

# Appendix

## **ADF Test for series: Gold spot price**

lagged differences: 2

no intercept, no time trend

asymptotic critical values

reference: Davidson, R. and MacKinnon, J. (1993),

"Estimation and Inference in Econometrics" p 708, table 20.1,

Oxford University Press, London

1%	5%	10%
----	----	-----

-2.56	-1.94	-1.62
-------	-------	-------

value of test statistic: 0.3223

## **KPSS test for series: Gold spot price**

number of lags: 2

KPSS test based on  $y(t)=a+e(t)$  (level stationarity)

asymptotic critical values:

10%	5%	1%
-----	----	----

0.347	0.463	0.739
-------	-------	-------

value of test statistic: 34.8170

## **ADF Test for series: Gold ó transformed series**

lagged differences: 2

no intercept, no time trend

asymptotic critical values

reference: Davidson, R. and MacKinnon, J. (1993),

"Estimation and Inference in Econometrics" p 708, table 20.1,

Oxford University Press, London

1%	5%	10%
----	----	-----

-2.56	-1.94	-1.62
-------	-------	-------

value of test statistic: -22.7220

### **KPSS test for series: Gold-transformed series**

number of lags: 2

KPSS test based on  $y(t)=a+e(t)$  (level stationarity)

asymptotic critical values:

10%	5%	1%
-----	----	----

0.347	0.463	0.739
-------	-------	-------

value of test statistic: 0.4308

### **Checking ARMA model for autocorrelation, heteroskedasticity and normality**

#### **PORTMANTEAU TEST with 16 lags**

**Portmanteau:** 22.7393

p-Value (Chi<sup>2</sup>): 0.0646

**Ljung & Box:** 22.9371

p-Value (Chi<sup>2</sup>): 0.0613

#### **JARQUE-BERA TEST:**

test statistic: 2123.3262

p-Value(Chi<sup>2</sup>): 0.0000

skewness: -0.3384

kurtosis: 8.8875

**ARCH-LM TEST with 4 lags:**

test statistic: 38.2530

p-Value(Chi<sup>2</sup>): 0.0000

F statistic: 9.8229

p-Value(F): 0.0000

**Checking GARCH(1,1) for further dependencies**

**ARCH-LM TEST with 4 lags for "GARCH Residuals"**

test statistic: 4.6218

p-Value(Chi<sup>2</sup>): 0.3283

F statistic: 1.1608

p-Value(F): 0.3266

**JARQUE-BERA TEST for "GARCH Residuals"**

test statistic: 60.8123

p-Value(Chi<sup>2</sup>): 0.0000

skewness: -0.4445

kurtosis: 3.8064

**TEST OF NO REMAINING ARCH with 1 lags**

F-test stat. 2.0199

p-value 0.1556

degfree1 1.0000

degfree2 1012.0000

**ADF Test for series: Oil spot price**

lagged differences: 2

no intercept, no time trend

asymptotic critical values

reference: Davidson, R. and MacKinnon, J. (1993),

"Estimation and Inference in Econometrics" p 708, table 20.1,

Oxford University Press, London

1%	5%	10%
----	----	-----

-2.56	-1.94	-1.62
-------	-------	-------

value of test statistic: -1.0189

**KPSS test for series: Oil spot price**

number of lags: 2

KPSS test based on  $y(t)=a+e(t)$  (level stationarity)

asymptotic critical values:

10%	5%	1%
-----	----	----

0.347	0.463	0.739
-------	-------	-------

value of test statistic: 25.8515

**ADF Test for series: Oil  $\delta$  transformed series**

lagged differences: 2

no intercept, no time trend

asymptotic critical values

reference: Davidson, R. and MacKinnon, J. (1993),

"Estimation and Inference in Econometrics" p 708, table 20.1,

Oxford University Press, London

1%      5%      10%

-2.56   -1.94   -1.62

value of test statistic: -21.3092

### **KPSS test for series: Oil ó transformed series**

number of lags:      2

KPSS test based on  $y(t)=a+e(t)$  (level stationarity)

asymptotic critical values:

10%      5%      1%

0.347    0.463    0.739

value of test statistic: 0.3048

### **Checking ARMA model for autocorrelation, heteroskedasticity and normality**

#### **PORTMANTEAU TEST with 16 lags**

**Portmanteau:**            46.8827

p-Value (Chi<sup>2</sup>):        0.0000

**Ljung & Box:**            47.2934

p-Value (Chi<sup>2</sup>):        0.0000

#### **JARQUE-BERA TEST:**

test statistic:            3734.3447

p-Value(Chi<sup>2</sup>):        0.0000

skewness:                0.0157

kurtosis:                 11.0153

**ARCH-LM TEST with 4 lags:**

test statistic: 95.9922

p-Value(Chi<sup>2</sup>): 0.0000

F statistic: 25.7769

p-Value(F): 0.0000

**Checking GARCH(1,1) for further dependencies****ARCH-LM TEST with 4 lags for "GARCH Residuals"**

test statistic: 2.1442

p-Value(Chi<sup>2</sup>): 0.7093

F statistic: 0.5369

p-Value(F): 0.7087

**JARQUE-BERA TEST for "GARCH Residuals"**

test statistic: 88.9335

p-Value(Chi<sup>2</sup>): 0.0000

skewness: -0.2177

kurtosis: 4.1578

**TEST OF NO REMAINING ARCH with 1 lags**

F-test stat. 0.1373

p-value 0.7110

degfree1 1.0000

degfree2 1395.0000

**KPSS test for series: Treasury securities**

number of lags: 2

KPSS test based on  $y(t)=a+e(t)$  (level stationarity)

asymptotic critical values:

10%      5%      1%

0.347    0.463    0.739

value of test statistic: 27.1582

**ADF Test for series: Treasury securities**

lagged differences: 2

no intercept, no time trend

asymptotic critical values

reference: Davidson, R. and MacKinnon, J. (1993),

"Estimation and Inference in Econometrics" p 708, table 20.1,

Oxford University Press, London

1%      5%      10%

-2.56    -1.94    -1.62

value of test statistic: -0.8270

**ADF Test for series: Treasury securities-transformed series**

lagged differences: 2

no intercept, no time trend

asymptotic critical values

reference: Davidson, R. and MacKinnon, J. (1993),

"Estimation and Inference in Econometrics" p 708, table 20.1,

Oxford University Press, London

1%      5%      10%

-2.56   -1.94   -1.62

value of test statistic: -22.1388

**KPSS test for series: Treasury securities-transformed series**

number of lags:      2

KPSS test based on  $y(t)=a+e(t)$  (level stationarity)

asymptotic critical values:

10%      5%      1%

0.347   0.463   0.739

value of test statistic: 0.1036

**Checking ARMA model for autocorrelation, heteroskedasticity and normality**

**PORTMANTEAU TEST with 16 lags**

**Portmanteau:**              15.0129

p-Value (Chi<sup>2</sup>):            0.3773

**Ljung & Box:**              15.1176

p-Value (Chi<sup>2</sup>):            0.3702

**JARQUE-BERA TEST:**

test statistic:              108.9235

p-Value(Chi<sup>2</sup>):            0.0000

skewness:                  0.0049

kurtosis:                    4.3713

**ARCH-LM TEST with 4 lags:**



test statistic: 74.2015  
p-Value(Chi<sup>2</sup>): 0.0000  
F statistic: 19.5997  
p-Value(F): 0.0000

**Checking GARCH(1,1) for further dependencies**

**ARCH-LM TEST with 4 lags for "GARCH Residuals"**

test statistic: 2.4915  
p-Value(Chi<sup>2</sup>): 0.6462  
F statistic: 0.6240  
p-Value(F): 0.6454

**JARQUE-BERA TEST for "GARCH Residuals"**

test statistic: 27.3800  
p-Value(Chi<sup>2</sup>): 0.0000  
skewness: 0.0491  
kurtosis: 3.6805

**TEST OF NO REMAINING ARCH with 1 lags**

F-test stat. 0.8101  
p-value 0.3683  
degfree1 1.0000  
degfree2 1389.0000

**ADF Test for series: Exchange rate USD/EUR**

lagged differences: 2  
no intercept, no time trend

asymptotic critical values

reference: Davidson, R. and MacKinnon, J. (1993),

"Estimation and Inference in Econometrics" p 708, table 20.1,

Oxford University Press, London

1%	5%	10%
----	----	-----

-2.56	-1.94	-1.62
-------	-------	-------

value of test statistic: -0.8016

**KPSS test for series: Exchange rate USD/EUR**

number of lags: 2

KPSS test based on  $y(t)=a+e(t)$  (level stationarity)

asymptotic critical values:

10%	5%	1%
-----	----	----

0.347	0.463	0.739
-------	-------	-------

value of test statistic: 8.1657

**ADF Test for series: Exchange rate USD/EUR-transformed series**

lagged differences: 2

no intercept, no time trend

asymptotic critical values

reference: Davidson, R. and MacKinnon, J. (1993),

"Estimation and Inference in Econometrics" p 708, table 20.1,

Oxford University Press, London

1%	5%	10%
----	----	-----

-2.56   -1.94   -1.62

value of test statistic: -21.0303

**KPSS test for series: Exchange rate USD/EUR-transformed series**

number of lags:     2

KPSS test based on  $y(t)=a+e(t)$  (level stationarity)

asymptotic critical values:

10%     5%     1%

0.347   0.463   0.739

value of test statistic: 0.1324

**Checking ARMA model for autocorrelation, heteroskedasticity and normality**

**PORTMANTEAU TEST with 16 lags**

**Portmanteau:**           21.8853

p-Value (Chi<sup>2</sup>):       0.0810

**Ljung & Box:**           22.0583

p-Value (Chi<sup>2</sup>):       0.0774

**JARQUE-BERA TEST:**

test statistic:       633.9270

p-Value(Chi<sup>2</sup>):       0.0000

skewness:           -0.1526

kurtosis:            6.2509

**ARCH-LM TEST with 4 lags:**

test statistic:       143.7478

p-Value(Chi<sup>2</sup>):       0.0000

F statistic: 39.9751

p-Value(F): 0.0000

**Checking GARCH(1,1) for further dependencies**

**TEST OF NO REMAINING ARCH with 1 lags**

F-test stat. 2.4178

p-value 0.1202

degfree1 1.0000

degfree2 1426.0000

**ARCH-LM TEST with 4 lags for "GARCH Residuals"**

test statistic: 1.9254

p-Value(Chi<sup>2</sup>): 0.7495

F statistic: 0.4820

p-Value(F): 0.7490

**JARQUE-BERA TEST for "GARCH Residuals"**

test statistic: 59.9650

p-Value(Chi<sup>2</sup>): 0.0000

skewness: -0.1839

kurtosis: 3.9345

**ADF Test for series: Eurostoxx50**

lagged differences: 2

no intercept, no time trend

asymptotic critical values

reference: Davidson, R. and MacKinnon, J. (1993),

"Estimation and Inference in Econometrics" p 708, table 20.1,

Oxford University Press, London

1%      5%      10%

-2.56   -1.94   -1.62

value of test statistic: -0.2047

**KPSS test for series: Eurostoxx50**

number of lags:      2

KPSS test based on  $y(t)=a+e(t)$  (level stationarity)

asymptotic critical values:

10%      5%      1%

0.347   0.463   0.739

value of test statistic: 3.9908

**ADF Test for series: Eurostoxx50 ó transformed series**

lagged differences:      2

no intercept, no time trend

asymptotic critical values

reference: Davidson, R. and MacKinnon, J. (1993),

"Estimation and Inference in Econometrics" p 708, table 20.1,

Oxford University Press, London

1%      5%      10%

-2.56   -1.94   -1.62

value of test statistic: -24.2056

**KPSS test for series: Eurostoxx50 - transformed series**

number of lags: 2

KPSS test based on  $y(t)=a+e(t)$  (level stationarity)

asymptotic critical values:

10%	5%	1%
0.347	0.463	0.739

value of test statistic: 0.1889

**Checking ARMA model for autocorrelation, heteroskedasticity and normality****PORTMANTEAU TEST with 16 lags**

**Portmanteau:** 36.0221

p-Value (Chi<sup>2</sup>): 0.0010

**Ljung & Box:** 36.2427

p-Value (Chi<sup>2</sup>): 0.0010

**JARQUE-BERA TEST:**

test statistic: 1403.0869

p-Value(Chi<sup>2</sup>): 0.0000

skewness: 0.0225

kurtosis: 7.8593

**ARCH-LM TEST with 4 lags:**

test statistic: 183.5189

p-Value(Chi<sup>2</sup>): 0.0000

F statistic: 52.6782

p-Value(F): 0.0000

**Checking GARCH(1,1) for further dependencies**

**TEST OF NO REMAINING ARCH with 1 lags**

F-test stat.      3.5306  
p-value            0.0604  
degfree1          1.0000  
degfree2          1425.0000

**ARCH-LM TEST with 4 lags for "GARCH Residuals"**

test statistic:      8.3364  
p-Value(Chi<sup>2</sup>):      0.0800  
F statistic:          2.0964  
p-Value(F):          0.0790

**JARQUE-BERA TEST for "GARCH Residuals"**

test statistic:      56.2124  
p-Value(Chi<sup>2</sup>):      0.0000  
skewness:           -0.1059  
kurtosis:            3.9493

