



ลิขสิทธิ์มหาวิทยาลัยเชียงใหม่

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ภาคผนวก ก
ข้อมูลที่ใช้ในการศึกษา

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ภาคผนวก ก
ข้อมูลที่ใช้ในการศึกษา

โดยที่ EN = คำนีราคาหลักทรัพย์กลุ่มพลังงานของประเทศไทย
 FTE = คำนีราคาหลักทรัพย์กลุ่มพลังงานของประเทศไทย
 DJUSEN = คำนีราคาหลักทรัพย์กลุ่มพลังงานของสหรัฐอเมริกา
 HK = คำนีราคาหลักทรัพย์กลุ่มพลังงานของประเทศไทย

ตารางข้อมูลที่ใช้ในการศึกษา

Date	EN	FTE	DJUSEN	HK
2/14/2548	12002.49	1180.18	355.59	4570.99
2/15/2548	12132.36	1187.07	356.04	4636.42
2/16/2548	12226.1	1189.49	365.73	4614.73
2/17/2548	12356.88	1199.35	361.53	4677.48
2/18/2548	12462.18	1206.65	369.41	4688.35
2/22/2548	12390.62	1205.67	365.48	4742.37
2/24/2548	12622.98	1196.57	379.05	4740.9
2/25/2548	12847.78	1220.25	388.86	4871.44
2/28/2548	13394.71	1220.64	387.55	4999.33
3/1/2548	13158.21	1222.46	379.52	5003.66
3/2/2548	12648.27	1228.29	384.2	4798.24
3/3/2548	12688.09	1239.56	389.47	4850.41
3/4/2548	12927.13	1254.76	394.26	4805.26
3/7/2548	13297.87	1245.13	391.42	4832.8
3/8/2548	12940.64	1241.19	390.91	4983.3
3/9/2548	13069.47	1234.93	379.41	5021.54
3/10/2548	13053.97	1208.18	373.19	4941.43
3/11/2548	12776.48	1211.6	375.88	4856.37
3/14/2548	12612.72	1213.53	378.57	4861.83

ตารางข้อมูลที่ใช้ในการศึกษา(ต่อ)

Date	EN	FTE	DJUSEN	HK
3/15/2548	12574.1	1226.65	373.17	4803.78
3/16/2548	12699.5	1210.81	373.84	4793.26
3/17/2548	12730.46	1209.63	380.06	4846.99
3/18/2548	12847.46	1223.95	385.09	4943.92
3/21/2548	12711.99	1221.91	382.09	4985.21
3/22/2548	12548.86	1220.86	377.22	4855.12
3/23/2548	12391.37	1202.44	370.15	4726.86
3/24/2548	12126.21	1200.65	368.51	4683
3/29/2548	11997.04	1210.58	363.04	4659.15
3/30/2548	11848.77	1199.94	368.22	4650.26
3/31/2548	12140.67	1205.29	374.46	4654.01
4/1/2548	12605.07	1212.55	382.86	4729.74
4/4/2548	12486.49	1226.32	380.86	4799.39
4/7/2548	12579.38	1249.61	381.01	4773.41
4/8/2548	12930.78	1239.91	374.58	4782.55
4/11/2548	13187.76	1231.79	376.69	4719.2
4/12/2548	13205.48	1231.56	372.57	4728.43
4/18/2548	12553.51	1167.75	354.1	4418.99
4/19/2548	12561.17	1180.31	362.51	4499.07
4/20/2548	12632.92	1174	355.19	4562.91
4/21/2548	12659.46	1167.73	366.72	4598.45
4/22/2548	12605.1	1184.79	368.2	4669.39
4/25/2548	12464.27	1201.13	372.95	4670.13
4/26/2548	12487.58	1202.15	367.29	4727.64
4/27/2548	12623.9	1181.15	358.99	4705.37
4/28/2548	12626.17	1180.18	349.78	4689.58
4/29/2548	12730.71	1182.38	353.66	4598.01

ตารางข้อมูลที่ใช้ในการศึกษา(ต่อ)

