

มหาวิทยาลัยเชียงใหม่  
Chiang Mai University

**ภาคผนวก ก**

**ผลการทดสอบ ธนาคารกรุงเทพ**

**Result of Bangkok Bank****Unit Root (Trend and Intercept)**

ADF Test Statistic	-16.93076	1% Critical Value*	-3.9968
		5% Critical Value	-3.4285
		10% Critical Value	-3.1373

\*MacKinnon critical values for rejection of hypothesis of a unit root.

**Augmented Dickey-Fuller Test Equation**

Dependent Variable: D(RBBL)

Method: Least Squares

Date: 05/28/03 Time: 20:15

Sample(adjusted): 1/18/1998 12/29/2002

Included observations: 259 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RBBL(-1)	-1.036544	0.061223	-16.93076	0.0000
C	0.022425	1.068634	0.020985	0.9833
@TREND(1/11/1998)	0.001880	0.007128	0.263699	0.7922
R-squared	0.528336	Mean dependent var		0.115710
Adjusted R-squared	0.524651	S.D. dependent var		12.43307
S.E. of regression	8.572051	Akaike info criterion		7.146407
Sum squared resid	18810.90	Schwarz criterion		7.187605
Log likelihood	-922.4596	F-statistic		143.3796
Durbin-Watson stat	1.955771	Prob(F-statistic)		0.000000

**Unit Root (Intercept)**

ADF Test Statistic	-16.96265	1% Critical Value*	-3.4572
		5% Critical Value	-2.8728
		10% Critical Value	-2.5727

\*MacKinnon critical values for rejection of hypothesis of a unit root.

**Augmented Dickey-Fuller Test Equation**

Dependent Variable: D(RBBL)

Method: Least Squares

Date: 05/28/03 Time: 20:16

Sample(adjusted): 1/18/1998 12/29/2002

Included observations: 259 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RBBL(-1)	-1.035979	0.061074	-16.96265	0.0000
C	0.266713	0.531751	0.501575	0.6164
R-squared	0.528208	Mean dependent var		0.115710
Adjusted R-squared	0.526372	S.D. dependent var		12.43307
S.E. of regression	8.556520	Akaike info criterion		7.138956
Sum squared resid	18816.01	Schwarz criterion		7.166422
Log likelihood	-922.4948	F-statistic		287.7313
Durbin-Watson stat	1.956529	Prob(F-statistic)		0.000000

**Unit Root (None)**

DF Test Statistic	-16.98127	1% Critical Value*	-2.5735
		5% Critical Value	-1.9408
		10% Critical Value	-1.6163

\*MacKinnon critical values for rejection of hypothesis of a unit root.

**Augmented Dickey-Fuller Test Equation**

Dependent Variable: D(RBBL)

Method: Least Squares

Date: 05/28/03 Time: 20:16

Sample(adjusted): 1/18/1998 12/29/2002

Included observations: 259 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RBBL(-1)	-1.035466	0.060977	-16.98127	0.0000
R-squared	0.527746	Mean dependent var		0.115710
Adjusted R-squared	0.527746	S.D. dependent var		12.43307
S.E. of regression	8.544100	Akaike info criterion		7.132213
Sum squared resid	18834.42	Schwarz criterion		7.145945
Log likelihood	-922.6215	Durbin-Watson stat		1.955786

**Cointegration**

Dependent Variable: RBBL

Method: Least Squares

Date: 05/28/03 Time: 20:18

Sample: 1/11/1998 12/29/2002

Included observations: 260

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.007187	0.304721	0.023586	0.9812
RM	1.492509	0.063324	23.56927	0.0000
R-squared	0.682856	Mean dependent var		0.153128
Adjusted R-squared	0.681627	S.D. dependent var		8.706236
S.E. of regression	4.912456	Akaike info criterion		6.029088
Sum squared resid	6226.115	Schwarz criterion		6.056478
Log likelihood	-781.7814	F-statistic		555.5106
Durbin-Watson stat	1.950205	Prob(F-statistic)		0.000000

**Residual**

ADF Test Statistic	-16.58567	1% Critical Value*	-2.5735
		5% Critical Value	-1.9408
		10% Critical Value	-1.6163

\*MacKinnon critical values for rejection of hypothesis of a unit root.

