

LAMPIRAN

Lampiran 1 Data IHSB, Kurs, dan Inflasi

bulan tahun	tingkat inflasi	kurs	Volume IHSB
01/06/2009	3.65%	14142	95898711200
01/07/2009	2.71%	14553	81982100300
01/08/2009	2.75%	14411	68301762200
01/09/2009	2.83%	15303	86977977600
01/10/2009	2.57%	15004	98857472200
01/11/2009	2.41%	14785	59964222200
01/12/2009	2.78%	14485	82687327400
01/01/2010	3.72%	14476	58475107300
01/02/2010	3.81%	14021	81365576000
01/03/2010	3.43%	13946	1.05507E+11
01/04/2010	3.91%	13825	87926923500
01/05/2010	4.16%	13776	91220776800
01/06/2010	5.05%	13480	82113176600
01/07/2010	6.22%	13616	81726803200
01/08/2010	6.44%	13582	63764534200
01/09/2010	5.80%	13640	1.05476E+11
01/10/2010	5.67%	13559	1.01676E+11
01/11/2010	6.33%	13418	59939428200
01/12/2010	6.96%	13390	57136795000
01/01/2011	7.02%	13386	33288846400
01/02/2011	6.84%	13388	52508015000
01/03/2011	6.65%	13394	51775824400
01/04/2011	6.16%	13388	92327768800
01/05/2011	5.98%	13414	61102879000
01/06/2011	5.54%	13410	77771733400
01/07/2011	4.61%	13503	72399600800
01/08/2011	4.79%	13631	54811268800
01/09/2011	4.61%	13116	75537829600
01/10/2011	4.42%	13063	50759519800
01/11/2011	4.15%	13367	40142565600
01/12/2011	3.79%	13159	55666096600
01/01/2012	3.65%	13246	52493035200
01/02/2012	3.56%	13683	33223493000
01/03/2012	3.97%	13270	70171301800
01/04/2012	4.50%	13342	52239910000
01/05/2012	4.45%	13462	33249221200
01/06/2012	4.53%	13915	36226039600
01/07/2012	4.56%	13864	27696006800

01/08/2012	4.58%	13909	42130136200
01/09/2012	4.31%	13707	58654133000
01/10/2012	4.61%	14730	34515598800
01/11/2012	4.32%	14097	37336733000
01/12/2012	4.30%	13548	46647148200
01/01/2013	4.57%	13399	44086729600
01/02/2013	5.31%	13277	41871168800
01/03/2013	5.90%	13002	57888441200
01/04/2013	5.57%	13149	49691693200
01/05/2013	5.47%	12927	45230439200
01/06/2013	5.90%	12688	44964721900
01/07/2013	8.61%	12502	66942192500
01/08/2013	8.79%	12257	92523051900
01/09/2013	8.40%	12142	73035132500
01/10/2013	8.32%	12273	63113145000
01/11/2013	8.37%	11776	55700469000
01/12/2013	8.38%	11649	55427112600
01/01/2014	8.22%	12029	69935300400
01/02/2014	7.75%	11669	87284636400
01/03/2014	7.32%	11590	76673742100
01/04/2014	7.25%	11461	62426319200
01/05/2014	7.32%	11692	59399840700
01/06/2014	6.70%	12287	76992830300
01/07/2014	4.53%	12250	71651853900
01/08/2014	3.99%	12037	78633212300
01/09/2014	4.53%	11290	75967911400
01/10/2014	4.83%	11671	80043521000
01/11/2014	6.23%	10979	96613060000
01/12/2014	8.36%	10329	94219872800
01/01/2015	6.96%	9979	78908016300
01/02/2015	6.29%	9851	96820780500
01/03/2015	6.38%	9771	87512382900
01/04/2015	6.79%	9768	74841895900
01/05/2015	7.15%	9715	66490581700
01/06/2015	7.26%	9746	61536178700
01/07/2015	7.26%	9718	69686518600
01/08/2015	7.18%	9653	68705625400
01/09/2015	6.83%	9663	89096456900
01/10/2015	6.25%	9636	58142315500
01/11/2015	4.89%	9608	44268983400
01/12/2015	3.35%	9532	51540959900

