

## APPENDIX

### 1. Descriptive Statistic

	CADEV	FD	KURS	NETEXPORT
Mean	95253.23	246.6896	10857.58	1236114.
Median	108405.0	251.9325	10142.50	1079822.
Maximum	124637.8	325.2610	14657.00	4423667.
Minimum	50.56400	147.2870	8508.000	-1471824.
Std. Dev.	36760.97	53.16375	1811.829	1187351.
Skewness	-2.125481	0.243233	0.374498	0.459176
Kurtosis	5.784939	1.880740	1.639034	3.051691
Jarque-Bera	103.3063	5.957571	9.652902	3.384172
Probability	0.000000	0.050855	0.008015	0.184135
Sum	9144310.	23682.20	1042328.	1.19E+08
Sum Sq. Dev.	1.28E+11	268506.5	3.12E+08	1.34E+14
Observations	96	96	96	96

### 2. Dynamic Assumption Test

#### A. Unit Root Test

Null Hypothesis: Unit root (individual unit root process)

Series: CADEV, FD, KURS, NETEXPORT

Date: 01/03/18 Time: 09:47

Sample: 2009M01 2016M12

Exogenous variables: Individual effects

Automatic selection of maximum lags

Automatic lag length selection based on SIC: 0 to 2

Total number of observations: 378

Cross-sections included: 4

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Method	Statistic	Prob.**
ADF - Fisher Chi-square	8.58337	0.3787
ADF - Choi Z-stat	-0.15842	0.4371

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\*\* Probabilities for Fisher tests are computed using an asymptotic Chi

-square distribution. All other tests assume asymptotic

normality.

Intermediate ADF test results UNTITLED

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Series	Prob.	Lag	Max Lag	Obs
CADEV	0.1161	0	11	95
FD	0.5109	0	11	95
KURS	0.9380	0	11	95
NETEXPORT	0.2460	2	11	93

**B. Unit Root test in 1 different**

Series: CADEV, FD, KURS, NETEXPORT

Date: 01/03/18 Time: 09:47

Sample: 2009M01 2016M12

Exogenous variables: Individual effects

Automatic selection of maximum lags

Automatic lag length selection based on SIC: 0 to 1

Total number of observations: 375

Cross-sections included: 4

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Method	Statistic	Prob.**
ADF - Fisher Chi-square	104.076	0.0000
ADF - Choi Z-stat	-9.04528	0.0000

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\*\* Probabilities for Fisher tests are computed using an asymptotic Chi

-square distribution. All other tests assume asymptotic normality.

Intermediate ADF test results D(UNTITLED)

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Series	Prob.	Lag	Max Lag	Obs
D(CADEV)	0.0000	0	11	94
D(FD)	0.0001	0	11	94
D(KURS)	0.0000	0	11	94
D(NETEXPOR T)	0.0001	1	11	93

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### C. Cointegration Test

Dependent Variable: CADEV  
Method: Least Squares  
Date: 01/03/18 Time: 09:45  
Sample: 2009M01 2016M12  
Included observations: 96

Variable	Coefficient	Std. Error	t-Statistic	Prob.
FD	911.2483	34.44837	26.45259	0.0000
KURS	-15.40939	1.046729	-14.72147	0.0000
NETEXPORT	0.007285	0.001056	6.897474	0.0000
C	24788.07	7991.841	3.101672	0.0026

  

R-squared	0.901934	Mean dependent var	91280.16
Adjusted R-squared	0.898736	S.D. dependent var	36410.36
S.E. of regression	11586.49	Akaike info criterion	21.59384
Sum squared resid	1.24E+10	Schwarz criterion	21.70069
Log likelihood	-1032.504	Hannan-Quinn criter.	21.63703
F-statistic	282.0482	Durbin-Watson stat	0.766171
Prob(F-statistic)	0.000000		

### D. ECT test

E. Null Hypothesis: RES has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic - based on SIC, maxlag=11)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-4.776555	0.0001
Test critical values: 1% level	-3.500669	
5% level	-2.892200	
10% level	-2.583192	

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(RES)

Method: Least Squares

Date: 01/03/18 Time: 09:48

Sample (adjusted): 2009M02 2016M12

Included observations: 95 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
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RES(-1)	-0.388836	0.081405	-4.776555	0.0000
C	-160.6948	927.2494	-0.173303	0.8628
R-squared	0.196999	Mean dependent var	-181.1321	
Adjusted R-squared	0.188364	S.D. dependent var	10031.67	
S.E. of regression	9037.613	Akaike info criterion	21.07701	
Sum squared resid	7.60E+09	Schwarz criterion	21.13077	
Log likelihood	-999.1578	Hannan-Quinn criter.	21.09873	
F-statistic	22.81548	Durbin-Watson stat	2.127401	
Prob(F-statistic)	0.000007			

