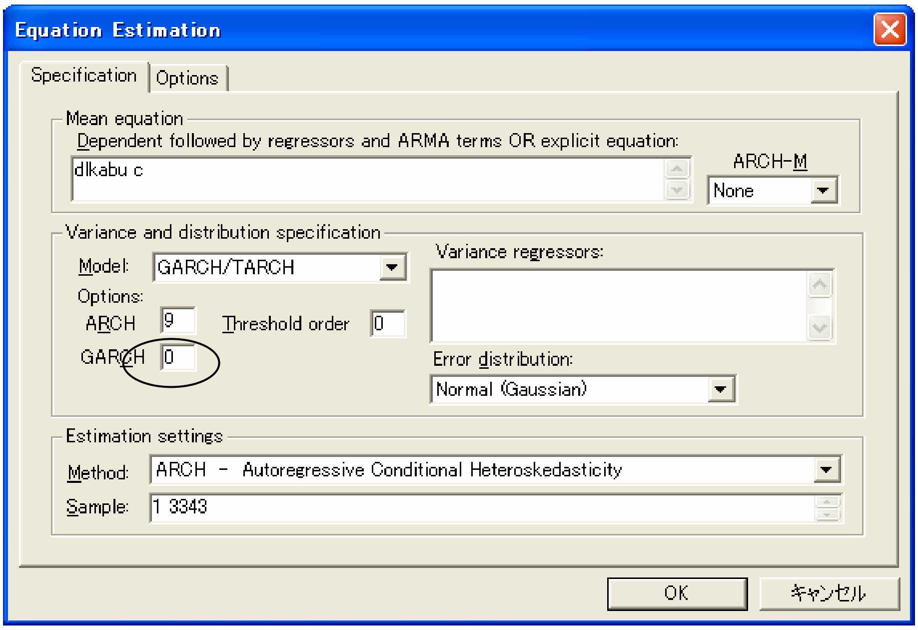
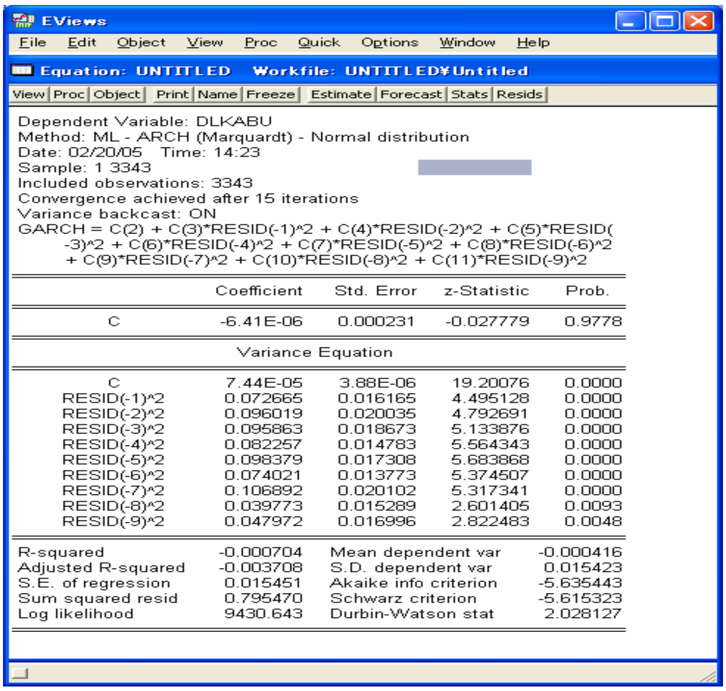
ＡＲＣＨ、ＧＡＲＣＨモデルの計算例

