

# LAMPIRAN

## Lampiran 1

Data Variabel Penelitian (LOG)

Tahun	Variabel
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	<b>PBY</b>	<b>DPK</b>	<b>SBIS</b>	<b>NPF</b>
<b>2007</b>	4,318522	4,340087	3,522314	3,061075
	4,361237	4,356294	3,310693	3,1529
	4,408172	4,392345	3,113275	3,176381
	4,446444	4,447344	3,414806	3,053463
<b>2008</b>	4,471717	4,470587	3,329398	3,092018
	4,532754	4,519145	3,243286	3,241048
	4,016239	4,45588	2,563481	3,022841
	4,582007	4,566461	3,405688	3,11694
<b>2009</b>	4,594481	4,580241	3,432007	3,305136
	4,625261	4,624313	3,259833	3,267406
	4,648584	4,656874	3,420781	3,406029
	4,671043	4,718261	3,487986	3,27462
<b>2010</b>	4,700756	4,722724	3,384712	3,311542
	4,746642	4,764019	3,436799	3,33646
	4,785116	4,656874	3,363612	3,381296
	4,833663	4,881019	3,733037	3,314078
<b>2011</b>	4,870714	4,901191	3,768638	3,427324
	4,917064	4,939644	3,699924	3,467904
	4,96773	4,990143	3,769746	3,512284
	5,01138	5,062262	3,96586	3,412964
<b>2012</b>	5,037888	5,077873	3,823996	3,478711
	5,070378	5,076564	3,595055	3,548144
	5,115134	5,106116	3,533009	3,553276
	5,168807	5,168827	3,698362	3,514415
<b>2013</b>	5,207042	5,1958	3,74904	3,646796
	5,233572	5,214754	3,735838	3,654946
	5,248758	5,234773	3,655427	3,695657
	5,265101	5,263717	3,82601	3,683767
<b>2014</b>	5,267087	5,257547	3,766636	3,774736
	5,285863	5,282101	3,831358	3,877487
	5,293502	5,294777	3,80956	3,962606
	5,299573	5,338174	3,910091	3,936111

## Lampiran 2

### Hasil Uji Stasioneritas (Level)

Null Hypothesis: LOG\_PBY has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic - based on SIC, maxlag=7)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.260483	0.6349
Test critical values: 1% level	-3.661661	
5% level	-2.960411	
10% level	-2.619160	

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

Null Hypothesis: LOG\_DPK has a unit root

Exogenous: Constant

Lag Length: 1 (Automatic - based on SIC, maxlag=7)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-0.910284	0.7709
Test critical values: 1% level	-3.670170	
5% level	-2.963972	
10% level	-2.621007	

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

Null Hypothesis: LOG\_SBIS has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic - based on SIC, maxlag=7)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.355634	0.1621
Test critical values: 1% level	-3.661661	
5% level	-2.960411	
10% level	-2.619160	

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

Null Hypothesis: LOG\_NPF has a unit root  
 Exogenous: Constant  
 Lag Length: 0 (Automatic - based on SIC, maxlag=7)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-0.467380	0.8847
Test critical values: 1% level	-3.661661	
5% level	-2.960411	
10% level	-2.619160	

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

### Lampiran 3

#### Hasil Uji Stasioneritas (*first difference*)

Null Hypothesis: D(LOG\_PBY) has a unit root  
 Exogenous: Constant  
 Lag Length: 0 (Automatic - based on SIC, maxlag=7)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-9.586983	0.0000
Test critical values: 1% level	-3.670170	
5% level	-2.963972	
10% level	-2.621007	

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

Null Hypothesis: D(LOG\_DPK) has a unit root  
 Exogenous: Constant  
 Lag Length: 0 (Automatic - based on SIC, maxlag=7)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-8.833997	0.0000
Test critical values: 1% level	-3.670170	

5% level	-2.963972
10% level	-2.621007

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

Null Hypothesis: D(LOG\_SBIS) has a unit root

Exogenous: Constant

Lag Length: 1 (Automatic - based on SIC, maxlag=7)

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	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-6.559662	0.0000
Test critical values:		
1% level	-3.679322	
5% level	-2.967767	
10% level	-2.622989	