Date	EN	FTE	DJUSEN	HK
5/3/2548	12792.61	1184.65	351.77	4590.95
5/4/2548	12750.25	1184.1	356.12	4599.27
5/6/2548	13015.17	1211.87	358.69	4657.67
5/9/2548	13039.65	1202.77	363.04	4743.5
5/10/2548	12876.75	1201.8	357.33	4763.32
5/11/2548	12914.9	1189.4	358.66	4753.43
5/12/2548	12845.39	1187.63	343.06	4743
5/13/2548	12705.95	1177.46	337.27	4598.89
5/17/2548	12146.46	1169.32	340.87	4487.64
5/18/2548	12247.93	1188.68	340.17	4505.45
5/19/2548	12161.02	1197.34	346.63	4571.27
5/20/2548	12181.29	1198.28	343.31	4608.47
5/24/2548	12216.18	1205.57	350.95	4563.72
5/25/2548	12308.49	1214.47	354.98	4506.32
5/26/2548	12289.94	1230.48	357.71	4481.65
5/27/2548	12351.01	1227.59	362.83	4575.78
5/31/2548	12424.03	1227.99	360.17	4640.66
6/1/2548	12462.65	1254.02	366.72	4563.93
6/2/2548	12650.18	1258.4	367.03	4589.1
6/3/2548	12774.24	1253.58	368.05	4595.48
6/6/2548	12953.44	1251.67	369.83	4679.2
6/7/2548	12992.23	1263.99	367.09	4711.88
6/8/2548	12979.74	1261.94	366.62	4706.72
6/9/2548	12791.42	1262.95	377.17	4598.45
6/10/2548	12930.77	1283.71	377.12	4695.25
6/13/2548	12825.43	1299.01	378.39	4694.61
6/14/2548	12991.36	1305.78	379.94	4642.99

ตารางข้อมูลที่ใช้ในการศึกษา(ต่อ)

Date	EN	FTE	DJUSEN	HK
6/15/2548	13114.46	1300.89	384.58	4699.35
6/16/2548	13205.52	1314.06	390.31	4753.35
6/17/2548	13088.38	1327.57	396.2	4674.9
6/20/2548	13216.06	1334.23	396.42	4753.29
6/21/2548	13648.17	1330.33	388.21	4730.9
6/22/2548	13487.21	1324.91	389.95	4765.88
6/23/2548	13826.03	1338.4	388.77	4799.62
6/24/2548	13752.3	1337.42	385.83	4835.88
6/27/2548	13583.13	1335.08	392.13	4838.43
6/28/2548	13744.31	1365.06	386.8	5079.09
6/29/2548	13736.2	1344.86	385.34	5085.27
6/30/2548	13438.85	1337.99	382.4	5071.49
7/5/2548	13287.41	1391.95	401.85	5164.27
7/6/2548	13362.33	1412.42	394.97	5324.72
7/7/2548	12982.11	1382.8	399.07	5283.37
7/8/2548	13028.11	1417.43	397	5198.92
7/11/2548	12931.69	1396.52	400.07	5265.94
7/12/2548	13201.27	1379.34	403.12	5289.69
7/13/2548	13343.56	1387.68	401.12	5351.03
7/14/2548	13496.05	1397.08	391.82	5288.26
7/15/2548	13212.01	1380.72	389.71	5136.65
7/18/2548	13255.86	1375.91	388.24	5110.84
7/19/2548	13196.66	1376.88	396.05	5106.2
7/20/2548	13289.92	1359.11	396.76	5168.13
7/21/2548	13189.15	1346.84	392.1	5370.1
7/25/2548	13497.41	1383.19	408.86	5500.19
7/26/2548	13363.76	1372.21	407.23	5474.47

ตารางข้อมูลที่ใช้ในการศึกษา(ต่อ)