**Augmented Dickey-Fuller Test Equation**

Dependent Variable: D(RESID01)

Method: Least Squares

Date: 05/28/03 Time: 20:18

Sample(adjusted): 1/18/1998 12/29/2002

Included observations: 259 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RESID01(-1)	-1.003211	0.060487	-16.58567	0.0000
R-squared	0.515974	Mean dependent var		0.069464
Adjusted R-squared	0.515974	S.D. dependent var		6.859880
S.E. of regression	4.772553	Akaike info criterion		5.967493
Sum squared resid	5876.534	Schwarz criterion		5.981226
Log likelihood	-771.7904	Durbin-Watson stat		2.020904

**Error Collection Model (ECM)**

Dependent Variable: D(RBBL)

Method: Least Squares

Date: 05/28/03 Time: 20:20

Sample(adjusted): 1/25/1998 12/29/2002

Included observations: 258 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.063825	0.582427	0.109585	0.9128
D(RM(-1))	-0.723964	0.205688	-3.519717	0.0005
D(RBBL(-1))	-0.099417	0.119074	-0.834922	0.4045
RESID01(-1)	-0.999407	0.170644	-5.856665	0.0000
R-squared	0.421419	Mean dependent var		-0.032643
Adjusted R-squared	0.414586	S.D. dependent var		12.22540
S.E. of regression	9.353943	Akaike info criterion		7.324855
Sum squared resid	22224.05	Schwarz criterion		7.379940
Log likelihood	-940.9064	F-statistic		61.66840
Durbin-Watson stat	2.282951	Prob(F-statistic)		0.000000

Switching by Limdep

--> RESET

--> READ;file="C:\Documents and Settings\Administrator\My Documents\L-Bank\BB...

this is record 512. expect len=10, found 10

--> SWITCH;Lhs=RBBL;Rh1=ONE, RM; Rh2=ONE, RM; Sep=I\$

```
Switching Regressions
Ordinary least squares regression Weighting variable = none
Dep. var. = RBBL Mean= 6.124163890 S.D.= 7.246425217
Model size: Observations = 130, Parameters = 2, Deg.Fr.= 128
Residuals: Sum of squares= 3046.827630 , Std.Dev.= 4.87887
Fit: R-squared= .550209, Adjusted R-squared = .54670
Model test: F[ 1, 128] = 156.58, Prob value = .00000
Diagnostic: Log-L = -389.4929, Restricted(b=0) Log-L = -441.4262
LogAmemiyaPrCrt.= 3.185, Akaike Info. Crt.= 6.023
OLS estimates of equation 1
```

Variable	Coefficient	Standard Error	b/St.Er.	P[ Z >z]	Mean of X
Constant	1.880449301	.54600405	3.444	.0006	
RM	1.355260808	.10830768	12.513	.0000	3.1312900

```
Switching Regressions
Ordinary least squares regression Weighting variable = none
Dep. var. = RBBL Mean= -5.817906976 , S.D.= 5.273965033
Model size: Observations = 130, Parameters = 2, Deg.Fr.= 128
Residuals: Sum of squares= 2199.002003 , Std.Dev.= 4.14484
Fit: R-squared= .387140, Adjusted R-squared = .38235
Model test: F[ 1, 128] = 80.86, Prob value = .00000
Diagnostic: Log-L = -368.2966, Restricted(b=0) Log-L = -400.1218
LogAmemiyaPrCrt.= 2.859, Akaike Info. Crt.= 5.697
OLS estimates of equation 0
```

Variable	Coefficient	Standard Error	b/St.Er.	P[ Z >z]	Mean of X
Constant	-2.434608197	.41931785	-5.806	.0000	
RM	1.152457788	.71187806E-01	16.189	.0000	-2.9357247

Normal exit from iterations. Exit status=0.

```
Switching Regressions
Maximum Likelihood Estimates
Dependent variable RBBL
Weighting variable ONE
Number of observations 260
Iterations completed 13
Log likelihood function -909.0151
Sample separation variable is I
RBBL is the minimum of y*(1) and y*(0)
```

Variable	Coefficient	Standard Error	b/St.Er.	P[ Z >z]	Mean of X
RHS for Regime 1					
Constant	4.139733448	.61878456	6.690	.0000	
RM	2.242734946	.12452584	18.010	.0000	3.1312900
RHS for Regime 2					
Constant	4.137216094	.62478993	6.622	.0000	
RM	.9500577082	.96940561E-01	9.800	.0000	-2.9357247
Sigma(1)	6.848676640	.43436741	15.767	.0000	
Sigma(0)	4.749084514	.20651929	22.996	.0000	

มหาวิทยาลัยเชียงใหม่  
Chiang Mai University

ภาคผนวก ข

ผลการทดสอบ วิชาการกสิกรรมไทย

**Result of Thai Farmer Bank****Unit Root (Trend and Intercept)**

ADF Test Statistic	-16.10626	1% Critical Value*	-3.9968
		5% Critical Value	-3.4285
		10% Critical Value	-3.1373

\*MacKinnon critical values for rejection of hypothesis of a unit root.

