

BAB V

KESIMPULAN DAN SARAN

Sebagai penutup dari skripsi ini, akan disajikan kesimpulan dari hasil penelitian dan pembahasan pada bab sebelumnya. Kemudian, akan di sampaikan pula saran yang didasarkan pada hasil kesimpulan. Saran dalam hasil penelitian ini diharapkan dapat bermanfaat bagi investor dan pihak-pihak lain yang berkepentingan sebagai masukan atau dasar pengambilan keputusan dalam melakukan aktifitas *hedging* dan memilih kontrak *futures* sebagai sarana *hedging* yang tepat dimasa yang akan datang.

Penelitian ini dimaksudkan untuk menganalisis efektivitas *hedging* dengan membandingkan dua kontrak *futures*. Dalam penelitian ini digunakan metode *Ordinary Least Square* (OLS) dan metode *Vector Auto Regression* (VAR) dalam mendeterminasikan *optimum hedge ratio*, dan untuk mengestimasi *optimum hedge ratio*.

Data set yang digunakan dalam penelitian ini adalah data *spot* saham harian serta data *futures* harian dari Januari 2012 sampai dengan Agustus 2013. Sumber data yang digunakan dalam penelitian ini adalah data sekunder.

Pertama akan dilakukan uji stasioneritas data menggunakan Dengan menggunakan uji ADF (*Augmented Dickey-Fuller*), suatu variabel diuji apakah stasioner atau tidak, jika hasil yang didapat dalam pengujian ini belum stasioner maka akan dilanjutkan ke tahap berikutnya yaitu tahap uji derajat integrasi (*Integration Test*).

Tahap berikutnya adalah melakukan analisis menggunakan metode *Ordinary Least Square (OLS)* dan *Vector Auto Regression (VAR)* terhadap data harian *BIST Securities Investment Trust*, *TURKDEX – BIST 30 Index Future Contract* dan *TURKDEX – BIST 100 Index Future Contract*.

Setelah *optimum hedge ratio* diketahui, tahap berikutnya adalah mencari dan membandingkan return serta tingkat risiko atau volatilitas dari index *BIST Securities Investment Trust* dan juga *hedge portofolionya*. Selanjutnya adalah mencari efektivitas *hedging*-nya. Efektivitas *hedging* dalam penelitian ini adalah efektivitas dalam *term* pengurangan risiko atau *risk reduction*. Setelah diketahui hasilnya, lalu dilakukan perbandingan untuk menentukan kontrak manakah yang lebih efektif dipakai untuk sarana *hedging*.

5.1 Kesimpulan

Index futures contract adalah salah satu cara *me-manage* atau melakukan lindung nilai (*hedging*) terhadap risiko sistematis di pasar saham. Penelitian ini dilakukan untuk mengkaji dan membandingkan efektivitas *hedging* dari dua kontrak *futures* yang diperdagangkan di *Turkish Derivatives Exchange (TURKDEX)* yakni *TURKDEX – BIST 30 Index Future Contract* dan *TURKDEX – BIST 100 Index Future Contract* terhadap *BIST Securities Investment Trust*. Data set yang digunakan dalam penelitian ini adalah data *spot* saham harian serta data *futures* harian dari Januari 2012 sampai dengan Agustus 2013.

Dari hasil tersebut dapat dilihat bahwa kontrak *futures TURKDEX BIST 100 Index Futures Contract* lebih superior dalam mengurangi risiko posisi *spot*

dari *BIST Securities Investment Trust*. *TURKDEX BIST 100 Index Futures Contract* mampu mengurangi risiko sebesar 9,96% dengan model OLS dan 9,91 dengan model VAR, angka ini lebih besar dari risk reduction pada *TURKDEX BIST 30 Index Futures Contract* yang hanya sebesar 2,78% dengan model OLS dan 2,69% dengan model VAR. Pengurangan risiko ini juga bersamaan dengan penurunan atau pengurangan retrun (*increasing loss*).

Dengan asumsi awal bahwa *BIST Securities Investment Trust* terdiri dari perusahaan *Investment Trust* yang dikelola oleh manajer profesional sehingga risiko tidak sistematisnya menjadi kecil, namun tetap menjadi sasaran dari risiko sistematis. Dengan demikian dapat dikatakan bahwa penggunaan *TURKDEX BIST 100 Index Futures Contract* dapat dikatakan mampu mengurangi risiko sistematis dari *BIST Securities Investment Trust* dan dapat digunakan sebagai sarana hedging yang baik.

