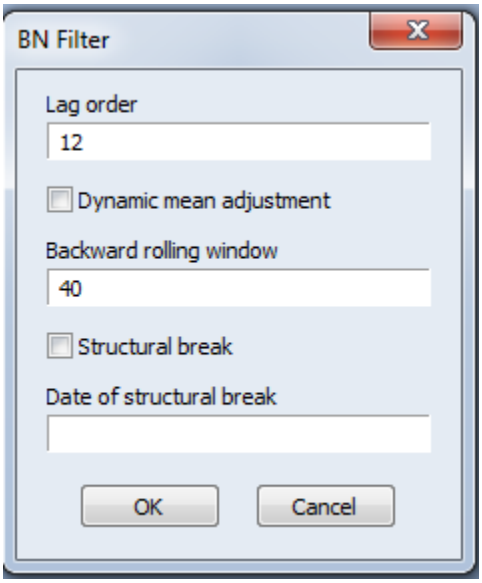
Package Name: BNFilter
Author: Davaajargal Luvsannyam
Date: 2017.11.17
Add-in Type: Series
Default Proc Name: bnfilter
Default Menu Text: BN Filter
Interface: Dialog and command line

Description

This add-in allows you to perform a modification of the BN decomposition to directly impose a low signal-to-noise ratio. In particular, rather than focusing solely on model fit by freely estimating a time series forecasting model, it estimates "BN filter" that trades off amplitude and model fit by maximizing the amplitude-to-noise ratio in order to determine a low signal to-noise ratio to impose in Bayesian estimation of a univariate AR model.

Dialog

Upon running the add-in from the menus, a dialog will appear:



Command line:

series.bnfilter(options)

for example:

```
series dy = 100*dlog(USGDP)
dy.bnfilter(lag=12)
dy.bnfilter(lag=12, sbreak=1, date=2006q1)
```

Options

lag	Lag order (default=12)
demean	Dynamic mean adjustment (0 or 1 default=0)
window	Backward rolling window (default=40)
sbreak	Structural break (0 or 1 default=0)
date	Date of structural break (allows just one break)

References:

Kamber, G., Morley J. and Wong B., 2017, "Intuitive and Reliable Estimates of the Output Gap from a Beveridge-Nelson Filter" Review of Economics and Statistics, (doi:10.1162/REST_a_00691)