**Augmented Dickey-Fuller Test Equation**

Dependent Variable: D(RTFB)

Method: Least Squares

Date: 05/28/03 Time: 20:56

Sample(adjusted): 1/18/1998 12/29/2002

Included observations: 259 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RTFB(-1)	-0.988592	0.061379	-16.10626	0.0000
C	0.658167	1.065807	0.617529	0.5374
@TREND(1/11/1998)	-0.002756	0.007106	-0.387836	0.6985
R-squared	0.503400	Mean dependent var		0.107256
Adjusted R-squared	0.499520	S.D. dependent var		12.08630
S.E. of regression	8.550405	Akaike info criterion		7.141350
Sum squared resid	18716.01	Schwarz criterion		7.182548
Log likelihood	-921.8048	F-statistic		129.7528
Durbin-Watson stat	1.940870	Prob(F-statistic)		0.000000

**Unit Root (Intercept)**

ADF Test Statistic	-16.13119	1% Critical Value*	-3.4572
		5% Critical Value	-2.8728
		10% Critical Value	-2.5727

\*MacKinnon critical values for rejection of hypothesis of a unit root.

**Augmented Dickey-Fuller Test Equation**

Dependent Variable: D(RTFB)

Method: Least Squares

Date: 05/28/03 Time: 20:56

Sample(adjusted): 1/18/1998 12/29/2002

Included observations: 259 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RTFB(-1)	-0.988472	0.061277	-16.13119	0.0000
C	0.299859	0.530552	0.565183	0.5724
R-squared	0.503108	Mean dependent var		0.107256
Adjusted R-squared	0.501175	S.D. dependent var		12.08630
S.E. of regression	8.536260	Akaike info criterion		7.134215
Sum squared resid	18727.01	Schwarz criterion		7.161681
Log likelihood	-921.8809	F-statistic		260.2153
Durbin-Watson stat	1.939991	Prob(F-statistic)		0.000000

**Unit Root (None)**

ADF Test Statistic	-16.14386	1% Critical Value*	-2.5735
		5% Critical Value	-1.9408
		10% Critical Value	-1.6163

\*MacKinnon critical values for rejection of hypothesis of a unit root.

**Augmented Dickey-Fuller Test Equation**

Dependent Variable: D(RTFB)

Method: Least Squares

Date: 05/28/03 Time: 20:56

Sample(adjusted): 1/18/1998 12/29/2002

Included observations: 259 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RTFB(-1)	-0.987693	0.061181	-16.14386	0.0000
R-squared	0.502491	Mean dependent var		0.107256
Adjusted R-squared	0.502491	S.D. dependent var		12.08630
S.E. of regression	8.524994	Akaike info criterion		7.127735
Sum squared resid	18750.29	Schwarz criterion		7.141468
Log likelihood	-922.0417	Durbin-Watson stat		1.939246

**Cointegration**

Dependent Variable: RTFB

Method: Least Squares

Date: 05/28/03 Time: 20:56

Sample: 1/11/1998 12/29/2002

Included observations: 260

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.056366	0.302255	0.186484	0.8522
RM	1.485690	0.062812	23.65299	0.0000
R-squared	0.684390	Mean dependent var		0.201640
Adjusted R-squared	0.683167	S.D. dependent var		8.656744
S.E. of regression	4.872705	Akaike info criterion		6.012838
Sum squared resid	6125.759	Schwarz criterion		6.040228
Log likelihood	-779.6689	F-statistic		559.4642
Durbin-Watson stat	2.119414	Prob(F-statistic)		0.000000



**Residual**

ADF Test Statistic	-17.86065	1% Critical Value*	-2.5735
		5% Critical Value	-1.9408
		10% Critical Value	-1.6163

\*MacKinnon critical values for rejection of hypothesis of a unit root.

