ภาคผนวก

ภาคผนวก ก

อัตราผลตอบแทนของตลาดหลักทรัพย์และหลักทรัพย์กลุ่มธนาคารพาณิชย์ขนาดใหญ่

ภาคผนวก ก

อัตราผลตอบแทนของตลาดหลักทรัพย์และหลักทรัพย์กลุ่มธนาคารพาณิชย์ขนาดใหญ่

(หน่วย : ร้อยละต่อสัปดาห์)

DATE	R_M	Ri_{BBL}	Ri_{KBANK}	Ri_{KTB}	Ri_{SCB}
11/1/1998	-6.1767125	-27.9069767	-25.8186398	1.020408163	-7.291666667
18/1/1998	9.53470388	10.483871	16.80814941	16.16161616	14.60674157
25/1/1998	10.4070361	-2.18978102	13.37209302	-6.52173913	14.70588235
1/2/1998	17.1116442	30.5970149	45.76923077	32.55813953	17.94871795
8/2/1998	8.22849366	9.71428571	0.615655233	19.29824561	8.695652174
15/2/1998	-6.7185308	-4.6875	-6.90559441	-8.82352941	-3.333333333
22/2/1998	4.37226634	1.63934426	0.563380282	-4.83870968	-2.068965517
1/3/1998	1.26285567	7.52688172	7.469654528	3.389830508	-1.408450704
8/3/1998	-3.8510978	-3	2.2589053	0	-7.857142857
15/3/1998	1.21439563	0.51546392	-1.69923534	0	3.100775194
22/3/1998	-2.8177486	-10.2564103	-7.43301642	-1.63934426	-5.263157895
29/3/1998	-5.9829895	-2.85714286	-3.64145658	-10	-11.9047619
5/4/1998	-5.7231073	-9.41176471	-8.33333333	-11.1111111	-8.108108108
12/4/1998	0.71564251	2.5974026	2.748414376	-2.08333333	-4.901960784
19/4/1998	-1.6004326	-1.26582278	-2.67489712	-6.38297872	-1.546391753
26/4/1998	-3.2346933	0	0	-9.09090909	0.523560209
3/5/1998	-2.9802984	-0.64102564	-3.48837209	0	-4.6875
10/5/1998	-6.2383204	-1.93548387	-7.33844469	-4	-13.1147541
17/5/1998	-4.3967754	-5.92105263	1.654846336	-9.375	-18.86792453
24/5/1998	-3.6840485	-2.0979021	-4.65116279	-10.3448276	-10.07751938
31/5/1998	-8.4958713	-11.4285714	-24.6341463	-17.9487179	-28.44827586

DATE	R_M	Ri_{BBL}	Ri_{KBANK}	Ri_{KTB}	Ri_{SCB}
7/6/1998	-2.2820111	-1.61290323	9.223300971	-14.0625	-14.45783133
14/6/1998	-12.191979	-16.3934426	-15.2592593	-10.9090909	-11.26760563
21/6/1998	1.77184737	4.90196078	-7.51748252	14.28571429	-4.761904762
28/6/1998	-6.8021945	-18.6915888	-22.4952741	-5.35714286	-11.66666667
5/7/1998	3.30590221	1.72413793	-2.43902439	3.773584906	-11.32075472
12/7/1998	0.18996859	7.34463277	7.5	-3.63636364	-14.89361702
19/7/1998	7.66425627	10.5263158	13.72093023	7.547169811	20
26/7/1998	-6.7190463	-20	-18.200409	-5.26315789	-2.083333333
2/8/1998	-3.1658437	-16.6666667	-16.5	0	-4.255319149
9/8/1998	-7.1910655	-7.14285714	-20.6586826	-11.1111111	-12.88888889
16/8/1998	-1.5835785	-9.23076923	15.8490566	14.58333333	9.693877551
23/8/1998	-1.9292341	-5.08474576	-8.46905537	20	-4.651162791
30/8/1998	-8.4002972	-12.5	-16.3701068	-10.6060606	-10.24390244
6/9/1998	-5.2730224	-16.3265306	-8.5106383	-5.08474576	-2.173913043
13/9/1998	2.59997106	0	7.441860465	7.142857143	0
20/9/1998	4.30183827	3.65853659	7.359307359	3.333333333	0
27/9/1998	12.2064362	12.9411765	17.33870968	11.29032258	13.88888889
4/10/1998	1.05652597	-8.33333333	-3.43642612	-8.69565217	-4.390243902
11/10/1998	16.2744474	26.1363636	22.41992883	19.04761905	14.79591837
18/10/1998	9.13504274	9.00900901	14.24418605	56.66666667	40
25/10/1998	0.73617255	8.26446281	10.94147583	10.63829787	9.523809524
1/11/1998	3.02266993	9.16030534	16.05504587	3.846153846	21.73913043
8/11/1998	13.6768386	45.4545455	34.58498024	59.25925926	35.71428571
15/11/1998	-11.420608	-17.7884615	-20.8516887	-24.4186047	-35.96491228
22/11/1998	11.4931473	21.6374269	27.64378479	27.69230769	30.1369863
29/11/1998	0.31188934	2.88461538	3.779069767	4.819277108	-10.52631579
6/12/1998	-9.5044091	-14.0186916	-17.0868347	-19.5402299	-25.88235294
13/12/1998	6.71444777	13.0434783	20.60810811	25.71428571	17.46031746

DATE	R_M	Ri_{BBL}	Ri_{KBANK}	Ri_{KTB}	Ri_{SCB}
20/12/1998	-5.1012991	-3.84615385	-1.82072829	-14.7727273	-14.86486486
27/12/1998	4.16471385	8	3.708987161	10.66666667	12.6984127
3/1/1999	-0.0982704	-3.7037037	-2.61348006	-4.81927711	-1.408450704
10/1/1999	12.2593491	7.69230769	11.15819209	11.39240506	5.714285714
17/1/1999	-4.4087776	-4.46428571	-4.1931385	-9.09090909	2.702702703
24/1/1999	-1.3985647	-2.80373832	-0.92838196	-11.25	-3.947368421
31/1/1999	-3.580538	-2.88461538	2.677376171	-4.22535211	-1.369863014
7/2/1999	-6.8980744	-13.8613861	-7.69230769	-14.7058824	-13.88888889
14/2/1999	2.80210684	5.74712644	-1.97740113	8.620689655	-3.225806452
21/2/1999	-3.1258038	-2.17391304	-0.86455331	-6.34920635	3.333333333
28/2/1999	1.2983896	3.88888889	-1.88953488	6.779661017	1.612903226
7/3/1999	-1.3873438	-4.81283422	-2.51851852	-4.76190476	-3.174603175
14/3/1999	2.84941563	10.1123596	7.598784195	6.666666667	4.918032787
21/3/1999	6.33332062	12.244898	8.333333333	18.75	18.75
28/3/1999	-0.2121352	0	5.997392438	-2.63157895	1.315789474
4/4/1999	-2.6736775	-1.81818182	-4.79704797	-4.05405405	-5.194805195
11/4/1999	4.1584989	6.48148148	6.84754522	2.816901408	12.32876712
18/4/1999	8.22422346	10.4347826	7.980652963	9.589041096	14.63414634
25/4/1999	-0.3651811	-3.1496063	-2.23964166	-5	3.191489362
2/5/1999	14.5311289	16.2601626	12.14203895	35.52631579	57.73195876
9/5/1999	6.31326861	13.2867133	14.19816139	-1.94174757	0
16/5/1999	-2.7541763	-1.2345679	-4.74060823	-3.96039604	-1.307189542
23/5/1999	0.93282798	-1.875	-3.09859155	7.216494845	-2.649006623
30/5/1999	-5.3679053	-3.18471338	-3.87596899	-8.65384615	-7.482993197
6/6/1999	5.04188481	2.63157895	4.032258065	2.105263158	19.11764706
13/6/1999	6.42013138	4.48717949	4.457364341	10.30927835	14.19753086
20/6/1999	2.31728001	0	-1.85528757	5.607476636	-0.540540541
27/6/1999	4.82642586	0	-0.66162571	-0.88495575	-0.543478261

