phf level drift

###############################################

# Augmented Dickey-Fuller Test Unit Root Test #

###############################################

Test regression drift

Call:

lm(formula = z.diff ~ z.lag.1 + 1 + z.diff.lag)

Residuals:

Min 1Q Median 3Q Max

-0.12188 -0.01595 -0.00035 0.01798 0.24606

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) 0.23536 0.11775 1.999 0.0471 \*

z.lag.1 -0.02495 0.01255 -1.988 0.0483 \*

z.diff.lag 0.35047 0.06861 5.108 7.99e-07 \*\*\*

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.04363 on 187 degrees of freedom

Multiple R-squared: 0.1327, Adjusted R-squared: 0.1234

F-statistic: 14.31 on 2 and 187 DF, p-value: 1.655e-06

Value of test-statistic is: -1.9876 2.0715

Critical values for test statistics:

1pct 5pct 10pct

tau2 -3.46 -2.88 -2.57

phi1 6.52 4.63 3.81

phf level trend

###############################################

# Augmented Dickey-Fuller Test Unit Root Test #

###############################################

Test regression trend

Call:

lm(formula = z.diff ~ z.lag.1 + 1 + tt + z.diff.lag)

Residuals:

Min 1Q Median 3Q Max

-0.120196 -0.015063 0.000047 0.016993 0.249810

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) 3.194e-01 1.434e-01 2.227 0.0271 \*

z.lag.1 -3.467e-02 1.572e-02 -2.205 0.0287 \*

tt 7.425e-05 7.232e-05 1.027 0.3059

z.diff.lag 3.566e-01 6.886e-02 5.178 5.78e-07 \*\*\*

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.04363 on 186 degrees of freedom

Multiple R-squared: 0.1376, Adjusted R-squared: 0.1237

F-statistic: 9.892 on 3 and 186 DF, p-value: 4.395e-06

Value of test-statistic is: -2.2052 1.7327 2.503

Critical values for test statistics:

1pct 5pct 10pct

tau3 -3.99 -3.43 -3.13

phi2 6.22 4.75 4.07

phi3 8.43 6.49 5.47

phf first diff drift

###############################################

# Augmented Dickey-Fuller Test Unit Root Test #

###############################################

Test regression drift

Call:

lm(formula = z.diff ~ z.lag.1 + 1 + z.diff.lag)

Residuals:

Min 1Q Median 3Q Max

-0.125688 -0.017609 0.000536 0.015989 0.248536

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) 0.001314 0.003221 0.408 0.684

z.lag.1 -0.679898 0.085884 -7.916 2.14e-13 \*\*\*

z.diff.lag 0.028676 0.074853 0.383 0.702

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.04415 on 186 degrees of freedom

Multiple R-squared: 0.3291, Adjusted R-squared: 0.3218

F-statistic: 45.61 on 2 and 186 DF, p-value: < 2.2e-16

Value of test-statistic is: -7.9164 31.3579

Critical values for test statistics:

1pct 5pct 10pct

tau2 -3.46 -2.88 -2.57

phi1 6.52 4.63 3.81

phf first diff trend

###############################################

# Augmented Dickey-Fuller Test Unit Root Test #

###############################################

Test regression trend

Call:

lm(formula = z.diff ~ z.lag.1 + 1 + tt + z.diff.lag)

Residuals:

Min 1Q Median 3Q Max

-0.126163 -0.016546 0.000839 0.015875 0.247747

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) 2.968e-03 6.523e-03 0.455 0.650

z.lag.1 -6.802e-01 8.610e-02 -7.900 2.42e-13 \*\*\*

tt -1.723e-05 5.902e-05 -0.292 0.771

z.diff.lag 2.841e-02 7.504e-02 0.379 0.705

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.04426 on 185 degrees of freedom

Multiple R-squared: 0.3294, Adjusted R-squared: 0.3185

F-statistic: 30.29 on 3 and 185 DF, p-value: 5.627e-16

Value of test-statistic is: -7.8996 20.8308 31.2234

Critical values for test statistics:

1pct 5pct 10pct

tau3 -3.99 -3.43 -3.13

phi2 6.22 4.75 4.07

phi3 8.43 6.49 5.47

phw level drift

###############################################

# Augmented Dickey-Fuller Test Unit Root Test #

###############################################

Test regression drift

Call:

lm(formula = z.diff ~ z.lag.1 + 1 + z.diff.lag)

Residuals:

Min 1Q Median 3Q Max

-0.153675 -0.020224 -0.001265 0.021612 0.306690

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) 0.21675 0.12828 1.690 0.09275 .

z.lag.1 -0.02120 0.01268 -1.672 0.09615 .

z.diff.lag 0.19871 0.07182 2.767 0.00623 \*\*

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.04759 on 187 degrees of freedom

Multiple R-squared: 0.04937, Adjusted R-squared: 0.0392

F-statistic: 4.856 on 2 and 187 DF, p-value: 0.008793

Value of test-statistic is: -1.6722 1.623

Critical values for test statistics:

1pct 5pct 10pct

tau2 -3.46 -2.88 -2.57

phi1 6.52 4.63 3.81

phw level trend

###############################################

# Augmented Dickey-Fuller Test Unit Root Test #

###############################################

Test regression trend

Call:

lm(formula = z.diff ~ z.lag.1 + 1 + tt + z.diff.lag)

Residuals:

Min 1Q Median 3Q Max

-0.144912 -0.022013 -0.000945 0.023318 0.310519

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) 3.570e-01 1.742e-01 2.050 0.04180 \*

z.lag.1 -3.608e-02 1.780e-02 -2.026 0.04415 \*

tt 1.051e-04 8.838e-05 1.189 0.23603

z.diff.lag 2.062e-01 7.201e-02 2.863 0.00468 \*\*

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.04754 on 186 degrees of freedom

Multiple R-squared: 0.05654, Adjusted R-squared: 0.04132

F-statistic: 3.715 on 3 and 186 DF, p-value: 0.01254

Value of test-statistic is: -2.0264 1.5555 2.1079

Critical values for test statistics:

1pct 5pct 10pct

tau3 -3.99 -3.43 -3.13

phi2 6.22 4.75 4.07

phi3 8.43 6.49 5.47

phw first diff drift

###############################################

# Augmented Dickey-Fuller Test Unit Root Test #

###############################################

Test regression drift

Call:

lm(formula = z.diff ~ z.lag.1 + 1 + z.diff.lag)

Residuals:

Min 1Q Median 3Q Max

-0.145242 -0.021081 -0.002466 0.019657 0.311539

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) 0.002466 0.003504 0.704 0.483

z.lag.1 -0.861399 0.094235 -9.141 <2e-16 \*\*\*

z.diff.lag 0.060834 0.073600 0.827 0.410

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.04799 on 186 degrees of freedom

Multiple R-squared: 0.4048, Adjusted R-squared: 0.3984

F-statistic: 63.26 on 2 and 186 DF, p-value: < 2.2e-16

Value of test-statistic is: -9.1409 41.7841

Critical values for test statistics:

1pct 5pct 10pct

tau2 -3.46 -2.88 -2.57

phi1 6.52 4.63 3.81

phw first diff trend

###############################################

# Augmented Dickey-Fuller Test Unit Root Test #

###############################################

Test regression trend

Call:

lm(formula = z.diff ~ z.lag.1 + 1 + tt + z.diff.lag)

Residuals:

Min 1Q Median 3Q Max

-0.14578 -0.01989 -0.00260 0.01976 0.31062

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) 4.371e-03 7.089e-03 0.617 0.538

z.lag.1 -8.614e-01 9.447e-02 -9.118 <2e-16 \*\*\*

tt -1.984e-05 6.414e-05 -0.309 0.757

z.diff.lag 6.054e-02 7.379e-02 0.820 0.413

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.0481 on 185 degrees of freedom

Multiple R-squared: 0.4051, Adjusted R-squared: 0.3955

F-statistic: 42 on 3 and 185 DF, p-value: < 2.2e-16

Value of test-statistic is: -9.1184 27.7526 41.6231

Critical values for test statistics:

1pct 5pct 10pct

tau3 -3.99 -3.43 -3.13

phi2 6.22 4.75 4.07

phi3 8.43 6.49 5.47

phx level drift

###############################################

# Augmented Dickey-Fuller Test Unit Root Test #

###############################################

Test regression drift

Call:

lm(formula = z.diff ~ z.lag.1 + 1 + z.diff.lag)

