the following fields serialised in the Datastore Explorer file.

1. Market Name – Edit Control
   Datastore Explorer market name.

   Datastore market names are reflected in external serialisation file names and must be unique for all Markets within a Country. Allocated name forms part of OHLCvs dataset pathnames

2. Description – Edit Control.
   Internal description allocated to the Country-Market.

3. OHLCvs EoD – Tab.
   Manages and serialises directory monitoring parameters for downloaded OHLCv-EoD files.

   Alternatively OHLCv-EoD files may be manually updated via the Datastore Explorer Market Item Context Menu, **[OHLCvs EoD Update]** menu item.

   Monitoring may be toggled on and off via the Monitor EoD download directory for updates, check box.

4. OHLCvs Period – Tab.
   Manages and serialises directory monitoring parameters for downloaded OHLCv-Period files.

   Alternatively OHLCv-Period files may be manually updated via the Datastore Explorer Market Item Context Menu, **[OHLCvs Period Update]** menu item.

   Monitoring may be toggled on and off via the Monitor EoD download directory for updates, check box.

5. Y2Date Shorts – Tab.
   Manages and serialises directory monitoring parameters for downloaded Y2Date-Shorts files.

   Alternatively Y2Date-Shorts files may be manually updated via the Datastore Explorer Market Item Context Menu, **[Shorts Update]** menu item.

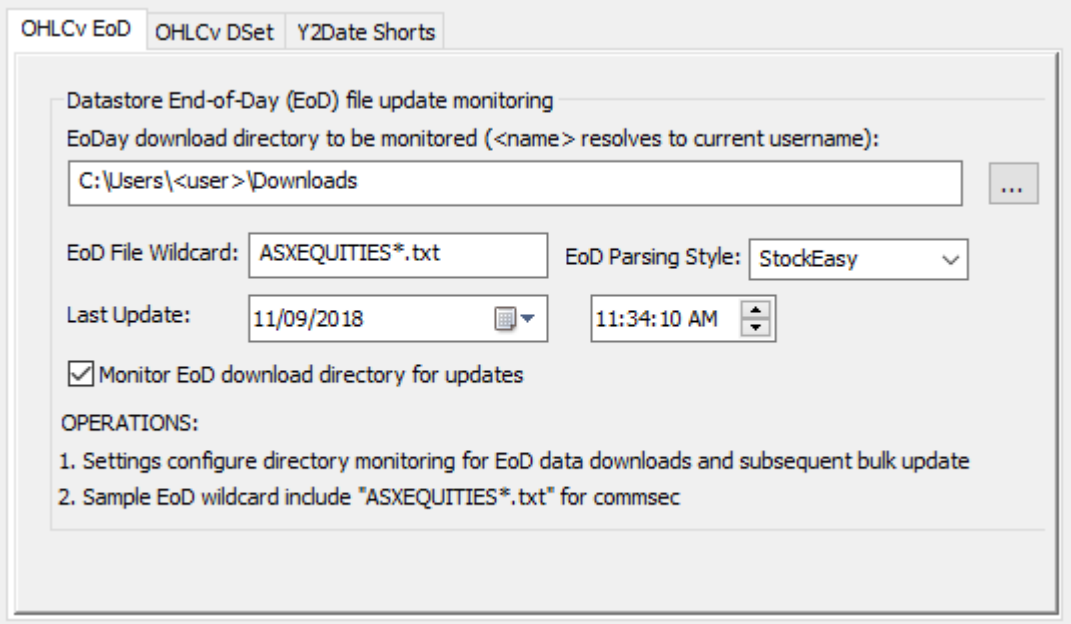
   Monitoring may be toggled on and off via the Monitor Shorts download directory for updates, check box.

6. **{OK}** – Button.
   Applies any unsaved edits to the Datastore Explorer Country-Market and terminates the modal Datastore Explorer Market Configuration Dialog.

7. **{Cancel}** – Button.
   Cancels any unsaved edits and terminates the modal Datastore Explorer Market Configuration Dialog.

7.4.3.3.1 Datastore Explorer Market Configuration Dialog – EoD Tab

Activated via the Datastore Explorer Configuration Dialog – **[OHLCvs EoD]** Tab.



Dialog tab supports the following fields serialised in the Datastore Explorer file for the **[OHLCvs EoD]** tab.

1. EoDay download directory to be monitored – Edit Control
   Full path for download directory to be monitored.

   Directory monitored for changes in content and subsequently fully scanned for files matching EoD File Wildcard.

   Current username will be substituted for <user> sequences.

2. **{…}**
   Activates standard Windows File Selection Dialog for picking download directory.

3. EoDay File Wildcard – Edit Control
   File matching wildcard. Non matched files excluded from monitoring process.

4. EoDay Parsing Style – Edit Control
   Parsing style to be adopted for matched files.

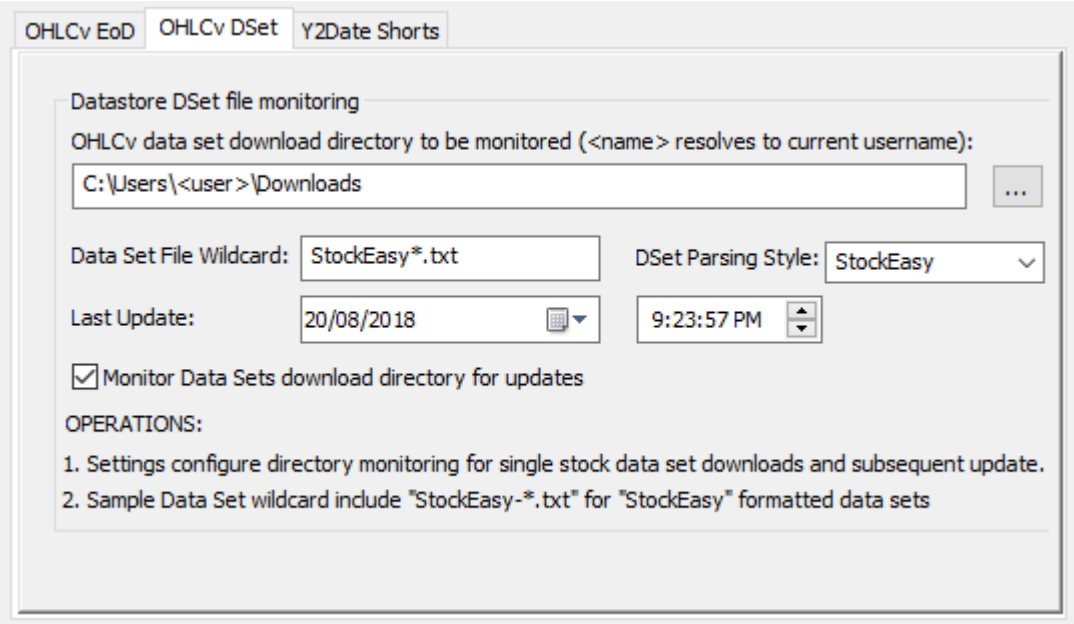
5. **{Manage…}** – Button.
   Activates the modal Datastore Manage OHLCv Parsers Dialog.

6. Last Update – Date and Time Controls
   Date and time of last processing cycle. All matched files before this last processing cycle excluded from processing

7. Monitor EoD download directory for updates – Edit Control
   Toggles directory monitoring process on and off for **[OHLCvs EoD]** tab.

7.4.3.3.2 Datastore Explorer Market Configuration Dialog – Period Tab

Activated via the Datastore Explorer Configuration Dialog – **[OHLCvs Period]** Tab.



Dialog tab supports the following fields serialised in the Datastore Explorer file for the **[OHLCvs Period]** tab.

1. **[OHLCvs download directory to be monitored]** – Edit Control
   Full path for download directory to be monitored.

   Directory monitored for changes in content and subsequently fully scanned for files matching Period File Wildcard.

   Current username will be substituted for <user> sequences.

2. {…}
   Activates standard Windows File Selection Dialog for picking download directory.

3. **[Period File Wildcard]** – Edit Control
   File matching wildcard. Non matched files excluded from monitoring process.

4. **[Period Parsing Style]** – Edit Control
   Parsing style to be adopted for matched files.

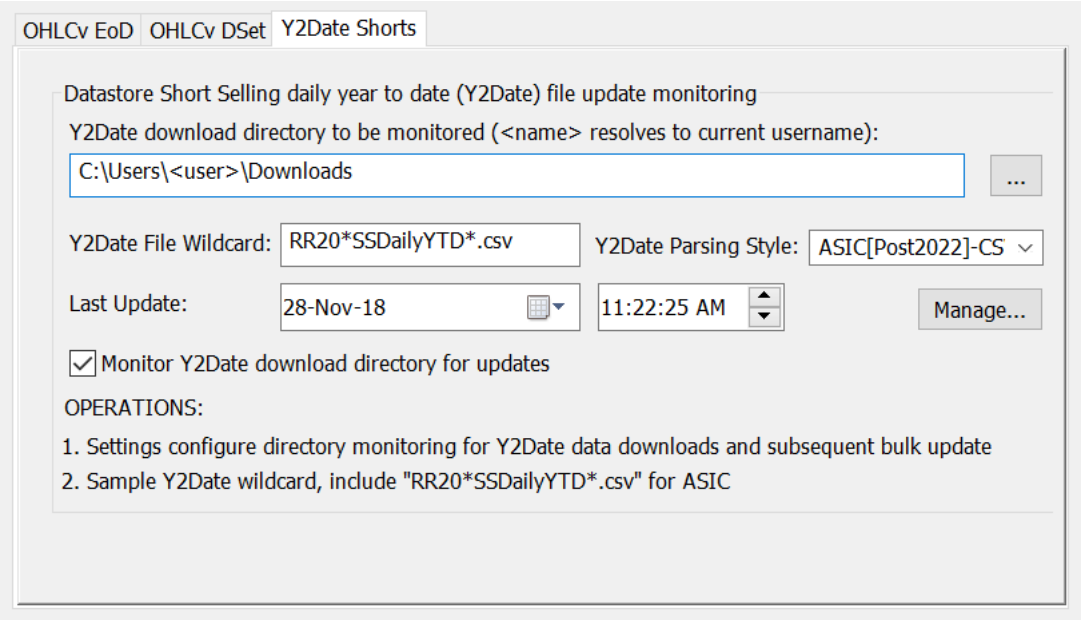
5. **{Manage…}** – Button.
   Activates the modal Datastore Manage OHLCv Parsers Dialog.

6. **[Last Update]** – Date and Time Controls
   Date and time of last processing cycle. All matched files before this last processing cycle excluded from processing

7. **[Monitor EoD download directory for updates]** – Edit Control
   Toggles directory monitoring process on and off for **[OHLCvs Period]** tab.

7.4.3.3.3 Datastore Explorer Market Configuration Dialog – Y2Date Tab

Activated via the Datastore Explorer Configuration Dialog – **[Y2Date Shorts]** Tab.



Dialog tab supports the following fields serialised in the Datastore Explorer file for the **[Y2Date Shorts]** tab.

1. **[Y2Date download directory to be monitored]** – Edit Control
   Full path for download directory to be monitored.

   Directory monitored for changes in content and subsequently fully scanned for files matching Y2Date File Wildcard.

   Current username will be substituted for <user> sequences.

2. {…}
   Activates standard Windows File Selection Dialog for picking download directory.

3. **[Y2Date File Wildcard]** – Edit Control
   File matching wildcard. Non matched files excluded from monitoring process.

4. **[Y2Date Parsing Style]** – Edit Control
   Parsing style to be adopted for matched files.

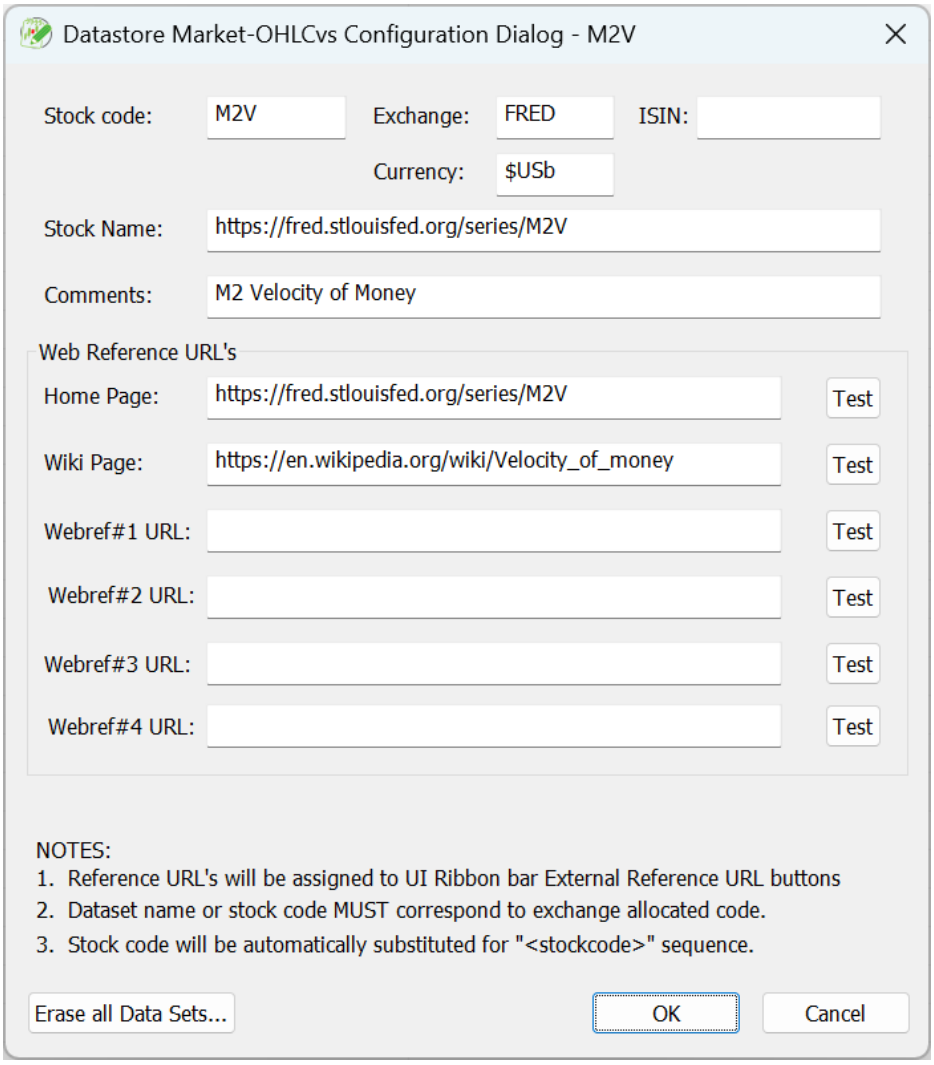
5. **{Manage…}** – Button.
   Activates the modal Datastore Manage OHLCv Parsers Dialog.

6. **[Last Update]** – Date and Time Controls
   Date and time of last processing cycle. All matched files before this last processing cycle excluded from processing

7. **[Monitor Y2Date download directory for updates]** – Check Box
   Toggles directory monitoring process on and off for **[Y2Date Shorts]** tab.

7.4.3.4 Datastore Market-OHLCvs Configuration Dialog

Activated via the Datastore Market-OHLCvs Dataset Item Context Menu – **[Configuration…]** item.



Dialog supports the following fields serialised in the Datastore Explorer file for each stock contained within a Market.

1. **[Stock Code]** – Edit Control
   Code allocated to the stock for the market under which it exists. This code is used for all subsequent references and imported data matches.

2. **[Stock Name]** – Edit Control.
   Formal name allocated to the stock by the exchange under which it exists.

The External web site URL integration control contents are assigned to the Ribbon Bar **[Home]** Tab – **[Broker]** and **[News Feed]** Panels.

3. **[Home Page]** – Edit Control and **{Test}** Button.
   Allocated Home Page URL definition and associated {Test} button.

   Entered URL will be associated with the Ribbon Bar **[OHLCvs] & [PFigure]** Tabs – **[External Reference URL's]** Panel – **{Home Page}** Button. When either the **{Home Page}** Button or the local **{Test}** Button is pressed the URL page will be activated either locally in a **[URL View]** Tab or externally in the default browser according to External URL Spawn setting.