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

Null Hypothesis: D(LOG\_NPF) has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic - based on SIC, maxlag=7)

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	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-7.919795	0.0000
Test critical values:		
1% level	-3.670170	
5% level	-2.963972	
10% level	-2.621007	

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

## Lampiran 4

### Hasil Uji Stabilitas VAR

Roots of Characteristic Polynomial

Endogenous variables: D(LOG\_PBY) D(LOG\_DPK)

D(LOG\_SBIS) D(LOG\_NPF)

Exogenous variables: C

Lag specification: 1 2

Date: 03/10/16 Time: 22:20

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Root	Modulus
-0.103429 - 0.781025i	0.787844
-0.103429 + 0.781025i	0.787844
-0.524616 - 0.340903i	0.625649
-0.524616 + 0.340903i	0.625649
0.583230	0.583230
-0.293957 - 0.402082i	0.498077
-0.293957 + 0.402082i	0.498077
-0.443633	0.443633

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No root lies outside the unit circle.

VAR satisfies the stability condition.

## Lampiran 5

Hasil Uji Optimum Lag

VAR Lag Order Selection Criteria

Endogenous variables: D(LOG\_PBY) D(LOG\_SBIS) D(LOG\_DPK)

D(LOG\_NPF)

Exogenous variables: C

Date: 03/09/16 Time: 20:49

Sample: 2007Q1 2014Q4

Included observations: 29

Lag	LogL	LR	FPE	AIC	SC	HQ
0	120.6209	NA	3.78e-09	-8.042818	-7.854226*	-7.983754
1	139.9242	31.95026	3.05e-09	-8.270631	-7.327668	-7.975307
2	161.0725	29.17009*	2.29e-09*	-8.625687*	-6.928355	-8.094104*

\* 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 6

### Hasil Uji Kointegrasi

Date: 03/25/16 Time: 12:49

Sample (adjusted): 2008Q1 2014Q4

Included observations: 28 after adjustments

Trend assumption: Linear deterministic trend

Series: D(LOG\_PBY) D(LOG\_DPK) D(LOG\_SBIS) D(LOG\_NPF)

Lags interval (in first differences): 1 to 2

#### Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.1 Critical Value	Prob.**
None *	0.702821	75.82299	44.49359	0.0000

At most 1 *	0.606966	41.84718	27.06695	0.0013
At most 2 *	0.293067	15.69909	13.42878	0.0466
At most 3 *	0.192541	5.988153	2.705545	0.0144

Trace test indicates 4 cointegrating eqn(s) at the 0.1 level

\* denotes rejection of the hypothesis at the 0.1 level

\*\*MacKinnon-Haug-Michelis (1999) p-values

#### Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.1 Critical Value	Prob.**
None *	0.702821	33.97581	25.12408	0.0066
At most 1 *	0.606966	26.14809	18.89282	0.0090
At most 2	0.293067	9.710940	12.29652	0.2316
At most 3 *	0.192541	5.988153	2.705545	0.0144

Max-eigenvalue test indicates 2 cointegrating eqn(s) at the 0.1 level

\* denotes rejection of the hypothesis at the 0.1 level

\*\*MacKinnon-Haug-Michelis (1999) p-values

## Lampiran 7

### Estimasi Model VAR

#### Vector Autoregression Estimates

Date: 03/09/16 Time: 20:54

Sample (adjusted): 2007Q4 2014Q4

Included observations: 29 after adjustments

Standard errors in ( ) & t-statistics in [ ]

	D(LOG_PBY)	D(LOG_SBIS)	D(LOG_DPK)	D(LOG_NPF)
D(LOG_PBY(-1))	-0.711890 (0.39753) [-1.79077]	-1.013269 (0.69132) [-1.46571]	0.021452 (0.16276) [ 0.13180]	-0.120224 (0.22936) [-0.52416]
D(LOG_PBY(-2))	-0.200344 (0.37251) [-0.53782]	-0.294766 (0.64780) [-0.45502]	0.085667 (0.15252) [ 0.56168]	-0.673901 (0.21493) [-3.13547]