DATE	R_M	Ri_{BBL}	Ri_{KBANK}	Ri_{KTB}	Ri_{SCB}
4/7/1999	-1.9343496	0	-3.13986679	-8.92857143	-5.464480874
11/7/1999	-4.4531583	-13.4969325	-11.6895874	-14.7058824	2.312138728
18/7/1999	-4.1347738	-4.96453901	-2.89210234	-4.59770115	-9.039548023
25/7/1999	-2.6161183	-1.49253731	-0.80183276	-10.8433735	-0.621118012
1/8/1999	-3.9770478	1.51515152	0.808314088	-14.8648649	3.75
8/8/1999	-4.3278365	-8.20895522	-3.78006873	-4.76190476	-6.024096386
15/8/1999	-3.0340494	-8.1300813	-1.54761905	-6.66666667	-5.128205128
22/8/1999	3.94780547	8.84955752	11.85006046	5.357142857	6.081081081
29/8/1999	3.86597344	4.06504065	-2.7027027	3.389830508	5.095541401
5/9/1999	-5.7743606	-14.84375	-7.77777778	-4.91803279	-6.060606061
12/9/1999	-0.0487103	-3.66972477	0.602409639	-1.72413793	1.290322581
19/9/1999	1.6824859	-1.9047619	-0.5988024	14.03508772	-1.910828025
26/9/1999	-12.814951	-19.4174757	-11.4457831	-16.9230769	-20.12987013
3/10/1999	6.60192124	24.0963855	8.163265306	5.555555556	13.82113821
10/10/1999	-3.4894334	-7.2815534	-11.3207547	-5.26315789	-4.285714286
17/10/1999	-1.9388327	0	0	-3.7037037	2.23880597
24/10/1999	-2.1380359	0	-2.83687943	-1.92307692	0.729927007
31/10/1999	4.87591208	9.94764398	6.569343066	3.921568627	2.898550725
7/11/1999	5.79446608	8.57142857	6.164383562	18.86792453	12.67605634
14/11/1999	3.23798361	2.63157895	-1.29032258	0	0.625
21/11/1999	-4.7382067	-8.54700855	-1.96078431	-6.34920635	-2.48447205
28/11/1999	0.18467015	-0.93457944	0.666666667	1.694915254	0.636942675
5/12/1999	0.51175329	-0.94339623	-1.32450331	-3.33333333	-2.53164557
12/12/1999	1.290956	-0.95238095	0.67114094	0	-1.298701299
19/12/1999	4.65731721	6.73076923	4.666666667	8.620689655	3.289473684
26/12/1999	5.00091038	5.40540541	5.732484076	12.6984127	7.006369427
2/1/2000	4.47224079	4.27350427	3.614457831	11.26760563	5.952380952
9/1/2000	-5.9366719	-3.27868852	-0.58139535	-5.06329114	-1.685393258

DATE	R_M	Ri_{BBL}	Ri_{KBANK}	Ri_{KTB}	Ri_{SCB}
16/1/2000	4.64582736	2.54237288	1.169590643	6.666666667	1.714285714
23/1/2000	0.959169	5.78512397	0.578034682	-2.5	1.685393258
30/1/2000	-0.3069406	-3.90625	0	0	-1.657458564
6/2/2000	-1.4891632	0	-4.59770115	-3.84615385	-3.370786517
13/2/2000	-3.0233448	-17.0731707	-6.62650602	-10.6666667	-9.302325581
20/2/2000	-10.473119	-8.33333333	-4.51612903	-7.46268657	-10.25641026
27/2/2000	-0.4138631	-2.13903743	-4.72972973	-1.61290323	-5
5/3/2000	-5.7861604	-13.1147541	-6.38297872	-9.83606557	-11.27819549
12/3/2000	5.0296218	-3.14465409	6.060606061	3.636363636	5.93220339
19/3/2000	-0.6610338	0	-1.42857143	8.771929825	2.4
26/3/2000	1.10572125	0.64935065	-0.72463768	4.838709677	2.34375
2/4/2000	-0.9501163	0.64516129	0	-4.61538462	-1.526717557
9/4/2000	0.78187448	3.20512821	2.189781022	9.677419355	2.325581395
16/4/2000	2.72648401	0	1.428571429	-2.94117647	3.787878788
23/4/2000	-4.6784919	-2.48447205	-4.22535211	-4.54545455	-2.189781022
30/4/2000	-1.1795702	1.91082803	-1.47058824	-4.76190476	-5.223880597
7/5/2000	-2.6716164	-2.5	-2.23880597	-5	-7.086614173
14/5/2000	-9.0270258	-12.8205128	-10.6870229	-8.77192982	-11.86440678
21/5/2000	-0.6567015	-5.14705882	-2.56410256	0	-0.961538462
28/5/2000	-8.8293538	-6.97674419	-10.5263158	-9.61538462	-10.67961165
4/6/2000	8.36847158	13.3333333	14.70588235	14.89361702	13.04347826
11/6/2000	0.61011849	-4.41176471	0	-1.85185185	-1.923076923
18/6/2000	0.91987107	-2.30769231	0	1.886792453	-4.901960784
25/6/2000	-3.2453744	-4.72440945	-4.27350427	0	-4.12371134
2/7/2000	-2.28616	0.82644628	-1.78571429	-1.85185185	-5.376344086
9/7/2000	-0.865854	-1.63934426	-4.54545455	-7.54716981	-6.818181818
16/7/2000	-2.2578778	0.83333333	-1.9047619	0	-3.658536585

