

```

cd "D:\UCL\IMESS\Dissertation\Data\code"
use Shiqi Yin_data.dta
tsset time
ren gva gva_growth

    gen m2_growth2= m2_growth*100

drop m2_growth

ren m2_growth2 m2_growth

drop if rawyear < 2004

*descriptive analysis

logout, save(description) word replace: tabstat ( auto_growth rgdp_growth gva_growth
m2_growth ), stat(count mean sd min max)

line auto_growth time, title(1) ytitle(auto_growth) xtitle(Time)
    line rgdp_growth time, title(2) ytitle(rgdp_growth) xtitle(Time)
    line gva_growth time, title(3) ytitle(gva_growth) xtitle(Time)
    line m2_growth time, title(4) ytitle(m2_growth) xtitle(Time)

*GARCH (1,1)
arch auto_growth, arch(1) garch(1)
predict h_auto, variance
line h_auto time
arch rgdp_growth, arch(1) garch(1)
predict h_rgdp, variance
line h_rgdp time
twoway (line h_auto time, yaxis(1)) (line h_rgdp time, yaxis(2))

arch gva_growth, arch(1) garch(1)
predict h_gva, variance
line h_gva time
twoway (line h_auto time, yaxis(1)) (line h_gva time, yaxis(2))

arch m2_growth, arch(1) garch(1)
predict h_m2, variance
line h_m2 time
twoway (line h_auto time, yaxis(1)) (line h_m2 time, yaxis(2))
twoway (line h_rgdp time, yaxis(1)) (line h_m2 time, yaxis(2))

```

*VAR

*rgdp_growth and auto_growth

list if auto_growth == 0 | rgdp_growth == 0

count

tsset time

dfuller auto_growth

dfuller auto_growth, drift

dfuller auto_growth, trend

dfuller rgdp_growth

dfuller rgdp_growth, drift

dfuller rgdp_growth, trend

pperron auto_growth

pperron auto_growth, trend

pperron rgdp_growth

pperron rgdp_growth, trend

varsoc auto_growth rgdp_growth, maxlag(8)

var auto_growth rgdp_growth, lags(1/4)

varstable

varstable, graph

varlmar, mlag(8)

vargranger

**IFR and VD

irf creat graph1, set(rgdp) step(20)

irf graph oirf, yline(0)

irf table fevd, r(rgdp_growth) noci

irf graph fevd, r(rgdp_growth)

irf table fevd, r(auto_growth) noci

irf graph fevd, r(auto_growth)

irf graph fevd

*gva

list if auto_growth == 0 | gva == 0

count

tsset time

dfuller gva_growth

dfuller gva_growth, drift

dfuller gva_growth, trend

pperron gva_growth

pperron gva_growth, trend

varsoc auto_growth gva, maxlag(8)

var auto_growth gva, lags(1/4)

varstable

varstable, graph

varlmar

varlmar, mlag(8)

vargranger

irf creat graph2, set(gva_growth) step(20)

irf graph oirf, yline(0)

irf table fevd, r(gva_growth) noci

irf graph fevd, r(gva_growth)

irf table fevd, r(auto_growth) noci

irf graph fevd, r(auto_growth)

irf graph fevd

*m2_growth

list if auto_growth == 0 | m2_growth == 0

count

tsset time

dfuller m2_growth

dfuller m2_growth, drift

dfuller m2_growth, trend

pperron m2_growth

pperron m2_growth, trend

```
varsoc auto_growth m2_growth, maxlag(8)
var auto_growth m2_growth, lags(1/4)
```

```
varstable
varstable, graph
varlmar
varlmar, mlag(8)
```

```
vargranger
```

```
irf creat graph3, set(m2) step(20)
irf graph oirf, yline(0)
irf table fevd, r(m2_growth) noci
irf graph fevd, r(m2_growth)
irf table fevd, r(auto_growth) noci
irf graph fevd, r(auto_growth)
irf graph fevd
```