### A. ECM test

Dependent Variable: D(CADEV)

Method: Least Squares

Date: 01/03/18 Time: 09:50

Sample (adjusted): 2009M02 2016M12

Included observations: 95 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(FD)	1031.064	240.2754	4.291175	0.0000
D(KURS)	0.829128	2.506600	0.330778	0.7416
D(NETEXPORT)	0.002614	0.000679	3.848709	0.0002
RES(-1)	-0.282344	0.058388	-4.835631	0.0000
C	-644.1174	792.6851	-0.812577	0.4186
R-squared	0.365756	Mean dependent var	1224.328	
Adjusted R-squared	0.337568	S.D. dependent var	7811.139	
S.E. of regression	6357.482	Akaike info criterion	20.40385	
Sum squared resid	3.64E+09	Schwarz criterion	20.53826	
Log likelihood	-964.1828	Hannan-Quinn criter.	20.45816	
F-statistic	12.97532	Durbin-Watson stat	1.801952	
Prob(F-statistic)	0.000000			

### B. Classical Assumption

#### A. Multicollinearity

### 1. Variance Inflation Factors

Date: 01/03/18 Time: 10:03

Sample: 2009M01 2016M12

Included observations: 95

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
D(FD)	57732.29	1.686869	1.266196
D(KURS)	6.283044	1.280169	1.273083
D(NETEXPORT)	4.61E-07	1.020743	1.020351
RES(-1)	0.003409	1.039667	1.039645
C	628349.7	1.476913	NA

	FD	KURS	NETEXPORT
FD	1.000000	0.754485	-0.122145
KURS	0.754485	1.000000	-0.285266
NETEXPORT	-0.122145	-0.285266	1.000000

### B) Heterocedasticity Test

Heteroskedasticity Test: ARCH

F-statistic	0.015416	Prob. F(1,92)	0.9015
Obs*R-squared	0.015748	Prob. Chi-Square(1)	0.9001

Test Equation:

Dependent Variable: RESID^2

Method: Least Squares

Date: 01/03/18 Time: 09:53

Sample (adjusted): 2009M03 2016M12

Included observations: 94 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	37538729	22742010	1.650634	0.1022
RESID^2(-1)	0.012944	0.104254	0.124160	0.9015
R-squared	0.000168	Mean dependent var	38038767	
Adjusted R-squared	-0.010700	S.D. dependent var	2.16E+08	

S.E. of regression	2.17E+08	Akaike info criterion	41.24980
Sum squared resid	4.33E+18	Schwarz criterion	41.30392
Log likelihood	-1936.741	Hannan-Quinn criter.	41.27166
F-statistic	0.015416	Durbin-Watson stat	2.001373
Prob(F-statistic)	0.901459		

### C) Autocorrelation Test

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	0.515596	Prob. F(2,88)	0.5989
Obs*R-squared	1.100324	Prob. Chi-Square(2)	0.5769

Test Equation:

Dependent Variable: RESID

Method: Least Squares

Date: 01/03/18 Time: 09:52

Sample: 2009M02 2016M12

Included observations: 95

Presample missing value lagged residuals set to zero.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(FD)	0.093816	243.0076	0.000386	0.9997
D(KURS)	0.158885	2.566753	0.061901	0.9508
D(NETEXPORT)	2.83E-05	0.000688	0.041157	0.9673
RES(-1)	-0.040234	0.075828	-0.530594	0.5970
C	1.437289	798.9185	0.001799	0.9986
RESID(-1)	0.130036	0.128467	1.012211	0.3142
RESID(-2)	0.009461	0.118410	0.079898	0.9365

R-squared	0.011582	Mean dependent var	-3.97E-13
Adjusted R-squared	-0.055810	S.D. dependent var	6220.746
S.E. of regression	6391.978	Akaike info criterion	20.43430
Sum squared resid	3.60E+09	Schwarz criterion	20.62248
Log likelihood	-963.6294	Hannan-Quinn criter.	20.51034
F-statistic	0.171865	Durbin-Watson stat	1.979359
Prob(F-statistic)	0.983715		

Determinant Analysis of Foreign Exchange Reserve in Indonesia

(Periode: January 2009-December 2016)