DATE	R_M	Ri_{BBL}	Ri_{KBANK}	Ri_{KTB}	Ri_{SCB}
23/7/2000	-3.1434154	-4.95867769	-5.82524272	-2.04081633	-11.39240506
30/7/2000	-4.599879	-13.0434783	-8.24742268	-4.16666667	-11.42857143
6/8/2000	6.79698193	6	5.617977528	10.86956522	16.12903226
13/8/2000	1.66334848	5.66037736	0	5.882352941	4.166666667
20/8/2000	0.82753946	-0.89285714	0	1.851851852	5.333333333
27/8/2000	-3.8782031	-6.30630631	-7.44680851	-9.09090909	-6.329113924
3/9/2000	1.26776496	3.84615385	2.298850575	4	0
10/9/2000	-4.3960994	-11.1111111	-5.61797753	-7.69230769	-12.16216216
17/9/2000	-1.2690679	0	-1.19047619	0	0
24/9/2000	-6.5325539	-7.29166667	-6.02409639	-4.16666667	-3.076923077
1/10/2000	1.14904789	-1.12359551	2.564102564	-2.17391304	1.587301587
8/10/2000	-3.4656928	1.13636364	-1.25	-2.22222222	4.6875
15/10/2000	-5.0134491	2.24719101	0	-4.54545455	-1.492537313
22/10/2000	8.78628997	18.6813187	3.797468354	7.142857143	13.63636364
29/10/2000	-0.8170679	-2.77777778	0	-2.22222222	-4
5/11/2000	4.92090107	0.95238095	1.219512195	6.818181818	8.333333333
12/11/2000	1.87257157	5.66037736	2.409638554	-2.12765957	6.41025641
19/11/2000	0.50471642	-0.89285714	-1.17647059	2.173913043	3.614457831
26/11/2000	-3.1522447	-1.8018018	-3.57142857	-2.12765957	-5.813953488
3/12/2000	-4.0501785	-4.58715596	-2.4691358	-4.34782609	-6.172839506
10/12/2000	-0.0620719	1.92307692	0	0	-1.315789474
17/12/2000	-0.1899923	-1.88679245	0	0	1.333333333
24/12/2000	-2.2257238	-4.80769231	-1.26582278	0	0
31/12/2000	0.78625183	3.03030303	0	-2.27272727	3.947368421
7/1/2001	6.52699209	14.7058824	10.25641026	13.95348837	11.39240506
14/1/2001	8.54023893	36.7521368	18.60465116	4.081632653	23.86363636
21/1/2001	1.80240643	-4.375	-2.94117647	3.921568627	-3.669724771
28/1/2001	4.81916635	5.22875817	6.060606061	11.32075472	8.571428571

DATE	R_M	Ri_{BBL}	Ri_{KBANK}	Ri_{KTB}	Ri_{SCB}
4/2/2001	0.59314425	2.48447205	1.904761905	-1.69491525	1.754385965
11/2/2001	-2.8075456	-1.81818182	-3.73831776	-3.44827586	-2.586206897
18/2/2001	-2.6853905	-4.9382716	-5.82524272	-5.35714286	-1.769911504
25/2/2001	2.60759177	5.84415584	2.06185567	5.660377358	3.603603604
4/3/2001	-5.6100421	-6.13496933	-6.06060606	-8.92857143	-7.826086957
11/3/2001	0.31041007	1.96078431	3.225806452	0	-1.886792453
18/3/2001	-4.5602606	-3.84615385	-7.29166667	-3.92156863	-5.769230769
25/3/2001	-0.9385666	-8	-3.37078652	-2.04081633	-2.040816327
1/4/2001	0.58225668	1.44927536	-1.1627907	-6.25	-2.083333333
8/4/2001	-3.3979619	0.71428571	-3.52941176	-4.44444444	-5.319148936
15/4/2001	3.28345874	4.96453901	3.658536585	0	5.617977528
22/4/2001	0.44630253	1.35135135	-2.35294118	6.976744186	-1.063829787
29/4/2001	1.58247322	-3.33333333	0	-2.17391304	-2.150537634
6/5/2001	3.1190136	4.13793103	2.409638554	8.888888889	1.098901099
13/5/2001	1.45196419	0.66225166	-1.17647059	6.12244898	0
20/5/2001	-3.3094202	0.65789474	-2.38095238	-5.76923077	0
27/5/2001	3.48256375	0.65359477	7.317073171	2.040816327	3.260869565
3/6/2001	0.30536146	-3.24675325	-5.68181818	-4	-7.368421053
10/6/2001	0.07370698	-0.67114094	-3.61445783	0	-6.818181818
17/6/2001	3.74011003	3.37837838	2.5	2.083333333	4.87804878
24/6/2001	-1.6359509	-2.61437908	-2.43902439	-4.08163265	-4.651162791
1/7/2001	1.21755417	2.01342282	0	2.127659574	-1.219512195
8/7/2001	0.72237175	-1.31578947	-2.5	-2.08333333	0
15/7/2001	-3.253509	-8.66666667	-11.5384615	-6.38297872	-13.58024691
22/7/2001	-0.6490439	0	-2.89855072	-2.27272727	0
29/7/2001	-3.580232	-1.45985401	-4.47761194	0	-4.285714286
5/8/2001	4.9354047	9.62962963	10.9375	9.302325581	10.44776119
12/8/2001	-0.0253236	-7.43243243	-9.85915493	-2.12765957	-9.459459459

DATE	R_M	Ri_{BBL}	Ri_{KBANK}	Ri_{KTB}	Ri_{SCB}
19/8/2001	2.33640422	2.91970803	3.125	0	4.47761194
26/8/2001	2.75947718	3.54609929	7.575757576	2.173913043	5.714285714
2/9/2001	1.02357224	4.79452055	11.26760563	-2.12765957	9.459459459
9/9/2001	2.01150276	1.96078431	2.53164557	0	2.469135802
16/9/2001	-15.838981	-16.6666667	-23.4567901	-19.1304348	-24.09638554
23/9/2001	-4.6858728	-4.61538462	-6.4516129	-6.4516129	-6.349206349
30/9/2001	0.88856515	0.80645161	0	0	1.694915254
7/10/2001	1.38607777	7.2	5.172413793	-1.14942529	1.666666667
14/10/2001	1.45613785	5.2238806	0	4.651162791	1.639344262
21/10/2001	-0.0877285	-1.41843972	0	3.333333333	-1.612903226
28/10/2001	-1.4470322	-3.5971223	-1.63934426	-3.22580645	-1.639344262
4/11/2001	-2.2737027	-2.23880597	-1.66666667	-2.22222222	-3.333333333
11/11/2001	-2.2281416	-1.52671756	-3.05084746	-3.40909091	-5.517241379
18/11/2001	2.77125817	3.10077519	4.195804196	12.94117647	4.379562044
25/11/2001	7.7048629	8.27067669	20.80536913	12.5	16.78321678
2/12/2001	1.97122694	1.38888889	2.222222222	-0.92592593	3.592814371
9/12/2001	0.47253651	2.05479452	0	-2.80373832	-0.578034682
16/12/2001	-3.3053742	-2.68456376	-7.06521739	-3.84615385	-5.813953488
23/12/2001	0.91496599	-0.68965517	4.678362573	4	0
30/12/2001	2.41329671	1.38888889	3.910614525	1.923076923	3.703703704
6/1/2002	3.9098238	8.90410959	11.29032258	1.886792453	13.69047619
13/1/2002	2.16006708	5.66037736	-0.96618357	-1.85185185	-0.523560209
20/1/2002	-1.5594482	-4.16666667	0	-4.71698113	0
27/1/2002	6.761779	25.4658385	17.07317073	4.95049505	8.421052632
3/2/2002	-0.6902859	-2.97029703	-1.66666667	-6.13207547	9.223300971
10/2/2002	5.03193539	14.2857143	5.93220339	17.5879397	13.33333333
17/2/2002	5.49506208	8.92857143	6	11.96581197	6.862745098
24/2/2002	-5.8173772	-18.852459	-13.5849057	-6.87022901	-11.9266055