   Refer Ribbon Bar **[Home]** Tab – **[View]** Panel – **{External URL Spawn}** Check box setting for further details.

4. **[Wiki Page]** – Edit Control and **{Test}** Button.
   Allocated Wiki Page URL definition and associated **{Test}** button.

   Entered URL will be associated with the Ribbon Bar **[OHLCvs] & [PFigure]** Tabs – **[External Reference URL's]** Panel – **{Wiki Page}** Button. When either the **{Wiki Page}** Button or the local **{Test}** Button is pressed the URL page will be activated either locally in a **[URL View]** Tab or externally in the default browser according to External URL Spawn setting.

   Refer Ribbon Bar **[Home]** Tab – **[View]** Panel – **{External URL Spawn}** Check box setting for further details.

5. **[Webref #1 URL]** – Edit Control and **{Test}** Button.
   Allocated Webref #1 URL definition and associated **{Test}** button.

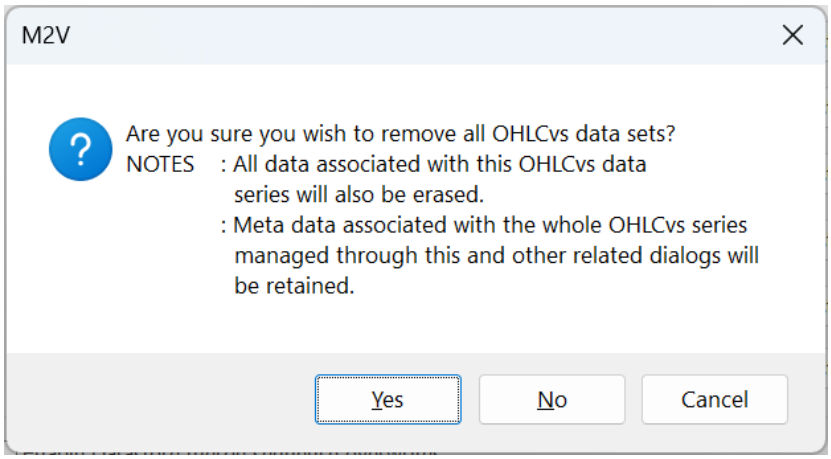
6. **[Webref #2 URL]** – Edit Control and **{Test}** Button.
   Allocated News Feed #2 URL definition and associated **{Test}** button.

7. **[Webref #3 URL]** – Edit Control and **{Test}** Button.
   Allocated News Feed #3 URL definition and associated **{Test}** button.

8. **[Webref #4 URL]** – Edit Control and **{Test}** Button.
   Allocated News Feed #4 URL definition and associated **{Test}** button.

9. **{Erase All Data Sets…}** – Button.
   Erases all OHLCvs Data Sets contained for the dependant stock.

The following confirmation prompt will be made for non-empty OHLCvs folders.

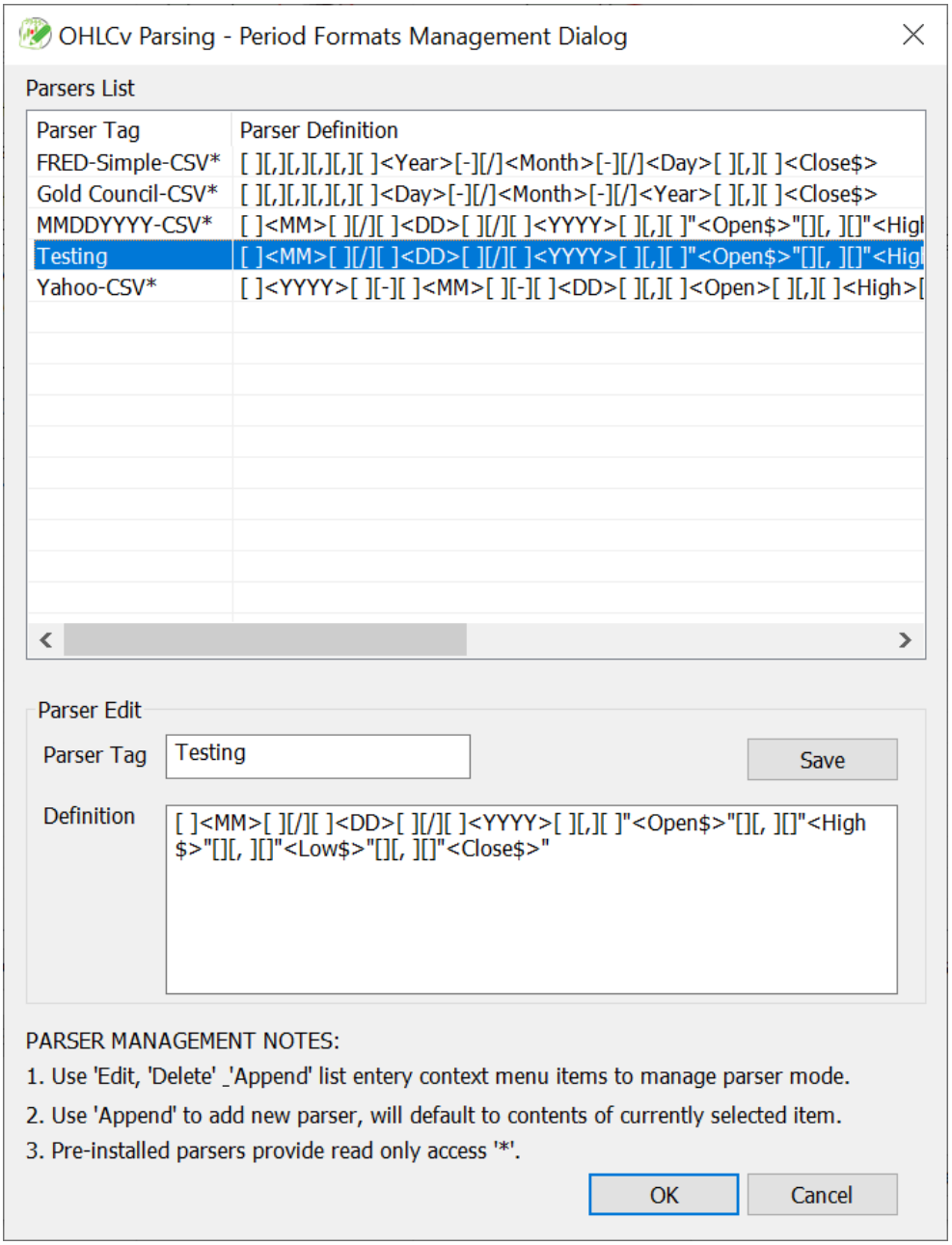


10. **{OK}** – Button.
Applies any unsaved edits to the Datastore and terminates the modal Datastore Market-OHLCvs Dataset Configuration Dialog.

11. **{Cancel}** – Button.
Cancels any unsaved edits and terminates the modal Datastore Market-OHLCvs Dataset Configuration Dialog.

7.4.3.5 Datastore Manage OHLCv Parsers Dialog

Activated via the {Manage…} buttons on the Datastore Explorer Bulk-OHLCv-EoD Update Dialog, Datastore Market-OHLCvs Bulk Shorts Update Dialog, Datastore Market-OHLCvs Period Update Dialog and the Datastore Market-Web Source OHLCvs Period Update Dialog.



Dialog supports the following fields serialised in the Datastore Explorer file for the context in which data is being imported.

1. **[Parsers List]** – List Control
   List of available parsers, contains both pre-installed and subsequent creations.

   ParserTag
   Parser name subsequently displayed in selection lists.

   Parser Definition
   Decode string used by the parser, edited to reflect the various data sources

2. **[Stock Name]** – Edit Control.
   Formal name allocated to the stock by the exchange under which it exists.

The Parser Edit group contents present editable fields.

3. **[Parser Tag]** – Edit Control.
   Parser name subsequently displayed in selection lists.

4. **[Definition]** – Edit Control.
   Parser definition.

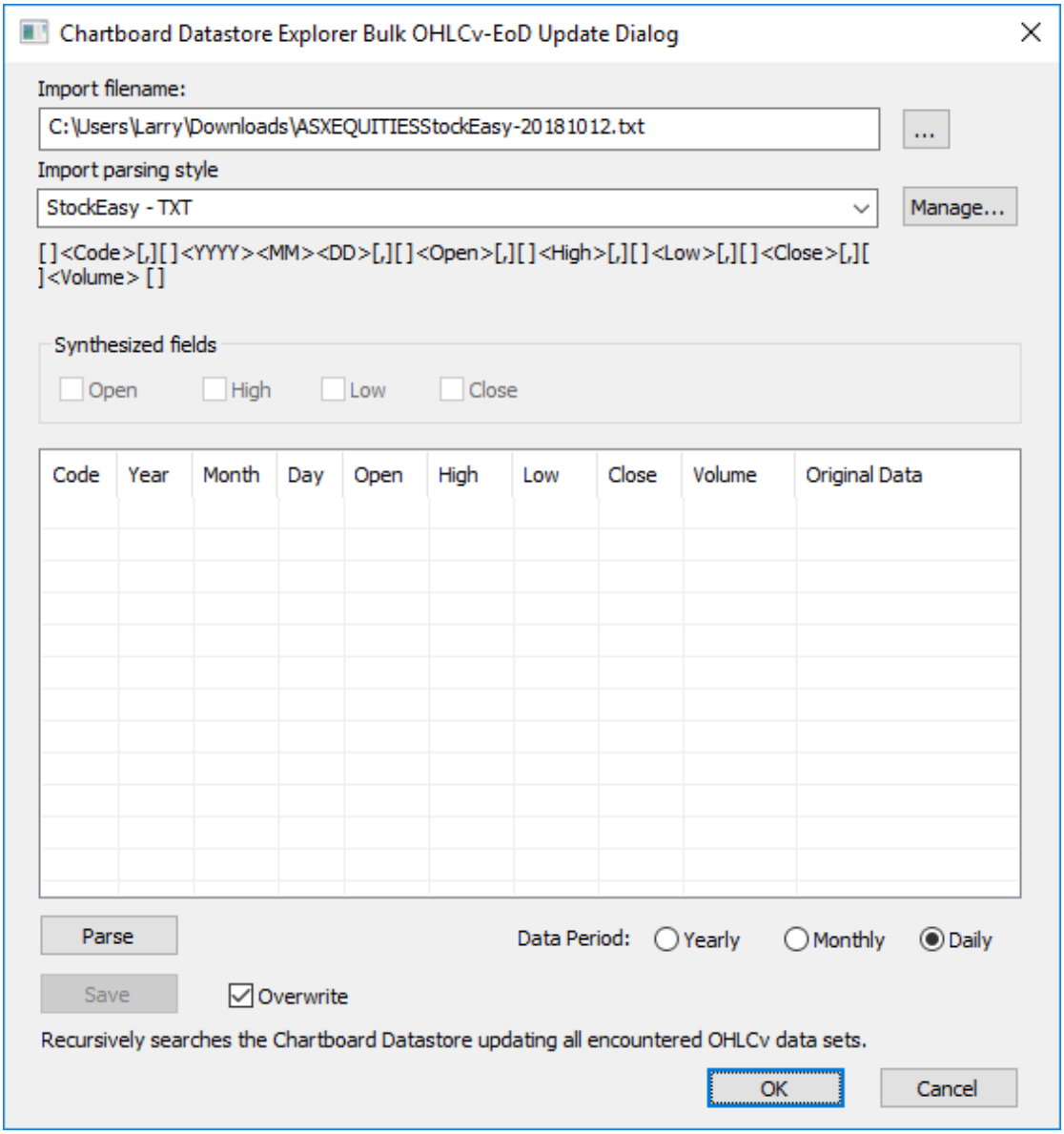
5. **{Save}, {Edit} and {Delete}** – Button.
   Action buttons.

6. **{OK}** – Button.
   Applies any unsaved edits and terminates the modal Datastore Manage OHLCv Parsers Dialog.

7. **{Cancel}** – Button.
   Cancels any unsaved edits and terminates the modal Datastore Manage OHLCv Parsers Dialog.

7.4.3.6 Datastore Explorer Bulk-OHLCv-EoD Update Dialog

Activated via the Datastore Market-OHLCvs Bulk EoD Import Context Menu – **[Bulk OHLCvs Update…]** item.



The Datastore Market-OHLCvs Bulk EoD Import Dialog supports the following data items and controls. The adopted values persist in the saved chart.

1. Import Filename – Edit control.
   Name of the import filename to be parsed and updated recursively into the Market-OHLCvs datasets.

2. **{…}** – Button.
   Select import filename.

3. Import parsing style – List control.
   Parsing style.

4. {Manage…}
   Activates the modal OHLCv Parsing - Period Formats Management Dialog.

5. Synthesized Fields – Check Boxes.
   Data fields to be synthesized.

6. Parse: - Button.
   Parse import file according to style.

7. Data Period – Check Boxes.
   Parsed data period units.

8. **{Save}** – Button.
   Save parsed dataset.

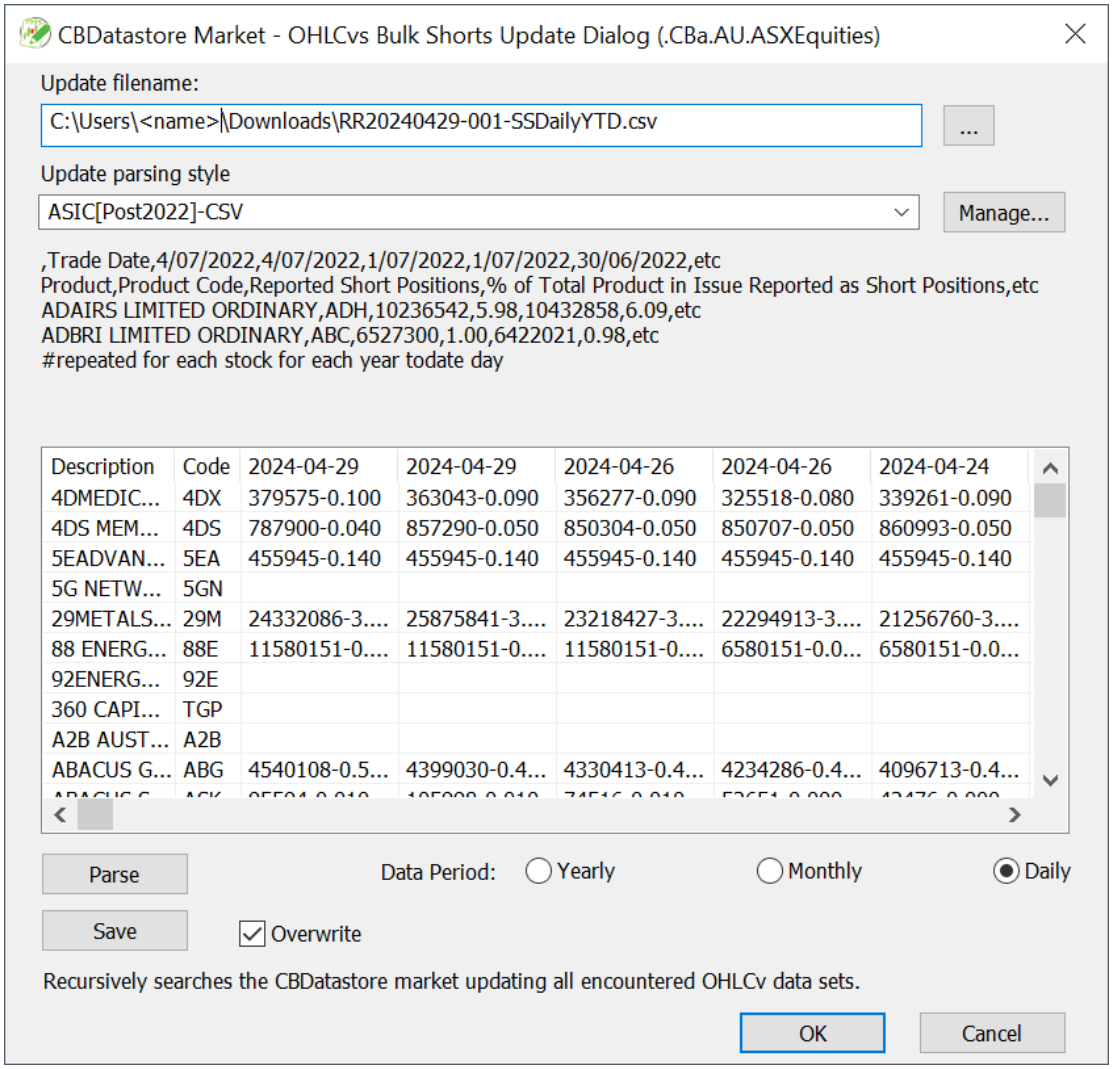
9. Overwrite – Check Box.
   Overwrite existing data with freshly parsed data.