[Quick] → [Equation Estimation] で、method を ARCH にする。

ＡＲＣＨ（９）の場合



出力結果（Eviews Var5 では結果が教科書と微妙に異なります）

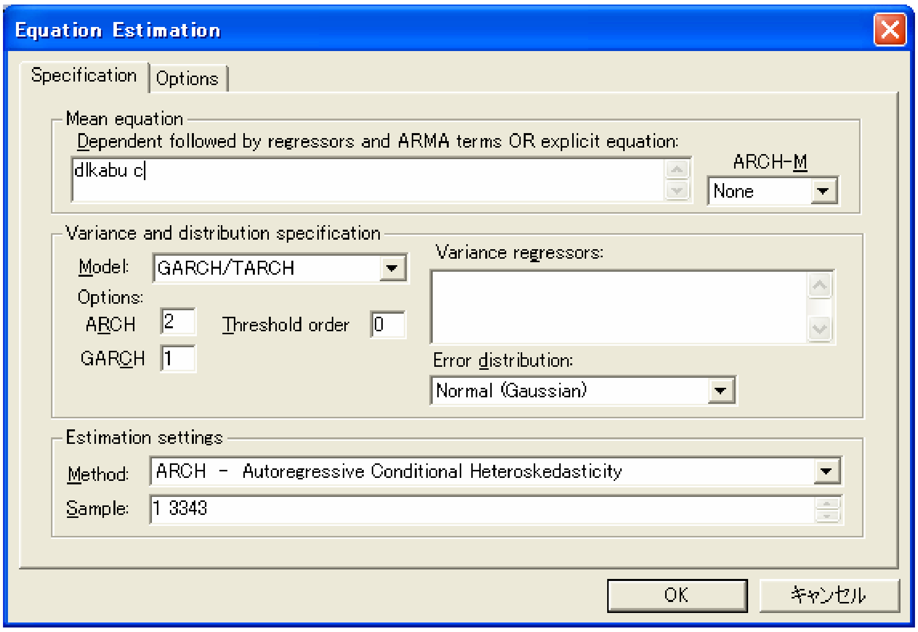


Dependent Variable: DLKABU
Method: ML - ARCH (Marquardt) - Normal distribution
Date: 02/20/05 Time: 14:23
Sample: 1 3343
Included observations: 3343
Convergence achieved after 15 iterations
Variance backcast: ON
GARCH = C(2) + C(3)*RESID(-1)^2 + C(4)*RESID(-2)^2 + C(5)*RESID(-3)^2 + C(6)*RESID(-4)^2 + C(7)*RESID(-5)^2 + C(8)*RESID(-6)^2 + C(9)*RESID(-7)^2 + C(10)*RESID(-8)^2 + C(11)*RESID(-9)^2

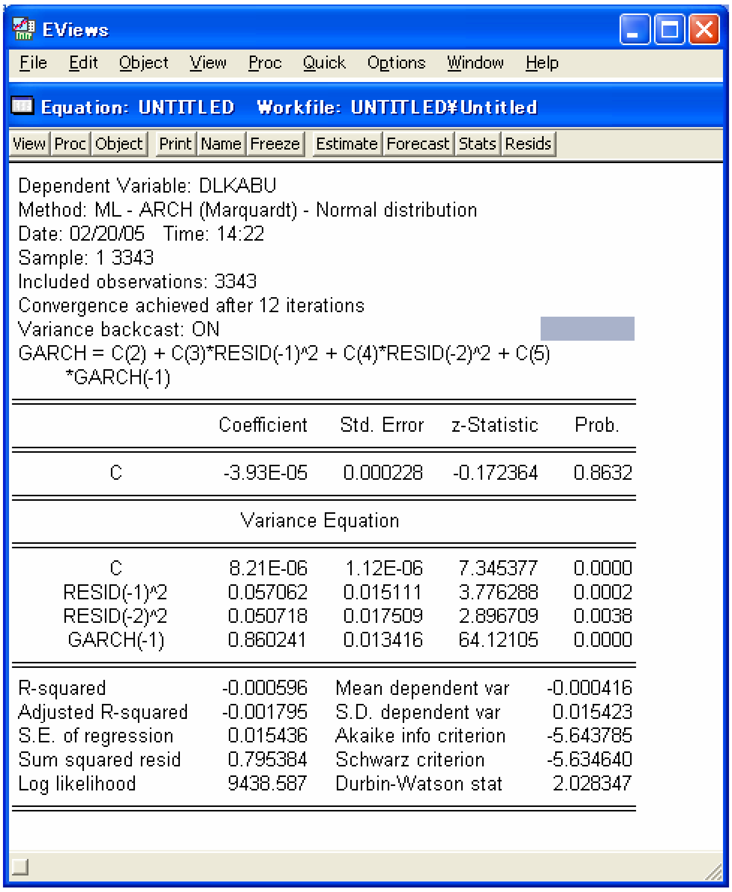
	Coefficient	Std. Error	z-Statistic	Prob.
C	-6.41E-06	0.000231	-0.027779	0.9778
Variance Equation				
C	7.44E-05	3.88E-06	19.20076	0.0000
RESID(-1)^2	0.072665	0.016165	4.495128	0.0000
RESID(-2)^2	0.096019	0.020035	4.792691	0.0000
RESID(-3)^2	0.095863	0.018673	5.133876	0.0000
RESID(-4)^2	0.082257	0.014783	5.564343	0.0000
RESID(-5)^2	0.098379	0.017308	5.683868	0.0000
RESID(-6)^2	0.074021	0.013773	5.374507	0.0000
RESID(-7)^2	0.106892	0.020102	5.317341	0.0000
RESID(-8)^2	0.039773	0.015289	2.601405	0.0093
RESID(-9)^2	0.047972	0.016996	2.822483	0.0048

R-squared	-0.000704	Mean dependent var	-0.000416
Adjusted R-squared	-0.003708	S.D. dependent var	0.015423
S.E. of regression	0.015451	Akaike info criterion	-5.635443
Sum squared resid	0.795470	Schwarz criterion	-5.615323
Log likelihood	9430.643	Durbin-Watson stat	2.028127

ＧＡＲＣＨ（２，１）の場合



出力結果



Dependent Variable: DLKABU
Method: ML - ARCH (Marquardt) - Normal distribution
Date: 02/20/05 Time: 14:22
Sample: 1 3343
Included observations: 3343
Convergence achieved after 12 iterations
Variance backcast: ON
GARCH = C(2) + C(3)*RESID(-1)^2 + C(4)*RESID(-2)^2 + C(5)*GARCH(-1)

	Coefficient	Std. Error	z-Statistic	Prob.
C	-3.93E-05	0.000228	-0.172364	0.8632
	Variance Equation			
C	8.21E-06	1.12E-06	7.345377	0.0000
RESID(-1)^2	0.057062	0.015111	3.776288	0.0002
RESID(-2)^2	0.050718	0.017509	2.896709	0.0038
GARCH(-1)	0.860241	0.013416	64.12105	0.0000

R-squared	-0.000596	Mean dependent var	-0.000416
Adjusted R-squared	-0.001795	S.D. dependent var	0.015423
S.E. of regression	0.015436	Akaike info criterion	-5.643785
Sum squared resid	0.795384	Schwarz criterion	-5.634640
Log likelihood	9438.587	Durbin-Watson stat	2.028347