DATE	R_M	Ri_{BBL}	Ri_{KBANK}	Ri_{KTB}	Ri_{SCB}
3/3/2002	8.34850824	11.1111111	13.5371179	8.196721311	15.625
10/3/2002	2.62708532	-0.90909091	-5	-0.75757576	-3.603603604
17/3/2002	-3.3943377	-1.83486239	-3.2388664	-6.10687023	-10.28037383
24/3/2002	3.15853353	0	3.347280335	0.81300813	4.166666667
31/3/2002	-3.9454394	-7.47663551	-9.31174089	-9.67741935	-8
7/4/2002	-1.0589704	7.07070707	4.017857143	3.571428571	3.043478261
14/4/2002	2.6054786	1.88679245	7.296137339	5.172413793	8.64978903
21/4/2002	1.81229355	5.55555556	7	0.819672131	5.825242718
28/4/2002	-2.6053685	-7.01754386	-6.54205607	-4.87804878	-9.357798165
5/5/2002	-0.634898	-0.94339623	4	0.854700855	4.251012146
12/5/2002	2.14944799	3.80952381	0	0.847457627	-1.941747573
19/5/2002	-1.0102306	-4.58715596	-1.92307692	0	0.99009901
26/5/2002	3.66443424	4.80769231	4.901960784	4.201680672	3.921568627
2/6/2002	4.04753756	7.33944954	12.14953271	0	14.1509434
9/6/2002	2.29679386	2.56410256	2.5	-2.41935484	0
16/6/2002	1.2244531	7.5	3.25203252	6.611570248	7.438016529
23/6/2002	-6.3867082	-11.627907	-9.4488189	-5.42635659	-14.61538462
30/6/2002	-1.6082487	-1.75438596	-1.73913043	-8.19672131	4.504504505
7/7/2002	3.08404001	6.25	3.539823009	3.571428571	4.310344828
14/7/2002	-0.1097008	-0.84033613	-1.70940171	0	-4.958677686
21/7/2002	-1.594871	-4.23728814	-4.34782609	-2.5862069	-5.217391304
28/7/2002	-7.0510033	-7.96460177	-11.6363636	-6.19469027	-9.357798165
4/8/2002	1.08876306	1.92307692	2.880658436	-0.94339623	2.226720648
11/8/2002	-0.9150732	-1.88679245	1	0	-1.386138614
18/8/2002	1.62366574	1.92307692	7.920792079	0	8.43373494
25/8/2002	-1.6138085	0	-0.91743119	0	0.925925926
1/9/2002	-1.5939647	-3.77358491	-5.55555556	1.904761905	-4.587155963
8/9/2002	-2.1071021	-6.8627451	-3.1372549	0	-1.923076923

DATE	R_M	Ri_{BBL}	Ri_{KBANK}	Ri_{KTB}	Ri_{SCB}
15/9/2002	1.01824356	4.73684211	4.251012146	-1.86915888	0
22/9/2002	-1.5763685	-3.51758794	-1.94174757	-2.85714286	0
29/9/2002	-3.6413263	-5.20833333	-6.93069307	-6.37254902	-5.490196078
6/10/2002	0.64950697	-2.1978022	2.127659574	-2.09424084	-0.414937759
13/10/2002	-3.0828375	-6.74157303	-8.33333333	-9.09090909	-8.333333333
20/10/2002	3.64698102	12.6506024	19.31818182	5.882352941	15.90909091
27/10/2002	1.75202949	6.4171123	-0.95238095	0	0.980392157
3/11/2002	2.64592787	1.50753769	0.961538462	1.111111111	3.883495146
10/11/2002	-0.7492703	-0.99009901	0	-2.1978022	-2.803738318
17/11/2002	0.34929296	-2.5	0	-8.98876404	0.961538462
24/11/2002	1.78250903	5.64102564	3.80952381	-3.7037037	4.761904762
1/12/2002	0.63708045	2.91262136	1.834862385	-1.28205128	4.545454545
8/12/2002	0.0520718	-2.83018868	-1.8018018	-0.64935065	3.47826087
15/12/2002	-2.4350133	-0.97087379	-4.58715596	-6.53594771	-5.882352941
22/12/2002	-1.7377877	-4.90196078	-1.92307692	-5.59440559	-0.892857143
29/12/2002	1.84851856	2.06185567	1.960784314	-0.74074074	1.801801802
5/1/2003	0.21039048	0.50505051	2.884615385	0	0.884955752
12/1/2003	0.8789827	5.52763819	5.607476636	2.985074627	7.01754386
19/1/2003	1.8841746	3.80952381	0.884955752	13.04347826	6.557377049
26/1/2003	2.4893752	5.50458716	9.649122807	0.641025641	4.615384615
2/2/2003	-1.6715334	-2.60869565	-3.2	-3.82165605	-1.470588235
9/2/2003	2.41615085	4.46428571	4.132231405	4.635761589	1.492537313
16/2/2003	-2.7022087	-1.70940171	-2.38095238	-6.32911392	-2.205882353
23/2/2003	-2.489759	-9.56521739	-9.75609756	-2.02702703	-7.518796992
2/3/2003	0.497875	2.88461538	3.603603604	2.75862069	5.691056911
9/3/2003	-0.7860068	3.73831776	0	-3.89261745	-3.076923077
16/3/2003	-0.0669549	-3.6036036	1.739130435	6.666666667	0.793650794
23/3/2003	1.50178935	2.80373832	3.418803419	3.661971831	5.511811024

DATE	R_M	Ri_{BBL}	Ri_{KBANK}	Ri_{KTB}	Ri_{SCB}
30/3/2003	1.62532314	0.90909091	1.652892562	5.774647887	1.492537313
6/4/2003	0.64947095	0.9009009	7.317073171	4.965517241	4.411764706
13/4/2003	3.07315901	1.78571429	3.03030303	12.38095238	4.929577465
20/4/2003	0.29737323	-1.75438596	-2.20588235	-2.5	-4.026845638
27/4/2003	-4.153446	-8.03571429	-9.02255639	-7.05128205	-6.993006993
4/5/2003	1.82074458	0.97087379	3.305785124	0	2.255639098
11/5/2003	2.41979007	4.80769231	3.2	8.275862069	2.205882353
18/5/2003	-0.3434664	-1.83486239	-0.7751938	-3.82165605	-2.158273381
25/5/2003	3.26892689	3.73831776	3.125	3.311258278	2.941176471
1/6/2003	2.09850835	2.7027027	2.272727273	1.923076923	1.428571429
8/6/2003	3.56346383	-0.87719298	3.703703704	0.628930818	4.225352113
15/6/2003	2.33375822	0.88495575	1.428571429	3.125	4.72972973
22/6/2003	5.76909596	3.50877193	1.408450704	4.242424242	1.290322581
29/6/2003	1.07144656	-4.23728814	-4.86111111	-2.90697674	-7.643312102
6/7/2003	8.35172765	8.84955752	13.13868613	30.53892216	8.965517241
13/7/2003	-2.2855624	-6.50406504	-5.80645161	-6.42201835	-3.797468354
20/7/2003	1.78575111	2.60869565	6.164383562	-3.43137255	2.631578947
27/7/2003	-1.6590986	-1.69491525	-1.29032258	-6.59898477	-2.564102564
3/8/2003	1.37772143	1.72413793	1.960784314	-1.63043478	-1.315789474
10/8/2003	2.3721365	-0.84745763	-3.20512821	0	-4
17/8/2003	3.14784771	10.2564103	2.649006623	4.419889503	3.472222222
24/8/2003	3.03830545	17.0542636	8.387096774	6.878306878	7.382550336
31/8/2003	0.54225239	-4.63576159	-1.19047619	0.99009901	-2.5
7/9/2003	3.73807057	4.86111111	4.21686747	1.960784314	1.923076923
14/9/2003	1.89311773	1.98675497	1.156069364	-0.96153846	0
21/9/2003	-0.2040889	0.64935065	-1.71428571	2.912621359	-1.886792453
28/9/2003	2.40827551	0	1.744186047	-3.77358491	0.641025641
5/10/2003	-3.8786596	-6.4516129	-5.71428571	-7.84313725	-0.636942675