10. **{OK}** – Button.
    Applies any unsaved edits to the chart and terminates the modal Datastore Market-OHLCvs Bulk EoD Import Dialog.

11. **{Cancel}** – Button.
    Cancels any unsaved edits and terminates the modal Datastore Market-OHLCvs Bulk EoD Import Dialog.

7.4.3.7 Datastore Market-OHLCvs Bulk Shorts Update Dialog

Activated via the Datastore Country-Market Item Context Menu – **[Bulk Shorts Update…]** item.



The CBDatastore Market - OHLCvs Bulk Shorts Update Dialog supports the following data items and controls. The adopted values persist in the saved chart.

1. Update Filename – Edit control.
   Name of the update filename to be parsed and updated recursively into the Market-OHLCvs datasets.

2. {…} – Button.
   Select update filename.

3. Update parsing style – List control.
   Parsing style, ASIC[Pre2022]-CSV or ASIC[Post2022]-CSV.

4. **{Manage…}** – Button.
   Activates the modal Datastore Manage OHLCv Parsers Dialog.

5. Synthesized Fields – Check Boxes.
   Data fields to be synthesized.

6. Parse: - Button.
   Parse update file according to style.

7. Data Period – Check Boxes.
   Parsed data period units.

8. **{Save}** – Button.
   Save parsed dataset.

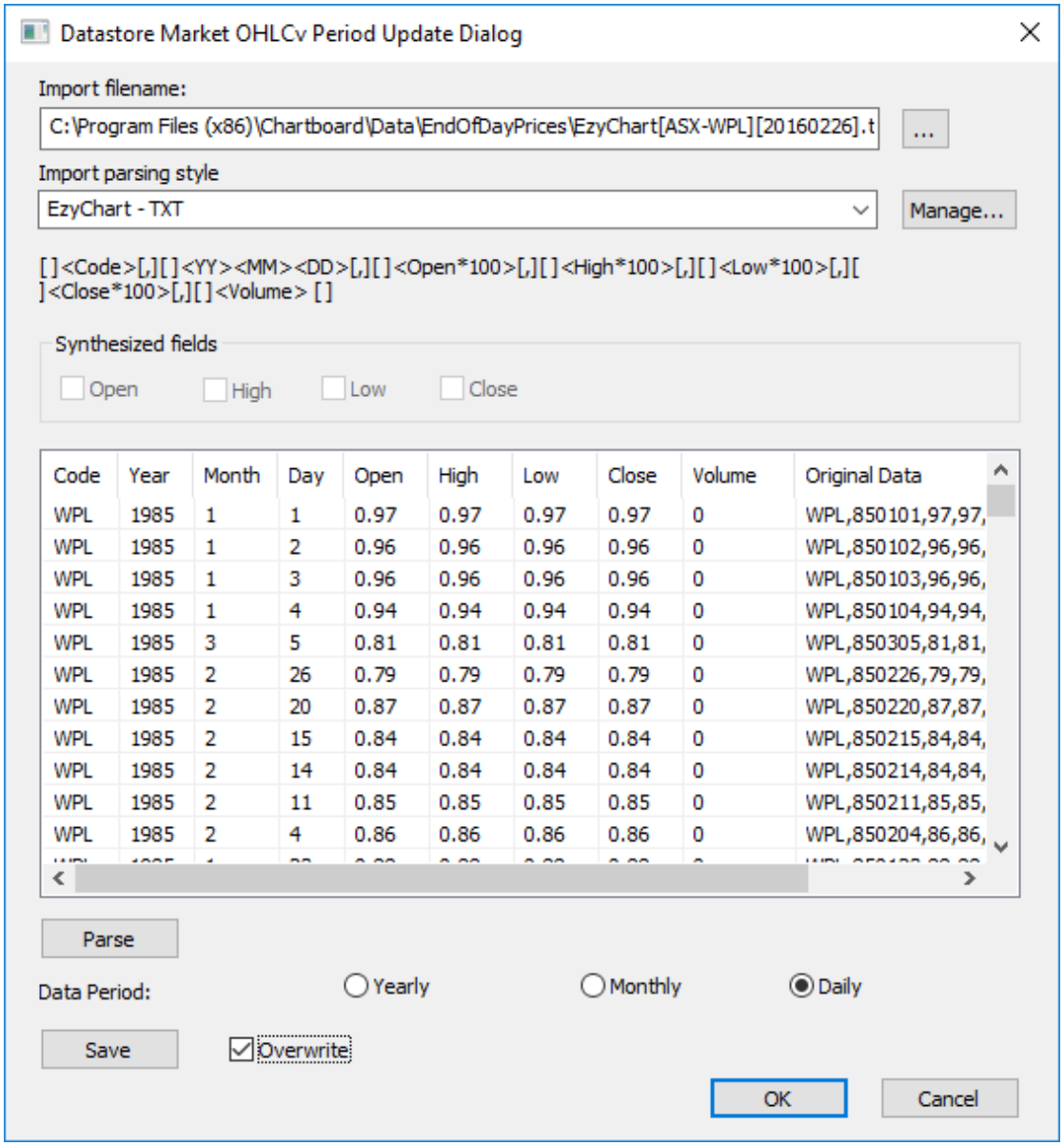
9. Overwrite – Check Box.
   Overwrite existing data with freshly parsed data.

10. **{OK}** – Button.
    Applies any unsaved edits to the chart and terminates the modal CBDatastore Market - OHLCvs Bulk Shorts Update Dialog.

11. **{Cancel}** – Button.
    Cancels any unsaved edits and terminates the modal Datastore Market - OHLCvs Bulk Shorts Update Dialog.

7.4.3.8 Datastore Market-OHLCvs Period Update Dialog

Activated via the Datastore Market-OHLCvs Period Update Context Menu – **[Period OHLCvs Update…]** item.



The Datastore Market-OHLCvs Period Update Dialog supports the following data items and controls. The adopted values persist in the saved chart.

1. Import Filename – Edit control.
   Name of the period import filename to be parsed and updated recursively into the Market-OHLCvs datasets.

2. **{…}** – Button.
   Select import filename.

3. Import parsing style – List control.
   Parsing style.

4. **{Manage…}** – Button.
   Activates the modal Datastore Manage OHLCv Parsers Dialog.

5. Synthesized Fields – Check Boxes.
   Data fields to be synthesized.

6. Parse: - Button.
   Parse import file according to style.

7. Data Period – Check Boxes.
   Parsed data period units.

8. **{Save}** – Button.
   Save parsed dataset.

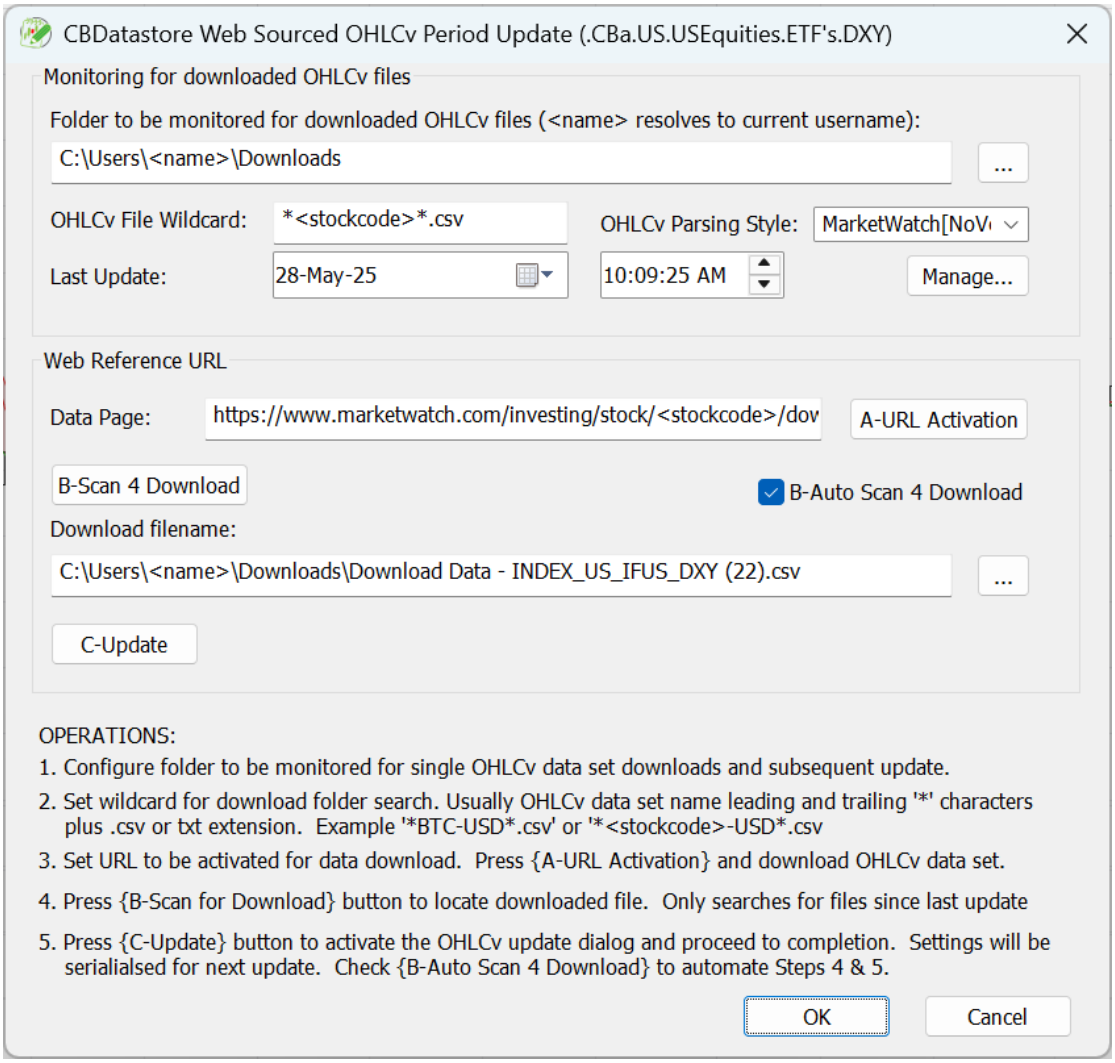
9. Overwrite – Check Box.
   Overwrite existing data with freshly parsed data.

10. **{OK}** – Button.
    Applies any unsaved edits to the chart and terminates the modal Datastore Market-OHLCvs Period Update Dialog.

11. **{Cancel}** – Button.
    Cancels any unsaved edits and terminates the modal Datastore Market-OHLCvs Period Update Dialog.

7.4.3.9 Datastore Market-Web Source OHLCvs Period Update Dialog

Activated via the Datastore Market-OHLCvs Period Update Context Menu – **[Web OHLCvs Update…]** item.



The Datastore Market-OHLCvs Period Update Dialog supports the following data items and controls. The adopted values persist in the saved chart.

1. Web Download Folder – Edit control.
   Name folder to be scanned for downloaded Market-OHLCv data sets. Supports and resolves <name> tag.

2. **{…}** – Button.
   Select folder to be scanned for downloaded OHLCv files.

3. OHLCv File Wildcard – Edit control.
   Wildcard to be used when scanning for downloaded OHLCv file. Supports and resolves <stockcode> tag.

4. **{Manage…}** – Button.
   Activates the modal Datastore Manage OHLCv Parsers Dialog.

5. Import parsing style – List control.
   Parsing style.

6. Last Update – Date and Time Controls
   Date and time of last processing cycle. All matched files before this last processing cycle excluded from scanning

7. **[Data Page]** – Edit Control.
   Allocated Data Page URL definition. Supports and resolves <stockcode> tag.

8. **{A-URL Activation}** – Button.
   Externally activates the enter [Data Page] URL from which OHLCv data for the Market Item is downloaded. The OHLCv Period dataset downloaded MUST be specified to the Market Item from which the Dialog was activated.

9. **{B-Scan 4 Download}** – Button.
   Scans the nominated [Web Download] folder for OHLCv Period File. Only those files with modification dates greater than the [Last Update] time and matching the [OHLCv File Wildcard] will be considered.

10. **{B-Auto Scan 4 Download}** – Check Box.
    Automates **{Scan 4 Download}** and **{C-Update}** sequences when checked.

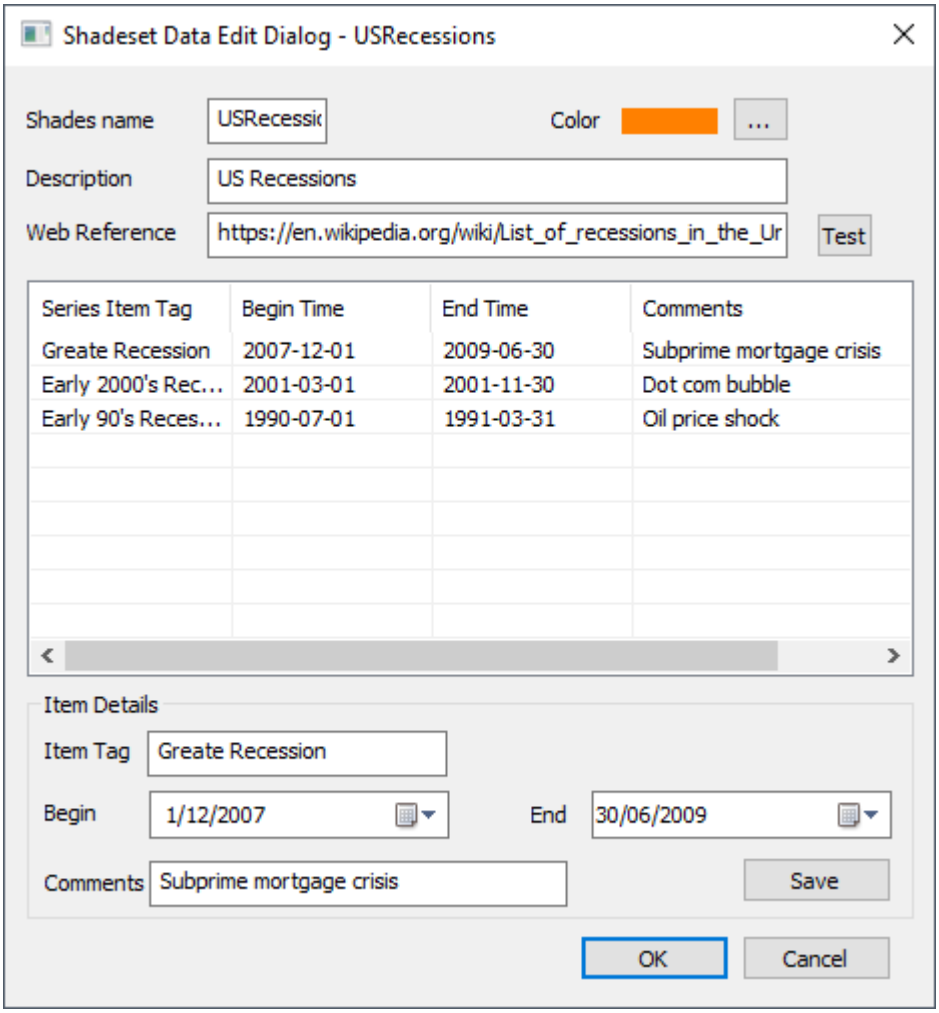
11. **{C-Update}** – Button.
    Activates the CBDatastore Market-OHLCv Period Update Dialog for the elected [Download Filename].