By Using Error Correction Model (ECM)

date	Foreign Exchange reserve	Exchange Rate	Net Export	Foreign Debt
Jan-09	50.87	11355	977.179	151.457
Feb-09	50.564	11980	2414.126	147.287
Mar-09	54.84	11575	8281.112	150.965
Apr-09	56.566	10713	2240.565	152.015
May-09	57.934	10340	2860.015	154.455
Jun-09	57.576	10225	2392.818	153.741
Jul-09	57.418	9920	1160.741	157.018
Aug-09	57.943	10060	2596.548	158.522
Sep-09	62.287	9681	3173.421	167.989
Oct-09	64.528	9545	3170.4	170.785
Nov-09	65.844	9480	2474.786	175.493
Dec-09	66.105	9400	4809.822	172.871
Jan-10	95331.56	9365	3292610	178.041
Feb-10	99618.83	9335	2787589	178.966
Mar-10	105709.1	9115	2615877	180.843
Apr-10	113814.2	9012	2525335	185.843
May-10	118108.8	9180	3858579	180.344
Jun-10	119654.7	9083	2790882	183.329
Jul-10	122671	8952	2303564	188.65
Aug-10	124637.8	9041	4423667	190.756
Sep-10	114502	8924	2976978	194.349
Oct-10	113962	8926	2212144	198.209
Nov-10	111316	9013	1904612	197.833
Dec-10	110123	8991	2133157	202.413
Jan-11	95331.56	9057	3292610	201.603
Feb-11	99618.83	8823	2787589	204.561
Mar-11	105709.1	8709	2615877	210.08
Apr-11	113814.2	8574	2525335	216.799
May-11	118108.8	8537	3858579	221.154
Jun-11	119654.7	8597	2790882	222.816
Jul-11	122671	8508	2303564	227.456
Aug-11	124637.8	8578	4423667	230.222
Sep-11	114502	8823	2976978	223.676
Oct-11	113962	8835	2212144	222.828
Nov-11	111316	9170	1904612	222.119
Dec-11	110123	9068	2133157	225.375
Jan-12	111990.7	9000	1494149	231.333
Feb-12	112219.7	9085	797689.7	229.627
Mar-12	110493.5	9180	1675957	228.671

Apr-12	116412.8	9190	320302.1	235.425
May-12	111527.9	9565	411739.6	237.626
Jun-12	106502	9480	57420.27	238.917
Jul-12	106558.8	9485	689107.7	241.788
Aug-12	108990.2	9560	1324043	241.25
Sep-12	110172.2	9588	1125281	243.91
Oct-12	110297.2	9615	-909194	248.196
Nov-12	111285.1	9605	642110.8	251.121
Dec-12	112781.2	9670	1050915	252.364
Jan-13	108780	9698	462269.9	251.501
Feb-13	105183	9667	218440.8	253.298
Mar-13	104800	9719	921345.6	254.295
Apr-13	107269	9722	-462962	257.046
May-13	105149	9802	26006.55	258.519
Jun-13	98095	9929	-119520	257.98
Jul-13	92671.06	10278	-1471824	260.046
Aug-13	92997.09	10924	967554.7	257.479
Sep-13	95675.33	11613	589035.3	259.867
Oct-13	96995.69	11234	794444.3	262.389
Nov-13	96960.15	11977	1405029	263.101
Dec-13	99386.71	12189	2503412	265.912
Jan-14	108780	12226	-139607	270.853
Feb-14	100651	11634	1574104	273.715
Mar-14	102592	11404	1915146	276.916
Apr-14	105562.8	11532	-1271578	278.1
May-14	107047.7	11611	527968.7	284.999
Jun-14	107678.1	11969	368447.4	286.169
Jul-14	110542.5	11591	1012559	292.253
Aug-14	111224	11717	266907	290.635
Sep-14	111164	12212	280646.1	292.286
Oct-14	111973	12082	954471.9	294.461
Nov-14	111144	12196	410847.6	295.331
Dec-14	111862	12440	1082658	293.876
Jan-15	114249.5	12625	1091823	301.387
Feb-15	115527.3	12863	906715.1	300.956
Mar-15	111554	13084	1199614	299.367
Apr-15	110867	12937	1380360	300.473
May-15	110771	13211	1590177	302.557
Jun-15	108030	13332	1400198	304.515
Jul-15	107553	13481	1830056	304.551
Aug-15	105346	14027	910427.2	304.131



Sep-15	101720	14657	1507263	302.514
Oct-15	100712	13639	1391702	304.118
Nov-15	100240	13840	288889.2	304.158
Dec-15	105931	13795	551344.3	310.053
Jan-16	102134	13846	355443.2	309.562
Feb-16	104544	13395	1466128	312.996
Mar-16	107543	13276	826725.1	316.785
Apr-16	107711	13204	1164219	320.018
May-16	103591	13615	1076987	315.046
Jun-16	109789	13180	1511518	324.787
Jul-16	111409	13094	945521.2	324.441
Aug-16	113538	13300	1005801	322.74
Sep-16	115671	12998	1972070	325.261
Oct-16	115037	13051	1660673	323.249
Nov-16	111466	13563	1643539	317.694
Dec-16	116362	13436	1807911	318.724