D(LOG_SBIS(-1))	0.164960 (0.20779) [ 0.79390]	0.132768 (0.36134) [ 0.36743]	0.018275 (0.08507) [ 0.21481]	0.100645 (0.11989) [ 0.83951]
D(LOG_SBIS(-2))	0.086473 (0.19402) [ 0.44570]	-0.166166 (0.33740) [-0.49249]	-0.015824 (0.07944) [-0.19920]	0.411791 (0.11194) [ 3.67860]
D(LOG_DPK(-1))	-0.843543 (0.64610) [-1.30560]	-1.951075 (1.12358) [-1.73649]	-0.609338 (0.26454) [-2.30343]	-0.112675 (0.37278) [-0.30225]
D(LOG_DPK(-2))	-0.236838 (0.66832) [-0.35438]	-0.783272 (1.16222) [-0.67394]	-0.116544 (0.27363) [-0.42591]	-0.657339 (0.38560) [-1.70470]
D(LOG_NPF(-1))	-0.673271 (0.37663) [-1.78764]	-0.619665 (0.65496) [-0.94611]	-0.076345 (0.15420) [-0.49509]	-0.515947 (0.21730) [-2.37432]
D(LOG_NPF(-2))	-0.307804 (0.36596) [-0.84109]	-0.063896 (0.63641) [-0.10040]	-0.023977 (0.14984) [-0.16002]	-0.151249 (0.21115) [-0.71632]
C	0.119002 (0.05002) [ 2.37930]	0.177053 (0.08698) [ 2.03560]	0.055233 (0.02048) [ 2.69718]	0.090084 (0.02886) [ 3.12169]
R-squared	0.501086	0.468547	0.259516	0.590916
Adj. R-squared	0.301520	0.255965	-0.036678	0.427283
Sum sq. resids	0.295376	0.893272	0.049516	0.098330
S.E. equation	0.121527	0.211338	0.049757	0.070118
F-statistic	2.510882	2.204081	0.876168	3.611219
Log likelihood	25.35942	9.313099	51.25573	41.30830
Akaike AIC	-1.128236	-0.021593	-2.914188	-2.228159
Schwarz SC	-0.703903	0.402740	-2.489855	-1.803826
Mean dependent	0.030738	0.027476	0.032615	0.026198
S.D. dependent	0.145410	0.245008	0.048869	0.092652
Determinant resid covariance (dof adj.)		7.78E-10		
Determinant resid covariance		1.76E-10		
Log likelihood		161.0725		
Akaike information criterion		-8.625687		
Schwarz criterion		-6.928355		

System: UNTITLED

Estimation Method: Least Squares

Date: 03/10/16 Time: 22:34

Sample: 2007Q4 2014Q4

Included observations: 29

Total system (balanced) observations 116

	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	-0.711890	0.397532	-1.790773	0.0771
C(2)	-0.843543	0.646097	-1.305597	0.1954
C(3)	0.164960	0.207785	0.793898	0.4296
C(4)	-0.673271	0.376626	-1.787636	0.0776
C(5)	-0.200344	0.372510	-0.537822	0.5922
C(6)	-0.236838	0.668322	-0.354378	0.7240
C(7)	0.086473	0.194017	0.445698	0.6570
C(8)	-0.307804	0.365960	-0.841087	0.4028
C(9)	0.119002	0.050016	2.379300	0.0197
C(10)	0.021452	0.162764	0.131799	0.8955
C(11)	-0.609338	0.264535	-2.303429	0.0239
C(12)	0.018275	0.085075	0.214815	0.8305
C(13)	-0.076345	0.154204	-0.495090	0.6219
C(14)	0.085667	0.152519	0.561678	0.5759
C(15)	-0.116544	0.273634	-0.425913	0.6713
C(16)	-0.015824	0.079437	-0.199196	0.8426
C(17)	-0.023977	0.149837	-0.160020	0.8733
C(18)	0.055233	0.020478	2.697185	0.0085
C(19)	-1.013269	0.691316	-1.465710	0.1466
C(20)	-1.951075	1.123576	-1.736488	0.0863
C(21)	0.132768	0.361342	0.367430	0.7143
C(22)	-0.619665	0.654961	-0.946110	0.3469
C(23)	-0.294766	0.647803	-0.455025	0.6503
C(24)	-0.783272	1.162224	-0.673942	0.5023
C(25)	-0.166166	0.337399	-0.492489	0.6237
C(26)	-0.063896	0.636411	-0.100401	0.9203
C(27)	0.177053	0.086978	2.035603	0.0451