Table 4.a: Prevailing topics of statements

Topic						
name	rate change	growth	inflation	nonstandard measure	liquidity	rate appropriate
Weidmann	12%	10%	10%	22%	20%	7%
Wellink	29%	11%	20%	9%	14%	0%
Orphanides	22%	9%	31%	16%	3%	3%
Asmussen	6%	16%	19%	6%	6%	0%
Tumpel	17%	28%	17%	7%	3%	3%
Praet	29%	14%	14%	14%	7%	4%
Quaden	22%	26%	7%	4%	4%	7%
Provopoulos	22%	30%	4%	9%	13%	0%
Makuch	32%	26%	5%	0%	21%	5%
Ordonez	39%	6%	11%	11%	6%	6%
Bonello	28%	17%	17%	6%	6%	6%
Papademos	25%	13%	25%	6%	6%	0%
Coene	38%	13%	19%	13%	0%	13%
Kranjec	7%	21%	29%	14%	14%	0%
Sramko	0%	64%	0%	7%	7%	0%
Hurley	22%	33%	11%	0%	0%	11%
Knot	25%	0%	0%	38%	13%	0%
Honohan	0%	29%	14%	0%	14%	14%
Liebscher	0%	33%	67%	0%	0%	0%
Bonnici	50%	17%	0%	0%	17%	17%
Hansson	17%	0%	0%	0%	17%	17%
Visco	50%	25%	0%	25%	0%	0%

Source: Author's calculations



Table 7.1a: Model 2 ó first statement, estimation results

$Coex_t = \beta_1 Coex_{t-1} + \beta_2 r_{fx_{t-1}} + \beta_3 Volatility_{fx_{t-1}} + \beta_4 r_{oil_{t-1}} + \beta_5 Volatility_{oil_{t-1}} + \beta_6 r_{bond_{t-1}} + \beta_7 Volatility_{bond_{t-1}} + \beta_8 r_{gold_{t-1}} + \beta_9 Volatility_{gold_{t-1}} + \beta_{10} r_{stx_{t-1}} + \beta_{11} Volatility_{stx_{t-1}} + \beta_{12} Communication_{t-1} + u_t$			
Extreme returns	Below 5th percentile	Above 95th percentile	Extreme return (below 5th or above 95th percentile)
$Coex_{t-1}$	-0.45 (0.39)	-0.94** (0.44)	-0.47** (0.20)
$r_{fx_{t-1}}$	0.43* (0.26)	0.31 (0.22)	0.18 (0.17)
$Volatility_{fx_{t-1}}$	5.32*** (1.78)	-0.11 (1.02)	1.84** (0.83)
$r_{oil_{t-1}}$	0.11 (0.10)	0.02 (0.07)	0.07 (0.06)
$Volatility_{oil_{t-1}}$	-0.33*** (0.12)	0.02 (0.05)	-0.09** (0.04)
$r_{bond_{t-1}}$	-0.43*** (0.13)	0.37*** (0.10)	0.09 (0.07)
$Volatility_{bond_{t-1}}$	-0.16 (0.13)	0.17* (0.09)	0.09 (0.07)
$r_{gold_{t-1}}$	0.18 (0.15)	0.04 (0.12)	0.07 (0.10)

Continue Table 7.1a

Extreme returns	Below 5th percentile	Above 95th percentile	Extreme return (below 5th or above 95th percentile)
<i>Volatility_gold<sub>t-1</sub></i>	0.26 (0.27)	0.27 (0.21)	0.28* (0.16)
<i>r_stx<sub>t-1</sub></i>	-0.30* (0.17)	0.07 (0.15)	-0.12 (0.09)
<i>Volatility_stx<sub>t-1</sub></i>	0.31*** (0.10)	0.04 (0.08)	0.20*** (0.06)
<i>Communication<sub>t</sub></i>	-0.10 (0.33)	0.24 (0.26)	0.04 (0.21)
Pseudo R-sq.	0.29	0.13	0.17
Number of observations	505	505	505
<p><b>Notes:</b> *, **, and *** denote statistical significance at the 10 percent, 5 percent, and 1 percent level, respectively. Standard errors are reported in parentheses. The first column represents estimation for coexceedance constructed by using returns below 5th percentile, the second column represents estimation for coexceedance constructed by using returns above 95th percentile and the last column represents estimation for coexceedance constructed by using returns below 5th percentile and above 95th percentile. <i>Coex</i>, <i>r_fx</i>, <i>Volatility_fx</i>, <i>r_oil</i>, <i>Volatility_oil</i>, <i>r_bond</i>, <i>Volatility_bond</i>, <i>r_gold</i>, <i>Volatility_gold</i>, <i>r_stx</i>, <i>Volatility_stx</i> stand for coexceedance, log return on currency, currency volatility, log return on oil, volatility of oil, log return on US. Securities, securities volatility, log return on gold, gold volatility, volatility of regional stock market and log returns of regional stocks, respectively.</p>			

Source: Author's calculations