**Augmented Dickey-Fuller Test Equation**

Dependent Variable: D(RESID01)

Method: Least Squares

Date: 05/28/03 Time: 20:57

Sample(adjusted): 1/18/1998 12/29/2002

Included observations: 259 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RESID01(-1)	-1.082533	0.060610	-17.86065	0.0000
R-squared	0.552828	Mean dependent var	0.061222	
Adjusted R-squared	0.552828	S.D. dependent var	7.093519	
S.E. of regression	4.743499	Akaike info criterion	5.955281	
Sum squared resid	5805.203	Schwarz criterion	5.969014	
Log likelihood	-770.2089	Durbin-Watson stat	1.996037	

**Error Collection Model (ECM)**

Dependent Variable: D(RTFB)

Method: Least Squares

Date: 05/28/03 Time: 20:58

Sample(adjusted): 1/25/1998 12/29/2002

Included observations: 258 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.020598	0.573986	0.035885	0.9714
D(RTFB(-1))	0.212041	0.118284	1.792651	0.0742
D(RM(-1))	-1.197008	0.193602	-6.182840	0.0000
RESID01(-1)	-1.135390	0.176371	-6.437524	0.0000
R-squared	0.398282	Mean dependent var	-0.057548	
Adjusted R-squared	0.391175	S.D. dependent var	11.81462	
S.E. of regression	9.218618	Akaike info criterion	7.295710	
Sum squared resid	21585.66	Schwarz criterion	7.350794	
Log likelihood	-937.1465	F-statistic	56.04159	
Durbin-Watson stat	2.271842	Prob(F-statistic)	0.000000	

Switching by Limdep

--> RESET

--> READ;file="C:\Documents and Settings\Administrator\My Documents\L-Bank\TF...

this is record 512. expect len=10, found 10

--> SWITCH;Lhs=RTFB;Rh1=ONE,RM;Rh2=ONE,RM;Sep=I\$

```
Switching Regressions
Ordinary least squares regression Weighting variable = none
Dep. var. = RTFB Mean= 6.163870743 , S.D.= 7.242828273
Model size: Observations = 128, Parameters = 2, Deg.Fr.= 126
Residuals: Sum of squares= 3201.428604 , Std.Dev.= 5.04065
Fit: R-squared= .519466, Adjusted R-squared = .51565
Model test: F[ 1, 126] = 136.21, Prob value = .00000
Diagnostic: Log-L = -387.6608, Restricted(b=0) Log-L = -434.5637
LogAmemiyaPrCrt.= 3.251, Akaike Info. Crt.= 6.088
OLS estimates of equation 1
```

Variable	Coefficient	Standard Error	b/St.Er.	P[ Z >z]	Mean of X
Constant	2.386640370	.51303667	4.652	.0000	
RM	1.198252355	.80694683E-01	14.849	.0000	3.1522829

```
Switching Regressions
Ordinary least squares regression Weighting variable = none
Dep. var. = RTFB Mean= -5.579916114 , S.D.= 5.374926349
Model size: Observations = 132, Parameters = 2, Deg.Fr.= 130
Residuals: Sum of squares= 2052.320228 , Std.Dev.= 3.97330
Fit: R-squared= .457713, Adjusted R-squared = .45354
Model test: F[ 1, 130] = 109.73, Prob value = .00000
Diagnostic: Log-L = -368.3989, Restricted(b=0) Log-L = -408.7883
LogAmemiyaPrCrt.= 2.774, Akaike Info. Crt.= 5.612
OLS estimates of equation 0
```

Variable	Coefficient	Standard Error	b/St.Er.	P[ Z >z]	Mean of X
Constant	-2.449101580	.39739170	-6.163	.0000	
RM	1.093101591	.68347413E-01	15.993	.0000	-2.8641570

Normal exit from iterations. Exit status=0.

```
Switching Regressions
Maximum Likelihood Estimates
Dependent variable RTFB
Weighting variable ONE
Number of observations 260
Iterations completed 13
Log likelihood function -906.7348
Sample separation variable is I
RTFB is the minimum of y*(1) and y*(0)
```

Variable	Coefficient	Standard Error	b/St.Er.	P[ Z >z]	Mean of X
RHS for Regime 1					
Constant	3.990502355	.53739719	7.426	.0000	
RM	2.210661911	.12483661	17.708	.0000	3.1522829
RHS for Regime 2					
Constant	4.327597560	.56491388	7.661	.0000	
RM	.9011235032	.88456086E-01	10.187	.0000	-2.8641570
Sigma(1)	6.569504351	.42520692	15.450	.0000	
Sigma(0)	4.853310482	.26738849	18.151	.0000	

มหาวิทยาลัยเชียงใหม่  
Chiang Mai University

ภาคผนวก ค

ผลการทดสอบ ธนาคารกรุงไทย

**Result of Krung Thai Bank****Unit Root (Trend and Intercept)**

ADF Test Statistic	-16.58551	1% Critical Value*
		5% Critical Value
		10% Critical Value

\*MacKinnon critical values for rejection of hypothesis of a unit root.