12. **{OK}** – Button.
    Applies any unsaved edits to the chart and terminates the modal CBDatastore Market-OHLCvs Web Update Dialog.

13. **{Cancel}** – Button.
    Cancels any unsaved edits and terminates the modal Datastore Market-OHLCvs Web Update Dialog.

7.4.3.10 Datastore Markups-Shadeset Data Edit Dialog

Activated via the Datastore Markups-Shades Item Context Menu – **[Edit…]** item.



The Datastore Markups-Shadeset Data Edit Dialog supports the following data items and controls. The adopted values persist in the saved dataset.

1. Shadeset name – Edit control.
   Arbitrary name allocated to Shadeset. Usually reflects underlying series of events, name and MUST be unique within context of folder

2. Colour **{…}** – Button.
   Colour selection button.

3. Description – Edit control.
   Shadeset description.

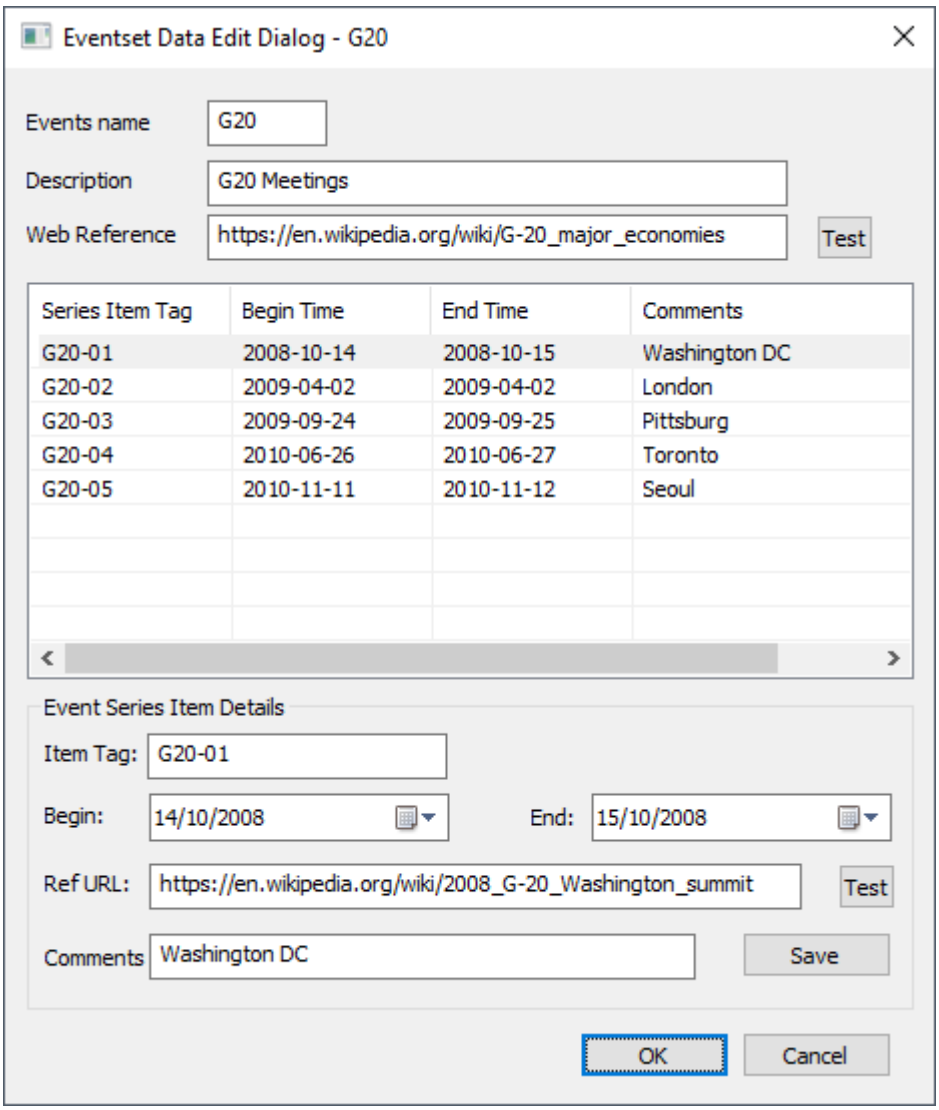
4. Web Reference – Edit control
   Underlying Shades dataset web reference URL definition and associated {Test} button.

5. **{OK}** – Button.
   Applies any unsaved edits to the chart and terminates the modal Datastore Markup-Shades Data Edit Dialog.

6. **{Cancel}** – Button.
   Cancels any unsaved edits and terminates the modal Datastore Markup-Shades Data Edit Dialog.

7.4.3.11 Datastore Markups-Eventset Data Edit Dialog

Activated via the Datastore Markups-Eventset Item Context Menu – **[Edit…]** item.



The Datastore Markups-Eventset Data Edit Dialog supports the following data items and controls. The adopted values persist in the saved data set.

1. Eventset name – Edit control.
   Arbitrary name allocated to Eventset. Usually reflects underlying series of events, name and MUST be unique within context of folder

2. Description – Edit control.
   Eventset description.

3. Web Reference – Edit control
   Underlying Events dataset web reference URL definition and associated

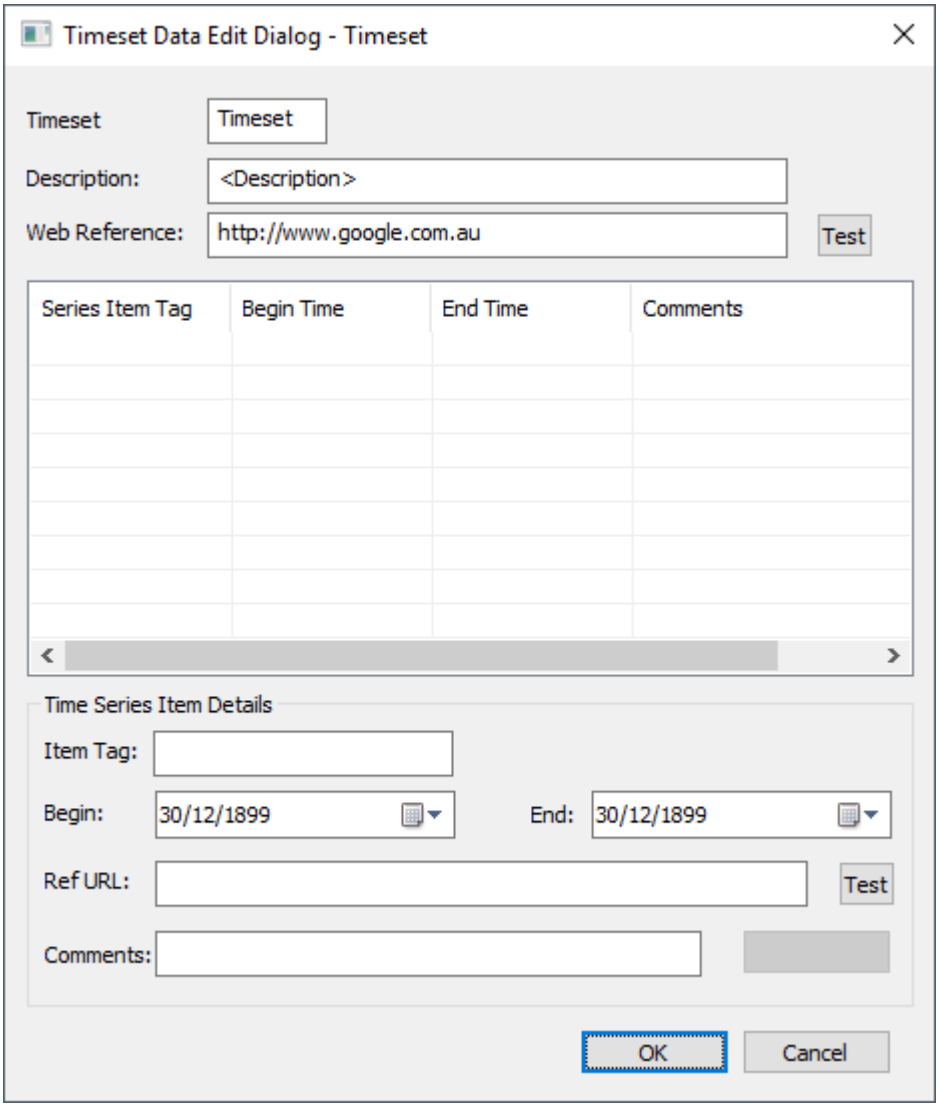
{Test} button.

4. **{OK}** – Button.
   Applies any unsaved edits to the chart and terminates the modal Datastore Markups-Eventset Data Edit Dialog.

5. **{Cancel}** – Button.
   Cancels any unsaved edits and terminates the modal Datastore Markups Eventset Data Edit Dialog.

7.4.3.12 Datastore Markups-Timeset Data Edit Dialog

Activated via the Datastore Markups-Timeset Item Context Menu – **[Edit…]** item.



The Datastore Markups-Timeset Data Edit Dialog supports the following data items and controls. The adopted values persist in the saved data set.

1. Timeset name – Edit control.
   Arbitrary name allocated to Timeset. Usually reflects underlying series of

events, name and MUST be unique within context of folder

2. Colour **{…}** – Button.
   Colour selection button.

3. Description – Edit control.
   Timeset description.

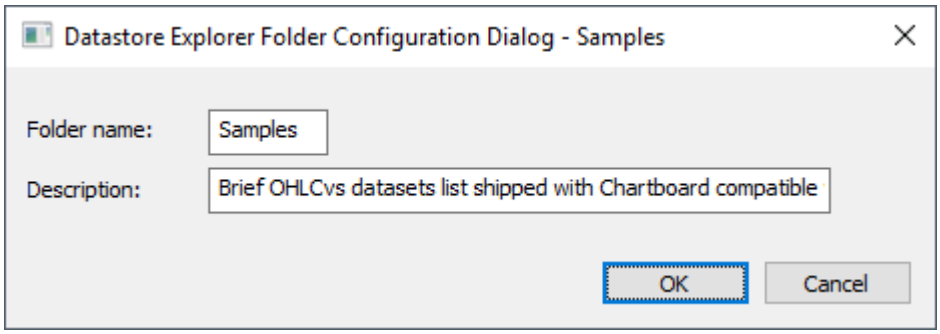
4. Web Reference – Edit control
   Underlying Timeset web reference URL definition and associated {Test} button.

5. **{OK}** – Button.
   Applies any unsaved edits to the chart and terminates the modal Datastore Markups-Timeset Data Edit Dialog.

6. **{Cancel}** – Button.
   Cancels any unsaved edits and terminates the modal Datastore Markups-Timeset Data Edit Dialog.

7.4.3.13 Datastore Explorer Folder Configuration Dialog.

Activated via the Datastore Explorer Folder Item Context Menu – **[Configuration…]** item.



Dialog supports the following fields serialised in the Datastore Attachment file.

5. **[Folder Name]** – Edit Control
   Datastore Folder name.

   Allocated name forms part of Datastore pathnames

6. **[Description]** – Edit Control.
   Internal description allocated to the Folder.

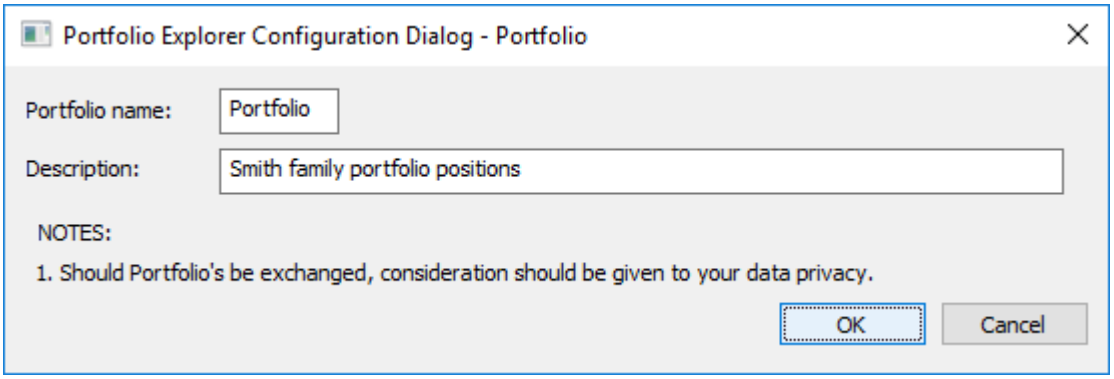
7. **{OK}** – Button.
   Applies any unsaved edits to the Datastore and terminates the modal Datastore Folder Configuration Dialog.

8. **{Cancel}** – Button.
   Cancels any unsaved edits and terminates the modal Datastore Folder Configuration Dialog.

7.4.4 Portfolio Explorer Dialogs

7.4.4.1 Portfolio Explorer Configuration Dialog

Activated via the Portfolio Explorer Root Item Context Menu – **[Configuration…]** item.



Dialog supports the following fields serialised in the Portfolio Explorer file.

1. **[Portfolio Name]** – Edit Control
   Internal Portfolio name.

   Portfolio internal names are independent of external serialisation file names but must be unique for all Portfolio Attachments. Allocated name forms part of Portfolio pathnames

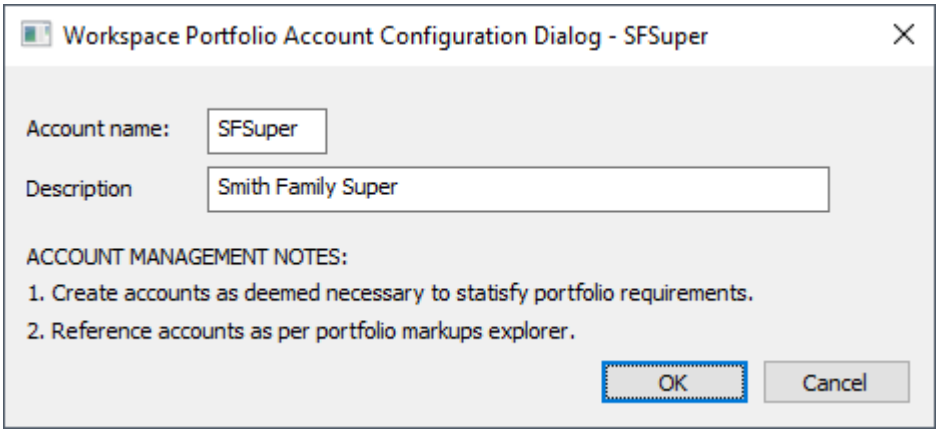
2. **[Description]** – Edit Control.
   Internal description allocated to the Portfolio.

3. **{OK}** – Button.
   Applies any unsaved edits to the Portfolio and terminates the modal Portfolio Explorer Configuration Dialog.

4. **{Cancel}** – Button.
   Cancels any unsaved edits and terminates the modal Portfolio Explorer Configuration Dialog.

7.4.4.2 Portfolio Account Configuration Dialog.

Activated via the Portfolio Explorer Account Item Context Menu – **[Configuration…]** item.



Dialog supports the following fields serialised in the Portfolio Explorer file.

1. **[Account Name]** – Edit Control
   Portfolio Account name.

   Allocated name forms part of Portfolio pathnames

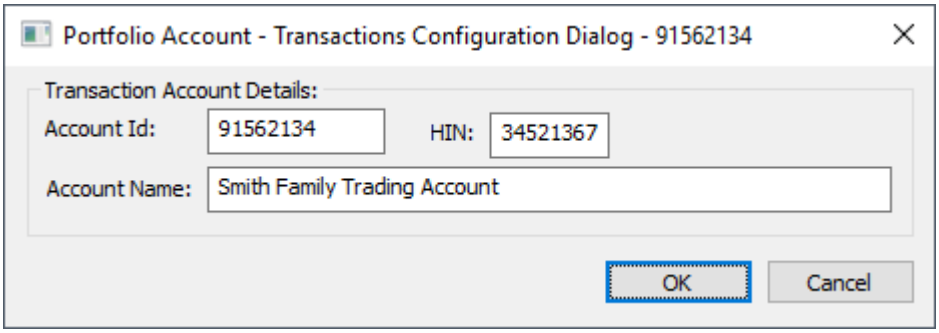
2. **[Description]** – Edit Control.
   Internal description allocated to the Portfolio.