5.2 Saran

Penelitian ini dilakukan untuk mengkaji dan membandingkan efektivitas hedging dari dua kontrak futures yang diperdagangkan di *Turkish Derivatives Exchange* (*TURKDEX*) yakni *TURKDEX – BIST 30 Index Future Contract* dan *TURKDEX – BIST 100 Index Future Contract* terhadap *BIST Securities Investment Trust*. Saran untuk penelitian-penelitian selanjutnya agar menggunakan lebih dari dua kontrak futures, serta periode penelitian diperpanjang. Penelitian selanjutnya juga diharapkan dapat menggunakan lebih banyak metode dalam menentukan *optimum hedge ratio*.

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LAMPIRAN 1

Null Hypothesis: **SETTLEMENT_BITS_30** has a unit root
 Exogenous: Constant
 Lag Length: 4 (Automatic - based on SIC, maxlag=17)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.921467	0.3223
Test critical values:		
1% level	-3.446525	
5% level	-2.868565	
10% level	-2.570578	

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

Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(SETTLEMENT_BITS_30)
 Method: Least Squares
 Date: 06/18/14 Time: 19:08
 Sample (adjusted): 1/09/2012 8/02/2013
 Included observations: 399 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
SETTLEMENT_BITS_30(-1)	-0.009692	0.005044	-1.921467	0.0554
D(SETTLEMENT_BITS_30(-1))	-0.037423	0.049495	-0.756101	0.4500
D(SETTLEMENT_BITS_30(-2))	0.027704	0.048441	0.571924	0.5677
D(SETTLEMENT_BITS_30(-3))	0.213234	0.048428	4.403151	0.0000
D(SETTLEMENT_BITS_30(-4))	-0.148654	0.049446	-3.006415	0.0028
C	913.3021	441.8251	2.067112	0.0394

R-squared	0.084525	Mean dependent var	77.75689
Adjusted R-squared	0.072878	S.D. dependent var	1418.055
S.E. of regression	1365.406	Akaike info criterion	17.29121
Sum squared resid	7.33E+08	Schwarz criterion	17.35120
Log likelihood	-3443.597	Hannan-Quinn criter.	17.31497
F-statistic	7.257063	Durbin-Watson stat	2.009839
Prob(F-statistic)	0.000002		

Null Hypothesis: **RF_BITS_30** has a unit root
 Exogenous: Constant
 Lag Length: 3 (Automatic - based on SIC, maxlag=17)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-10.11076	0.0000
Test critical values:		
1% level	-3.446484	
5% level	-2.868547	
10% level	-2.570568	

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

Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(RF_BITS_30)
 Method: Least Squares
 Date: 06/18/14 Time: 19:09
 Sample (adjusted): 1/06/2012 8/02/2013
 Included observations: 400 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RF_BITS_30(-1)	-0.986845	0.097603	-10.11076	0.0000
D(RF_BITS_30(-1))	-0.046161	0.087950	-0.524850	0.6000
D(RF_BITS_30(-2))	-0.024260	0.071588	-0.338884	0.7349
D(RF_BITS_30(-3))	0.145089	0.049464	2.933240	0.0035
C	0.000952	0.000768	1.239674	0.2158
R-squared	0.554059	Mean dependent var		3.19E-05
Adjusted R-squared	0.549543	S.D. dependent var		0.022718
S.E. of regression	0.015248	Akaike info criterion		-5.516356
Sum squared resid	0.091834	Schwarz criterion		-5.466463
Log likelihood	1108.271	Hannan-Quinn criter.		-5.496598
F-statistic	122.6916	Durbin-Watson stat		1.998885
Prob(F-statistic)	0.000000			

Null Hypothesis: **SETTLEMENT_BITS_100** has a unit root
 Exogenous: Constant
 Lag Length: 0 (Automatic - based on SIC, maxlag=17)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.683114	0.4391
Test critical values:		
1% level	-3.446362	
5% level	-2.868493	
10% level	-2.570539	

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

Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(SETTLEMENT_BITS_100)
 Method: Least Squares
 Date: 06/18/14 Time: 19:10
 Sample (adjusted): 1/03/2012 8/02/2013
 Included observations: 403 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
SETTLEMENT_BITS_100(-1)	-0.007742	0.004600	-1.683114	0.0931
C	607.5141	327.7245	1.853734	0.0645
R-squared	0.007015	Mean dependent var		62.03474
Adjusted R-squared	0.004539	S.D. dependent var		979.4044
S.E. of regression	977.1792	Akaike info criterion		16.61217
Sum squared resid	3.83E+08	Schwarz criterion		16.63201
Log likelihood	-3345.352	Hannan-Quinn criter.		16.62002
F-statistic	2.832874	Durbin-Watson stat		2.077446
Prob(F-statistic)	0.093131			