Date	EN	FTE	DJUSEN	HK
7/27/2548	13609.5	1368.8	408.71	5597.71
7/28/2548	13802.89	1364.74	410.97	5593.45
7/29/2548	14020.94	1375.86	406.12	5822.31
8/1/2548	14173.86	1378.04	409.94	5878.42
8/2/2548	14381.63	1396.6	416.33	6057.9
8/3/2548	14394.38	1404.77	413.9	5985.58
8/4/2548	14294.23	1391.28	414.18	5850.96
8/5/2548	14286.48	1383.88	411.1	5827.07
8/8/2548	14326.9	1406.64	416.16	5996.34
8/9/2548	14321.46	1429.12	416.08	6068.34
8/10/2548	14301.04	1438.34	422.41	6279.85
8/11/2548	14198.92	1446.59	426.93	6304.08
8/15/2548	14176.32	1440.3	421.55	6423.52
8/16/2548	13868.28	1422.34	412.49	6284.75
8/17/2548	13887.6	1419.54	403.36	6115.25
8/18/2548	13955.62	1396.79	402.82	5892.93
8/19/2548	14273.73	1418.41	408.94	5801.09
8/22/2548	14663.04	1418.03	409.82	5943.41
8/23/2548	14759.89	1403.01	409.52	5889.96
8/24/2548	15091.28	1401.52	411.96	5773.87
8/25/2548	15045.26	1390.5	412.15	5878.8
8/26/2548	15039	1379.82	407.06	5929.43
8/29/2548	14955.08	1383.63	409.9	5923.24
8/30/2548	14863.89	1395.3	416.32	5927.87
8/31/2548	15040.62	1424.29	427.52	5774.97
9/1/2548	15318.59	1445.29	438.52	5931.79
9/2/2548	15104.31	1437.79	430.01	6009.56

ตารางข้อมูลที่ใช้ในการศึกษา(ต่อ)

Date	EN	FTE	DJUSEN	HK
9/6/2548	14753.93	1442.36	432.85	5941.92
9/7/2548	14717.08	1438.09	433.84	5851.84
9/8/2548	14908.21	1432.95	433.45	5744.89
9/9/2548	14910.66	1445.93	445.3	5780.8
9/12/2548	14908.82	1448.24	437.35	5837.92
9/13/2548	14763.1	1434.77	433.34	5691.83
9/14/2548	14855.74	1439.38	437.96	5660.75
9/15/2548	14743.04	1459.34	438.22	5713.3
9/16/2548	14596.44	1474.05	443.06	5659.95
9/20/2548	15187.14	1496.14	450.31	5863.61
9/21/2548	15133.74	1495.99	455.63	5872.7
9/22/2548	15324.28	1501.22	452.9	5848.81
9/23/2548	15188.2	1490.11	445.27	5787.48
9/26/2548	14889.22	1491.84	453.11	5741.8
9/27/2548	14993.31	1497.98	453.55	5722.55
9/28/2548	15057.89	1509.63	457.73	5724.28
9/29/2548	15088.57	1517.58	461.46	5961.22
9/30/2548	15083.34	1508.75	454.41	5976.83
10/3/2548	15000.6	1514	453.09	5926.1
10/4/2548	14888.37	1484.29	437.62	5897.79
10/5/2548	14829.5	1442.69	421.94	5790.5
10/6/2548	14631.63	1405.98	412.28	5572.01
10/7/2548	14451.88	1404.28	421.12	5498.42
10/10/2548	14346.29	1411.12	414.44	5584.24
10/12/2548	14702.25	1413.71	416.23	5487.83
10/13/2548	14508.45	1388.85	405.95	5485.8
10/14/2548	14387.77	1368.03	412.15	5344.8

ตารางข้อมูลที่ใช้ในการศึกษา(ต่อ)

Date	EN	FTE	DJUSEN	HK
10/17/2548	14261.15	1390.18	416.34	5401.76
10/18/2548	14193.33	1377.04	397.76	5467.92
10/19/2548	13771.35	1347.77	405.37	5327.68
10/20/2548	13614.71	1354.02	388.52	5316.42
10/21/2548	13753.16	1343.83	391.51	5273.36
10/25/2548	13572.56	1356.38	412.91	5272.82
10/26/2548	13845.22	1381.57	409.2	5312.68
10/27/2548	13924.18	1359.94	399.68	5317.37
10/28/2548	13857.35	1366.84	409.37	5255.02
10/31/2548	13771.47	1397.56	412.46	5354.78
11/1/2548	13913.11	1398.96	415.03	5461.55
11/2/2548	14077.41	1401.48	422.41	5511.63
11/3/2548	14142.93	1432.87	429.93	5487.77
11/4/2548	14312.01	1432.48	419.15	5561.26
11/7/2548	14186.54	1422.91	412.37	5420.88
11/8/2548	13956.1	1424.4	415.18	5398.83
11/9/2548	13976.15	1418.94	412.31	5449.08
11/10/2548	13885.18	1391.52	400.53	5447.78
11/11/2548	13738.48	1392.32	402.94	5359.56
11/14/2548	13852.01	1411.64	405.12	5334.89
11/15/2548	13885.2	1423.01	404.96	5352.37
11/16/2548	13667.82	1409.17	413.67	5350.87
11/17/2548	13639.28	1426.25	414.43	5454.98
11/18/2548	13715.83	1436.04	415.7	5481.85
11/21/2548	13578.83	1457.56	425.1	5458.33
11/22/2548	13644.41	1475.9	431.24	5483.25
11/23/2548	13633.49	1466.26	429.86	5626.15