Residuals:

Min 1Q Median 3Q Max

-0.113633 -0.016530 -0.002051 0.014755 0.277056

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) 0.21268 0.11556 1.84 0.0673 .

z.lag.1 -0.02069 0.01131 -1.83 0.0689 .

z.diff.lag 0.39769 0.06718 5.92 1.51e-08 \*\*\*

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.04137 on 187 degrees of freedom

Multiple R-squared: 0.1646, Adjusted R-squared: 0.1557

F-statistic: 18.43 on 2 and 187 DF, p-value: 4.957e-08

Value of test-statistic is: -1.8297 1.768

Critical values for test statistics:

1pct 5pct 10pct

tau2 -3.46 -2.88 -2.57

phi1 6.52 4.63 3.81

phx level trend

###############################################

# Augmented Dickey-Fuller Test Unit Root Test #

###############################################

Test regression trend

Call:

lm(formula = z.diff ~ z.lag.1 + 1 + tt + z.diff.lag)

Residuals:

Min 1Q Median 3Q Max

-0.114569 -0.017952 -0.001624 0.016584 0.280791

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) 3.565e-01 1.516e-01 2.351 0.0197 \*

z.lag.1 -3.579e-02 1.530e-02 -2.339 0.0204 \*

tt 1.081e-04 7.405e-05 1.459 0.1461

z.diff.lag 4.055e-01 6.719e-02 6.035 8.41e-09 \*\*\*

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.04125 on 186 degrees of freedom

Multiple R-squared: 0.1741, Adjusted R-squared: 0.1608

F-statistic: 13.07 on 3 and 186 DF, p-value: 8.786e-08

Value of test-statistic is: -2.339 1.8958 2.749

Critical values for test statistics:

1pct 5pct 10pct

tau3 -3.99 -3.43 -3.13

phi2 6.22 4.75 4.07

phi3 8.43 6.49 5.47

phx first diff drift

###############################################

# Augmented Dickey-Fuller Test Unit Root Test #

###############################################

Test regression drift

Call:

lm(formula = z.diff ~ z.lag.1 + 1 + z.diff.lag)

Residuals:

Min 1Q Median 3Q Max

-0.117176 -0.015904 -0.002058 0.014039 0.281880

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) 0.001470 0.003039 0.484 0.629

z.lag.1 -0.669058 0.081444 -8.215 3.51e-14 \*\*\*

z.diff.lag 0.091310 0.073623 1.240 0.216

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.04168 on 186 degrees of freedom

Multiple R-squared: 0.3111, Adjusted R-squared: 0.3036

F-statistic: 41.99 on 2 and 186 DF, p-value: 8.936e-16

Value of test-statistic is: -8.2149 33.7463

Critical values for test statistics:

1pct 5pct 10pct

tau2 -3.46 -2.88 -2.57

phi1 6.52 4.63 3.81

phx first diff trend

###############################################

# Augmented Dickey-Fuller Test Unit Root Test #

###############################################

Test regression trend

Call:

lm(formula = z.diff ~ z.lag.1 + 1 + tt + z.diff.lag)

Residuals:

Min 1Q Median 3Q Max

-0.116916 -0.015713 -0.002075 0.014115 0.281516

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) 2.228e-03 6.155e-03 0.362 0.718

z.lag.1 -6.690e-01 8.166e-02 -8.192 4.12e-14 \*\*\*

tt -7.898e-06 5.572e-05 -0.142 0.887

z.diff.lag 9.114e-02 7.383e-02 1.234 0.219

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.04179 on 185 degrees of freedom

Multiple R-squared: 0.3111, Adjusted R-squared: 0.3

F-statistic: 27.85 on 3 and 185 DF, p-value: 6.554e-15

Value of test-statistic is: -8.1924 22.3857 33.5745

Critical values for test statistics:

1pct 5pct 10pct

tau3 -3.99 -3.43 -3.13

phi2 6.22 4.75 4.07

phi3 8.43 6.49 5.47

pwf level drift

###############################################

# Augmented Dickey-Fuller Test Unit Root Test #

###############################################

Test regression drift

Call:

lm(formula = z.diff ~ z.lag.1 + 1 + z.diff.lag)

