model;
y = a*y(-1) + b*y(+2) - c*w(+1) + zy;
x = alpha*x(+1) + beta*y + zx;
w = x(+1) - zw;
zy = rhozy*zy(-1) + shk_zy;
zx = rhozx*zx(-1) + shk_zx;
zw = rhozw*zw(-1) + rhozw*zw(-2) + shk_zw;
end;
parsed model
0 = a*y_m1 + b*aux_y_lead_p1 - c*w_p1 + zy-y;
0 = alpha*x_1 + beta*y + zx -x;
0 = x_p1 - zw-w;
0 = rhozy*zy_m1 + shk_zy -zy;
0 = rhozx*zx_m1 + shk_zx -zx;
0 = rhozw*zw_m1 + rhozw1*aux_zw_lag_m1 + shk_zw-zw;
0 = -aux_zw_lag + zw_m1;
0 = -aux_y_lead + y_p1;
Variables initial order y,w, x, zy, zx, zw, aux_zw_lag, aux_y_lead,

$$A = \begin{bmatrix} b & -c & 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & \alpha & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 1 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\ 1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \end{bmatrix}; B = \begin{bmatrix} -1 & 0 & 0 & 1 & 0 & 0 & 0 & 0 \\ \beta & -1 & 0 & 0 & 1 & 0 & 0 & 0 \\ 0 & -1 & 0 & 0 & 0 & -1 & 0 & 0 \\ 0 & 0 & 0 & -1 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & -1 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & -1 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 & -1 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 & 0 & -1 \end{bmatrix}; C = \begin{bmatrix} a & 0 & 0 \\ 0 & 0 & 0 \\ 0 & 0 & 0 \\ 0 & 0 & 0 \\ 0 & 0 & 0 \\ 0 & 0 & 0 \\ 0 & 0 & 0 \\ 0 & 0 & 0 \end{bmatrix}$$

$$D = \begin{bmatrix} 0 & 0 & 0 \\ 0 & 0 & 0 \\ 0 & 0 & 0 \\ 1 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & 1 \\ 0 & 0 & 0 \\ 0 & 0 & 0 \end{bmatrix}$$

How to order the variables:
Backward looking exogenous variables:
All columns in A for these variables are zero, and
All columns of other variables on these variables are zero in B and C.
Backward looking endogenous variables:
All columns in A for those variables are zero.
Forward looking variables:
All columns in C for those variables are zero.
Static variables:

All columns in A, B for those variables are zero.

The idea is then

1) Eliminate static variables by substituting out them:

2) On the remaining variables order them as: backward looking exogenous states zy, zx, zw follow by forward/backward endogenous variables y,w, x.

3) Order equations for the backward exogenous variables first. In this case, we don;t have the other equations variables in any way. Just move the equations for the exogenous variables firts.