

**Package Name:** TechAsis

**Author:** Quantitative Micro Software

**Date:** 2010/02/10

**Description:** These add-ins allow you to perform various technical analysis techniques on stock data. There are four add-ins; a global one, one that works off a group of price data, and one that works off a single series of price data, along with an add-in that lets you download stock data straight into EViews from Yahoo finance.

The technical analysis techniques that are performed are all taken from the book "Technical Analysis from A to Z" (2<sup>nd</sup> Edition) by Steven B. Achelis, and the accompanying Excel spreadsheet. Where there differences between the formulas given in the book and those given in the spreadsheet, we have used our judgement over which one is correct (which is usually the one printed in the book).

**Add-Ins:** TAGUI

TASeriesGUI

TAGroupGUI

GetStocks

# TAGUI

**Add-in Type:** Global

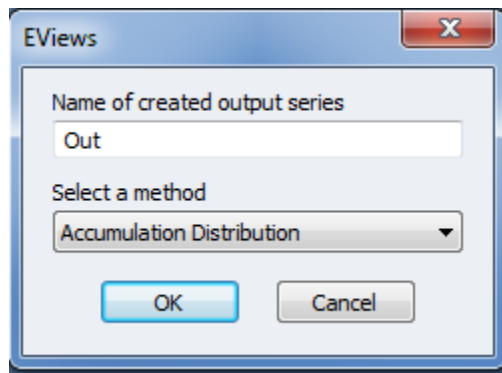
**Default Proc Name:** stockta

**Default Menu Text:** Technical analysis of stock data

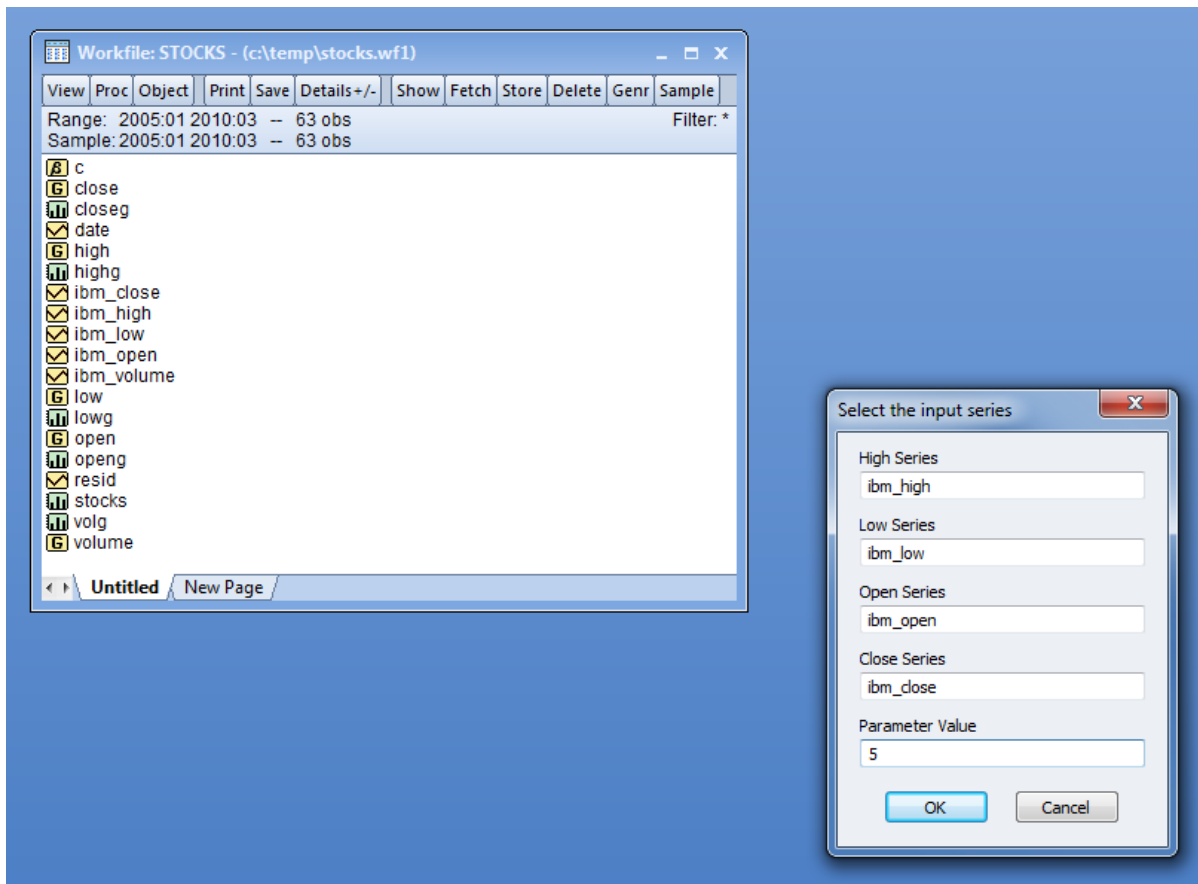
**Interface:** Dialog

This add-in allows you to perform technical analysis on a set of stock price data. The techniques available are listed in the appendix of this document. The general flavor of the add-in is that it asks you to provide a name for