01/01/2016	4.14%	9527	61740009900
01/02/2016	4.42%	9613	81119384900
01/03/2016	4.45%	9236	84316471600
01/04/2016	3.60%	9226	64177101700
01/05/2016	3.33%	9130	99470404800
01/06/2016	3.45%	9045	79617343200
01/07/2016	3.21%	9113	1.26376E+11
01/08/2016	2.79%	9216	96836257400
01/09/2016	3.07%	8879	1.06499E+11
01/10/2016	3.31%	8867	1.50673E+11
01/11/2016	3.58%	8621	1235733000
01/12/2016	3.02%	8551	2453053100
01/01/2017	3.49%	8640	3216845000
01/02/2017	3.83%	8580	1766313600
01/03/2017	3.61%	8617	1229812800
01/04/2017	4.17%	8753	1289370400
01/05/2017	4.33%	8867	723336100
01/06/2017	4.37%	9102	959742600
01/07/2017	3.88%	9036	1267802200
01/08/2017	3.82%	9058	1078401500
01/09/2017	3.72%	8973	1322968600
01/10/2017	3.58%	8969	1299946900
01/11/2017	3.30%	9086	982689900
01/12/2017	3.61%	8997	1894206300
01/01/2018	3.25%	9128	2055828000
01/02/2018	3.18%	9226	1669079000
01/03/2018	3.40%	9057	1362405900
01/04/2018	3.41%	9161	1288503300
01/05/2018	3.23%	9382	800124100
01/06/2018	3.12%	9412	1320595600
01/07/2018	3.18%	9447	1257577100
01/08/2018	3.20%	9527	1210011400
01/09/2018	2.88%	9593	1539594700
01/10/2018	3.16%	9729	1391867600
01/11/2018	3.23%	10110	1220062100
01/12/2018	3.13%	9970	2027244600
01/01/2019	2.82%	10276	1955163100
01/02/2019	2.57%	10392	1987558400
01/03/2019	2.48%	10767	1894855300
01/04/2019	2.83%	14286	1894855300
01/05/2019	3.32%	14457	1874205900

Lampiran 2 Output Uji Stasioner pada Level

Null Hypothesis: IHSG has a unit root
Exogenous: Constant
Lag Length: 1 (Automatic - based on SIC, maxlag=12)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.362043	0.1548
Test critical values:		
1% level	-3.486551	
5% level	-2.886074	
10% level	-2.579931	

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

Null Hypothesis: KURS has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=12)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.012919	0.7471
Test critical values:		
1% level	-3.486064	
5% level	-2.885863	
10% level	-2.579818	

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

Null Hypothesis: TINGKAT_INFLASI has a unit root
Exogenous: Constant
Lag Length: 1 (Automatic - based on SIC, maxlag=12)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.715070	0.0745
Test critical values:		
1% level	-3.486551	
5% level	-2.886074	
10% level	-2.579931	

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

Lampiran 3 Output Uji Stasioner pada First Difference

Null Hypothesis: D(IHSG) has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic - based on SIC, maxlag=12)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-15.15894	0.0000
Test critical values:		
1% level	-3.486551	
5% level	-2.886074	
10% level	-2.579931	

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

Null Hypothesis: D(KURS) has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic - based on SIC, maxlag=12)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-10.11202	0.0000
Test critical values:		
1% level	-3.486551	
5% level	-2.886074	
10% level	-2.579931	

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

Null Hypothesis: D(TINGKAT_INFLASI) has a unit root

Exogenous: Constant

Lag Length: 1 (Automatic - based on SIC, maxlag=12)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-8.248037	0.0000
Test critical values:		
1% level	-3.487046	
5% level	-2.886290	
10% level	-2.580046	

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

Lampiran 4 Output Uji Lag Optimal

VAR Lag Order Selection Criteria
 Endogenous variables: D(IHSG) D(KURS) D(TINGKAT_INFLASI)
 Exogenous variables: C
 Date: 08/05/19 Time: 23:37
 Sample: 2009M06 2019M05
 Included observations: 117

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-3387.800	NA	2.99e+21	57.96240	58.03322*	57.99115*
1	-3375.262	24.22035*	2.81e+21*	57.90191*	58.18521	58.01692
2	-3367.766	14.09507	2.89e+21	57.92762	58.42339	58.12889

* indicates lag order selected by the criterion

LR: sequential modified LR test statistic (each test at 5% level)

FPE: Final prediction error

AIC: Akaike information criterion

SC: Schwarz information criterion

HQ: Hannan-Quinn information criterion

Lampiran 5 Output Uji Stabilitas VAR

Roots of Characteristic Polynomial
 Endogenous variables: D(IHSG) D(KURS) D(TINGK...
 Exogenous variables: C
 Lag specification: 1 2
 Date: 08/05/19 Time: 23:42

Root	Modulus
0.154400 - 0.496210i	0.519677
0.154400 + 0.496210i	0.519677
-0.198794 - 0.351990i	0.404248
-0.198794 + 0.351990i	0.404248
0.392745	0.392745
-0.297706	0.297706

No root lies outside the unit circle.
 VAR satisfies the stability condition.

