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Null Hypothesis: LNHFCE has a unit root  
 Exogenous: Constant  
 Lag Length: 0 (Automatic - based on SIC, maxlag=9)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	0.481721	0.9839
Test critical values:		
1% level	-3.610453	
5% level	-2.938987	
10% level	-2.607932	

\*Mackinnon (1996) one-sided p-values.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LNHFCE(-1)	0.009712	0.020162	0.481721	0.6328
C	-0.149387	0.465096	-0.321195	0.7499
R-squared	0.006233	Mean dependent var		0.074488
Adjusted R-squared	-0.020626	S.D. dependent var		0.112753
S.E. of regression	0.113910	Akaike info criterion		-1.456904
Sum squared resid	0.480089	Schwarz criterion		-1.371593
Log likelihood	30.40963	Hannan-Quinn criter.		-1.426295
F-statistic	0.232055	Durbin-Watson stat		1.849553
Prob(F-statistic)	0.632841			

### Appendix I: Augmented Dickey –Fuller Test of LNHFCE at level

Null Hypothesis: D(LNHFCE) has a unit root  
 Exogenous: Constant  
 Lag Length: 0 (Automatic - based on SIC, maxlag=9)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-7.053813	0.0000
Test critical values:		
1% level	-3.610453	
5% level	-2.938987	
10% level	-2.607932	

\*Mackinnon (1996) one-sided p-values.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LNHFCE(-1))	-1.157842	0.164144	-7.053813	0.0000
C	0.086746	0.022116	3.922287	0.0004
R-squared	0.573518	Mean dependent var		-0.003172
Adjusted R-squared	0.561991	S.D. dependent var		0.170536
S.E. of regression	0.112865	Akaike info criterion		-1.475336
Sum squared resid	0.471321	Schwarz criterion		-1.390025
Log likelihood	30.76905	Hannan-Quinn criter.		-1.444727
F-statistic	49.75628	Durbin-Watson stat		1.532478
Prob(F-statistic)	0.000000			

### Appendix II: Augmented Dickey –Fuller Test of LNHFCE at First Difference

Null Hypothesis: LNGDP has a unit root  
 Exogenous: Constant  
 Lag Length: 0 (Automatic - based on SIC, maxlag=9)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	0.730092	0.9913
Test critical values:		
1% level	-3.610453	
5% level	-2.938987	
10% level	-2.607932	

\*Mackinnon (1996) one-sided p-values.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LNGDP(-1)	0.013023	0.017837	0.730092	0.4699
C	-0.227697	0.417101	-0.545902	0.5884
R-squared	0.014202	Mean dependent var		0.076573
Adjusted R-squared	-0.012441	S.D. dependent var		0.105576
S.E. of regression	0.106230	Akaike info criterion		-1.596494
Sum squared resid	0.417541	Schwarz criterion		-1.511183
Log likelihood	33.13162	Hannan-Quinn criter.		-1.565885
F-statistic	0.533034	Durbin-Watson stat		1.579488
Prob(F-statistic)	0.469931			

### Appendix III: Augmented Dickey –Fuller Test of LNGDP at Level

Null Hypothesis: D(LNGDP) has a unit root  
 Exogenous: Constant  
 Lag Length: 0 (Automatic - based on SIC, maxlag=9)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-6.795404	0.0000
Test critical values:		
1% level	-3.610453	
5% level	-2.938987	
10% level	-2.607932	

\*Mackinnon (1996) one-sided p-values.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LNGDP(-1))	-1.112405	0.163700	-6.795404	0.0000
C	0.085539	0.021456	3.986727	0.0003
R-squared	0.555168	Mean dependent var		-0.003200
Adjusted R-squared	0.543146	S.D. dependent var		0.157295
S.E. of regression	0.106318	Akaike info criterion		-1.594853
Sum squared resid	0.418226	Schwarz criterion		-1.509542
Log likelihood	33.09963	Hannan-Quinn criter.		-1.564244
F-statistic	46.17751	Durbin-Watson stat		1.311334
Prob(F-statistic)	0.000000			