3. **{OK}** – Button.
   Applies any unsaved edits to the Portfolio and terminates the modal Portfolio Account Configuration Dialog.

4. **{Cancel}** – Button.
   Cancels any unsaved edits and terminates the modal Portfolio Account Configuration Dialog.

7.4.4.3 Portfolio Account-Transactions Configuration Dialog

Activated via the Portfolio Account-Transactions Item Context Menu – **[Configuration…]** item.



Dialog supports the following fields serialised in the Portfolio Explorer file.

1. **[Account Id]** – Edit Control
   Account identification number.

2. **[Account Name]** – Edit Control.
   Name of the account.

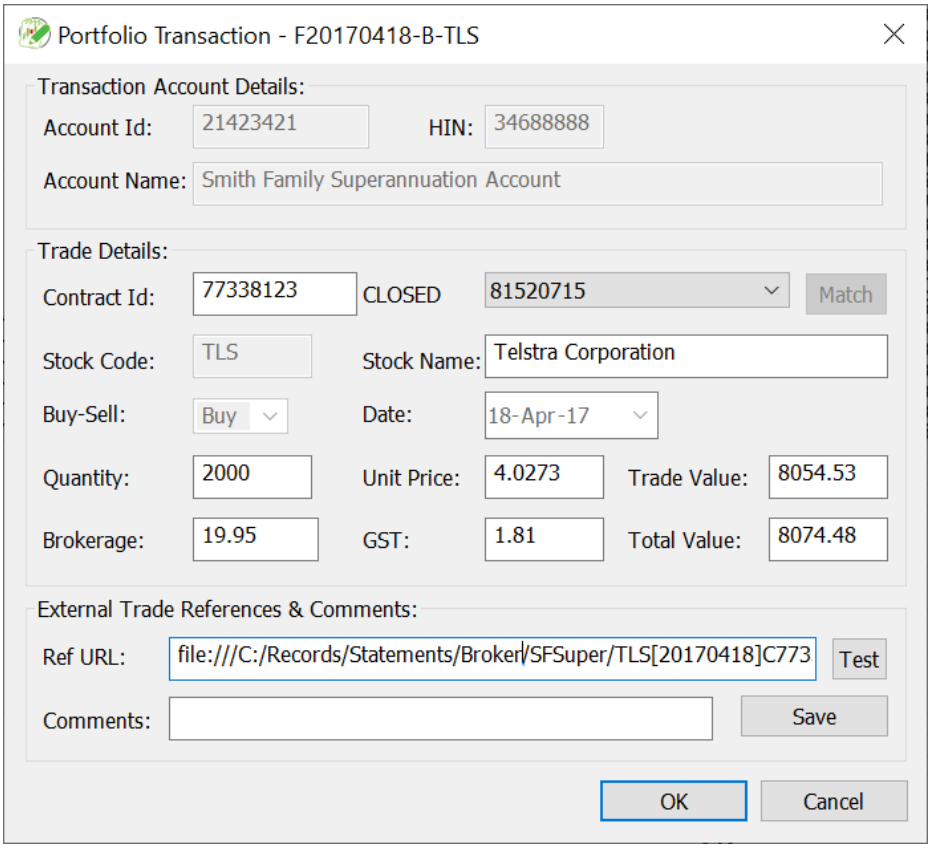
3. **[HIN]** – Edit Control.
   Holder identification number for account.

4. **{OK}** – Button.
   Applies any unsaved edits to the Portfolio and terminates the modal Portfolio Account-Transactions Configuration Dialog.

5. **{Cancel}** – Button.
   Cancels any unsaved edits and terminates the modal Portfolio Account-Transactions Configuration Dialog.

7.4.4.4 Portfolio Transactions-Trade BUY Dialog

Activated via the Portfolio Transactions – Trade Item Context Menu – **[Add Transaction ► Buy…]** item.



The Portfolio Transaction-Trade Buy Dialog supports the following data items and controls. The adopted values persist in the saved trade.

1. Account Id, HIN and Account Name – Edit controls.
   Information only, contents taken from parent account

2. Contract Id – Edit Control.
   Identification code of assigned broker contract.

3. OPEN or CLOSED – Static Control
   Position summary.

4. Booked – Combo Control
   List of contacts to which the transaction has been cross referenced and/or matched.

5. {Book} – Button
   Activates the Portfolio Transaction – Trade Booking Dialog for cross referencing and matching contracts.

6. Stock Code – Edit control.
   Code assigned to traded stock by exchange.

7. Stock Name – Edit control.
   Name assigned to traded stock by exchange.

8. Buy-Sell: - List control.
   Type of trade.

9. Date – Calendar Control.
   Trade date.

10. Quantity – Edit Control.
    Trade quantity.

11. Unit Price – Edit Control.
    Unit price.

12. Trade Value – Edit Control.
    Trade value.

13. Brokerage – Edit Control.
    Brokerage.

14. GST – Edit Control.
    GST or Tax.

15. Total Trade Value – Edit Control.
    Total Trade value.

16. Ref URL – Edit Control.
    Trade reference URL, usually trade note PDF.

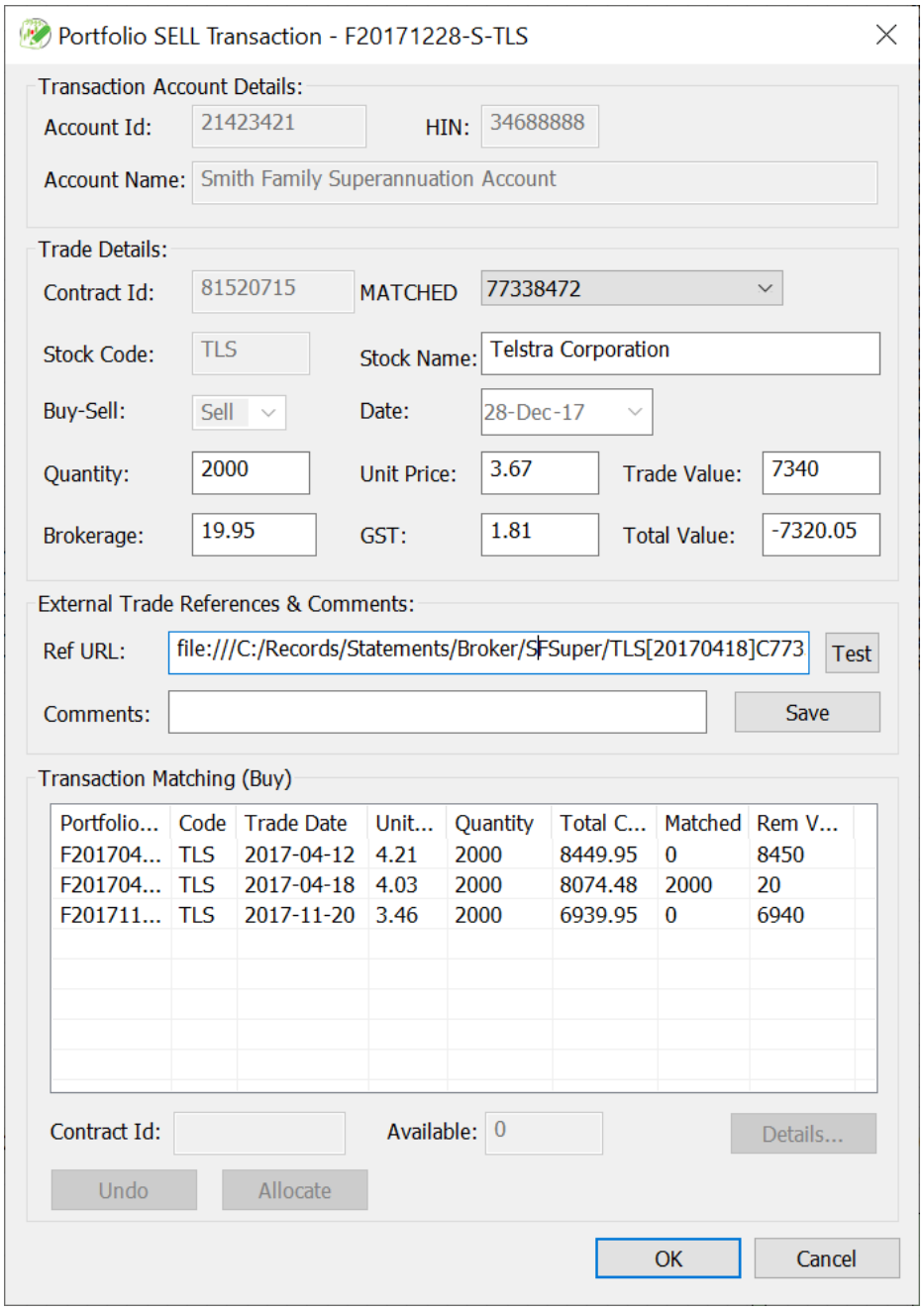
17. Comments – Edit Control.
    Trade comments.

18. **{OK}** – Button.
Applies any unsaved edits to the chart and terminates the modal Portfolio Transaction-Trade Buy Dialog.

19. **{Cancel}** – Button.
Cancels any unsaved edits and terminates the modal Portfolio Transaction-Trade Buy Dialog.

7.4.4.5 Portfolio Transactions-Trade SELL Dialog

Activated via the Portfolio Transactions – Trade Item Context Menu – **[Add Transaction ► Sell]** item.



The Portfolio Transaction-Trade Sell Dialog supports the following data items and controls. The adopted values persist in the saved trade.

1. Account Id, HIN and Account Name – Edit controls.
   Information only, contents taken from parent account

2. Contract Id – Edit Control.
   Identification code of assigned broker contract.

3. PENDING or BOOKED – Static Control
   Position summary.

4. Booked – Combo Control
   List of contacts to which the transaction has been cross referenced and/or matched.

5. Stock Code – Edit control.
   Code assigned to traded stock by exchange.

6. Stock Name – Edit control.
   Name assigned to traded stock by exchange.

7. Buy-Sell: - List control.
   Type of trade.

8. Date – Calendar Control.
   Trade date.

9. Quantity – Edit Control.
   Trade quantity.

10. Unit Price – Edit Control.
    Unit price.

11. Trade Value – Edit Control.
    Trade value.

12. Brokerage – Edit Control.
    Brokerage.

13. GST – Edit Control.
    GST or Tax.

14. Total Trade Value – Edit Control.
    Total Trade value.

15. Ref URL – Edit Control.
    Trade reference URL, usually trade note PDF.

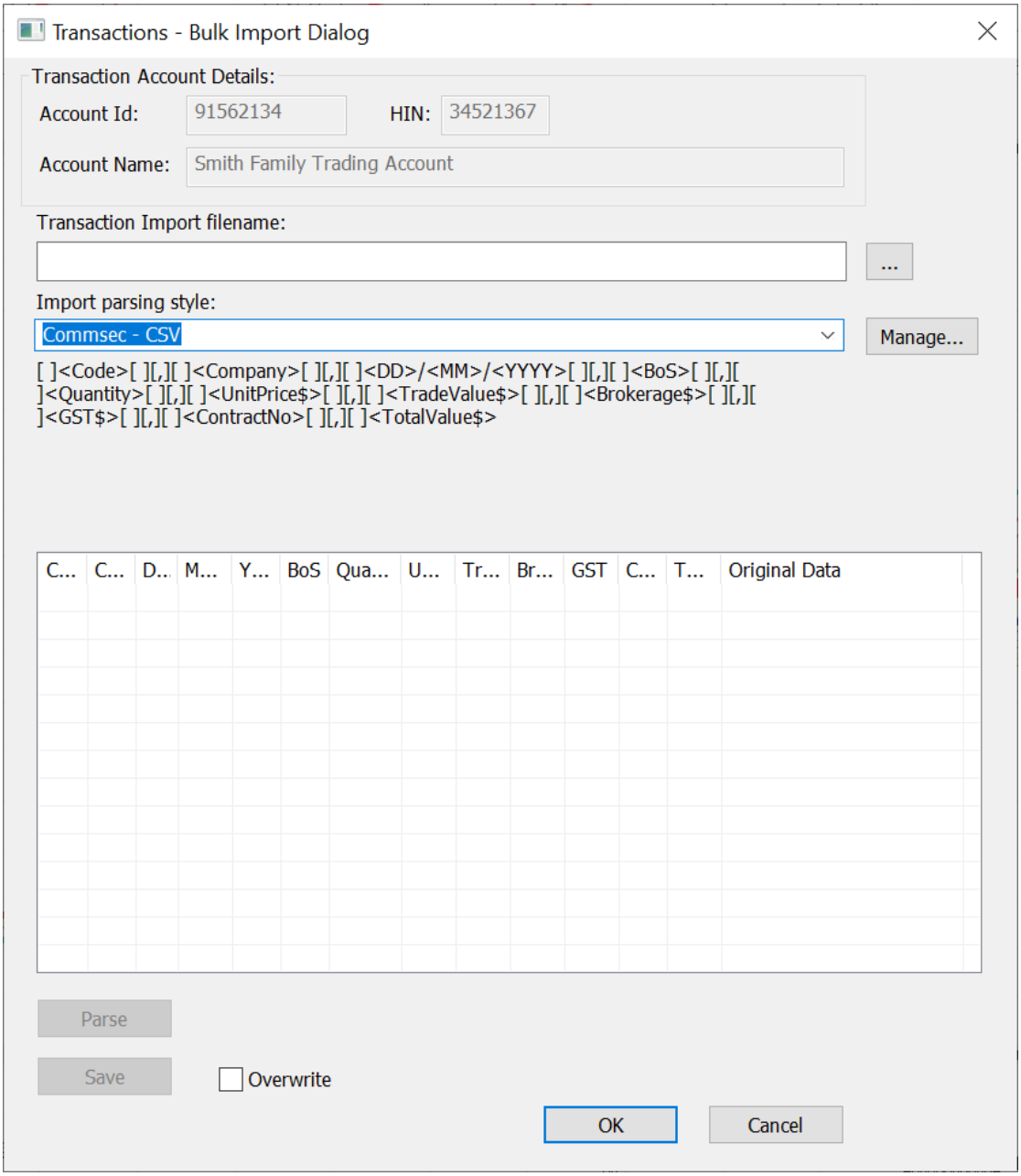
16. Comments – Edit Control.
Trade comments.

17. **{OK}** – Button.
Applies any unsaved edits to the chart and terminates the modal Portfolio Transaction-Trade Sell Dialog.

18. **{Cancel}** – Button.
Cancels any unsaved edits and terminates the modal Portfolio Transaction-Trade Sell Dialog.

7.4.4.6 Portfolio Transactions-Bulk Import Dialog

Activated via the Portfolio Transactions – Trade Item Context Menu – **[Bulk Additions..]** item.



The Portfolio Transaction-Bulk Import Dialog supports the following data items and controls. The adopted values persist in the saved trade.

1. Account Id, HIN and Account Name – Edit controls.
   Information only, contents taken from parent account

2. Transaction Import Filename – Edit Control.
   Identification code of assigned broker contract.

3. {…} – Button.
   Select import filename.

4. Import parsing style – List control.
   Parsing style.

5. Parse: - Button.
   Parse import file according to style.

6. **{Save}** – Button.
   Save parsed transactions.

7. Overwrite – Check Box.
   Overwrite existing data with freshly parsed transactions.

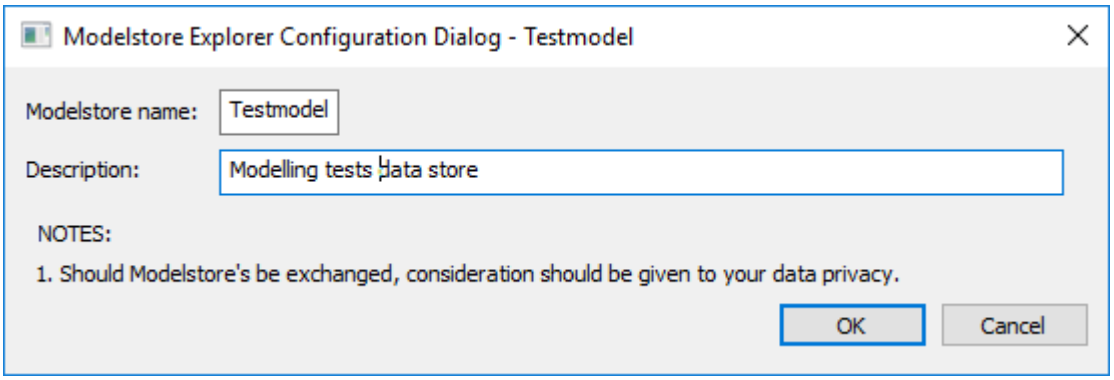
8. **{OK}** – Button.
   Applies any unsaved edits to the chart and terminates the modal Portfolio Transactions-Bulk Import Dialog.