DATE	R_M	Ri_{BBL}	Ri_{KBANK}	Ri_{KTB}	Ri_{SCB}
12/10/2003	4.26442467	10.3448276	5.454545455	2.127659574	5.769230769
19/10/2003	1.10795496	-2.5	-4.59770115	-7.8125	-1.818181818
26/10/2003	3.50832836	-1.92307692	-0.60240964	-2.25988701	-1.234567901
2/11/2003	4.95691588	12.4183007	2.424242424	2.89017341	2.5
9/11/2003	4.93392595	4.65116279	1.775147929	3.93258427	4.268292683
16/11/2003	-2.0298063	-6.66666667	-4.06976744	-3.24324324	-3.50877193
23/11/2003	-6.6856324	-7.73809524	-7.87878788	-5.02793296	-10.3030303
30/11/2003	5.31438641	7.09677419	11.84210526	1.764705882	9.459459459
7/12/2003	2.05252843	1.20481928	-0.58823529	1.734104046	0
14/12/2003	2.29944796	-0.5952381	2.958579882	1.704545455	1.234567901
21/12/2003	5.14493431	8.98203593	10.91954023	11.73184358	8.536585366
28/12/2003	3.62969601	14.2857143	27.4611399	12	19.1011236

ภาคผนวก ข

ผลการทดสอบความนิ่งของข้อมูลด้วยวิธียูนิทรูท

ภาคผนวก ข

ผลการทดสอบความนิ่งของข้อมูลด้วยวิธียูนิทรูท

ตลาดหลักทรัพย์

1. NONE

ADF Test Statistic	-8.481478	1% Critical Value*	-2.5723
		5% Critical Value	-1.9406
		10% Critical Value	-1.6162

*MacKinnon critical values for rejection of hypothesis of a unit root.
Augmented Dickey-Fuller Test Equation
Dependent Variable: D(RM)
Method: Least Squares
Date: 04/22/04 Time: 12:49
Sample(adjusted): 7 314
Included observations: 308 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RM(-1)	-0.778803	0.091824	-8.481478	0.0000
D(RM(-1))	-0.201892	0.085278	-2.367448	0.0185
D(RM(-2))	0.011678	0.076208	0.153233	0.8783
D(RM(-3))	0.099479	0.054899	1.812034	0.0710

R-squared	0.518661	Mean dependent var	-0.043773
Adjusted R-squared	0.513911	S.D. dependent var	6.167024
S.E. of regression	4.299656	Akaike info criterion	5.767849
Sum squared resid	5620.062	Schwarz criterion	5.816292
Log likelihood	-884.2488	F-statistic	109.1903
Durbin-Watson stat	2.017997	Prob(F-statistic)	0.000000

2. INTERCEPT

ADF Test Statistic	-8.494893	1% Critical Value*	-3.4534
		5% Critical Value	-2.8711
		10% Critical Value	-2.5718

*MacKinnon critical values for rejection of hypothesis of a unit root.
Augmented Dickey-Fuller Test Equation
Dependent Variable: D(RM)
Method: Least Squares
Date: 04/22/04 Time: 12:49
Sample(adjusted): 7 314
Included observations: 308 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RM(-1)	-0.785311	0.092445	-8.494893	0.0000
D(RM(-1))	-0.196851	0.085704	-2.296862	0.0223
D(RM(-2))	0.015068	0.076455	0.197087	0.8439
D(RM(-3))	0.101053	0.055003	1.837230	0.0672
C	0.161660	0.246659	0.655399	0.5127

R-squared	0.519342	Mean dependent var	-0.043773
Adjusted R-squared	0.512997	S.D. dependent var	6.167024
S.E. of regression	4.303696	Akaike info criterion	5.772926
Sum squared resid	5612.106	Schwarz criterion	5.833480
Log likelihood	-884.0306	F-statistic	81.84647
Durbin-Watson stat	2.017878	Prob(F-statistic)	0.000000

3. INTERCEPT AND TREND

ADF Test Statistic	-8.678760	1% Critical Value*	-3.9914
		5% Critical Value	-3.4259
		10% Critical Value	-3.1358

*MacKinnon critical values for rejection of hypothesis of a unit root.
Augmented Dickey-Fuller Test Equation
Dependent Variable: D(RM)
Method: Least Squares
Date: 04/22/04 Time: 12:53
Sample(adjusted): 7 314
Included observations: 308 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RM(-1)	-0.804616	0.092711	-8.678760	0.0000
D(RM(-1))	-0.184827	0.085639	-2.158205	0.0317
D(RM(-2))	0.021958	0.076262	0.287924	0.7736
D(RM(-3))	0.104975	0.054839	1.914237	0.0565
C	-0.633318	0.502523	-1.260276	0.2085
@TREND(1)	0.005018	0.002767	1.813595	0.0707

R-squared	0.524521	Mean dependent var	-0.043773
Adjusted R-squared	0.516648	S.D. dependent var	6.167024
S.E. of regression	4.287531	Akaike info criterion	5.768587
Sum squared resid	5551.642	Schwarz criterion	5.841252
Log likelihood	-882.3624	F-statistic	66.62967
Durbin-Watson stat	2.025117	Prob(F-statistic)	0.000000

หลักทรัพย์ BBL

1. **NONE**

ADF Test Statistic	-10.89924	1% Critical Value*	-2.5722
		5% Critical Value	-1.9406
		10% Critical Value	-1.6162

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(BBL)
Method: Least Squares
Date: 04/22/04 Time: 11:48
Sample(adjusted): 5 314
Included observations: 310 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
BBL(-1)	-0.883132	0.081027	-10.89924	0.0000
D(BBL(-1))	-0.132255	0.055686	-2.375009	0.0182

R-squared	0.518112	Mean dependent var	0.012264
Adjusted R-squared	0.516547	S.D. dependent var	11.62415
S.E. of regression	8.082360	Akaike info criterion	7.023676
Sum squared resid	20119.96	Schwarz criterion	7.047783
Log likelihood	-1086.670	F-statistic	331.1522
Durbin-Watson stat	2.008826	Prob(F-statistic)	0.000000

2. INTERCEPT

ADF Test Statistic	-10.93245	1% Critical Value*	-3.4533
		5% Critical Value	-2.8710
		10% Critical Value	-2.5718

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(BBL)
Method: Least Squares
Date: 04/22/04 Time: 11:54
Sample(adjusted): 5 314
Included observations: 310 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
BBL(-1)	-0.888082	0.081234	-10.93245	0.0000
D(BBL(-1))	-0.130177	0.055749	-2.335050	0.0202
C	0.417571	0.460241	0.907288	0.3650

R-squared	0.519400	Mean dependent var	0.012264
Adjusted R-squared	0.516269	S.D. dependent var	11.62415
S.E. of regression	8.084682	Akaike info criterion	7.027450
Sum squared resid	20066.16	Schwarz criterion	7.063610
Log likelihood	-1086.255	F-statistic	165.8926
Durbin-Watson stat	2.008229	Prob(F-statistic)	0.000000