### Appendix IV: Augmented Dickey –Fuller Test of LNGDP at First Difference

Null Hypothesis: LNGNI has a unit root  
 Exogenous: Constant  
 Lag Length: 0 (Automatic - based on SIC, maxlag=9)

		t-Statistic	Prob.*	
Augmented Dickey-Fuller test statistic		0.441699	0.9823	
Test critical values:	1% level	-3.610453		
	5% level	-2.938987		
	10% level	-2.607932		
*MacKinnon (1996) one-sided p-values.				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
LNGNI(-1)	0.007565	0.017126	0.441699	0.6613
C	-0.096873	0.400213	-0.242052	0.8101
R-squared	0.005245	Mean dependent var		0.079753
Adjusted R-squared	-0.021640	S.D. dependent var		0.101299
S.E. of regression	0.102389	Akaike info criterion		-1.670147
Sum squared resid	0.387893	Schwarz criterion		-1.584837
Log likelihood	34.56788	Hannan-Quinn criter.		-1.639539
F-statistic	0.195098	Durbin-Watson stat		1.722956
Prob(F-statistic)	0.661278			

#### Appendix V: Augmented Dickey –Fuller Test of LNGNI at Level

Null Hypothesis: D(LNGNI) has a unit root  
 Exogenous: Constant  
 Lag Length: 0 (Automatic - based on SIC, maxlag=9)

		t-Statistic	Prob.*	
Augmented Dickey-Fuller test statistic		-7.083770	0.0000	
Test critical values:	1% level	-3.610453		
	5% level	-2.938987		
	10% level	-2.607932		
*MacKinnon (1996) one-sided p-values.				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LNGNI(-1))	-1.153698	0.162865	-7.083770	0.0000
C	0.092547	0.021158	4.374053	0.0001
R-squared	0.575590	Mean dependent var		-0.003488
Adjusted R-squared	0.564119	S.D. dependent var		0.153655
S.E. of regression	0.101445	Akaike info criterion		-1.688674
Sum squared resid	0.380773	Schwarz criterion		-1.603363
Log likelihood	34.92913	Hannan-Quinn criter.		-1.658065
F-statistic	50.17979	Durbin-Watson stat		1.396118
Prob(F-statistic)	0.000000			

#### Appendix VI: Augmented Dickey –Fuller Test of LNGNI at First Difference



Null Hypothesis: LNGDS has a unit root  
 Exogenous: Constant  
 Lag Length: 0 (Automatic - based on SIC, maxlag=9)

		t-Statistic	Prob.*	
Augmented Dickey-Fuller test statistic		0.479846	0.9838	
Test critical values:	1% level	-3.610453		
	5% level	-2.938987		
	10% level	-2.607932		
*MacKinnon (1996) one-sided p-values.				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
LNGDS(-1)	0.014389	0.029988	0.479846	0.6342
C	-0.226302	0.646747	-0.349907	0.7284
R-squared	0.006185	Mean dependent var		0.083609
Adjusted R-squared	-0.020675	S.D. dependent var		0.209903
S.E. of regression	0.212062	Akaike info criterion		-0.213955
Sum squared resid	1.663902	Schwarz criterion		-0.128644
Log likelihood	6.172128	Hannan-Quinn criter.		-0.183346
F-statistic	0.230252	Durbin-Watson stat		2.051829
Prob(F-statistic)	0.634162			

### Appendix VII: Augmented Dickey –Fuller Test of LNGDS at Level

Null Hypothesis: D(LNGDS) has a unit root  
 Exogenous: Constant  
 Lag Length: 0 (Automatic - based on SIC, maxlag=9)

		t-Statistic	Prob.*	
Augmented Dickey-Fuller test statistic		-8.047335	0.0000	
Test critical values:	1% level	-3.610453		
	5% level	-2.938987		
	10% level	-2.607932		
*MacKinnon (1996) one-sided p-values.				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LNGDS(-1))	-1.245365	0.154755	-8.047335	0.0000
C	0.105762	0.035800	2.954213	0.0054
R-squared	0.636398	Mean dependent var		-0.006676
Adjusted R-squared	0.626571	S.D. dependent var		0.336847
S.E. of regression	0.205843	Akaike info criterion		-0.273484
Sum squared resid	1.567742	Schwarz criterion		-0.188174
Log likelihood	7.332946	Hannan-Quinn criter.		-0.242876
F-statistic	64.75960	Durbin-Watson stat		1.545917
Prob(F-statistic)	0.000000			

### Appendix VIII: Augmented Dickey –Fuller Test of LNGDS at First Difference

Null Hypothesis: LNHFCE has a unit root  
 Exogenous: Constant  
 Bandwidth: 0 (Newey-West automatic) using Bartlett kernel

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	0.481721	0.9839
Test critical values:		
1% level	-3.610453	
5% level	-2.938987	
10% level	-2.607932	

\*Mackinnon (1996) one-sided p-values.