Null Hypothesis: **RF_BITS_100** has a unit root
 Exogenous: Constant
 Lag Length: 0 (Automatic - based on SIC, maxlag=17)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-20.91742	0.0000
Test critical values:		
1% level	-3.446362	
5% level	-2.868493	
10% level	-2.570539	

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

Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(RF_BITS_100)
 Method: Least Squares
 Date: 06/18/14 Time: 19:11
 Sample (adjusted): 1/03/2012 8/02/2013
 Included observations: 403 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RF_BITS_100(-1)	-1.050092	0.050202	-20.91742	0.0000
C	0.001024	0.000653	1.568467	0.1176
R-squared	0.521787	Mean dependent var		7.64E-05
Adjusted R-squared	0.520594	S.D. dependent var		0.018875
S.E. of regression	0.013069	Akaike info criterion		-5.832192
Sum squared resid	0.068491	Schwarz criterion		-5.812346
Log likelihood	1177.187	Hannan-Quinn criter.		-5.824335
F-statistic	437.5384	Durbin-Watson stat		1.980922
Prob(F-statistic)	0.000000			

Null Hypothesis: **CLOSING_PRICE_SITS** has a unit root
 Exogenous: Constant
 Lag Length: 0 (Automatic - based on SIC, maxlag=17)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.112623	0.2399
Test critical values:		
1% level	-3.446362	
5% level	-2.868493	
10% level	-2.570539	

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

Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(CLOSING_PRICE_SITS)
 Method: Least Squares
 Date: 06/18/14 Time: 19:12
 Sample (adjusted): 1/03/2012 8/02/2013
 Included observations: 403 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CLOSING_PRICE_SITS(-1)	-0.014305	0.006771	-2.112623	0.0353
C	323.7514	149.8100	2.161079	0.0313
R-squared	0.011008	Mean dependent var		7.997667
Adjusted R-squared	0.008541	S.D. dependent var		206.2057
S.E. of regression	205.3232	Akaike info criterion		13.49200
Sum squared resid	16905196	Schwarz criterion		13.51184
Log likelihood	-2716.638	Hannan-Quinn criter.		13.49985
F-statistic	4.463177	Durbin-Watson stat		1.955635
Prob(F-statistic)	0.035251			

Null Hypothesis: **RS_BITS_SITS** has a unit root
 Exogenous: Constant
 Lag Length: 0 (Automatic - based on SIC, maxlag=17)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-19.73612	0.0000
Test critical values:		
1% level	-3.446362	
5% level	-2.868493	
10% level	-2.570539	

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

Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(RS)
 Method: Least Squares
 Date: 06/18/14 Time: 19:12
 Sample (adjusted): 1/03/2012 8/02/2013
 Included observations: 403 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RS(-1)	-0.988490	0.050085	-19.73612	0.0000
C	0.000383	0.000464	0.825656	0.4095
R-squared	0.492735	Mean dependent var		-3.49E-05
Adjusted R-squared	0.491470	S.D. dependent var		0.013054
S.E. of regression	0.009309	Akaike info criterion		-6.510724
Sum squared resid	0.034750	Schwarz criterion		-6.490878
Log likelihood	1313.911	Hannan-Quinn criter.		-6.502867
F-statistic	389.5145	Durbin-Watson stat		1.994189
Prob(F-statistic)	0.000000			



LAMPIRAN 2

Date: 06/20/14 Time: 04:31
 Sample (adjusted): 1/09/2012 8/02/2013
 Included observations: 399 after adjustments
 Trend assumption: Linear deterministic trend
 Series: RF_BITS_30 RS
 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 *	0.208278	160.7640	15.49471	0.0001
At most 1 *	0.155806	67.57969	3.841466	0.0000

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 *	0.208278	93.18430	14.26460	0.0000
At most 1 *	0.155806	67.57969	3.841466	0.0000

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

Unrestricted Cointegrating Coefficients (normalized by b*S11*b=I):

RF_BITS_30	RS
-148.8536	211.6903
67.77866	162.5388

Unrestricted Adjustment Coefficients (alpha):