9. **{Cancel}** – Button.
   Cancels any unsaved edits and terminates the modal Portfolio Transactions - Bulk Import Dialog.

7.4.5 Modelling Explorer Dialogs

7.4.5.1 Modelstore Explorer Configuration Dialog

Activated via the Modelstore Explorer Root Item Context Menu – **[Configuration…]** item.



Dialog supports the following fields serialised in the Modelling Explorer file.

1. **[Modelstore Name]** – Edit Control
   Internal Modelling name.

   Modelstore internal names are independent of external serialisation file names but must be unique for all Modelling Attachments. Allocated name forms part of Modelstore pathnames

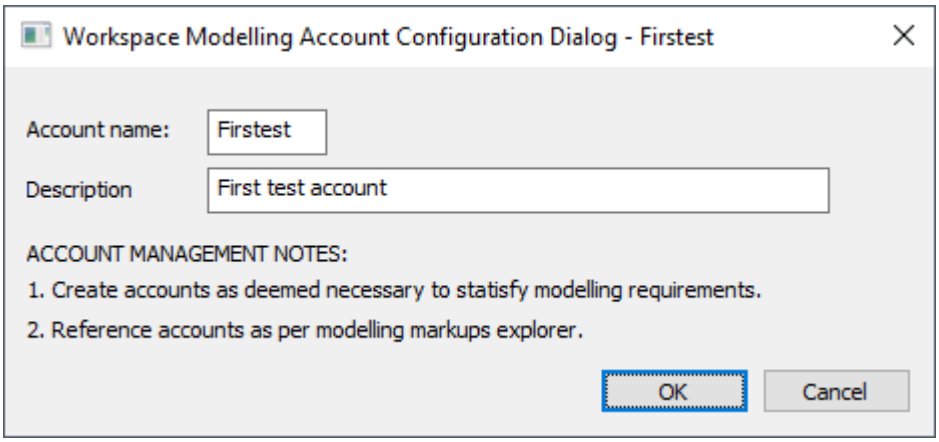
2. **[Description]** – Edit Control.
   Internal description allocated to the Modelstore.

3. **{OK}** – Button.
   Applies any unsaved edits to the Modelstore and terminates the modal Modelstore Explorer Configuration Dialog.

4. **{Cancel}** – Button.
   Cancels any unsaved edits and terminates the modal Modelstore Explorer Configuration Dialog.

7.4.5.2 Modelling Account Management Dialog

Activated via the Modelling Explorer Account Item Context Menu – **[Configuration…]** item.



Dialog supports the following fields serialised in the Modelling Explorer file.

1. **[Account Name]** – Edit Control
   Modelling Account name.

   Allocated name forms part of Modelling pathnames

2. **[Description]** – Edit Control.
   Internal description allocated to the Modelling Account.

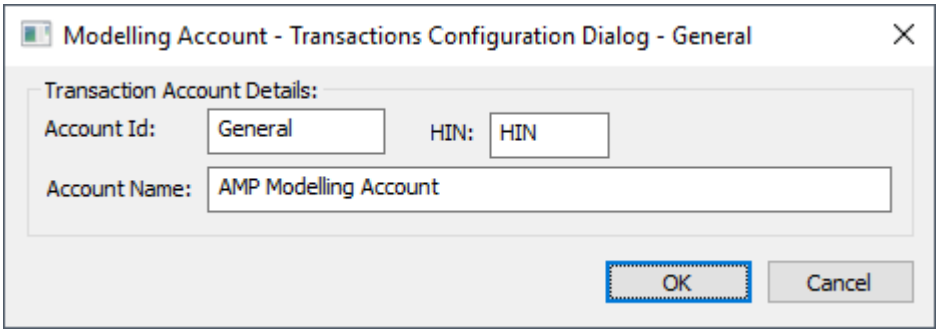
3. **{OK}** – Button.
   Applies any unsaved edits to the Portfolio and terminates the modal

Modelling Account Configuration Dialog.

4. **{Cancel}** – Button.
   Cancels any unsaved edits and terminates the modal Modelling Account Configuration Dialog.

7.4.5.3 Modelling Account-Transactions Management Dialog

Activated via the Modelling Account-Transactions Item Context Menu – **[Configuration…]** item.



Dialog supports the following fields serialised in the Modelling Explorer file.

1. **[Account Id]** – Edit Control
   Account identification number.

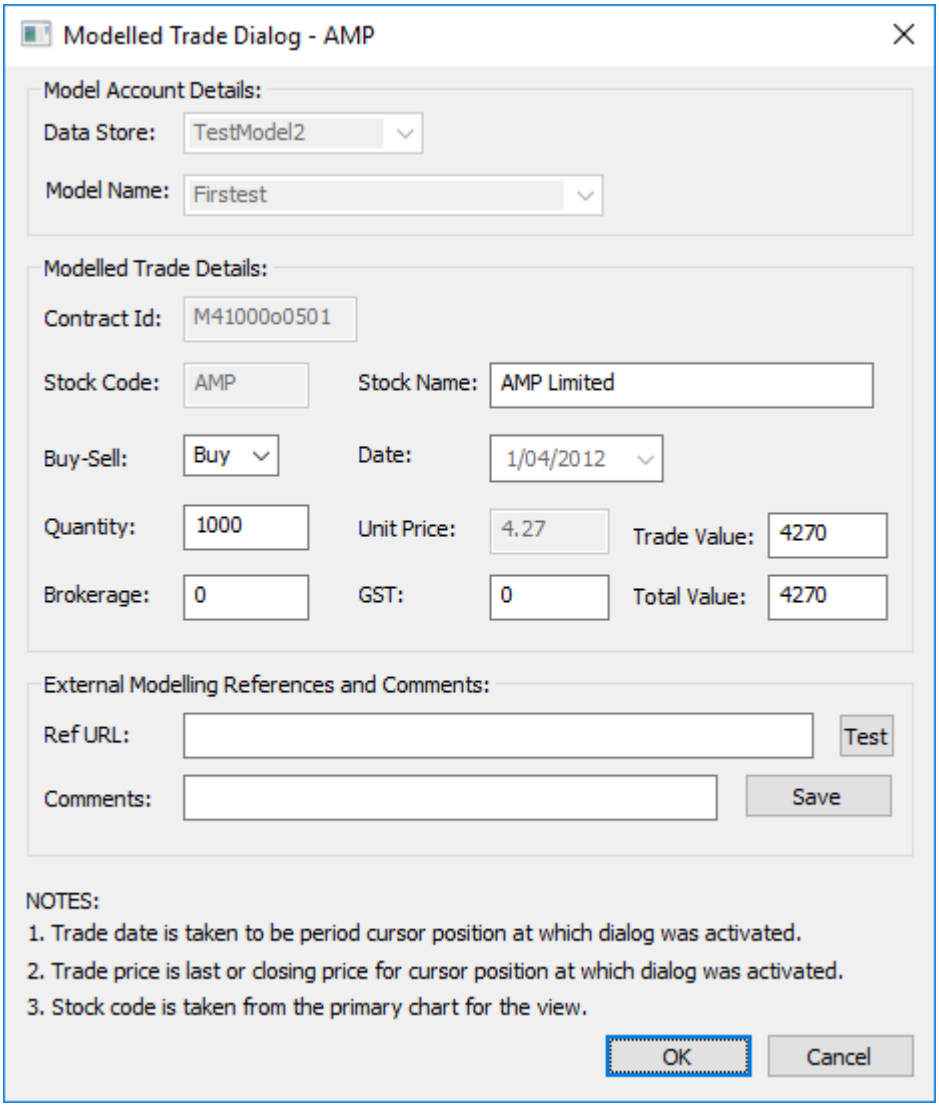
2. **[Account Name]** – Edit Control.
   Name of the account.

3. **{OK}** – Button.
   Applies any unsaved edits to the Portfolio and terminates the modal Modelling Account-Transactions Configuration Dialog.

4. **{Cancel}** – Button.
   Cancels any unsaved edits and terminates the modal Modelling Account-Transactions Configuration Dialog.

7.4.5.4 Modelling Transactions-Trade Edit Dialog

Activated via the Modelling Transactions-Trade Item Context Menu – **[Configuration…]** item.



The Modelling Transaction-Trade Edit Dialog supports the following data items and controls. The adopted values persist in the saved trade.

1. Account Id and Account Name – Edit controls.
   Information only, contents taken from parent account

2. Contract Id – Edit Control.
   Synthetic Identification code assigned by modelling process.

3. Stock Code – Edit control.
   Code assigned to traded stock by exchange.

4. Stock Name – Edit control.
   Name assigned to traded stock by exchange.

5. Buy-Sell: - List control.
   Type of trade.

6. Date – Calendar Control.
   Trade date.

7. Quantity – Edit Control.
   Trade quantity.

8. Unit Price – Edit Control.
   Unit price.

9. Trade Value – Edit Control.
   Trade value.

10. Brokerage – Edit Control.
    Brokerage.

11. GST – Edit Control.
    GST or Tax.

12. Total Trade Value – Edit Control.
    Total Trade value.

13. Ref URL – Edit Control.
    Trade reference URL, assigned as part of modelling process.

14. Comments – Edit Control.
    Trade comments.

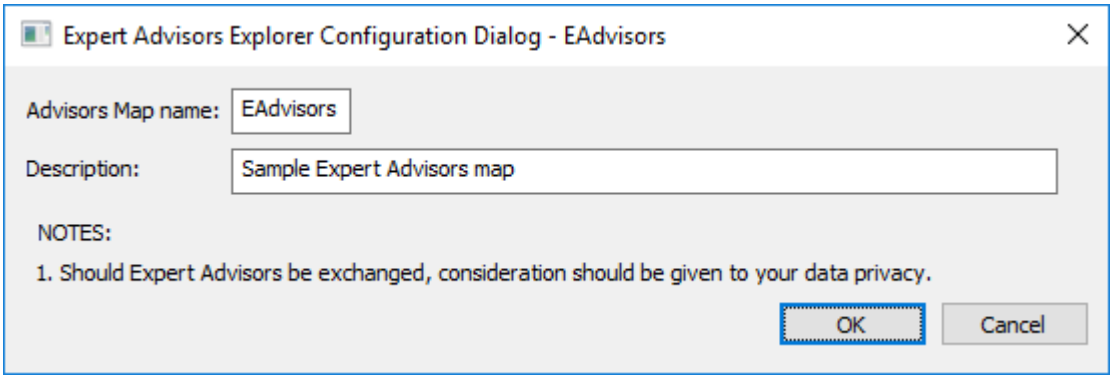
15. **{OK}** – Button.
    Applies any unsaved edits to the chart and terminates the modal OHLCvs Chart Configuration Dialog.

16. **{Cancel}** – Button.
    Cancels any unsaved edits and terminates the modal OHLCvs Chart Configuration Dialog.

7.4.6 Automation Explorer Dialogs

7.4.6.1 Automation Explorer Configuration Dialog

Activated via the Python Advisor Explorer Root Item Context Menu – **[Configuration…]** item.



Dialog supports the following fields serialised in the Python Advisor Explorer file.

1. **[Advisors Map Name]** – Edit Control
   Internal Python Advisor name.

   Python Advisor internal names are independent of external serialisation file names but must be unique for all Python Advisor Attachments. Allocated name forms part of Python Advisor pathnames

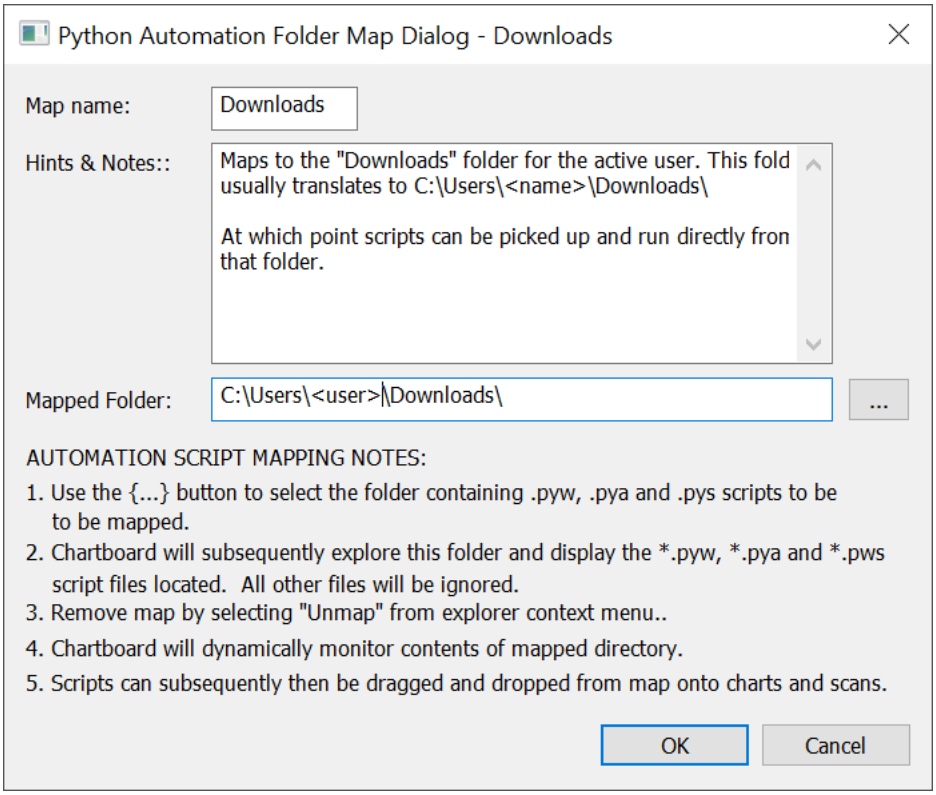
2. **[Description]** – Edit Control.
   Internal description allocated to the Python Advisor store.

3. **{OK}** – Button.
   Applies any unsaved edits to the Datastore and terminates the modal Python Advisor Explorer Configuration Dialog.

4. **{Cancel}** – Button.
   Cancels any unsaved edits and terminates the modal Python Advisor Explorer Configuration Dialog.

7.4.6.2 Python Scripts Folder Map Dialog

Activated via the Python Scripts Folder-Map Item Context Menu – **[Configuration…]** item.



Dialog supports the following fields serialised in the Python Automation Attachment file.

1. **[Map Name]** – Edit Control
   Allocated name of the map that appears in the Python Scripts Explorer Tree.

2. **[Hints & Notes]** – Edit Control
   Brief collection of hints and notes describing contents of mapped folder.

3. **[Mapped Folder]** – Edit Control.
   Full mapped folder path.

4. **{…}** – Mapped folder selection button.
   Selection is facilitated via the Windows File Selection Dialog activated via a button press.

   Selected folder path is automatically edited into the Edit Control.

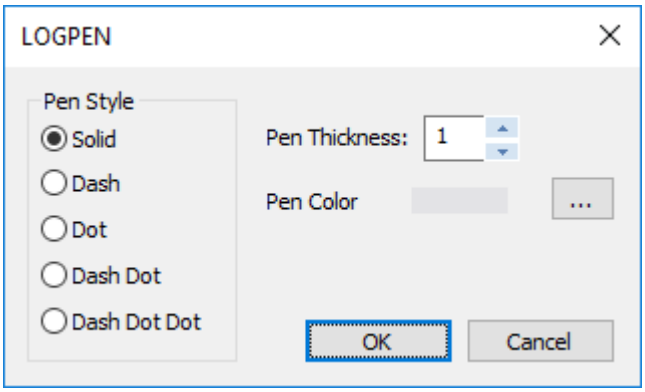
5. **{OK}** – Button.
   Applies any unsaved edits to the Automation Attachment and terminates the modal Python Automation Folder Map Dialog.