Residual variance (no correction)	0.012310
HAC corrected variance (Bartlett kernel)	0.012310

Phillips-Perron Test Equation  
 Dependent Variable: D(LNHFCE)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LNHFCE(-1)	0.009712	0.020162	0.481721	0.6328
C	-0.149387	0.465096	-0.321195	0.7499
R-squared	0.006233	Mean dependent var		0.074488
Adjusted R-squared	-0.020626	S.D. dependent var		0.112753
S.E. of regression	0.113910	Akaike info criterion		-1.456904
Sum squared resid	0.480089	Schwarz criterion		-1.371593
Log likelihood	30.40963	Hannan-Quinn criter.		-1.426295
F-statistic	0.232055	Durbin-Watson stat		1.849553
Prob(F-statistic)	0.632841			

**Appendix IX: Phillips-Perron Test of LNHFCE at level**

Null Hypothesis: D(LNHFCE) has a unit root  
 Exogenous: Constant  
 Bandwidth: 1 (Newey-West automatic) using Bartlett kernel

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-7.051849	0.0000
Test critical values:		
1% level	-3.610453	
5% level	-2.938987	
10% level	-2.607932	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	0.012085
HAC corrected variance (Bartlett kernel)	0.012144

Phillips-Perron Test Equation  
 Dependent Variable: D(LNHFCE,2)  
 Method: Least Squares

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LNHFCE(-1))	-1.157842	0.164144	-7.053813	0.0000
C	0.086746	0.022116	3.922287	0.0004
R-squared	0.573518	Mean dependent var		-0.003172
Adjusted R-squared	0.561991	S.D. dependent var		0.170536
S.E. of regression	0.112865	Akaike info criterion		-1.475336
Sum squared resid	0.471321	Schwarz criterion		-1.390025
Log likelihood	30.76905	Hannan-Quinn criter.		-1.444727
F-statistic	49.75628	Durbin-Watson stat		1.532478
Prob(F-statistic)	0.000000			

### Appendix X: Phillips-Perron Test of LNHFCE at First Difference

Null Hypothesis: LNGDP has a unit root  
 Exogenous: Constant  
 Bandwidth: 1 (Newey-West automatic) using Bartlett kernel

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	0.774708	0.9923
Test critical values:		
1% level	-3.610453	
5% level	-2.938987	
10% level	-2.607932	

\*Mackinnon (1996) one-sided p-values.

Residual variance (no correction)	0.010706
HAC corrected variance (Bartlett kernel)	0.010054

Phillips-Perron Test Equation  
 Dependent Variable: D(LNGDP)  
 Method: Least Squares

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LNGDP(-1)	0.013023	0.017837	0.730092	0.4699
C	-0.227697	0.417101	-0.545902	0.5884
R-squared	0.014202	Mean dependent var		0.076573
Adjusted R-squared	-0.012441	S.D. dependent var		0.105576
S.E. of regression	0.106230	Akaike info criterion		-1.596494
Sum squared resid	0.417541	Schwarz criterion		-1.511183
Log likelihood	33.13162	Hannan-Quinn criter.		-1.565885
F-statistic	0.533034	Durbin-Watson stat		1.579488
Prob(F-statistic)	0.469931			

### Appendix XI: Phillips-Perron Test of LNGDP at level

Null Hypothesis: D(LNGDP) has a unit root  
 Exogenous: Constant  
 Bandwidth: 2 (Newey-West automatic) using Bartlett kernel

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-6.776567	0.0000
Test critical values:		
1% level	-3.610453	
5% level	-2.938987	
10% level	-2.607932	

\*Mackinnon (1996) one-sided p-values.

Residual variance (no correction)	0.010724
HAC corrected variance (Bartlett kernel)	0.011712

Phillips-Perron Test Equation  
 Dependent Variable: D(LNGDP,2)  
 Method: Least Squares

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LNGDP(-1))	-1.112405	0.163700	-6.795404	0.0000
C	0.085539	0.021456	3.986727	0.0003
R-squared	0.555168	Mean dependent var		-0.003200
Adjusted R-squared	0.543146	S.D. dependent var		0.157295
S.E. of regression	0.106318	Akaike info criterion		-1.594853
Sum squared resid	0.418226	Schwarz criterion		-1.509542
Log likelihood	33.09963	Hannan-Quinn criter.		-1.564244
F-statistic	46.17751	Durbin-Watson stat		1.311334
Prob(F-statistic)	0.000000			

**Appendix XII:** Phillips-Perron Test of LNGDP at First Difference

Null Hypothesis: LNGNI has a unit root  
 Exogenous: Constant  
 Bandwidth: 1 (Newey-West automatic) using Bartlett kernel

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	0.493788	0.9844
Test critical values:		
1% level	-3.610453	
5% level	-2.938987	
10% level	-2.607932	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	0.009946
HAC corrected variance (Bartlett kernel)	0.009050