**Augmented Dickey-Fuller Test Equation**

Dependent Variable: D(RKTB)

Method: Least Squares

Date: 05/28/03 Time: 20:23

Sample(adjusted): 1/18/1998 12/29/2002

Included observations: 259 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RKTB(-1)	-1.035918	0.062459	-16.58551	0.0000
C	1.850051	1.216511	1.520785	0.1295
@TREND(1/11/1998)	-0.012032	0.008110	-1.483594	0.1391
R-squared	0.517963	Mean dependent var		
Adjusted R-squared	0.514197	S.D. dependent var		
S.E. of regression	9.719333	Akaike info criterion		
Sum squared resid	24183.15	Schwarz criterion		
Log likelihood	-954.9926	F-statistic		
Durbin-Watson stat	1.980220	Prob(F-statistic)		

**Unit Root (Intercept)**

ADF Test Statistic	-16.48056	1% Critical Value*	-3.4572
		5% Critical Value	-2.8728
		10% Critical Value	-2.5727

\*MacKinnon critical values for rejection of hypothesis of a unit root.

**Augmented Dickey-Fuller Test Equation**

Dependent Variable: D(RKTB)

Method: Least Squares

Date: 05/28/03 Time: 20:23

Sample(adjusted): 1/18/1998 12/29/2002

Included observations: 259 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RKTB(-1)	-1.027646	0.062355	-16.48056	0.0000
C	0.283571	0.605596	0.468252	0.6400
R-squared	0.513818	Mean dependent var	-0.006800	
Adjusted R-squared	0.511926	S.D. dependent var	13.94461	
S.E. of regression	9.742017	Akaike info criterion	7.398465	
Sum squared resid	24391.07	Schwarz criterion	7.425931	
Log likelihood	-956.1013	F-statistic	271.6088	
Durbin-Watson stat	1.982250	Prob(F-statistic)	0.000000	

**Unit Root (None)**

ADF Test Statistic	-16.49889	1% Critical Value*	-2.5735
		5% Critical Value	-1.9408
		10% Critical Value	-1.6163

\*MacKinnon critical values for rejection of hypothesis of a unit root.

**Augmented Dickey-Fuller Test Equation**

Dependent Variable: D(RKTB)

Method: Least Squares

Date: 05/28/03 Time: 20:24

Sample(adjusted): 1/18/1998 12/29/2002

Included observations: 259 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RKTB(-1)	-1.026797	0.062234	-16.49889	0.0000
R-squared	0.513403	Mean dependent var		-0.006800
Adjusted R-squared	0.513403	S.D. dependent var		13.94461
S.E. of regression	9.727266	Akaike info criterion		7.391596
Sum squared resid	24411.88	Schwarz criterion		7.405329
Log likelihood	-956.2117	Durbin-Watson stat		1.982515

**Cointegration**

Dependent Variable: RKTB

Method: Least Squares

Date: 05/28/03 Time: 20:24

Sample: 1/11/1998 12/29/2002

Included observations: 260

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.127259	0.385984	0.329699	0.7419
RM	1.547973	0.080212	19.29856	0.0000
R-squared	0.590758	Mean dependent var		0.278624
Adjusted R-squared	0.589172	S.D. dependent var		9.708151
S.E. of regression	6.222522	Akaike info criterion		6.501890
Sum squared resid	9989.704	Schwarz criterion		6.529280
Log likelihood	-843.2457	F-statistic		372.4344
Durbin-Watson stat	1.985599	Prob(F-statistic)		0.000000

**Residual**

ADF Test Statistic	-16.12303	1% Critical Value*	-2.5735
		5% Critical Value	-1.9408
		10% Critical Value	-1.6163

\*MacKinnon critical values for rejection of hypothesis of a unit root.

**Augmented Dickey-Fuller Test Equation**

Dependent Variable: D(RESID01)

Method: Least Squares

Date: 05/28/03 Time: 20:25

Sample(adjusted): 1/18/1998 12/29/2002

Included observations: 259 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RESID01(-1)	-0.998965	0.061959	-16.12303	0.0000
R-squared	0.501865	Mean dependent var	-0.054764	
Adjusted R-squared	0.501865	S.D. dependent var	8.768065	
S.E. of regression	6.188385	Akaike info criterion	6.487079	
Sum squared resid	9880.396	Schwarz criterion	6.500812	
Log likelihood	-839.0767	Durbin-Watson stat	2.001095	