C(28)	-0.120224	0.229365	-0.524159	0.6016
C(29)	-0.112675	0.372780	-0.302255	0.7632
C(30)	0.100645	0.119886	0.839508	0.4037
C(31)	-0.515947	0.217303	-2.374324	0.0200
C(32)	-0.673901	0.214928	-3.135470	0.0024
C(33)	-0.657339	0.385603	-1.704704	0.0921
C(34)	0.411791	0.111942	3.678601	0.0004
C(35)	-0.151249	0.211149	-0.716316	0.4759
C(36)	0.090084	0.028858	3.121687	0.0025

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Determinant residual covariance      1.76E-10

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Equation:  $D(\text{LOG\_PBY}) = C(1)*D(\text{LOG\_PBY}(-1)) + C(2)*D(\text{LOG\_DPK}(-1)) + C(3)*D(\text{LOG\_SBIS}(-1)) + C(4)*D(\text{LOG\_NPF}(-1)) + C(5)*D(\text{LOG\_PBY}(-2)) + C(6)*D(\text{LOG\_DPK}(-2)) + C(7)*D(\text{LOG\_SBIS}(-2)) + C(8)*D(\text{LOG\_NPF}(-2)) + C(9)$

Observations: 29

R-squared	0.501086	Mean dependent var	0.030738
Adjusted R-squared	0.301520	S.D. dependent var	0.145410
S.E. of regression	0.121527	Sum squared resid	0.295376
Durbin-Watson stat	1.962930		

Equation:  $D(\text{LOG\_DPK}) = C(10)*D(\text{LOG\_PBY}(-1)) + C(11)*D(\text{LOG\_DPK}(-1)) + C(12)*D(\text{LOG\_SBIS}(-1)) + C(13)*D(\text{LOG\_NPF}(-1)) + C(14)*D(\text{LOG\_PBY}(-2)) + C(15)*D(\text{LOG\_DPK}(-2)) + C(16)*D(\text{LOG\_SBIS}(-2)) + C(17)*D(\text{LOG\_NPF}(-2)) + C(18)$

Observations: 29

R-squared	0.259516	Mean dependent var	0.032615
Adjusted R-squared	-0.036678	S.D. dependent var	0.048869
S.E. of regression	0.049757	Sum squared resid	0.049516
Durbin-Watson stat	2.045187		

Equation:  $D(\text{LOG\_SBIS}) = C(19)*D(\text{LOG\_PBY}(-1)) + C(20)*D(\text{LOG\_DPK}(-1)) + C(21)*D(\text{LOG\_SBIS}(-1)) + C(22)*D(\text{LOG\_NPF}(-1)) + C(23)*D(\text{LOG\_PBY}(-2)) + C(24)*D(\text{LOG\_DPK}(-2)) + C(25)*D(\text{LOG\_SBIS}(-2))$

$$+ C(26)*D(LOG\_NPF(-2)) + C(27)$$

Observations: 29

R-squared	0.468547	Mean dependent var	0.027476
Adjusted R-squared	0.255965	S.D. dependent var	0.245008
S.E. of regression	0.211338	Sum squared resid	0.893272
Durbin-Watson stat	1.920817		

$$\begin{aligned} \text{Equation: } D(\text{LOG\_NPF}) = & C(28)*D(\text{LOG\_PBY}(-1)) + C(29)*D(\text{LOG\_DPK}(-1)) \\ & + C(30)*D(\text{LOG\_SBIS}(-1)) + C(31)*D(\text{LOG\_NPF}(-1)) + C(32) \\ & *D(\text{LOG\_PBY}(-2)) + C(33)*D(\text{LOG\_DPK}(-2)) + C(34)*D(\text{LOG\_SBIS}(-2)) \\ & + C(35)*D(\text{LOG\_NPF}(-2)) + C(36) \end{aligned}$$