Lampiran 6 Output Uji Kointegrasi

Date: 08/21/19 Time: 00:28
 Sample (adjusted): 2009M12 2019M05
 Included observations: 114 after adjustments
 Trend assumption: Linear deterministic trend
 Series: D(IHSG) D(KURS) D(TINGKAT_INFLASI)
 Lags interval (in first differences): 1 to 4

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.274504	57.52954	29.79707	0.0000
At most 1 *	0.163253	20.94703	15.49471	0.0068
At most 2	0.005497	0.628437	3.841466	0.4279

Trace test indicates 2 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**Mackinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.274504	36.58251	21.13162	0.0002
At most 1 *	0.163253	20.31859	14.26460	0.0049
At most 2	0.005497	0.628437	3.841466	0.4279

Max-eigenvalue test indicates 2 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**Mackinnon-Haug-Michelis (1999) p-values

Lampiran 7 Output Uji Kausalitas Granger

Pairwise Granger Causality Tests

Date: 08/06/19 Time: 00:33
 Sample: 2009M06 2019M05
 Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
KURS does not Granger Cause IHSG	118	1.42183	0.2456
IHSG does not Granger Cause KURS		3.41783	0.0362
TINGKAT_INFLASI does not Granger Cause IHSG	118	0.88894	0.4139
IHSG does not Granger Cause TINGKAT_INFLASI		1.07776	0.3438
TINGKAT_INFLASI does not Granger Cause KURS	118	1.24123	0.2929
KURS does not Granger Cause TINGKAT_INFLASI		1.89835	0.1546

Lampiran 8 Output Model VECM

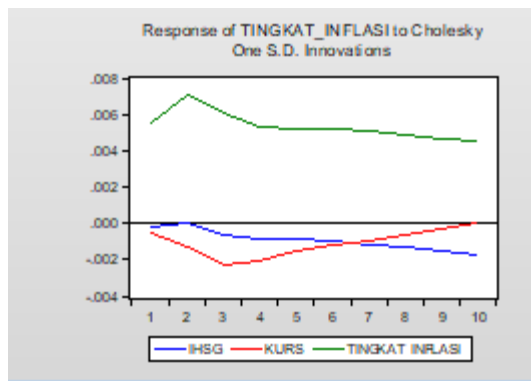
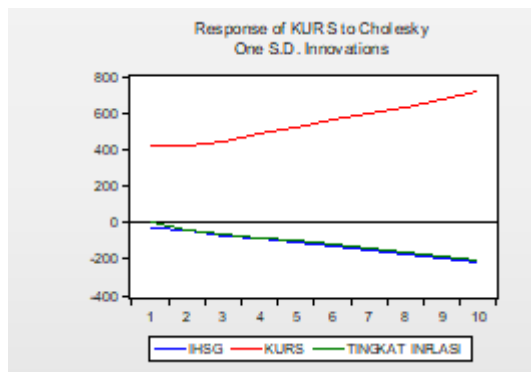
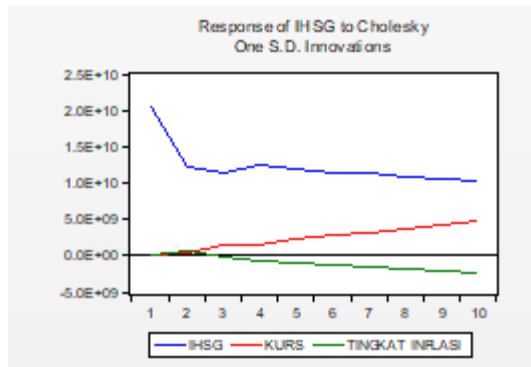
Vector Error Correction Estimates
 Date: 08/21/19 Time: 00:38
 Sample (adjusted): 2009M09 2019M05
 Included observations: 117 after adjustments
 Standard errors in () & t-statistics in []

Cointegrating Eq:	CointEq1
IHSG(-1)	1.000000
KURS(-1)	-51163741 (2.4E+07) [-2.11369]
TINGKAT_INFLASI(-1)	2.07E+12 (1.2E+12) [1.70461]
@TREND(09M06)	-2.67E+09 (1.5E+09) [-1.75755]
C	5.99E+11