3. INTERCEPT AND TREND

ADF Test Statistic	-10.97179	1% Critical Value*	-3.9912
		5% Critical Value	-3.4258
		10% Critical Value	-3.1358

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(BBL)
Method: Least Squares
Date: 04/22/04 Time: 11:55
Sample(adjusted): 5 314
Included observations: 310 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
BBL(-1)	-0.893798	0.081463	-10.97179	0.0000
D(BBL(-1))	-0.127019	0.055854	-2.274123	0.0237
C	-0.361662	0.934605	-0.386968	0.6990
@TREND(1)	0.004930	0.005146	0.958003	0.3388

R-squared	0.520837	Mean dependent var	0.012264
Adjusted R-squared	0.516140	S.D. dependent var	11.62415
S.E. of regression	8.085765	Akaike info criterion	7.030906
Sum squared resid	20006.15	Schwarz criterion	7.079120
Log likelihood	-1085.790	F-statistic	110.8714
Durbin-Watson stat	2.008776	Prob(F-statistic)	0.000000

หลักทรัพย์ KBANK

1. NONE

ADF Test Statistic	-10.77332	1%	Critical Value*	-2.5722
		5%	Critical Value	-1.9406
		10%	Critical Value	-1.6162

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(KBANK)
Method: Least Squares
Date: 04/22/04 Time: 11:59
Sample(adjusted): 5 314
Included observations: 310 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
KBANK(-1)	-0.868684	0.080633	-10.77332	0.0000
D(KBANK(-1))	-0.096575	0.056575	-1.707008	0.0888

R-squared	0.481822	Mean dependent var	0.034364
Adjusted R-squared	0.480139	S.D. dependent var	11.26862
S.E. of regression	8.124832	Akaike info criterion	7.034158
Sum squared resid	20331.97	Schwarz criterion	7.058265
Log likelihood	-1088.294	F-statistic	286.3900
Durbin-Watson stat	1.979482	Prob(F-statistic)	0.000000

2. INTERCEPT

ADF Test Statistic	-10.81657	1% Critical Value*	-3.4533
		5% Critical Value	-2.8710
		10% Critical Value	-2.5718

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(KBANK)
Method: Least Squares
Date: 04/22/04 Time: 12:00
Sample(adjusted): 5 314
Included observations: 310 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
KBANK(-1)	-0.874488	0.080847	-10.81657	0.0000
D(KBANK(-1))	-0.094125	0.056631	-1.662080	0.0975
C	0.458902	0.462710	0.991769	0.3221

R-squared	0.483477	Mean dependent var	0.034364
Adjusted R-squared	0.480112	S.D. dependent var	11.26862
S.E. of regression	8.125048	Akaike info criterion	7.037411
Sum squared resid	20267.04	Schwarz criterion	7.073571
Log likelihood	-1087.799	F-statistic	143.6792
Durbin-Watson stat	1.979196	Prob(F-statistic)	0.000000

3. INTERCEPT AND TREND

ADF Test Statistic	-10.82188	1% Critical Value*	-3.9912
		5% Critical Value	-3.4258
		10% Critical Value	-3.1358

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(KBANK)
Method: Least Squares
Date: 04/22/04 Time: 12:01
Sample(adjusted): 5 314
Included observations: 310 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
KBANK(-1)	-0.875931	0.080941	-10.82188	0.0000
D(KBANK(-1))	-0.093198	0.056694	-1.643893	0.1012
C	-0.112867	0.939553	-0.120128	0.9045
@TREND(1)	0.003611	0.005163	0.699413	0.4848

R-squared	0.484301	Mean dependent var	0.034364
Adjusted R-squared	0.479245	S.D. dependent var	11.26862
S.E. of regression	8.131817	Akaike info criterion	7.042265
Sum squared resid	20234.69	Schwarz criterion	7.090479
Log likelihood	-1087.551	F-statistic	95.78979
Durbin-Watson stat	1.981376	Prob(F-statistic)	0.000000

หลักทรัพย์ KTB

1. **NONE**

ADF Test Statistic	-7.557389	1%	Critical Value*	-2.5723
		5%	Critical Value	-1.9406
		10%	Critical Value	-1.6162

*MacKinnon critical values for rejection of hypothesis of a unit root.
Augmented Dickey-Fuller Test Equation
Dependent Variable: D(KTB)
Method: Least Squares
Date: 04/22/04 Time: 12:10
Sample(adjusted): 7 314
Included observations: 308 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
KTB(-1)	-0.749055	0.099116	-7.557389	0.0000
D(KTB(-1))	-0.270560	0.093256	-2.901253	0.0040
D(KTB(-2))	-0.127942	0.080566	-1.588047	0.1133
D(KTB(-3))	0.093089	0.056046	1.660945	0.0978

R-squared	0.551975	Mean dependent var	-0.066747
Adjusted R-squared	0.547554	S.D. dependent var	13.06381
S.E. of regression	8.787258	Akaike info criterion	7.197384
Sum squared resid	23473.63	Schwarz criterion	7.245827
Log likelihood	-1104.397	F-statistic	124.8446
Durbin-Watson stat	2.019579	Prob(F-statistic)	0.000000

2. INTERCEPT

ADF Test Statistic	-7.566921	1% Critical Value*	-3.4534
		5% Critical Value	-2.8711
		10% Critical Value	-2.5718

*MacKinnon critical values for rejection of hypothesis of a unit root.
Augmented Dickey-Fuller Test Equation
Dependent Variable: D(KTB)
Method: Least Squares
Date: 04/22/04 Time: 12:24
Sample(adjusted): 7 314
Included observations: 308 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
KTB(-1)	-0.753351	0.099559	-7.566921	0.0000
D(KTB(-1))	-0.267262	0.093570	-2.856263	0.0046
D(KTB(-2))	-0.125745	0.080766	-1.556904	0.1205
D(KTB(-3))	0.094057	0.056141	1.675357	0.0949
C	0.268364	0.502943	0.533588	0.5940

R-squared	0.552396	Mean dependent var	-0.066747
Adjusted R-squared	0.546487	S.D. dependent var	13.06381
S.E. of regression	8.797614	Akaike info criterion	7.202939
Sum squared resid	23451.60	Schwarz criterion	7.263492
Log likelihood	-1104.253	F-statistic	93.48434
Durbin-Watson stat	2.019381	Prob(F-statistic)	0.000000

3. INTERCEPT AND TREND

ADF Test Statistic	-7.528409	1% Critical Value*	-3.9914
		5% Critical Value	-3.4259
		10% Critical Value	-3.1358

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(KTB)
Method: Least Squares
Date: 04/22/04 Time: 12:28
Sample(adjusted): 7 314
Included observations: 308 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
KTB(-1)	-0.752896	0.100007	-7.528409	0.0000
D(KTB(-1))	-0.267654	0.093949	-2.848924	0.0047
D(KTB(-2))	-0.126029	0.081036	-1.555227	0.1209
D(KTB(-3))	0.093924	0.056277	1.668970	0.0962
C	0.213616	1.037091	0.205976	0.8369
@TREND(1)	0.000342	0.005664	0.060394	0.9519

R-squared	0.552401	Mean dependent var	-0.066747
Adjusted R-squared	0.544991	S.D. dependent var	13.06381
S.E. of regression	8.812114	Akaike info criterion	7.209420
Sum squared resid	23451.31	Schwarz criterion	7.282084
Log likelihood	-1104.251	F-statistic	74.54228
Durbin-Watson stat	2.019543	Prob(F-statistic)	0.000000