Observations: 29

R-squared	0.590916	Mean dependent var	0.026198
Adjusted R-squared	0.427283	S.D. dependent var	0.092652
S.E. of regression	0.070118	Sum squared resid	0.098330
Durbin-Watson stat	1.906755		

## Lampiran 8

### Hasil Uji Kausalitas Granger

Pairwise Granger Causality Tests

Date: 03/10/16 Time: 22:22

Sample: 2007Q1 2014Q4

Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
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LOG_DPK does not Granger Cause LOG_PBY	30	5.82921	0.0084
LOG_PBY does not Granger Cause LOG_DPK		1.00084	0.3818
LOG_SBIS does not Granger Cause LOG_PBY	30	0.84518	0.4414
LOG_PBY does not Granger Cause LOG_SBIS		4.54959	0.0207
LOG_NPF does not Granger Cause LOG_PBY	30	2.18114	0.1339
LOG_PBY does not Granger Cause LOG_NPF		2.07270	0.1469
LOG_SBIS does not Granger Cause LOG_DPK	30	0.13663	0.8729
LOG_DPK does not Granger Cause LOG_SBIS		4.59352	0.0200
LOG_NPF does not Granger Cause LOG_DPK	30	0.44155	0.6480
LOG_DPK does not Granger Cause LOG_NPF		2.85932	0.0762
LOG_NPF does not Granger Cause LOG_SBIS	30	7.55153	0.0027
LOG_SBIS does not Granger Cause LOG_NPF		1.72479	0.1987

## Lampiran 9

### Hasil regresi model VAR

Dependent Variable: D(LOG\_PBY)

Method: Least Squares

Date: 03/10/16 Time: 22:45

Sample (adjusted): 2007Q3 2014Q4

Included observations: 30 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.060556	0.022350	2.709470	0.0116
D(LOG_PBY(-1))	-0.376450	0.166748	-2.257601	0.0323
D(LOG_NPF(-1))	-0.567162	0.261039	-2.172709	0.0387
R-squared	0.390813	Mean dependent var		0.031278

Adjusted R-squared	0.345688	S.D. dependent var	0.142912
S.E. of regression	0.115601	Akaike info criterion	-1.382707
Sum squared resid	0.360816	Schwarz criterion	-1.242587
Log likelihood	23.74061	Hannan-Quinn criter.	-1.337882
F-statistic	8.660678	Durbin-Watson stat	2.354970
Prob(F-statistic)	0.001242		

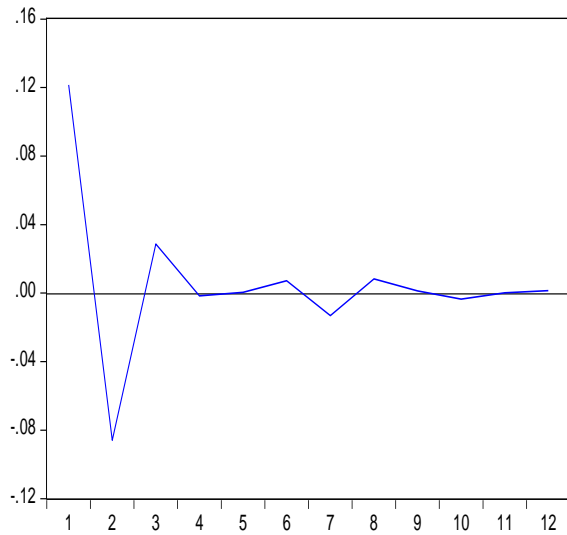
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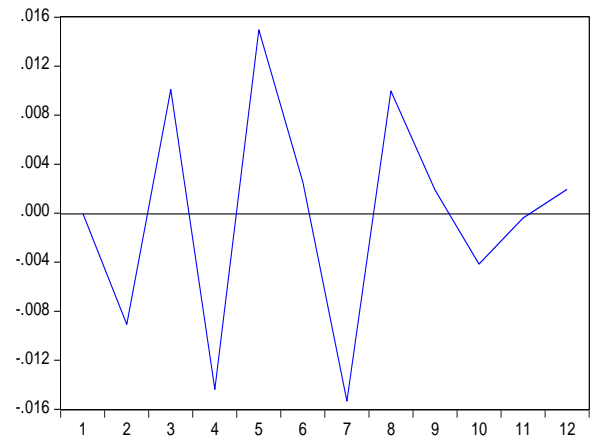
## Lampiran 10