Error Correction:	D(IHSG)	D(KURS)	D(TINGKAT_...
CointEq1	-0.025089 (0.02678) [-0.93700]	-1.48E-09 (5.5E-10) [-2.69553]	-1.59E-14 (7.2E-15) [-2.19916]
D(IHSG(-1))	-0.380472 (0.09441) [-4.02992]	5.73E-10 (1.9E-09) [0.29526]	2.51E-14 (2.5E-14) [0.98670]
D(IHSG(-2))	-0.177242 (0.09351) [-1.89547]	-1.42E-10 (1.9E-09) [-0.07397]	-2.20E-14 (2.5E-14) [-0.87236]
D(KURS(-1))	-304036.1 (5246281) [-0.05795]	-0.088604 (0.10781) [-0.82184]	-2.26E-06 (1.4E-06) [-1.60034]
D(KURS(-2))	1890503. (7661011) [0.24677]	-0.022297 (0.15743) [-0.14162]	-3.02E-06 (2.1E-06) [-1.46387]
D(TINGKAT_INFLASI(-1))	1.59E+11 (3.4E+11) [0.47019]	-4273.643 (6940.48) [-0.61576]	0.328664 (0.09106) [3.60938]
D(TINGKAT_INFLASI(-2))	-9.33E+10 (3.3E+11) [-0.27841]	150.7046 (6884.10) [0.02189]	-0.245446 (0.09032) [-2.71756]
C	-9.28E+08 (1.9E+09) [-0.48710]	-0.115376 (39.1392) [-0.00295]	-7.21E-05 (0.00051) [-0.14034]

R-squared	0.154172	0.077650	0.189851
Adj. R-squared	0.099853	0.018417	0.137823
Sum sq. resids	4.55E+22	19202568	0.003305
S.E. equation	2.04E+10	419.7265	0.005507
F-statistic	2.838258	1.310916	3.649030
Log likelihood	-2939.453	-868.5061	446.7355
Akaike AIC	50.38381	14.98301	-7.499752
Schwarz SC	50.57267	15.17188	-7.310886
Mean dependent	-5.68E+08	0.393162	4.87E-05
S.D. dependent	2.15E+10	423.6457	0.005931
Determinant resid covariance (dof adj.)		2.19E+21	
Determinant resid covariance		1.77E+21	
Log likelihood		-3360.254	
Akaike information criterion		57.91888	
Schwarz criterion		58.57991	

Lampiran 9 Output Impulse Response Function (IRF)



Lampiran 10 Output Variance Decomposition

Variance Decomposition of IHSG:				
Period	S.E.	IHSG	KURS	TINGKAT_I...
1	2.04E+10	100.0000	0.000000	0.000000
2	2.37E+10	99.91772	0.021635	0.060647
3	2.63E+10	99.57892	0.357557	0.063525
4	2.92E+10	99.28129	0.583189	0.135518
5	3.16E+10	98.80413	0.992874	0.202996
6	3.38E+10	98.14880	1.557397	0.293805
7	3.58E+10	97.36651	2.206183	0.427311
8	3.77E+10	96.40565	2.989566	0.604780
9	3.94E+10	95.25032	3.924174	0.825510
10	4.11E+10	93.89950	5.010011	1.090485

Variance Decomposition of KURS:				
Period	S.E.	IHSG	KURS	TINGKAT_I...
1	419.7265	0.480644	99.51936	0.000000
2	595.2167	0.838086	98.70536	0.456553
3	751.1746	1.492888	97.39782	1.109296
4	904.0565	1.973407	96.38900	1.637596
5	1055.016	2.477528	95.41139	2.111078
6	1206.798	3.032588	94.35844	2.608970
7	1361.393	3.591239	93.27322	3.135544
8	1520.180	4.146239	92.18572	3.668040
9	1683.958	4.695484	91.10975	4.194765
10	1853.254	5.235078	90.05176	4.713166

Variance Decomposition of TINGKAT_INFLASI:				
Period	S.E.	IHSG	KURS	TINGKAT_I...
1	0.005507	0.095828	1.071547	98.83262
2	0.009081	0.035364	2.592322	97.37231
3	0.011212	0.359835	6.049829	93.59034
4	0.012603	0.742575	7.562898	91.69453
5	0.013731	0.994280	7.635678	91.37004
6	0.014754	1.308596	7.240654	91.45075
7	0.015668	1.728431	6.765672	91.50590
8	0.016473	2.238742	6.280778	91.48048
9	0.017194	2.840121	5.807045	91.35283
10	0.017854	3.539021	5.385767	91.07521