D(RF_BITS_30)	0.004841	-0.005033
D(RS)	-0.002866	-0.002926

1 Cointegrating Equation(s): Log likelihood 2404.918

Normalized cointegrating coefficients (standard error in parentheses)

RF_BITS_30	RS
1.000000	-1.422138 (0.15649)

Adjustment coefficients (standard error in parentheses)

D(RF_BITS_30)	-0.720570 (0.11972)
D(RS)	0.426674 (0.07006)

Date: 06/20/14 Time: 06:41
 Sample (adjusted): 1/05/2012 8/02/2013
 Included observations: 401 after adjustments
 Trend assumption: Linear deterministic trend
 Series: RS RF_BITS_100
 Lags interval (in first differences): 1 to 2

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.267093	213.2281	15.49471	0.0001
At most 1 *	0.198287	88.62276	3.841466	0.0000

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 *	0.267093	124.6053	14.26460	0.0001
At most 1 *	0.198287	88.62276	3.841466	0.0000

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

Unrestricted Cointegrating Coefficients (normalized by b*S11*b=I):

	RS	RF_BITS_100
	-198.5842	93.48682
	-45.95164	-118.3405

Unrestricted Adjustment Coefficients (alpha):

	D(RS)	D(RF_BITS_100)
	0.004829	0.002229
	-0.001399	0.006333

1 Cointegrating Equation(s): Log likelihood 2464.729

Normalized cointegrating coefficients (standard error in parentheses)

	RS	RF_BITS_100
	1.000000	-0.470767 (0.05724)
Adjustment coefficients (standard error in parentheses)		
	D(RS)	-0.958892 (0.09428)
	D(RF_BITS_100)	0.277872 (0.14398)



LAMPIRAN 3

Dependent Variable: RS

Method: Least Squares

Date: 06/18/14 Time: 19:22

Sample: 1/02/2012 8/02/2013

Included observations: 404

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RF_BITS_30	0.099219	0.029028	3.418077	0.0007

R-squared	0.026480	Mean dependent var		0.000387
Adjusted R-squared	0.026480	S.D. dependent var		0.009286
S.E. of regression	0.009163	Akaike info criterion		-6.544878
Sum squared resid	0.033834	Schwarz criterion		-6.534974
Log likelihood	1323.065	Hannan-Quinn criter.		-6.540958
Durbin-Watson stat	2.078555			

Dependent Variable: RS

Method: Least Squares

Date: 06/18/14 Time: 19:24

Sample: 1/02/2012 8/02/2013

Included observations: 404

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RF_BITS_100	0.224367	0.033560	6.685607	0.0000

R-squared	0.098270	Mean dependent var		0.000387
Adjusted R-squared	0.098270	S.D. dependent var		0.009286
S.E. of regression	0.008818	Akaike info criterion		-6.621481
Sum squared resid	0.031339	Schwarz criterion		-6.611576
Log likelihood	1338.539	Hannan-Quinn criter.		-6.617560
Durbin-Watson stat	2.074224			



LAMPIRAN 4

VAR Lag Order Selection Criteria

Endogenous variables: RF_BITS_30 RS

Exogenous variables: C

Date: 06/20/14 Time: 03:16

Sample: 1/02/2012 8/02/2013

Included observations: 396

Lag	LogL	LR	FPE	AIC	SC	HQ
0	2386.008	NA	2.02e-08	-12.04045	-12.02034	-12.03248
1	2409.218	46.06837	1.84e-08	-12.13747	-12.07714*	-12.11357*
2	2410.502	2.535521	1.86e-08	-12.12375	-12.02321	-12.08392
3	2417.487	13.72312	1.83e-08	-12.13883	-11.99807	-12.08306
4	2423.503	11.75748*	1.81e-08*	-12.14900*	-11.96803	-12.07731
5	2423.846	0.666797	1.85e-08	-12.13053	-11.90934	-12.04291
6	2424.568	1.396610	1.88e-08	-12.11398	-11.85257	-12.01042
7	2427.342	5.337531	1.89e-08	-12.10779	-11.80616	-11.98829
8	2427.985	1.232073	1.92e-08	-12.09083	-11.74900	-11.95541