### Hasil Analisis IRF

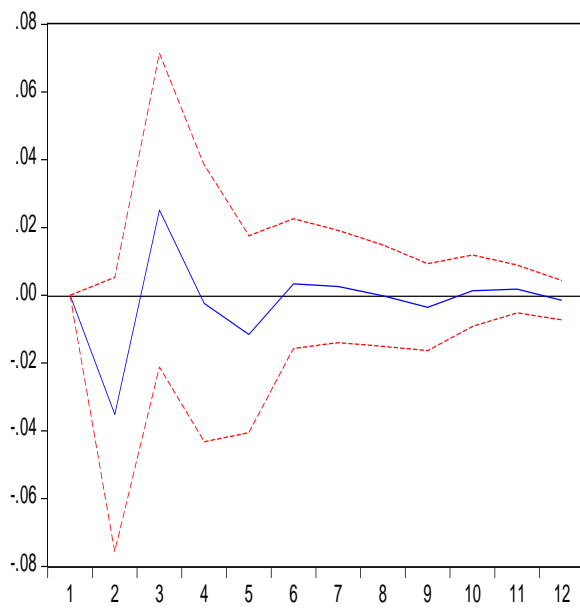
Response of D(LOG\_PBY) to Cholesky  
One S.D. D(LOG\_PBY) Innovation



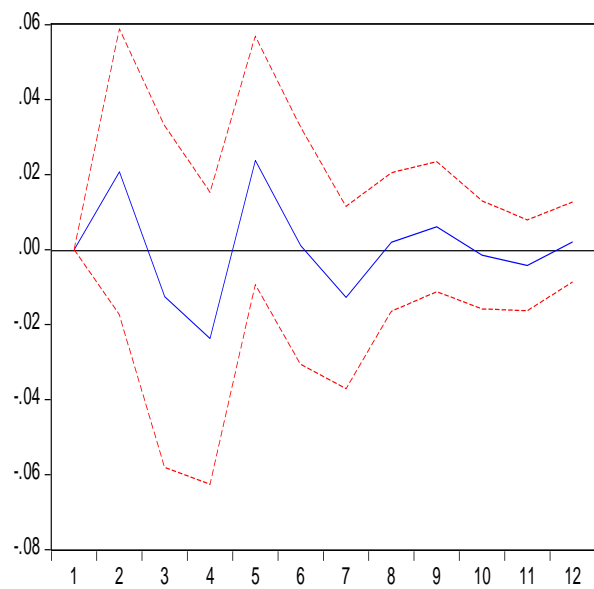
Response of D(LOG\_PBY) to Cholesky  
One S.D. D(LOG\_DPK) Innovation



Response of D(LOG\_PBY) to Cholesky  
One S.D. D(LOG\_NPF) Innovation



Response of D(LOG\_PBY) to Cholesky  
One S.D. D(LOG\_SBS) Innovation



## Lampiran 11

### Hasil Analisis FEVD

Period	S.E.	D(LOG_PBY)	D(LOG_DPK)	D(LOG_SBIS)	D(LOG_NPF)
1	0.121527	100.0000	0.000000	0.000000	0.000000
2	0.154601	92.68472	0.344583	1.797834	5.172865
3	0.160043	89.69750	0.719683	2.291593	7.291223
4	0.162446	87.07219	1.480776	4.349284	7.097754
5	0.165262	84.13039	2.251447	6.274466	7.343696
6	0.165478	84.10150	2.269111	6.262255	7.367131
7	0.167213	82.98111	3.062386	6.717668	7.238838
8	0.167730	82.71859	3.396768	6.690307	7.194337
9	0.167893	82.56344	3.402924	6.808826	7.224808
10	0.167995	82.50938	3.460067	6.808165	7.222392
11	0.168058	82.44746	3.458026	6.865708	7.228806
12	0.168094	82.41932	3.469953	6.877142	7.233582

Cholesky

Ordering:

D(LOG\_PBY)

D(LOG\_DPK)

D(LOG\_SBIS)

D(LOG\_NPF)