the output series (which will contain the requested analysis data), and a choice over which analysis you wish to perform, and then, it will ask you to provide the price data required for the chosen analysis, and, if necessary, to input any other parameters required. The output of the add-in will be a series containing the analysis data, plus a graph of the analysis.

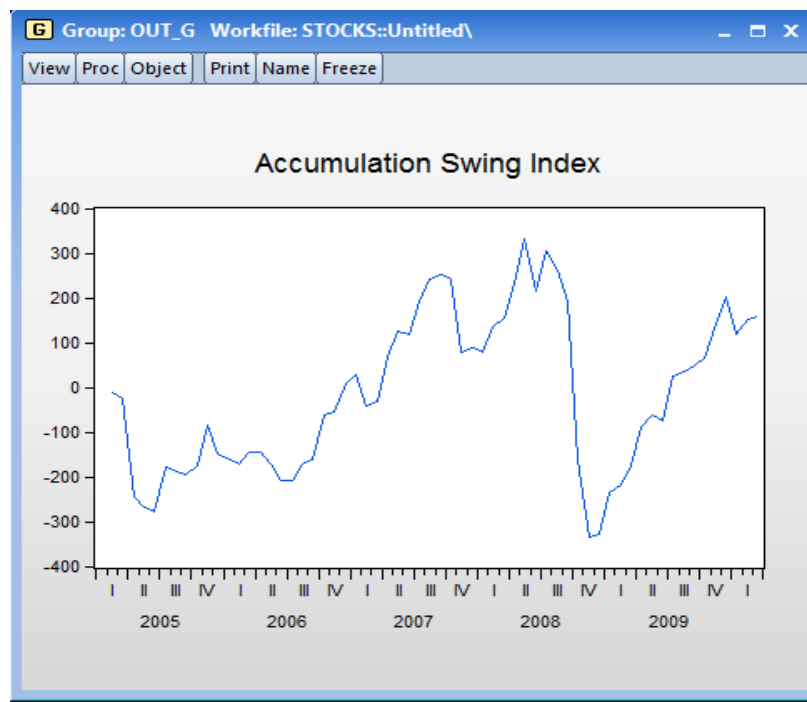
The first dialog that appears after running the add-in will look like this:



You should enter the name of the output series (defaulted to "OUT"), and choose which analysis you wish to perform. Once you have hit "OK", a second dialog will appear asking you to enter the names of the series required for the analysis. Most of the analysis techniques will require either a "high", "low", "open", "close", or "volume" series, or a combination of them. Some techniques will also require one or more parameter values, such as the number of periods to average over. As an example, the "Accumulation Swing Index" technique requires "high", "low", "open" and "close" series, as well as a single parameter value:



Here we have entered the series IBM\_HIGH for the "high" series, IBM\_LOW for the "low" series and so on. We have also entered a parameter value of "5". These particular choices resulted in the following analysis graph:



# TASeriesGUI

**Add-in Type:** Series

**Default Proc Name:** stockta

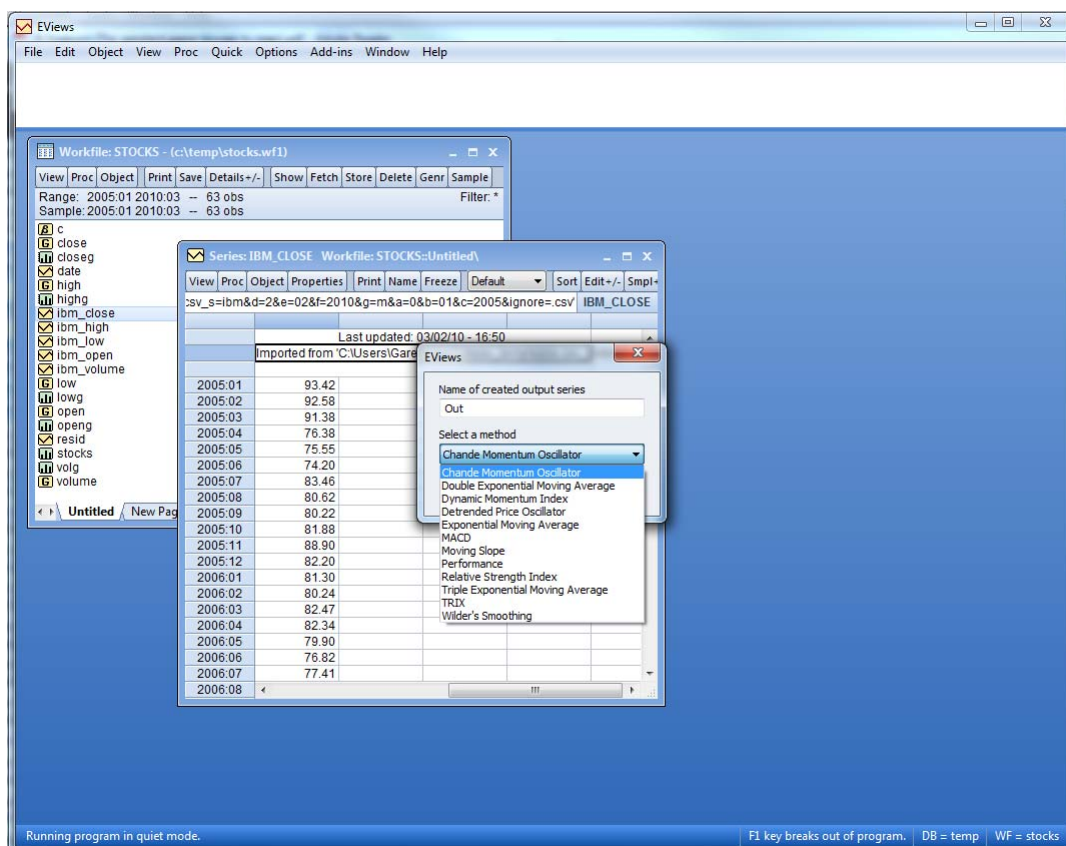
**Default Menu Text:** Technical analysis of stock data

**Interface:** Dialog

This add-in allows you to perform the technical analysis procedures that only require a single series of stock price data. Unlike the general GUI add-in above, you do not need to specify the name of the input data; the currently active series is used instead. These single series techniques are:

Chande Momentum Oscillator  
Double Exponential Moving Average  
Dynamic Momentum Index  
Detrended Price Oscillator  
Exponential Moving Average  
MACD  
Moving Slope  
Performance  
Relative Strength Index  
Triple Exponential Moving Average  
TRIX  
Wilder's Smoothing

When you run this series add-in, a dialog will appear asking you to specify an output series name, which of these single-series techniques you wish to perform, plus if necessary, any further parameter values:



# TAGroupGUI

**Add-in Type:** Group

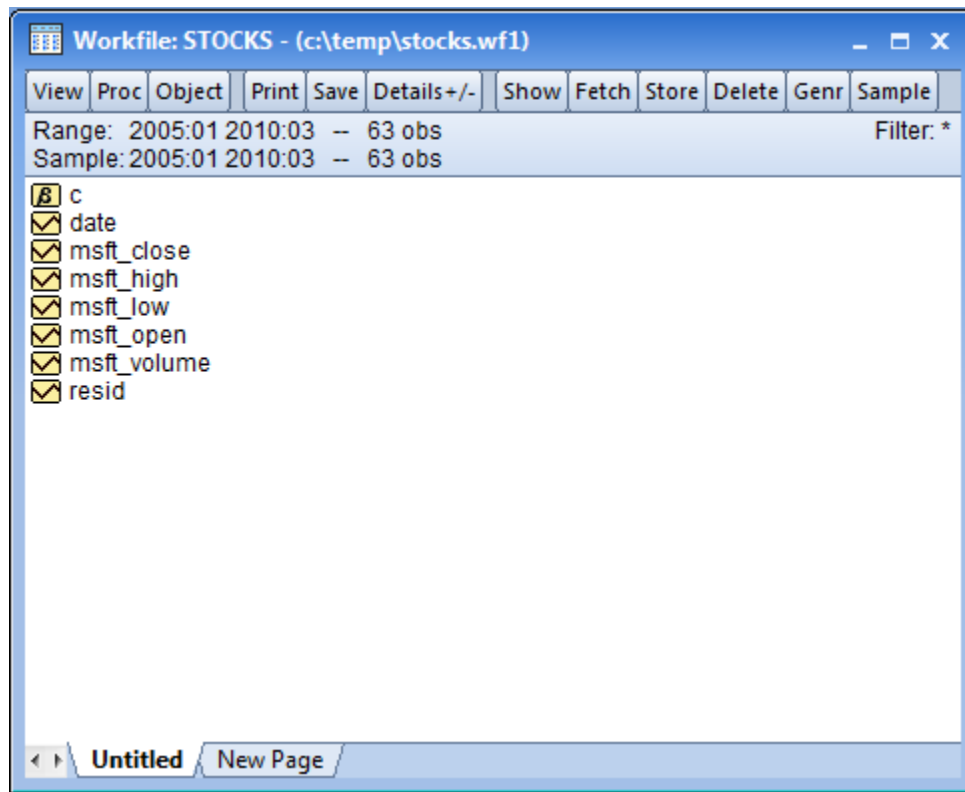
**Default Proc Name:** stockta

**Default Menu Text:** Technical analysis of stock data

**Interface:** Dialog

This add-in lets you perform multi-price technical analysis procedures without having to specify the names of the inputs. The add-in will automatically analyse the names of the series in the active group, select the inputs from those series names, and then provide you with a list of procedures that require the inputs contained in the group. As such it will only work on groups containing series names that contain certain keywords. Any series containing "high" price data should contain the word "high", any series containing "low" data should contain the word "low", and so on.

As an example, say we have a workfile containing MSFT stock data:



(note this workfile was created with the GetStocks add-in, which will automatically create series names that match the naming requirement). If you open the MSFT\_HIGH, MSFT\_LOW and MSFT\_VOLUME series as a group, and then run the Add-in, you will be present with a choice of two procedures, "East of Movement", and "Market Facilitation Index", since those are the only two procedures that require a "high", a "low" and a "volume" series:

The screenshot displays the EViews software interface. The main window shows a workfile named 'STOCKS' with a range from 2005:01 to 2010:03, containing 63 observations. The left-hand pane lists the available series: 'c', 'date', 'msft\_close', 'msft\_high', 'msft\_low', 'msft\_open', 'msft\_volume', and 'resid'. The central pane shows a group of series named 'UNTITLED' with columns for 'obs', 'MSFT\_HIGH', 'MSFT\_LOW', and 'MSFT\_VOL...'. The data is displayed in a table format, with the first row showing values for 2005:01.

obs	MSFT_HIGH	MSFT_LOW	MSFT_VOL...
2005:01	27.10	25.64	79642800
2005:02	26.50	25.13	75992300
2005:03	25.79	23.82	72899700
2005:04	25.45	23.94	77090200
2005:05	26.09	24.64	62699700
2005:06	26.00	24.82	62956700
2005:07	26.48	24.50	69046600
2005:08	27.94	25.76	65529900
2005:09	27.39	25.12	66976400
2005:10	25.80	24.25	72132400
2005:11	28.25	25.61	71469100
2005:12	28.10	26.10	62892300
2006:01	28.38	26.10	74173200
2006:02	28.07	26.34	58565000
2006:03	28.22	26.62	65223100
2006:04	27.94	24.00	107219900
2006:05	25.00	22.45	110427000
2006:06	23.65	21.46	92940200
2006:07	24.60	22.23	68627600
2006:08	26.25	23.85	50459500
2006:09	27.52	25.39	56588300
2006:10	28.85	27.15	61492200
2006:11			

An 'EViews' dialog box is open in the foreground, titled 'Name of created output series'. The 'Name' field contains 'Out'. Under the 'Select a method' section, a dropdown menu is open, showing three options: 'Ease of Movement', 'Ease of Movement', and 'Market Facilitation Index'. The 'Ease of Movement' option is currently selected.

You should note that some combinations of series will result in zero available procedures. For example, there are no procedures that require a mixture of "close", "high" and "volume".