6. **{Cancel}** – Button.
   Cancels any unsaved edits and terminates the modal Python Automation Folder Map Dialog.

7.5 Properties Grid Dialogs

7.5.1 Properties Grid Pen Selection Dialog

Activated via the edit button associated with Properties Grid Pen items.



The Properties Grid Pen Selection Dialog supports the following data items and controls. The adopted values persist in the saved value.

1. Pen Style – Radio Buttons
   Selects line style.

2. Pen Thickness – Spin Control
   Selects line thickness from indicative range.

3. Pen Color and **{...}** Button
   Displays current selection and facilitates new selection via {…} button.

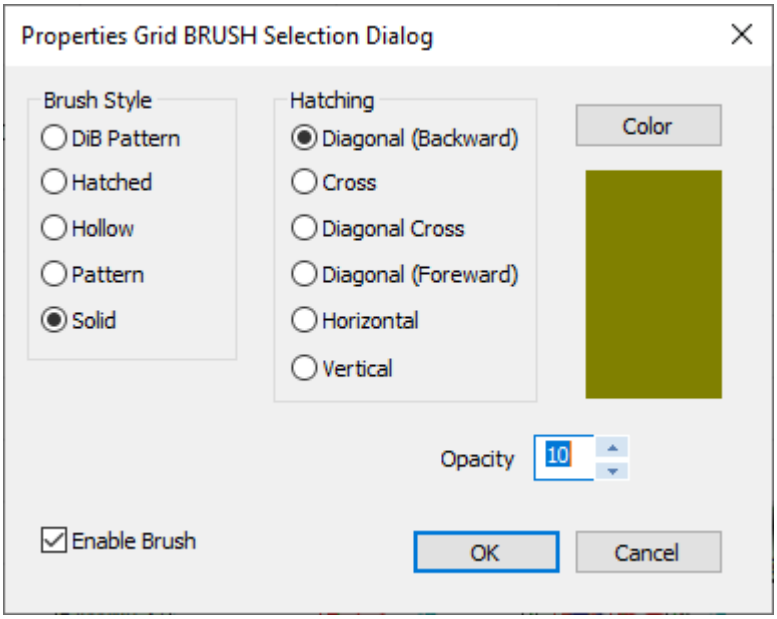
   Refer Color Configuration Dialog.

4. **{OK}** – Button.
   Applies any unsaved edits and terminates the modal Properties Grid Pen Selection Dialog.

5. **{Cancel}** – Button.
   Cancels any unsaved edits and terminates the modal Properties Grid Pen Selection Dialog.

7.5.2 Properties Grid Brush Selection Dialog

Activated via the edit button associated with Properties Grid Brush items.



1. **{Color}** – Button.
   Activates the modal Color Configuration Dialog for selection of brush color.

   The selected color together with Opacity is summarised immediately beneath the **{Color}** button.

2. Opacity – Spin Control.
   Selects the opacity or transparency of the selected brush color.

3. Enable Brush – Check Box
   Toggles brush visibility on (checked) and off. When switched on the brush will be used to paint backgrounds according to configured values. Brush NOT used when switched off.

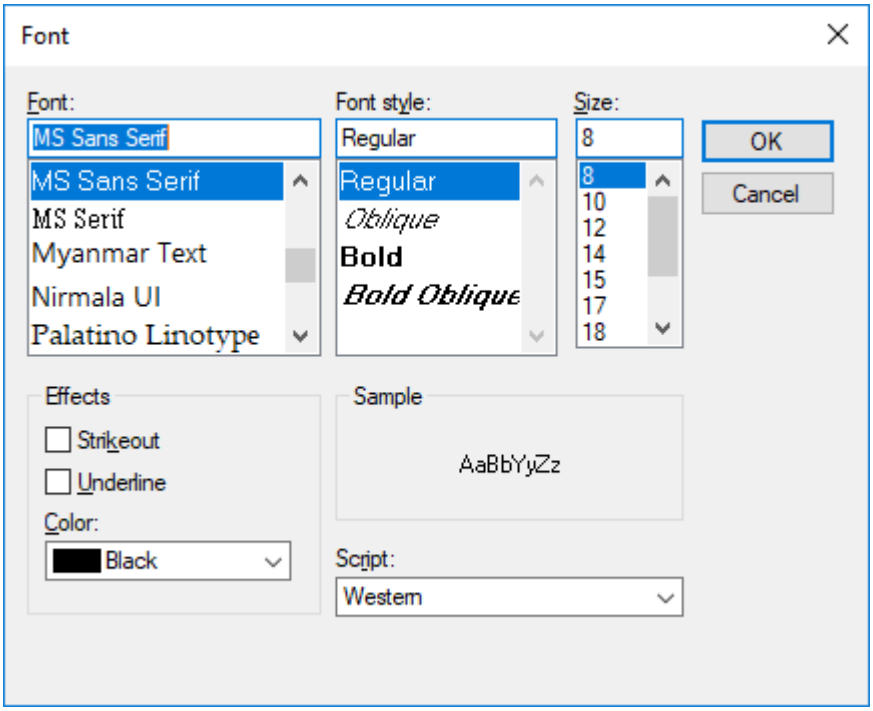
   In some instances the option is disabled in which case the brush is always used.

4. **{OK}** – Button.
   Applies any unsaved edits and terminates the modal Properties Grid Brush Selection Dialog.

5. **{Cancel}** – Button.
   Cancels any unsaved edits and terminates the modal Properties Grid Brush Selection Dialog.

7.5.3 Properties Grid Font Selection Dialog

Activated via the edit button associated with Properties Grid Font items.

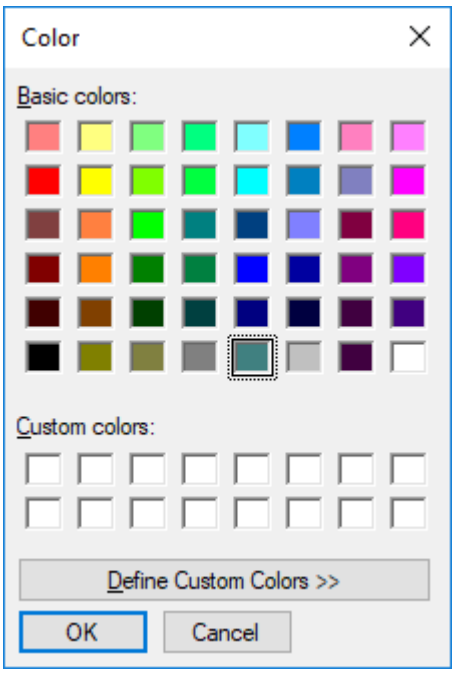


1. **{OK}** – Button.
   Applies any unsaved edits and terminates the modal Properties Grid Font Selection Dialog.

2. **{Cancel}** – Button.
   Cancels any unsaved edits and terminates the modal Properties Grid Font Selection Dialog.

7.5.4 Properties Grid Colour Selection Dialog

Activated via the edit button associated with Properties Grid Colour items.

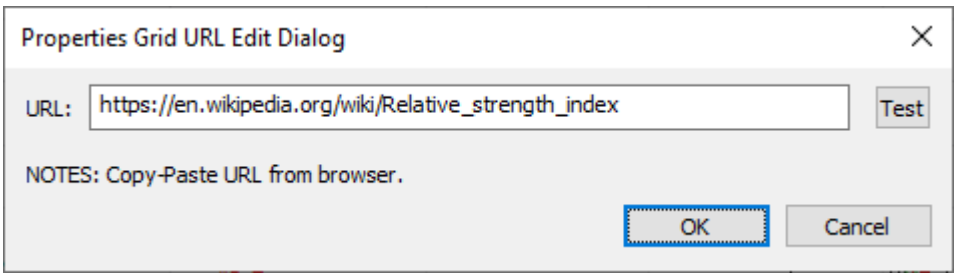


1. **{OK}** – Button.
   Applies any unsaved edits and terminates the modal Properties Grid Color Selection Dialog.

2. **{Cancel}** – Button.
   Cancels any unsaved edits and terminates the modal Properties Grid Color Selection Dialog.

7.5.5 Properties Grid URL Edit Dialog

Activated via the edit button associated with Properties Grid URL items.



1. URL – Edit Control
   Allocated URL.

2. **{Test}** – Button
   Allocated URL **{Test}** button.

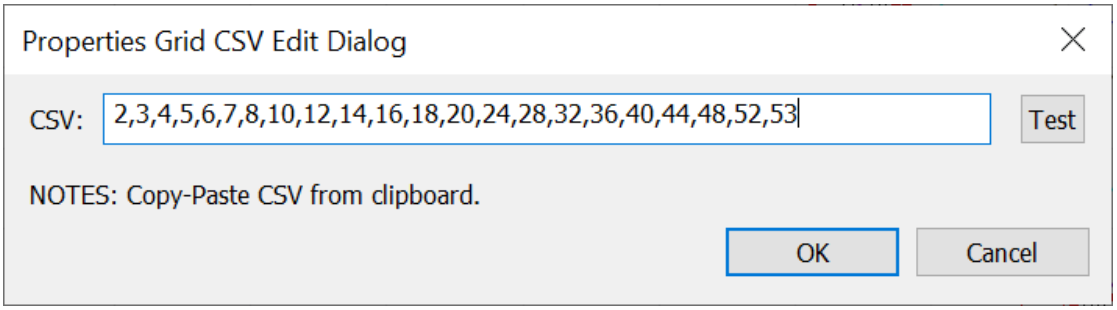
   When **{Test}** Button is pressed the entered URL will be activated either locally in a **[URL View]** Tab or externally in the default browser according to External URL Spawn setting.

3. **{OK}** – Button.
   Applies any unsaved edits and terminates the modal Properties Grid URL Edit Dialog.

4. **{Cancel}** – Button.
   Cancels any unsaved edits and terminates the modal Properties Grid URL Edit Dialog.

7.5.6 Properties Grid CSV Edit Dialog

Activated via the edit button associated with Properties Grid CSV items.



1. CSV – Edit Control
   Allocated CSV.

2. **{Test}** – Button
   Entered CSV **{Test}** button.

   When **{Test}** Button is pressed the entered CSV string will be validated.

3. **{OK}** – Button.
   Applies any unsaved edits and terminates the modal Properties Grid CSV Edit Dialog.

4. **{Cancel}** – Button.
   Cancels any unsaved edits and terminates the modal Properties Grid CSV Edit Dialog.

8. File Formats

The Chartboard application supports numerous propriety file formats to both manage and exchange data. Below is a brief summary of those files referred to elsewhere in this manual and subsequently documented in this Chapter:

- [Workspace].Msgraws files.

  Self-contained Chartboard Workspace file supported by the following proprietary workspace content exchange file sets.

  [Foldername].Msgraws#Folder workspace folder export-import file
  [Chartname].Msgraws#OHLCvs chart export-import file
  [Chartname].Msgraws#PFigure chart export-import file

- [Datastore].Msgradsr files.

  Self-contained Chartboard Datastore file supported by the following proprietary Datastore content exchange file sets.

  [Countryname].Msgradsr#Country data sets export-import file
  [Marketname].Msgradsr#Market OHLCvs data sets export-import file
  [Marketname].Msgradsr#MarketFolder OHLCvs data sets export-import file
  [Marketname].Msgradsr#MarketOHLCvs data sets export-import file

  [Markupsname].Msgradsr#Markups data sets export-import file
  [Markupsname].Msgradsr#MarkupsFolder data sets export-import file
  [Markupsname].Msgradsr#MarkupsEventset data set export-import file
  [Markupsname].Msgradsr#MarkupsShadeset data set export-import file
  [Markupsname].Msgradsr#MarkupsTimeset data set export-import file

  External industry standard OHLCvs individual stock update files

  EzyChart.txt, InsightTrader.txt, Metastock.txt, Metastock(100).txt, StockEasy.txt OHLCv data period files

  External industry standard OHLCvs multiple stock update files

  EzyChart.txt, InsightTrader.txt, Metastock.txt, Metastock(100).txt, StockEasy.txt OHLCv multiple stock single data period files

- External OHLCvs EoD Update files.

  Self-contained WEB service definition file used to both manage configuration parameters and maintain state. Additionally buffers data sets for offline operation.

  These files may also be used to exchange complete WEB services between Workspaces [.Msgraws].

- [Chunk].Msgra#Chart files.

  Files containing P2Pmsg chunks used to exchange Charts between Workspaces.

- Chartboard.P2Pconfig

8.1 Chartboard Proprietary Files

Format is proprietary to the Chartboard application and as such primarily intended for the collation of all information into a single self-contained document without external dependencies.

8.1.1 Workspace.Msgraws

8.1.2 [ChartName].Msgraws#Chart Files

8.1.3 Chartboard Datastores.Msgradsr Files

8.1.3.1 [ChartName].Msgraws#OHLCvs Files

8.1.4 Chartboard Portfolio.Msgrapfo Files

8.1.5 Chartboard Modelling.Msgramod Files

8.1.6 Chartboard EAdvisors.Msgraeav Files

8.2 External OHLCvs EoD Update Files

8.2.1 OHLCvs Parsing String Definitions

Chartboard contains verbs for extraction of the following fields from each record. Such data field definitions are always fully enclosed by the opposing ‘<…> characters.

<year> or **<YYYY>**
Extracts year in the following delimiter separated form 1970, 1990, 2024, etc

<mon>
Extracts month from the following ‘Jan’=1, ‘Feb’=2, ‘Mar’=3, ‘Apr’=4, ‘May’=5, ‘Jun’=6, ‘Jul’=7, ‘Aug’=8, ‘Sep’=9, ‘Oct’=10, ‘Nov’=11, ‘Dec’=12

<MM>
Extracts month from the following ’1|01’=Jan, ‘2|02’=Feb, ‘2|02’= ‘Mar’, ‘3|03’= Apr, ‘5|05’=May, ‘6|06’=Jun’, ‘7|07’=Jul’, ‘8|08’= Aug, ‘9|09’= Sep, ‘10’=Oct, ‘11’= Nov, ‘12’= Dec

<day>
Extracts day in the following delimiter separated form ’n’=1, 2, … 10, 11, … 31

<DD>
Extracts day in the following double (2) character form ’nn’=01, 02, … 10, 11, … 31

<code>
Extracts stock code in the following delimiter separated form 'BHP', 'NVDA', MSFT', etc

<Open> or **<Open[$|*nnn|\nnn]>**
Extracts 'O' stock price in the following delimiter separated form '1200', '1', '45', '33214', etc. Alternatively, if the '$' symbol is appended the field is assumed to be decimal '1200.00', '1.00', '45,21' or '33214.1' etc.

<High> or **<High[$|*nnn|\nnn]>**
Extracts 'H' stock price in the following delimiter separated form '1200', '1', '45', '33214', etc. Alternatively, if the '$' symbol is appended the field is assumed to be decimal '1200.00', '1.00', '45,21' or '33214.1' etc.

<Low> or **<Low[$|*nnn|\nnn]>**
Extracts 'L' stock price in the following delimiter separated form '1200', '1', '45', '33214', etc. Alternatively, if the '$' symbol is appended the field is assumed to be decimal '1200.00', '1.00', '45,21' or '33214.1' etc.

<Close> or **<Close[$|*nnn|\nnn]>**
Extracts 'C' stock price in the following delimiter separated form '1200', '1', '45', '33214', etc. Alternatively, if the '$' symbol is appended the field is assumed to be decimal '1200.00', '1.00', '45,21' or '33214.1' etc.

<Volume[$|*nnn|\nnn]>
Extracts 'v' stock quantity in the following delimiter separated form '1200', '12315', '45', '33214', etc. Alternatively, if the '$' symbol is appended the field is assumed to be decimal '1200.00', '1.00', '45,21' or '33214.1' etc.

NOTES: In the above **<Open>**, **<High>**, **<Low>** and **<Close>** the optional '**[$|*nnn|\nnn]'** qualifiers flag the following: '**$**' indicates decimal field. '***nnn**' indicates value has been multiplied by '**nnn**'. '**/nnn**' indicates value has been divided by '**nnn**'.