หลักทรัพย์ SCB

1. **NONE**

ADF Test Statistic	-7.384612	1% Critical Value*	-2.5722
		5% Critical Value	-1.9406
		10% Critical Value	-1.6162

*MacKinnon critical values for rejection of hypothesis of a unit root.
Augmented Dickey-Fuller Test Equation
Dependent Variable: D(SCB)
Method: Least Squares
Date: 04/22/04 Time: 12:35
Sample(adjusted): 6 314
Included observations: 309 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
SCB(-1)	-0.656023	0.088837	-7.384612	0.0000
D(SCB(-1))	-0.332524	0.077568	-4.286856	0.0000
D(SCB(-2))	-0.170060	0.056235	-3.024116	0.0027
R-squared	0.504420	Mean dependent var	0.014224	
Adjusted R-squared	0.501180	S.D. dependent var	12.82660	
S.E. of regression	9.059065	Akaike info criterion	7.255070	
Sum squared resid	25112.40	Schwarz criterion	7.291316	
Log likelihood	-1117.908	F-statistic	155.7289	
Durbin-Watson stat	1.949458	Prob(F-statistic)	0.000000	

2. INTERCEPT

ADF Test Statistic	-7.392101	1% Critical Value*	-3.4533
		5% Critical Value	-2.8710
		10% Critical Value	-2.5718

*MacKinnon critical values for rejection of hypothesis of a unit root.
Augmented Dickey-Fuller Test Equation
Dependent Variable: D(SCB)
Method: Least Squares
Date: 04/22/04 Time: 12:37
Sample(adjusted): 6 314
Included observations: 309 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
SCB(-1)	-0.658874	0.089132	-7.392101	0.0000
D(SCB(-1))	-0.330578	0.077763	-4.251074	0.0000
D(SCB(-2))	-0.169185	0.056332	-3.003382	0.0029
C	0.256175	0.517069	0.495436	0.6206

R-squared	0.504818	Mean dependent var	0.014224
Adjusted R-squared	0.499947	S.D. dependent var	12.82660
S.E. of regression	9.070255	Akaike info criterion	7.260738
Sum squared resid	25092.20	Schwarz criterion	7.309066
Log likelihood	-1117.784	F-statistic	103.6451
Durbin-Watson stat	1.949460	Prob(F-statistic)	0.000000

3.INTERCEPT AND TREND

ADF Test Statistic	-7.431035	1% Critical Value*	-3.9913
		5% Critical Value	-3.4259
		10% Critical Value	-3.1358

*MacKinnon critical values for rejection of hypothesis of a unit root.
Augmented Dickey-Fuller Test Equation
Dependent Variable: D(SCB)
Method: Least Squares
Date: 04/22/04 Time: 12:40
Sample(adjusted): 6 314
Included observations: 309 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
SCB(-1)	-0.663515	0.089290	-7.431035	0.0000
D(SCB(-1))	-0.327874	0.077834	-4.212494	0.0000
D(SCB(-2))	-0.167842	0.056362	-2.977922	0.0031
C	-0.601934	1.055028	-0.570539	0.5687
@TREND(1)	0.005408	0.005795	0.933162	0.3515

R-squared	0.506232	Mean dependent var	0.014224
Adjusted R-squared	0.499735	S.D. dependent var	12.82660
S.E. of regression	9.072177	Akaike info criterion	7.264350
Sum squared resid	25020.53	Schwarz criterion	7.324760
Log likelihood	-1117.342	F-statistic	77.91856
Durbin-Watson stat	1.951554	Prob(F-statistic)	0.000000

ภาคผนวก ค

ผลการประมาณค่า Frontier

ภาคผนวก ค

ผลการประมาณค่า Frontier

หลักทรัพย์ BBL

```
Output from the program FRONTIER (Version 4.1c)
instruction file = terminal
data file =       bbl.dat
Error Components Frontier (see B&C 1992)
The model is a production function
The dependent variable is logged
the ols estimates are :

            coefficient     standard-error    t-ratio

 beta 0       -0.85616614E-01  0.26911021E+00 -0.31814703E+00
 beta 1        0.14885834E+01  0.58885201E-01  0.25279415E+02
 sigma-squared  0.22483543E+02

log likelihood function =  -0.92729984E+03

the final mle estimates are :

              coefficient             standard-error          t-ratio

 beta 0       -0.68934408E-01  0.29734910E+01 -0.23182988E-01
 beta 1        0.14885929E+01  0.54032727E-01  0.27549838E+02
 sigma-squared  0.22339037E+02  0.15150106E+01  0.14745135E+02
 gamma          0.19615456E-04  0.71929136E-02  0.27270529E-02
 mu is restricted to be zero
 eta is restricted to be zero

log likelihood function =  -0.92729984E+03
```

หลักทรัพย์ KBANK

Output from the program FRONTIER (Version 4.1c)
instruction file = terminal
data file = kbank.dat
Error Components Frontier (see B&C 1992)
The model is a production function
The dependent variable is logged
the ols estimates are :

	coefficient	standard-error	t-ratio
beta 0	-0.13403346E-02	0.27288646E+00	-0.49116931E-02
beta 1	0.14829816E+01	0.59711498E-01	0.24835780E+02
sigma-squared	0.23118964E+02		

log likelihood function = -0.93164750E+03

the final mle estimates are :

	coefficient	standard-error	t-ratio
beta 0	0.18509118E-01	0.29292085E+01	0.63188119E-02
beta 1	0.14829849E+01	0.54809232E-01	0.27057209E+02
sigma-squared	0.22971260E+02	0.17011673E+01	0.13503234E+02
gamma	0.26482621E-04	0.84089527E-02	0.31493364E-02

mu is restricted to be zero
eta is restricted to be zero

log likelihood function = -0.93164750E+03

หลักทรัพย์ KTB

Output from the program FRONTIER (Version 4.1c)
instruction file = terminal
data file = ktb.dat
Error Components Frontier (see B&C 1992)
The model is a production function
The dependent variable is logged
the ols estimates are :

	coefficient	standard-error	t-ratio
beta 0	0.27982343E-02	0.34152618E+00	0.81933231E-02
beta 1	0.15450420E+01	0.74730860E-01	0.20674752E+02
sigma-squared	0.36211990E+02		

log likelihood function = -0.10016505E+04

the final mle estimates are :

	coefficient	standard-error	t-ratio
beta 0	0.70713468E-02	0.35769906E+00	0.19768984E-01
beta 1	0.15450404E+01	0.74645073E-01	0.20698491E+02
sigma-squared	0.35979562E+02	0.29598783E+01	0.12155757E+02
gamma	0.79965994E-06	0.12292110E-04	0.65054734E-01

mu is restricted to be zero
eta is restricted to be zero

log likelihood function = -0.10016505E+04

หลักทรัพย์ SCB

```
Output from the program FRONTIER (Version 4.1c)
instruction file = terminal
data file =      scb.dat
Error Components Frontier (see B&C 1992)
The model is a production function
The dependent variable is logged
the ols estimates are :

             coefficient    standard-error    t-ratio

 beta 0       -0.74959085E-01  0.31754869E+00 -0.23605541E+00
 beta 1        0.16379455E+01  0.69484238E-01  0.23572907E+02
 sigma-squared  0.31305816E+02

log likelihood function =  -0.97893900E+03

the final mle estimates are :

             coefficient    standard-error    t-ratio

 beta 0       -0.54875158E-01  0.30950141E+01 -0.17730181E-01
 beta 1        0.16379390E+01  0.70384460E-01  0.23271316E+02
 sigma-squared  0.31105698E+02  0.24169665E+01  0.12869727E+02
 gamma          0.19983904E-04  0.67150371E-02  0.29759930E-02
 mu is restricted to be zero
 eta is restricted to be zero

log likelihood function =  -0.97893901E+03
```