Phillips-Perron Test Equation  
 Dependent Variable: D(LNGNI)  
 Method: Least Squares

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LNGNI(-1)	0.007565	0.017126	0.441699	0.6613
C	-0.096873	0.400213	-0.242052	0.8101
R-squared	0.005245	Mean dependent var		0.079753
Adjusted R-squared	-0.021640	S.D. dependent var		0.101299
S.E. of regression	0.102389	Akaike info criterion		-1.670147
Sum squared resid	0.387893	Schwarz criterion		-1.584837
Log likelihood	34.56788	Hannan-Quinn criter.		-1.639539
F-statistic	0.195098	Durbin-Watson stat		1.722956
Prob(F-statistic)	0.661278			

**Appendix XIII: Phillips-Perron Test of LNGNI at level**

Null Hypothesis: D(LNGNI) has a unit root  
 Exogenous: Constant  
 Bandwidth: 2 (Newey-West automatic) using Bartlett kernel

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-7.051811	0.0000
Test critical values:		
1% level	-3.610453	
5% level	-2.938987	
10% level	-2.607932	

\*Mackinnon (1996) one-sided p-values.

Residual variance (no correction)	0.009763
HAC corrected variance (Bartlett kernel)	0.010637

Phillips-Perron Test Equation  
 Dependent Variable: D(LNGNI,2)  
 Method: Least Squares

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LNGNI(-1))	-1.153698	0.162865	-7.083770	0.0000
C	0.092547	0.021158	4.374053	0.0001
R-squared	0.575590	Mean dependent var		-0.003488
Adjusted R-squared	0.564119	S.D. dependent var		0.153655
S.E. of regression	0.101445	Akaike info criterion		-1.688674
Sum squared resid	0.380773	Schwarz criterion		-1.603363
Log likelihood	34.92913	Hannan-Quinn criter.		-1.658065
F-statistic	50.17979	Durbin-Watson stat		1.396118
Prob(F-statistic)	0.000000			

**Appendix XIV: Phillips-Perron Test of LNGNI at First Difference**

Null Hypothesis: LNGDS has a unit root  
 Exogenous: Constant  
 Bandwidth: 1 (Newey-West automatic) using Bartlett kernel

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	0.613928	0.9884
Test critical values:		
1% level	-3.610453	
5% level	-2.938987	
10% level	-2.607932	

\*MacKinnon (1996) one-sided p-values.

Residual variance (no correction)	0.042664
HAC corrected variance (Bartlett kernel)	0.036230

Phillips-Perron Test Equation  
 Dependent Variable: D(LNGDS)  
 Method: Least Squares

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LNGDS(-1)	0.014389	0.029988	0.479846	0.6342
C	-0.226302	0.646747	-0.349907	0.7284
R-squared	0.006185	Mean dependent var		0.083609
Adjusted R-squared	-0.020675	S.D. dependent var		0.209903
S.E. of regression	0.212062	Akaike info criterion		-0.213955
Sum squared resid	1.663902	Schwarz criterion		-0.128644
Log likelihood	6.172128	Hannan-Quinn criter.		-0.183346
F-statistic	0.230252	Durbin-Watson stat		2.051829
Prob(F-statistic)	0.634162			

**Appendix XV: Phillips-Perron Test of LNGDS at level**



Null Hypothesis: D(LNGDS) has a unit root  
 Exogenous: Constant  
 Bandwidth: 1 (Newey-West automatic) using Bartlett kernel

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-7.938711	0.0000
Test critical values:		
1% level	-3.610453	
5% level	-2.938987	
10% level	-2.607932	

\*Mackinnon (1996) one-sided p-values.

Residual variance (no correction)	0.040199
HAC corrected variance (Bartlett kernel)	0.044949

Phillips-Perron Test Equation  
 Dependent Variable: D(LNGDS,2)  
 Method: Least Squares

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LNGDS(-1))	-1.245365	0.154755	-8.047335	0.0000
C	0.105762	0.035800	2.954213	0.0054
R-squared	0.636398	Mean dependent var		-0.006676
Adjusted R-squared	0.626571	S.D. dependent var		0.336847
S.E. of regression	0.205843	Akaike info criterion		-0.273484
Sum squared resid	1.567742	Schwarz criterion		-0.188174
Log likelihood	7.332946	Hannan-Quinn criter.		-0.242876
F-statistic	64.75960	Durbin-Watson stat		1.545917
Prob(F-statistic)	0.000000			

**Appendix XVI: Phillips-Perron Test of LNGDS at First Difference**