Special characters and sequences.

[…]
Any sequence of characters enclosed by [] brackets are considered to be optional and parsed out of the record. For example, '[,]' would flag an optional comma. Other otherwise the comma would be mandatory and needs to be present. Use '[ ]' to parse out multiple spaces grouped together.

?
Any other character or sequence of characters is considered mandatory in the parsing sequence and MUST be present for parsing to complete.

\\%
Mandatory "%" character. Without escape sequence treats as special decode sequnec.

8.2.2 Commsec-CSV

Text files parsed using the following Chartboard pre-installed string:

```
"[ ]<Code>[,][ ]<DD>[ ][-]<Mon>[ ][-]<YYYY>[,][
]<Open>[,][ ]<High>[,][ ]<Low>[,][ ]<Close>[,][ ]<Volume>
[ ]"
```

Sample records:

```
Security Code,Date,Opening Price,High Sale Price,Low Sale
Price,Closing Price,Total Volume Traded
AMP,12-Jun-98,16.001,16.001,16.001,16.001,0
AMP,15-Jun-98,35.99,45.002,21.801,23.001,35778267
AMP,16-Jun-98,21.001,21.001,20.211,20.501,24273102
```

8.2.3 EzyChart.txt

Text files parsed using the following Chartboard pre-installed string:

```
"[ ]<Code>[,][ ]<YY><MM><DD>[,][ ]<Open*100>[,][
]<High*100>[,][ ]<Low*100>[,][ ]<Close*100>[,][ ]<Volume>
[ ]"
```

Sample records:

```
BPT,850101,65,65,65,65,0
BPT,850102,67,67,67,67,0
BPT,850103,71,71,71,71,0
```

8.2.4 FRED-Simple-CSV

Simple US Federal Reserve files can be downloaded and parsed using the following Chartboard pre-installed string:

```
"[ ][,][,][,][,][ ]<Year>[-][/]<Month>[-][/]<Day>[ ][,][
]<Close$>"
```

Sample records for Crude Oil Prices: West Texas Intermediate (WTI) - Cushing, Oklahoma:

```
DATE,DCOILWTICO
2019-11-18,56.82
2019-11-19,54.93
2019-11-20,56.71
```

CAUTION: These files do NOT contain a stock code field and as such care should be exercised when importing files into OHLCvs data sets. Refer to Datastore Market-Web Source OHLCvs Period Update Dialog accessed via the target Dataset **[OHLCvs Dataset Web Update…]** context menu item for sequences that observe the download file name.

8.2.5 Metastock

Text files parsed using the following Chartboard pre-installed string:

```
[ ]<Code>[,][ ]<YY><MM><DD>[,][ ]<Open>[,][ ]<High>[,][
]<Low>[,][ ]<Close>[,][ ]<Volume> [ ]"
```

Sample records:

```
NCM,160222,16,16.01,15.625,15.86,3320364
NCM,160223,15.68,15.86,15.27,15.82,4714349
NCM,160224,15.94,16.6,15.87,16.56,4935004
```

8.2.6 MetastockVol(100).txt

Text files parsed using the following Chartboard pre-installed string:

```
"[ ]<Code>[,][ ]<YY><MM><DD>[,][ ]<Open>[,][ ]<High>[,][
]<Low>[,][ ]<Close>[,][ ]<Volume/100> [ ]"
```

Sample records:

```
NCM,160222,16,16.01,15.625,15.86,3320364
NCM,160223,15.68,15.86,15.27,15.82,4714349
NCM,160224,15.94,16.6,15.87,16.56,4935004
```

8.2.7 InsightTrader.txt

Text files parsed using the following Chartboard pre-installed string:

```
"[ ]<Code> <Day>/<Month>/<Year> <Open*100> <High*100>
<Low*100> <Close*100> <Volume/100> [ ]"
```

Sample records:

```
TLS 17/11/97 260 275 260 267 3079420
TLS 18/11/97 260.5 281.9 243.5 253 2604190
TLS 19/11/97 249.3 264.9 248.4 257 1195280
```

8.2.8 StockEasy

Text files parsed using the following Chartboard pre-installed string:

```
"[ ]<Code>[,][ ]<YYYY><MM><DD>[,][ ]<Open>[,][
]<High>[,][ ]<Low>[,][ ]<Close>[,][ ]<Volume> [ ]"
```

Sample records:

```
TAH,19940812,2.25,2.25,2.25,2.25,0
TAH,19940815,2.2,2.376,2.2,2.2,6926100
TAH,19940816,2.21,2.22,2.18,2.21,4660899
```

8.2.9 Gold Council-CSV

Simple World Gold Council “Prices.xlsx” files can be downloaded, reformatted into “Prices.csv” files using Excel and parsed using the following Chartboard pre-installed string:

```
"[ ][,][,][,][,][ ]<Day>[-][/]<Month>[-][/]<Year>[ ][,][
]<Close$>"
```

Sample records for translated World Gold Council “Prices.csv” files using above parsing string:

```
,Gold price per troy ounce - Major consumer and producer
currencies,,,,,,,,,,,,,,,,,,,,
,"Source: Bloomberg, Datastream, ICE Benchmark
Administration, World Gold Council",,,,,,,,,,,,,,,,,,,,
,,,,,,,,,,,,,,,,,,,,,,
,,,,,,,,,,,,,,,,,,,,,,
,,,USD,EUR,JPY,GBP,CAD,CHF,INR,CNY,TRY,SAR,IDR,AED,THB,VN
D,EGP,KRW,RUB,ZAR,AUD
,,31-12-
24,"2,609.1","2,510.2","410,020.1","2,079.8","3,746.4","2
,361.5","223,049.6","19,044.9","92,197.5","9,800.3","42,2
41,329.0","9,583.8","89,270.4","66,487,695.3","132,664.4"
,"3,843,543.5","288,305.6","49,127.3","4,190.7"
,,01-01-
25,"2,609.1","2,510.2","410,020.1","2,079.8","3,746.4","2
,361.5","223,049.6","19,044.9","92,197.5","9,800.3","42,2
41,329.0","9,583.8","89,270.4","66,487,695.3","132,664.4"
,"3,843,543.5","288,305.6","49,127.3","4,190.7"
,,02-01-
25,"2,646.3","2,578.0","416,977.5","2,138.9","3,811.5","2
,414.5","227,081.7","19,316.1","93,521.6","9,939.8","42,9
83,850.9","9,719.9","91,098.9","67,366,859.1","134,371.4"
,"3,901,254.9","295,227.8","49,561.2","4,266.9"
,,03-01-
25,"2,646.8","2,570.2","415,997.6","2,131.4","3,826.5","2
,406.7","227,063.7","19,378.6","93,622.9","9,940.1","42,8
75,513.2","9,721.7","91,433.7","67,302,830.4","134,404.5"
,"3,891,801.8","292,774.7","49,669.9","4,261.5"
```

CAUTION: These files do NOT contain a stock code field and as such care should be exercised when importing files into OHLCvs data sets. Refer to Datastore Market-Web Source OHLCvs Period Update Dialog accessed via the target Dataset **[OHLCvs Dataset Web Update…]** context menu item for sequences that observe the download file name.

8.3 External Portfolio Update Files

8.3.1 Trade Parsing String Definitions

Chartboard contains verbs for extraction of the following fields from each record. Such data field definitions are always fully enclosed by the opposing ‘<…> characters.

<year> or **<YYYY>**
Extracts year in the following delimiter separated form 1970, 1990, 2024, etc

<mon>
Extracts month from the following ‘Jan’=1, ‘Feb’=2, ‘Mar’=3, ‘Apr’=4, ‘May’=5, ‘Jun’=6, ‘Jul’=7, ‘Aug’=8, ‘Sep’=9, ‘Oct’=10, ‘Nov’=11, ‘Dec’=12

<MM>
Extracts month from the following ’1|01’=Jan, ‘2|02’=Feb, ‘2|02’= ‘Mar’, ‘3|03’= Apr, ‘5|05’=May, ‘6|06’=Jun’, ‘7|07’=Jul’, ‘8|08’= Aug, ‘9|09’= Sep, ‘10’=Oct, ‘11’= Nov, ‘12’= Dec

<day>
Extracts day in the following delimiter separated form ’n’=1, 2, … 10, 11, … 31

<DD>
Extracts day in the following double (2) character form ’nn’=01, 02, … 10, 11, … 31

<code>
Extracts stock code in the following delimiter separated form ‘BHP’, ‘NVDA’, MSFT’, etc

<company>
Extracts company name in the following delimiter separated form ‘BHP’, ‘NVDA’, MSFT’, etc

<BoS>
Extracts ‘Buy’ for stock purchase, and ‘Sell’ for stock sales.

<Quantity>
Extracts stock quantity in the following delimiter separated form ‘1200’, ‘12315’, ‘45’, ‘33214’, etc. Alternatively, if the ‘$’ symbol is appended the field is assumed to be decimal ‘1200.00’, ‘1.00’, ’45,21’ or ‘33214.1’ etc.

<UnitPrice> or **<UnitPrice[$|*nnn|\nnn]>**
Extracts stock price in the following delimiter separated form ‘1200’, ‘1’, ‘45’, ‘33214’, etc. Alternatively, if the ‘$’ symbol is appended the field is assumed to be decimal ‘1200.00’, ‘1.00’, ’45,21’ or ‘33214.1’ etc.

<TradeValue> or **<TradeValue[$|*nnn|\nnn]>**
Extracts ‘C’ stock price in the following delimiter separated form ‘1200’, ‘1’, ‘45’, ‘33214’, etc. Alternatively, if the ‘$’ symbol is appended the field is assumed to be decimal ‘1200.00’, ‘1.00’, ’45,21’ or ‘33214.1’ etc.

<Brokerage> or **<Brokerage[$|*nnn|\nnn]>**
Extracts brokerage value in the following delimiter separated form ‘1200’, ‘1’, ‘45’, ‘33214’, etc. Alternatively, if the ‘$’ symbol is appended the field is assumed to be decimal ‘1200.00’, ‘1.00’, ’45,21’ or ‘33214.1’ etc.

<GST> or **<GST[$|*nnn|\nnn]>**
Extracts GST value in the following delimiter separated form ‘1200’, ‘1’, ‘45’, ‘33214’, etc. Alternatively, if the ‘$’ symbol is appended the field is assumed to be decimal ‘1200.00’, ‘1.00’, ’45,21’ or ‘33214.1’ etc.

<TotalValue> or **<TotalValue[$|*nnn|\nnn]>**
Extracts total trade value in the following delimiter separated form '1200', '1', '45', '33214', etc. Alternatively, if the '$' symbol is appended the field is assumed to be decimal '1200.00', '1.00', '45,21' or '33214.1' etc.

<ContractNo>
Extracts company name in the following delimiter separated form 'Contract####', '1234567890', etc

NOTES: In the above **<Open>**, **<High>**, **<Low>** and **<Close>** the optional '**[$|*nnn|\nnn]**' qualifiers flag the following: '**$**' indicates decimal field. '***nnn**' indicates value has been multiplied by '**nnn**'. '**/nnn**' indicates value has been divided by '**nnn**'.

Special characters and sequences.

[…]
Any sequence of characters enclosed by [] brackets are considered to be optional and parsed out of the record. For example, '[,]' would flag an optional comma. Other otherwise the comma would be mandatory and needs to be present. Use '[ ]' to parse out multiple spaces grouped together.

?
Any other character or sequence of characters is considered mandatory in the parsing sequence and MUST be present for parsing to complete.

8.3.2 Commsec-CSV

Text files parsed using the following Chartboard pre-installed string:

```
"[ ]<Code>[ ][,][ ]<Company>[ ][,][ ]<DD>/<MM>/<YYYY>
[ ][,][ ]<BoS>[ ][,][ ]<Quantity>[ ][,][ ]<UnitPrice$>
[ ][,][ ]<TradeValue$>[ ][,][ ]<Brokerage$>[ ][,][ ]
<GST$>[ ][,][ ]<ContractNo>[ ][,][ ]<TotalValue$>
```

Sample records:

```
Security Code,Date,Opening Price,High Sale Price,Low Sale
Transaction Summary
01 Jul 2022 - 30 Jun 2023
SHARES - 2230345 - HIN 84533685
MR GLEN SMITH

Code,Company,Date,Type,Quantity,Unit Price ($),Trade
Value ($),Brokerage+GST ($),GST ($),Contract Note,Total
Value ($)
"ETPMAG","ETFS ETFS AG (ETFS PHYSICAL
SILVER)",13/07/2022,"Sell","-200","25.7000","-
5140.0000","19.9500","1.8100","00000000","-5120.0500"
```

```
"GOLD","ETFS METALS. ETFS GOLD (ETFS PHYSICAL
GOLD)",08/07/2016,"Sell","-200","172.4097","-
34481.9400","41.3800","3.7600","12345678","-34440.5600"
"S32","SOUTH32 LIMITED FPO (ORDINARY FULLY
PAID)",05/07/2022,"Buy","2000","1.6300","3260.0000","19.9
500","1.8100","12345688","3279.9500"
"S32","SOUTH32 LIMITED FPO (ORDINARY FULLY
PAID)",30/09/2022,"Sell","-2000","2.4400","-
4880.0000","19.9500","1.8100","12344444","-4860.0500"
"WOW","WOOLWORTHS LIMITED FPO (ORDINARY FULLY
PAID)",05/07/2022,"Buy","200","20.6400","4128.0000","19.9
500","1.8100","12355555","4147.9500"

,,,,,,,,,Total Buys (inc. Brokerage + GST),"7427.9000"
,,,,,,,,,Total Sells (inc. Brokerage + GST),"44420.6600"
```

8.4 Chartboard Python Scripting Files

Chartboard supports the development of custom Python Advisor and Stock Scanning scripts developed under Python 3.8. An extensive series of Chartboard extension functions (CBEF) exist for the purpose of transparent integration. These scripting facilities are integrated into the Workspace environment via the following import libraries.

- ***import P2Root***
  Series of extension functions used to identify the environment under which the script is running. Facilitate hierarchical access to underlying P2Stack or P2Scanner environments.

- ***import P2Stack***
  Chart stack series of extension functions used to access the chart environment under which the Python Advisor script is running. Provides hierarchical access to the P2Chart.

- ***import P2Scanner***
  Stock scanning series of extension functions used to access the scan environment under which the scanning script is running

- ***import P2Chart***
  Chart series of extension functions to the access charts from either Python Advisor or Stock Scanning scripts.

- ***import P2Series***
  Chart data series of extension functions to access DSeries from either Python Advisor or Stock Scanning scripts.

- ***import P2Draw***
  Chart drawing extension functions to perform Chart drawing actions from Python Advisor scripts.

- ***import P2Model***
  Modelling extension functions to simulate stock trading actions from Python Advisor scripts.

8.4.1 Chartboard Extension Classes [PythonCBEC.pyw].

Chartboard supports the development of custom Python Advisor and Stock Scanning scripts via Python 3.8 extension functions and classes. These scripting facilities have been integrated into the Workspace environment providing the following functionality.

- Python Advisor scripts exist as discrete Python disk files that can be assigned and run on Chartboard views as required.
- Disk based collections of scrips can be mapped directly into a Chartboard docked explorer via the Python Advisor mapping facilities.
- Python extension or callback functions (CBEF) facilitate access to the internal Chartboard data structures.
- Python Chartboard extension classes (CBEC) facilitate structured access via the CBEF's.
- Integrated Chartboard debug console for developing and testing Python-Advisor scripts.
- Period cursor access with stepping through the underlying data series.
- Chart shading, drawing and annotation facilities.
- Trade modelling with dynamic position statements and summaries via properties grid.
- Python integration with subsequent 3rd Party products, Machine Learning, Neural Nets and SQL etc.

Python Advisor scripts exist as disk files and may be exchanged independently of Chartboard. Multiple scripts may be active across multiple views.

8.4.2 Python Advisor Scripts [name.pya].

Python Advisor scripts exist as discrete Python disk files that can be assigned and run on Chartboard views as required

8.4.3 Python Scanning Script [name.pys].

Python Scan scripts exist as discrete Python disk files that can be assigned and run on Chartboard views as required