ภาคผนวก ง

ผลการวิเคราะห์ถดถอยอย่างง่ายโดยวิธีกำลังสองน้อยที่สุด

ภาคผนวก ง

ผลการวิเคราะห์ถดถอยอย่างง่ายโดยวิธีกำลังสองน้อยที่สุด

หลักทรัพย์ BBL

--> REGRESS;Lhs=RIBBL100;Rhs=ONE,RM100;Het$

```
+-----------------------------------------------------------------+
| Ordinary    least squares regression    Weighting variable = none    |
| Dep. var. = RIBBL100 Mean=  -2.800476547    , S.D.=  57.09114068    |
| Model size: Observations =     313, Parameters =  2, Deg.Fr.=   311 |
| Residuals:  Sum of squares= 8507.285877    , Std.Dev.=       5.23016 |
| Fit:        R-squared=  .991634, Adjusted R-squared =        .99161 |
| Model test: F[  1,    311] =36864.89,    Prob value =        .00000 |
| Diagnostic: Log-L =   -960.9651, Restricted(b=0) Log-L =  -1709.6021 |
|             LogAmemiyaPrCrt.=   3.315, Akaike Info. Crt.=    6.153 |
| Autocorrel: Durbin-Watson Statistic =  2.11364,   Rho =     -.05682 |
| Results Corrected for heteroskedasticity                          |
| Breusch - Pagan chi-squared =    1.0907, with   1 degrees of freedom |
+-----------------------------------------------------------------+
+---------+--------------+----------------+--------+---------+----------+
|Variable | Coefficient  | Standard Error |t-ratio |P[|T|>t] | Mean of X|
+---------+--------------+----------------+--------+---------+----------+
 Constant  .8035674638E-01  .29607298        .271   .7863
 RM100     1.003232809     .32449317E-02  309.169   .0000 -2.8715501
```

หลักทรัพย์ KBANK

> REGRESS;Lhs=RIKBANK1;Rhs=ONE,RM100;Het$

```
+-------------------------------------------------------------------+
| Ordinary    least squares regression    Weighting variable = none    |
| Dep. var. = RIKBANK1 Mean=  -2.718262905    , S.D.=  57.09825265     |
| Model size: Observations =    313, Parameters =  2, Deg.Fr.=   311 |
| Residuals:  Sum of squares= 8668.696364    , Std.Dev.=      5.27955 |
| Fit:       R-squared=  .991478, Adjusted R-squared =        .99145 |
| Model test: F[  1,    311] =36181.77,    Prob value =        .00000 |
| Diagnostic: Log-L =  -963.9066, Restricted(b=0) Log-L =  -1709.6411 |
|            LogAmemiyaPrCrt.=   3.334, Akaike Info. Crt.=     6.172 |
| Autocorrel: Durbin-Watson Statistic =  2.03553,   Rho =     -.01777 |
| Results Corrected for heteroskedasticity                           |
| Breusch - Pagan chi-squared =     .8505, with   1 degrees of freedom |
+-------------------------------------------------------------------+
+---------+-------------+---------------+--------+---------+----------+
|Variable |  Coefficient  | Standard Error |t-ratio |P[|T|>t] | Mean of X|
+---------+-------------+---------------+--------+---------+----------+
 Constant  .1627017510      .29871627        .545   .5864
 RM100     1.003278555     .32147169E-02  312.089   .0000 -2.8715501
```

หลักทรัพย์ KTB

--> REGRESS;Lhs=RIKTB100;Rhs=ONE,RM100;Het$

```
+-------------------------------------------------------------------+
| Ordinary    least squares regression    Weighting variable = none    |
| Dep. var. = RIKTB100 Mean=  -2.694269358    , S.D.=  57.24752161     |
| Model size: Observations =    313, Parameters =  2, Deg.Fr.=   311 |
| Residuals:  Sum of squares= 13138.24999    , Std.Dev.=      6.49963 |
| Fit:       R-squared=  .987151, Adjusted R-squared =        .98711 |
| Model test: F[  1,    311] =23893.21,    Prob value =        .00000 |
| Diagnostic: Log-L =  -1028.9808, Restricted(b=0) Log-L =  -1710.4583 |
|            LogAmemiyaPrCrt.=   3.750, Akaike Info. Crt.=     6.588 |
| Autocorrel: Durbin-Watson Statistic =  2.05369,   Rho =     -.02684 |
| Results Corrected for heteroskedasticity                           |
| Breusch - Pagan chi-squared =    2.6530, with   1 degrees of freedom |
+-------------------------------------------------------------------+
+---------+-------------+---------------+--------+---------+----------+
|Variable |  Coefficient  | Standard Error |t-ratio |P[|T|>t] | Mean of X|
+---------+-------------+---------------+--------+---------+----------+
 Constant  .1879173181      .36877020        .510   .6107
 RM100     1.003704117     .36996350E-02  271.298   .0000 -2.8715501
```

หลักทรัพย์ SCB

--> REGRESS;Lhs=RISCB100;Rhs=ONE,RM100;Het$

```
+-----------------------------------------------------------------+
| Ordinary    least squares regression    Weighting variable = none     |
| Dep. var. = RISCB100 Mean=  -2.742035830    , S.D.=  57.25594798     |
| Model size: Observations =     313, Parameters =  2, Deg.Fr.=   311 |
| Residuals:  Sum of squares= 12325.53618    , Std.Dev.=       6.29539 |
| Fit:       R-squared=  .987949, Adjusted R-squared =        .98791 |
| Model test: F[  1,    311] =25496.76,    Prob value =        .00000 |
| Diagnostic: Log-L =  -1018.9875, Restricted(b=0) Log-L =  -1710.5043 |
|            LogAmemiyaPrCrt.=   3.686, Akaike Info. Crt.=    6.524 |
| Autocorrel: Durbin-Watson Statistic =  1.96149,   Rho =      .01926 |
| Results Corrected for heteroskedasticity                          |
| Breusch - Pagan chi-squared =    1.1164, with   1 degrees of freedom |
+-----------------------------------------------------------------+
```

Variable	Coefficient	Standard Error	t-ratio	P[|T|>t]	Mean of X
Constant	.1417405176	.35642280	.398	.6911	
RM100	1.004257710	.42367054E-02	237.037	.0000	-2.8715501

ประวัติผู้เขียน

ชื่อ	นางสาวอรวรรณ โพธิบุตร
วันเดือนปีเกิด	8 มีนาคม 2524
ประวัติการศึกษา	สำเร็จการศึกษามัธยมตอนต้น โรงเรียนศรีสะเกษวิทยาลัย ปีการศึกษา 2538 สำเร็จการศึกษามัธยมตอนปลาย โรงเรียนศรีสะเกษวิทยาลัย ปีการศึกษา 2541 สำเร็จการศึกษาปริญญาเศรษฐศาสตรบัณฑิต มหาวิทยาลัยแม่โจ้ ปีการศึกษา 2545