* 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

Vector Autoregression Estimates

Date: 06/20/14 Time: 04:06

Sample (adjusted): 1/06/2012 8/02/2013

Included observations: 400 after adjustments

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

	RS	RF_BITS_30
RS(-1)	-0.040196 (0.05178) [-0.77628]	0.002647 (0.08889) [0.02978]
RS(-2)	0.020876 (0.05190) [0.40221]	0.006241 (0.08910) [0.07004]
RS(-3)	-0.035869 (0.05186) [-0.69170]	0.131950 (0.08902) [1.48225]
RS(-4)	-0.006081 (0.04884) [-0.12449]	0.029271 (0.08385) [0.34910]
RF_BITS_30(-1)	0.192955 (0.02965) [6.50734]	-0.034225 (0.05090) [-0.67237]
RF_BITS_30(-2)	-0.005669 (0.03102) [-0.18272]	0.019498 (0.05326) [0.36612]
RF_BITS_30(-3)	0.016467 (0.03085) [0.53374]	0.153411 (0.05296) [2.89663]
RF_BITS_30(-4)	0.014737 (0.03110) [0.47383]	-0.174088 (0.05339) [-3.26063]
C	0.000241 (0.00045) [0.53751]	0.000929 (0.00077) [1.20631]
R-squared	0.105931	0.061699
Adj. R-squared	0.087638	0.042501
Sum sq. resids	0.030982	0.091301
S.E. equation	0.008902	0.015281
F-statistic	5.790810	3.213805
Log likelihood	1325.589	1109.436
Akaike AIC	-6.582947	-5.502178
Schwarz SC	-6.493139	-5.412370
Mean dependent	0.000421	0.000970
S.D. dependent	0.009319	0.015616

Determinant resid covariance (dof adj.) 1.77E-08
Determinant resid covariance 1.70E-08
Log likelihood 2443.449
Akaike information criterion -12.12724
Schwarz criterion -11.94763

Residual Covarian Matrix

	RS	RF_BITS_30
RS	0,000078	0,000027
RF_BITS_30	0,000027	0.000228

VAR Lag Order Selection Criteria

Endogenous variables: RS RF_BITS_100

Exogenous variables: C

Date: 06/20/14 Time: 04:54

Sample: 1/02/2012 8/02/2013

Included observations: 396

Lag	LogL	LR	FPE	AIC	SC	HQ
0	2468.950	NA	1.33e-08	-12.45934	-12.43923*	-12.45138
1	2476.136	14.26410*	1.31e-08*	-12.47544*	-12.41511	-12.45154*
2	2476.930	1.566346	1.33e-08	-12.45924	-12.35870	-12.41941
3	2480.346	6.712275	1.33e-08	-12.45629	-12.31554	-12.40053
4	2481.298	1.859570	1.36e-08	-12.44090	-12.25992	-12.36920
5	2481.729	0.838392	1.38e-08	-12.42287	-12.20168	-12.33524
6	2482.412	1.320996	1.40e-08	-12.40612	-12.14471	-12.30256
7	2485.915	6.741278	1.41e-08	-12.40361	-12.10199	-12.28412
8	2488.008	4.005964	1.42e-08	-12.39398	-12.05214	-12.25855

* 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

Vector Autoregression Estimates

Date: 06/20/14 Time: 05:49

Sample (adjusted): 1/04/2012 8/02/2013

Included observations: 402 after adjustments

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

	RS	RF_BITS_100
RS(-1)	-0.048632 (0.05345) [-0.90987]	0.004626 (0.07588) [0.06096]
RS(-2)	0.016706 (0.05266) [0.31727]	-0.049089 (0.07476) [-0.65665]
RF_BITS_100(-1)	0.122146 (0.03773) [3.23744]	-0.048491 (0.05357) [-0.90528]
RF_BITS_100(-2)	0.018989 (0.03821) [0.49700]	0.058368 (0.05424) [1.07602]
C	0.000283 (0.00046) [0.61046]	0.000964 (0.00066) [1.46765]
R-squared	0.026404	0.005790
Adj. R-squared	0.016595	-0.004227
Sum sq. resids	0.033826	0.068180
S.E. equation	0.009231	0.013105
F-statistic	2.691717	0.578047
Log likelihood	1315.565	1174.679
Akaike AIC	-6.520223	-5.819300
Schwarz SC	-6.470516	-5.769593
Mean dependent	0.000396	0.000956
S.D. dependent	0.009308	0.013077
Determinant resid covariance (dof adj.)		1.31E-08
Determinant resid covariance		1.27E-08
Log likelihood		2513.028
Akaike information criterion		-12.45287
Schwarz criterion		-12.35346

Residual Covarian Matrix

	RS	RF_BITS_30
RS	0,000084	0,000039
RF_BITS_30	0,0000391	0.000170