# GetStocks

**Add-in Type:** Global

**Default Proc Name:** getstocks

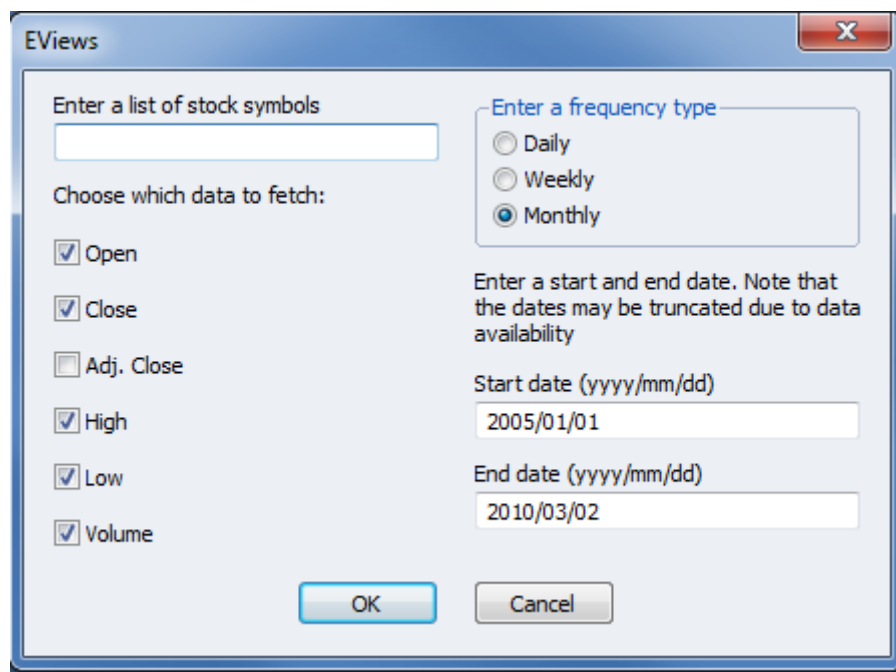
**Default Menu Text:** Download stock data

**Interface:** Dialog and command line.

**Description:** This add-in provides an easy way to download US stock data into EViews from the Yahoo Finance website.

## Interactive Use:

When running this add-in, it will present you with a single dialog:



The first box lets you enter the stock symbol/ticker of the stocks you want to download. If you want to download more than one stock at a time, enter each symbol separated by a space.

Under the stock list box are a selection of check boxes that let you select which stock price data you would like to retrieve.

The Frequency Type buttons let you specify which frequency to retrieve the data at.

Finally the start date and end date let you specify which dates to retrieve the data over. Note that the dates you enter may be truncated to the dates over which the data is available. For example, if you enter 1800/1/1 as a start date, and request to retrieve the IBM stock, the created workfile will actually start at 1962, since that is the first date that the IBM stock appeared.

## Command Line:

*Syntax:* getstocks(options) stocklist

*stocklist* should be a space delimited list of stocks

*Options:*

o                retrieve open price

c                retrieve close price

h                retrieve high price

l                retrieve low price

a                retrieve adjusted close price

v                retrieve volume

start="date"    start date of data (should be in quotes)

end = "date"    end date of data (should be in quotes)

freq=key        Frequency to fetch. Key can be 1 (daily), 2 (weekly) or 3 (monthly)



## Appendix – list of techniques

Procedure	Required Series
Accumulation Distribution	HLCV
Accumulation Swing Index	HLOCS
Average True Range	HLCS
Bollinger Bands	
Chaikin's Money Flow	HLCVS
Chaikin's Oscillator	HLCV
Chaikin's Volatility	HLS
Chande Momentum Oscillator	CS
Commodity Channel Index	HLCS
Commodity Selection Index	
Directional Movement Indicators	
Double Exponential Moving Average	CS
Dynamic Momentum Index	C
Detrended Price Oscillator	CS
Exponential Moving Average	CS
Ease of Movement	HLVS
Intraday Momentum Index	OCS
Klinger Oscillator	HLCV
MACD	C
Market Facilitation Index	HLV
Mass Index	HLS
Money Flow Index	HLCVS
Moving Average	
Moving Slope	CS
Negative Volume Index	CV
On Balance Volume	CV
Performance	C
Price Oscillator	
Projection Oscillator	HLCS
Positive Volume Index	CV
Price and Volume Trend	CV
QStick	OCS
Range Indicator	
Relative Strength Index	CS
Stochastic Momentum Index	
Stochastic Oscillator	
Swing Index	HLOCS
Triple Exponential Moving Average	CS
TRIX	CS
Ultimate Oscillator	HLC
Volume Oscillator	
Wilder's Smoothing	CS
Williams' Accumulation-Distribution	HLC
Williams' %R	HLCS

Key:

H – High

L – Low

O – Open

C – Close

V – Volume

S – One or more parameters, such as period length.

Note a procedure that simply requires a single price series is represented by a single "C", or a "CS".