**Error Collection Model (ECM)**

Dependent Variable: D(RKTB)

Method: Least Squares

Date: 05/28/03 Time: 20:26

Sample(adjusted): 1/25/1998 12/29/2002

Included observations: 258 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.084927	0.639658	-0.132769	0.8945
D(RM(-1))	-0.679799	0.196223	-3.464420	0.0006
D(RKTB(-1))	-0.125078	0.103481	-1.208707	0.2279
RESID01(-1)	-1.070464	0.146277	-7.318040	0.0000
R-squared	0.463096	Mean dependent var	-0.065513	
Adjusted R-squared	0.456755	S.D. dependent var	13.93960	
S.E. of regression	10.27420	Akaike info criterion	7.512532	
Sum squared resid	26812.06	Schwarz criterion	7.567617	
Log likelihood	-965.1166	F-statistic	73.02757	
Durbin-Watson stat	2.265143	Prob(F-statistic)	0.000000	

## Switching by Limdep

--&gt; RESET

--&gt; READ;file="C:\Documents and Settings\Administrator\My Documents\L-Bank\KT...

this is record 512. expect len=10, found 10

--&gt; SWITCH;Lhs=RKTB;Rh1=ONE,RM;Rh2=ONE,RM;Sep=I\$

```
Switching Regressions
Ordinary least squares regression Weighting variable = none
Dep. var. = RKTB Mean= 7.077937275 , S.D.= 9.536487540
Model size: Observations = 123, Parameters = 2, Deg.Fr.= 121
Residuals: Sum of squares= 6438.078374 , Std.Dev.= 7.29433
Fit: R-squared= .419744, Adjusted R-squared = .41495
Model test: F[ 1, 121] = 87.53, Prob value = .00000
Diagnostic: Log-L = -417.9342, Restricted(b=0) Log-L = -451.4078
LogAmemiyaPrCrt.= 3.990, Akaike Info. Crt.= 6.828
OLS estimates of equation 1
```

Variable	Coefficient	Standard Error	b/St.Er.	P[ Z >z]	Mean of X
Constant	3.101677036	.75379130	4.115	.0000	
RM	1.285584816	.11906688	10.797	.0000	3.0929583

```
Switching Regressions
Ordinary least squares regression Weighting variable = none
Dep. var. = RKTB Mean= -5.825869627 , S.D.= 4.307471640
Model size: Observations = 137, Parameters = 2, Deg.Fr.= 135
Residuals: Sum of squares= 1689.308787 , Std.Dev.= 3.53743
Fit: R-squared= .330539, Adjusted R-squared = .32558
Model test: F[ 1, 135] = 66.65, Prob value = .00000
Diagnostic: Log-L = -366.4730, Restricted(b=0) Log-L = -393.9608
LogAmemiyaPrCrt.= 2.541, Akaike Info. Crt.= 5.379
OLS estimates of equation 0
```

Variable	Coefficient	Standard Error	b/St.Er.	P[ Z >z]	Mean of X
Constant	-2.876062432	.33863401	-8.493	.0000	
RM	1.138343000	.58949085E-01	19.311	.0000	-2.5913167

Normal exit from iterations. Exit status=0.

```
Switching Regressions
Maximum Likelihood Estimates
Dependent variable          RKTB
Weighting variable          ONE
Number of observations       260
Iterations completed         13
Log likelihood function      -994.5757
Sample separation variable is I
RKTB is the minimum of y*(1) and y*(0)
```

Variable	Coefficient	Standard Error	b/St.Er.	P[ Z >z]	Mean of X
RHS for Regime 1					
Constant	4.639408161	.68090656	6.814	.0000	
RM	2.323240107	.18938502	12.267	.0000	3.0929583
RHS for Regime 2					
Constant	5.805609691	.88951134	6.527	.0000	
RM	.9305134467	.13536316	6.874	.0000	-2.5913167
Sigma(1)	8.570929797	.61984145	13.828	.0000	
Sigma(0)	6.908310531	.38310363	18.032	.0000	

มหาวิทยาลัยเชียงใหม่  
Chiang Mai University

ภาคผนวก ง

ผลการทดสอบ ธนาคารไทยพาณิชย์



**Result of Siam Commercial Bank****Unit Root (Trend and Intercept)**

ADF Test Statistic	-15.22871	1% Critical Value*	-3.9968
		5% Critical Value	-3.4285
		10% Critical Value	-3.1373

\*MacKinnon critical values for rejection of hypothesis of a unit root.

