

Subject index

A

ac command 24, 42–43, 60, 96–97
ACF see autocorrelation function
ADF test see augmented Dickey–Fuller test
AGARCH model see asymmetric generalized autoregressive conditional heteroskedasticity model
AIC see Akaike information criterion
Akaike information criterion 32
APARCH model see asymmetric power autoregressive conditional heteroskedasticity model
ARCH model see autoregressive conditional heteroskedasticity model
arch command 84–129
ARIMA model see autoregressive integrated moving-average model
arima command 61–64, 68–70
ARMA model see autoregressive moving-average model
ARMAX model see augmented autoregressive moving-average model
asymmetric generalized autoregressive conditional heteroskedasticity model 114–125
asymmetric power autoregressive conditional heteroskedasticity model 118–121
augmented autoregressive moving-average model 58
augmented Dickey–Fuller test 17–21
autocorrelation 22–26

autocorrelation function 22–24
autocorrelogram 24, 28
autoregressive conditional heteroskedasticity model 82–101
autoregressive integrated moving-average model 58, 91–92
autoregressive moving-average model 37–79

B

Baba, Engle, Kraft, and Kroner model 137–138
backtesting procedures 217–225
Bayesian information criterion 32
BEKK model see Baba, Engle, Kraft, and Kroner model
BIC see Bayesian information criterion

C

CCC model see constant conditional correlation model
centile command 207–208
Cholesky factorization 132
constant conditional correlation model 149–158
contagion 227–258
corrgram command 23–24, 42–43

D

DCC model see dynamic conditional correlation model
DCCE model see dynamic conditional correlation Engle model

DCCT model see dynamic conditional correlation Tse and Tsui model

describe command 4–5

DF-GLS test see Dickey–Fuller generalized least-squares test

dfgls command 20–21

dfuller command 18–19

diagonal vech model 136–137, 142–148

Dickey–Fuller generalized least-squares test 17–21

drawnorm command 213–214

drop command 41

dvech model .. see diagonal vech model

dynamic conditional correlation Engle model 158–174

dynamic conditional correlation model 158–185

dynamic conditional correlation Tse and Tsui model 174–185

E

ES see expected shortfall

estat acplot command 71–72

estat archlm command 29, 96

estat aroots command 73

estat duration command 247

estat ic command 67

estat transition command 247

estimates stats command 67

estimates store command 67

estimates table command 67–68

EVT see extreme value theory

expected shortfall 216–217

extreme value theory 191

G

GARCH model see generalized autoregressive conditional heteroskedasticity model

GARCH-M model see generalized autoregressive conditional heteroskedasticity in mean model

generalized autoregressive conditional heteroskedasticity in mean model 110–111

generalized autoregressive conditional heteroskedasticity model 101–114

generate command 27, 41, 75, 121, 146–148, 213

GJR model .. see Glosten–Jagannathan–Runkle model

Glosten–Jagannathan–Runkle model .. 117–118

gmm command 192–193

graph combine command 139, 146–148

H

histogram command 9–11, 97–98, 107, 208–211

I

import excel command 33–34

invertibility condition 54

inv(*t*) function 195

irf create command 74

irf graph command 74–75

irf table command 75

K

kdensity command 241–243

ksmirnov command 240–241

kurtosis 5–7

L

leverage effect 114

likelihood-ratio test 31

line command 241–243

Ljung–Box test statistic 23

loss of portfolio 188–189

LR test see likelihood-ratio test

lrtest command 68, 163

M

Markov switching 243–251

matrix command 213

- MGARCH model see multivariate generalized autoregressive conditional heteroskedasticity model
- `mgarch ccc` command 151–158
- `mgarch dvec` command 144–146
- `mswitch` command 246, 249–251
- multivariate generalized autoregressive conditional heteroskedasticity model 131–186
- N**
- Newey–West standard errors 21
- news impact curve 121–123
- NGARCH model see nonlinear generalized autoregressive conditional heteroskedasticity model
- NGARCHK model see nonlinear generalized autoregressive conditional heteroskedasticity k_i model
- NIC see news impact curve
- `nlcom` command 193–195
- nonlinear generalized autoregressive conditional heteroskedasticity k_i model 128–129
- nonlinear generalized autoregressive conditional heteroskedasticity model 127–128
- P**
- `pac` command 26, 42–43, 60
- PACF see partial autocorrelation function
- PARCH model see power autoregressive conditional heteroskedasticity model
- partial autocorrelation function . . 25–26
- partial autocorrelogram 24
- Phillips–Perron test 17–21
- `pnorm` command 12
- Portmanteau test statistic 22–24, 43–46, 70–71
- power autoregressive conditional heteroskedasticity model . . 126
- PP test see Phillips–Perron test
- P–P plot 12
- `pperron` command 21
- `predict` command 64, 78–79, 96, 113–114, 121–125, 146–148, 183–184, 196–197, 231–233, 239, 247–248
- `predictnl` command 196–197
- Q**
- `qnorm` command 11
- Q–Q plot 11
- R**
- random walk 16–17, 37
- `regress` command 28
- `replace` command 75
- `rnormal()` function 15, 41
- S**
- SAARCH model see simple autoregressive conditional heteroskedasticity model
- Schwarz information criterion 32
- `set obs` command 15, 210
- `sfrancia` command 14
- sign bias test 115
- simple autoregressive conditional heteroskedasticity model . . 116
- skewness 5
- `sktest` command 12–13
- stationarity 14–21
- `summarize` command 5–8, 140–141, 213
- `swilk` command 13
- T**
- TGARCH model . . see threshold generalized autoregressive conditional heteroskedasticity model
- threshold generalized autoregressive conditional heteroskedasticity model 116–117

Tse test 164
`tsline` command 3-4, 16, 146-148,
184
`tsset` command 3, 41

U

unilevel VaR test 218-225

V

value-at-risk 188, 190-217
VAR model ... see vector autoregressive
model

VaR see value-at-risk

`var` command 231-233

vech model 134-136

vector autoregressive model ... 131-132

W

`wntestb` command 71

`wntestq` command 70-71

Wold theorem 38-39