Residuals:

Min 1Q Median 3Q Max

-0.105284 -0.022343 -0.000329 0.021174 0.264627

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) 0.49546 0.15659 3.164 0.00182 \*\*

z.lag.1 -0.05500 0.01743 -3.156 0.00187 \*\*

z.diff.lag 0.34100 0.06760 5.045 1.07e-06 \*\*\*

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.04374 on 187 degrees of freedom

Multiple R-squared: 0.1508, Adjusted R-squared: 0.1417

F-statistic: 16.6 on 2 and 187 DF, p-value: 2.302e-07

Value of test-statistic is: -3.1556 5.0801

Critical values for test statistics:

1pct 5pct 10pct

tau2 -3.46 -2.88 -2.57

phi1 6.52 4.63 3.81

pwf level trend

###############################################

# Augmented Dickey-Fuller Test Unit Root Test #

###############################################

Test regression trend

Call:

lm(formula = z.diff ~ z.lag.1 + 1 + tt + z.diff.lag)

Residuals:

Min 1Q Median 3Q Max

-0.105490 -0.022214 -0.000286 0.021076 0.264490

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) 4.925e-01 1.622e-01 3.037 0.00273 \*\*

z.lag.1 -5.462e-02 1.822e-02 -2.997 0.00309 \*\*

tt -4.411e-06 6.070e-05 -0.073 0.94215

z.diff.lag 3.405e-01 6.818e-02 4.994 1.36e-06 \*\*\*

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.04386 on 186 degrees of freedom

Multiple R-squared: 0.1508, Adjusted R-squared: 0.1371

F-statistic: 11.01 on 3 and 186 DF, p-value: 1.088e-06

Value of test-statistic is: -2.9974 3.3705 4.9552

Critical values for test statistics:

1pct 5pct 10pct

tau3 -3.99 -3.43 -3.13

phi2 6.22 4.75 4.07

phi3 8.43 6.49 5.47

pwf first diff drift

###############################################

# Augmented Dickey-Fuller Test Unit Root Test #

###############################################

Test regression drift

Call:

lm(formula = z.diff ~ z.lag.1 + 1 + z.diff.lag)

Residuals:

Min 1Q Median 3Q Max

-0.120135 -0.020154 0.000222 0.019950 0.257608

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) 0.001746 0.003249 0.537 0.5916

z.lag.1 -0.763969 0.084460 -9.045 <2e-16 \*\*\*

z.diff.lag 0.130209 0.072665 1.792 0.0748 .

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.04459 on 186 degrees of freedom

Multiple R-squared: 0.3494, Adjusted R-squared: 0.3424

F-statistic: 49.95 on 2 and 186 DF, p-value: < 2.2e-16

Value of test-statistic is: -9.0453 40.9092

Critical values for test statistics:

1pct 5pct 10pct

tau2 -3.46 -2.88 -2.57

phi1 6.52 4.63 3.81

pwf first diff trend

###############################################

# Augmented Dickey-Fuller Test Unit Root Test #

###############################################

Test regression trend

Call:

lm(formula = z.diff ~ z.lag.1 + 1 + tt + z.diff.lag)

Residuals:

Min 1Q Median 3Q Max

-0.122977 -0.019611 -0.000104 0.018455 0.256076

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) 8.242e-03 6.607e-03 1.247 0.2138

z.lag.1 -7.740e-01 8.486e-02 -9.120 <2e-16 \*\*\*

tt -6.743e-05 5.974e-05 -1.129 0.2604

z.diff.lag 1.349e-01 7.273e-02 1.855 0.0652 .