**Augmented Dickey-Fuller Test Equation**

Dependent Variable: D(RSCB)

Method: Least Squares

Date: 05/28/03 Time: 20:50

Sample(adjusted): 1/18/1998 12/29/2002

Included observations: 259 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RSCB(-1)	-0.949660	0.062360	-15.22871	0.0000
C	-0.072496	1.246482	-0.058161	0.9537
@TREND(1/11/1998)	0.002781	0.008314	0.334445	0.7383
R-squared	0.475321	Mean dependent var		0.035110
Adjusted R-squared	0.471222	S.D. dependent var		13.75280
S.E. of regression	10.00064	Akaike info criterion		7.454691
Sum squared resid	25603.28	Schwarz criterion		7.495889
Log likelihood	-962.3824	F-statistic		115.9589
Durbin-Watson stat	1.999833	Prob(F-statistic)		0.000000

**Unit Root (Intercept)**

ADF Test Statistic	-15.25155	1% Critical Value*	-3.4572
		5% Critical Value	-2.8728
		10% Critical Value	-2.5727

\*MacKinnon critical values for rejection of hypothesis of a unit root.

**Augmented Dickey-Fuller Test Equation**

Dependent Variable: D(RSCB)

Method: Least Squares

Date: 05/28/03 Time: 20:50

Sample(adjusted): 1/18/1998 12/29/2002

Included observations: 259 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RSCB(-1)	-0.949113	0.062231	-15.25155	0.0000
C	0.288842	0.620558	0.465456	0.6420
R-squared	0.475092	Mean dependent var		0.035110
Adjusted R-squared	0.473050	S.D. dependent var		13.75280
S.E. of regression	9.983345	Akaike info criterion		7.447405
Sum squared resid	25614.46	Schwarz criterion		7.474871
Log likelihood	-962.4390	F-statistic		232.6098
Durbin-Watson stat	2.000234	Prob(F-statistic)		0.000000

**Unit Root (None)**

ADF Test Statistic	-15.26775	1% Critical Value*	-2.5735
		5% Critical Value	-1.9408
		10% Critical Value	-1.6163

\*MacKinnon critical values for rejection of hypothesis of a unit root.

**Augmented Dickey-Fuller Test Equation**

Dependent Variable: D(RSCB)

Method: Least Squares

Date: 05/28/03 Time: 20:51

Sample(adjusted): 1/18/1998 12/29/2002

Included observations: 259 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RSCB(-1)	-0.948336	0.062114	-15.26775	0.0000
R-squared	0.474650	Mean dependent var		0.035110
Adjusted R-squared	0.474650	S.D. dependent var		13.75280
S.E. of regression	9.968178	Akaike info criterion		7.440526
Sum squared resid	25636.06	Schwarz criterion		7.454259
Log likelihood	-962.5481	Durbin-Watson stat		2.000361

**Cointegration**

Dependent Variable: RSCB

Method: Least Squares

Date: 05/28/03 Time: 20:51

Sample: 1/11/1998 12/29/2002

Included observations: 260

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.109632	0.364143	0.301068	0.7636
RM	1.673164	0.075673	22.11045	0.0000
R-squared	0.654559	Mean dependent var		0.273238
Adjusted R-squared	0.653220	S.D. dependent var		9.968785
S.E. of regression	5.870419	Akaike info criterion		6.385391
Sum squared resid	8891.148	Schwarz criterion		6.412781
Log likelihood	-828.1009	F-statistic		488.8718
Durbin-Watson stat	2.090904	Prob(F-statistic)		0.000000

**Residual**

ADF Test Statistic	-16.82630	1% Critical Value*	-2.5735
		5% Critical Value	-1.9408
		10% Critical Value	-1.6163

\*MacKinnon critical values for rejection of hypothesis of a unit root.

**Augmented Dickey-Fuller Test Equation**

Dependent Variable: D(RESID01)

Method: Least Squares

Date: 05/28/03 Time: 20:52

Sample(adjusted): 1/18/1998 12/29/2002

Included observations: 259 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RESID01(-1)	-1.046056	0.062168	-16.82630	0.0000
R-squared	0.523213	Mean dependent var	-0.016734	
Adjusted R-squared	0.523213	S.D. dependent var	8.488584	
S.E. of regression	5.861346	Akaike info criterion	6.378489	
Sum squared resid	8863.688	Schwarz criterion	6.392222	
Log likelihood	-825.0143	Durbin-Watson stat	1.994119	

**Error Collection Model (ECM)**

Dependent Variable: D(RSCB)

Method: Least Squares

Date: 05/28/03 Time: 20:53

Sample(adjusted): 1/25/1998 12/29/2002

Included observations: 258 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.037834	0.657221	-0.057567	0.9541
D(RM(-1))	-1.102856	0.208693	-5.284583	0.0000
D(RSCB(-1))	0.049139	0.112225	0.437860	0.6619
RESID01(-1)	-1.003059	0.162307	-6.180000	0.0000
R-squared	0.414183	Mean dependent var	-0.049632	
Adjusted R-squared	0.407264	S.D. dependent var	13.71162	
S.E. of regression	10.55649	Akaike info criterion	7.566740	
Sum squared resid	28305.60	Schwarz criterion	7.621825	
Log likelihood	-972.1095	F-statistic	59.86084	
Durbin-Watson stat	2.301839	Prob(F-statistic)	0.000000	

## Switching by Limdep

--&gt; RESET

--&gt; READ;file="C:\Documents and Settings\Administrator\My Documents\L-Bank\SC...

this is record 512. expect len=10, found 10

--&gt; SWITCH;Lhs=RSCB;Rh1=ONE,RM;Rh2=ONE,RM;Sep=I\$

```
Switching Regressions
| Ordinary least squares regression Weighting variable = none
| Dep. var. = RSCB Mean= 7.202987636 , S.D.= 8.511045686
| Model size: Observations = 128, Parameters = 2, Deg.Fr.= 126
| Residuals: Sum of squares= 4796.887667 , Std.Dev.= 6.17013
| Fit: R-squared= .478577, Adjusted R-squared = .47444
| Model test: F[ 1, 126] = 115.65, Prob value = .00000
| Diagnostic: Log-L = -413.5404, Restricted(b=0) Log-L = -455.2169
| LogAmemiyaPrCrt.= 3.655, Akaike Info. Crt.= 6.493
| OLS estimates of equation 1
```

Variable	Coefficient	Standard Error	b/St.Er.	P[ Z >z]	Mean of X
Constant	3.518409313	.62374685	5.641	.0000	
RM	1.199807985	.98571743E-01	12.172	.0000	3.0709733

```
Switching Regressions
| Ordinary least squares regression Weighting variable = none
| Dep. var. = RSCB Mean= -6.446518618 , S.D.= 5.816352606
| Model size: Observations = 132, Parameters = 2, Deg.Fr.= 130
| Residuals: Sum of squares= 2670.266204 , Std.Dev.= 4.53216
| Fit: R-squared= .397466, Adjusted R-squared = .39283
| Model test: F[ 1, 130] = 85.76, Prob value = .00000
| Diagnostic: Log-L = -385.7706, Restricted(b=0) Log-L = -419.2069
| LogAmemiyaPrCrt.= 3.037, Akaike Info. Crt.= 5.875
| OLS estimates of equation 0
```

Variable	Coefficient	Standard Error	b/St.Er.	P[ Z >z]	Mean of X
Constant	-2.755894566	.44850576	-6.145	.0000	
RM	1.325031060	.76622884E-01	17.293	.0000	-2.7853114

Normal exit from iterations. Exit status=0.

```
Switching Regressions
| Maximum Likelihood Estimates
| Dependent variable RSCB
| Weighting variable ONE
| Number of observations 260
| Iterations completed 13
| Log likelihood function -957.7757
| Sample separation variable is I
| RSCB is the minimum of y*(1) and y*(0)
```

Variable	Coefficient	Standard Error	b/St.Er.	P[ Z >z]	Mean of X
RHS for Regime 1					
Constant	4.777055831	.67155519	7.113	.0000	
RM	2.554771045	.16717031	15.282	.0000	3.0709733
RHS for Regime 2					
Constant	5.234400005	.77216502	6.779	.0000	
RM	1.016767964	.12074426	8.421	.0000	-2.7853114
Sigma(1)	8.005774499	.58766381	13.623	.0000	
Sigma(0)	5.836347623	.25831205	22.594	.0000	

## ประวัติผู้เขียน

ชื่อ	นายประพนธ์ เถลิ้มพิชัย
วัน เดือน ปีเกิด	23 มกราคม 2523
ประวัติการศึกษา	สำเร็จการศึกษามัธยมศึกษาตอนปลาย โรงเรียนยุพราชวิทยาลัย ปีการศึกษา 2539 สำเร็จการศึกษาปริญญาวิศวกรรมศาสตรบัณฑิต สาขาวิศวกรรมอุตสาหกรรม มหาวิทยาลัยเชียงใหม่ ปีการศึกษา 2544