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.04456 on 185 degrees of freedom

Multiple R-squared: 0.3539, Adjusted R-squared: 0.3434

F-statistic: 33.78 on 3 and 185 DF, p-value: < 2.2e-16

Value of test-statistic is: -9.1205 27.7377 41.6065

Critical values for test statistics:

1pct 5pct 10pct

tau3 -3.99 -3.43 -3.13

phi2 6.22 4.75 4.07

phi3 8.43 6.49 5.47

pww level drift

###############################################

# Augmented Dickey-Fuller Test Unit Root Test #

###############################################

Test regression drift

Call:

lm(formula = z.diff ~ z.lag.1 + 1 + z.diff.lag)

Residuals:

Min 1Q Median 3Q Max

-0.15718 -0.02598 -0.00438 0.01961 0.33571

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) 0.58676 0.17563 3.341 0.00101 \*\*

z.lag.1 -0.06188 0.01856 -3.334 0.00103 \*\*

z.diff.lag 0.35853 0.06708 5.345 2.62e-07 \*\*\*

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.05198 on 187 degrees of freedom

Multiple R-squared: 0.165, Adjusted R-squared: 0.156

F-statistic: 18.47 on 2 and 187 DF, p-value: 4.787e-08

Value of test-statistic is: -3.3336 5.6254

Critical values for test statistics:

1pct 5pct 10pct

tau2 -3.46 -2.88 -2.57

phi1 6.52 4.63 3.81

pww level trend

###############################################

# Augmented Dickey-Fuller Test Unit Root Test #

###############################################

Test regression trend

Call:

lm(formula = z.diff ~ z.lag.1 + 1 + tt + z.diff.lag)

Residuals:

Min 1Q Median 3Q Max

-0.15923 -0.02614 -0.00262 0.02026 0.33441

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) 5.796e-01 1.763e-01 3.288 0.00121 \*\*

z.lag.1 -6.068e-02 1.869e-02 -3.246 0.00139 \*\*

tt -4.339e-05 6.960e-05 -0.623 0.53379

z.diff.lag 3.539e-01 6.761e-02 5.234 4.45e-07 \*\*\*

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.05207 on 186 degrees of freedom

Multiple R-squared: 0.1667, Adjusted R-squared: 0.1533

F-statistic: 12.4 on 3 and 186 DF, p-value: 1.974e-07

Value of test-statistic is: -3.2464 3.8675 5.7327

Critical values for test statistics:

1pct 5pct 10pct

tau3 -3.99 -3.43 -3.13

phi2 6.22 4.75 4.07

phi3 8.43 6.49 5.47

pww first diff drift

###############################################

# Augmented Dickey-Fuller Test Unit Root Test #

###############################################

Test regression drift

Call:

lm(formula = z.diff ~ z.lag.1 + 1 + z.diff.lag)

Residuals:

Min 1Q Median 3Q Max

-0.19767 -0.02281 -0.00172 0.02176 0.33797

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) 0.001048 0.003797 0.276 0.7828

z.lag.1 -0.777363 0.081929 -9.488 <2e-16 \*\*\*

z.diff.lag 0.177155 0.071321 2.484 0.0139 \*

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.05215 on 186 degrees of freedom

Multiple R-squared: 0.3568, Adjusted R-squared: 0.3499

F-statistic: 51.58 on 2 and 186 DF, p-value: < 2.2e-16

Value of test-statistic is: -9.4883 45.0229

Critical values for test statistics:

1pct 5pct 10pct

tau2 -3.46 -2.88 -2.57

phi1 6.52 4.63 3.81

pww first diff trend

###############################################

# Augmented Dickey-Fuller Test Unit Root Test #

###############################################

Test regression trend

Call:

lm(formula = z.diff ~ z.lag.1 + 1 + tt + z.diff.lag)

Residuals:

Min 1Q Median 3Q Max

-0.20001 -0.02143 -0.00204 0.01968 0.33683

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) 6.929e-03 7.748e-03 0.894 0.372

z.lag.1 -7.863e-01 8.262e-02 -9.517 <2e-16 \*\*\*

tt -6.106e-05 7.012e-05 -0.871 0.385

z.diff.lag 1.815e-01 7.154e-02 2.537 0.012 \*

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.05219 on 185 degrees of freedom

Multiple R-squared: 0.3594, Adjusted R-squared: 0.349

F-statistic: 34.6 on 3 and 185 DF, p-value: < 2.2e-16

Value of test-statistic is: -9.5169 30.2291 45.3346

Critical values for test statistics:

1pct 5pct 10pct

tau3 -3.99 -3.43 -3.13

phi2 6.22 4.75 4.07

phi3 8.43 6.49 5.47

pwx level drift

###############################################

# Augmented Dickey-Fuller Test Unit Root Test #

###############################################

Test regression drift

Call:

lm(formula = z.diff ~ z.lag.1 + 1 + z.diff.lag)

Residuals:

Min 1Q Median 3Q Max

-0.145115 -0.024009 -0.001533 0.021600 0.281739

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) 0.50156 0.14724 3.406 0.000806 \*\*\*

z.lag.1 -0.05236 0.01540 -3.399 0.000827 \*\*\*

z.diff.lag 0.48757 0.06270 7.776 4.88e-13 \*\*\*

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.04714 on 187 degrees of freedom

Multiple R-squared: 0.2688, Adjusted R-squared: 0.261

F-statistic: 34.37 on 2 and 187 DF, p-value: 1.945e-13

Value of test-statistic is: -3.3987 5.8439

Critical values for test statistics:

1pct 5pct 10pct

tau2 -3.46 -2.88 -2.57

phi1 6.52 4.63 3.81

pwx level trend

###############################################

# Augmented Dickey-Fuller Test Unit Root Test #

###############################################

Test regression trend

Call:

lm(formula = z.diff ~ z.lag.1 + 1 + tt + z.diff.lag)

Residuals:

Min 1Q Median 3Q Max

-0.143477 -0.024344 -0.002045 0.023532 0.281096

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) 4.961e-01 1.483e-01 3.345 0.000996 \*\*\*

z.lag.1 -5.155e-02 1.560e-02 -3.306 0.001137 \*\*

tt -2.323e-05 6.347e-05 -0.366 0.714808

z.diff.lag 4.849e-01 6.327e-02 7.664 9.65e-13 \*\*\*

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.04724 on 186 degrees of freedom

Multiple R-squared: 0.2693, Adjusted R-squared: 0.2575

F-statistic: 22.85 on 3 and 186 DF, p-value: 1.223e-12

Value of test-statistic is: -3.3056 3.9225 5.8158

Critical values for test statistics:

1pct 5pct 10pct

tau3 -3.99 -3.43 -3.13

phi2 6.22 4.75 4.07

phi3 8.43 6.49 5.47

pwx first diff drift

###############################################

# Augmented Dickey-Fuller Test Unit Root Test #

###############################################

Test regression drift

Call:

lm(formula = z.diff ~ z.lag.1 + 1 + z.diff.lag)

Residuals:

Min 1Q Median 3Q Max

-0.134806 -0.020020 -0.001785 0.020689 0.275292

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) 0.0009482 0.0034275 0.277 0.78235

z.lag.1 -0.6327837 0.0727855 -8.694 1.81e-15 \*\*\*

z.diff.lag 0.2029539 0.0709370 2.861 0.00471 \*\*

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.04707 on 186 degrees of freedom

Multiple R-squared: 0.2983, Adjusted R-squared: 0.2907

F-statistic: 39.53 on 2 and 186 DF, p-value: 4.946e-15

Value of test-statistic is: -8.6938 37.7988

Critical values for test statistics:

1pct 5pct 10pct

tau2 -3.46 -2.88 -2.57

phi1 6.52 4.63 3.81

pwx first diff trend

###############################################

# Augmented Dickey-Fuller Test Unit Root Test #

###############################################

Test regression trend

Call:

lm(formula = z.diff ~ z.lag.1 + 1 + tt + z.diff.lag)

Residuals:

Min 1Q Median 3Q Max

-0.135851 -0.022633 -0.001674 0.020193 0.274404

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) 5.463e-03 6.996e-03 0.781 0.43591

z.lag.1 -6.394e-01 7.343e-02 -8.709 1.7e-15 \*\*\*

tt -4.688e-05 6.331e-05 -0.740 0.45995

z.diff.lag 2.062e-01 7.116e-02 2.897 0.00422 \*\*

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.04713 on 185 degrees of freedom

Multiple R-squared: 0.3003, Adjusted R-squared: 0.289

F-statistic: 26.47 on 3 and 185 DF, p-value: 2.714e-14

Value of test-statistic is: -8.7086 25.3208 37.9736

Critical values for test statistics:

1pct 5pct 10pct

tau3 -3.99 -3.43 -3.13

phi2 6.22 4.75 4.07

phi3 8.43 6.49 5.47