ตารางข้อมูลที่ใช้ในการศึกษา(ต่อ)

Date	EN	FTE	DJUSEN	HK
11/25/2548	13701.34	1465.35	431.18	5610.12
11/28/2548	13644.69	1436.57	417.08	5636.09
11/29/2548	13698.21	1434.09	417.23	5543.3
11/30/2548	13469.33	1421.46	418.32	5540.34
12/1/2548	13333.13	1455.3	430.57	5654.82
12/2/2548	13319.81	1469.63	430.94	5704.05
12/6/2548	13893.25	1475.9	436.27	5715.19
12/7/2548	14248.89	1460.75	433.77	5921.9
12/8/2548	14272.91	1472.12	440.88	5843.79
12/9/2548	14348.84	1457.37	435.21	5888.59
12/13/2548	14279.05	1456.03	438.9	5889.11
12/14/2548	14126.51	1446.38	444.25	5840.79
12/15/2548	13926.69	1431.17	440.46	5831.43
12/16/2548	14051.51	1429.44	430.04	5739.92
12/19/2548	14072.46	1414.63	427.31	5778.01
12/20/2548	14294.94	1420.17	431.28	5775.07
12/21/2548	14167.18	1428.11	432.14	5781.8
12/22/2548	14119.93	1423.41	430.96	5807.49
12/23/2548	14110.69	1419.8	430.06	5770.1
12/28/2548	14119.23	1412.34	423.88	5738.05
12/29/2548	14148.35	1418.73	420.94	5747.25
12/30/2548	14211.21	1409.87	422.12	5748.79
1/3/2549	14491.93	1445.93	441.37	5755.13
1/4/2549	14742.88	1448.96	443.5	5915.8
1/5/2549	14807.58	1442.8	438.2	5944.04
1/6/2549	14952	1461.71	448.23	5956.46
1/9/2549	15369.6	1469.58	448.14	6099.13

ตารางข้อมูลที่ใช้ในการศึกษา(ต่อ)

Date	EN	FTE	DJUSEN	HK
1/10/2549	15340.93	1465.93	452.57	6110.22
1/11/2549	15447.7	1464.14	454.75	6235.19
1/12/2549	15361.61	1488.96	450.92	6327.32
1/13/2549	15317.15	1482.73	457.38	6419.3
1/17/2549	15412.69	1493.54	466.26	6521.56
1/18/2549	15140.59	1479.54	459.99	6634.09
1/19/2549	15152.47	1479.3	470.23	6724.15
1/20/2549	15248.54	1482.05	471.21	6809.44
1/23/2549	15536.14	1477.67	476.41	6792.24
1/24/2549	15474.17	1475.31	473.67	6872.4
1/25/2549	15997.6	1480.15	464.35	6833.75
1/26/2549	16026.9	1474.3	464.31	6778.54
1/27/2549	15990.06	1501.77	472.67	7018.82
2/1/2549	16120.93	1530.81	471.94	7288.8
2/2/2549	15630.38	1493.27	467.59	7138.42
2/3/2549	15582.93	1488.36	464.27	6906.96
2/6/2549	15492.77	1497.24	471.57	7214.84
2/7/2549	15455.65	1468.93	453.2	7325.49
2/8/2549	15173.45	1446.75	453.11	7083.85
2/9/2549	15145.97	1467.32	443.42	7025.24
2/10/2549	15292.03	1452.22	441.53	7111.09
2/14/2549	14980.94	1444.77	435.14	7092.13
2/15/2549	14870.32	1454.16	433.12	7051.36
2/16/2549	15007.45	1456.67	441.66	6886.29
2/17/2549	15114.08	1463.07	444.62	6905.99
2/21/2549	15066.57	1478.98	452.35	7140.44
2/22/2549	15022.45	1460.71	445.4	7200.83

ตารางข้อมูลที่ใช้ในการศึกษา(ต่อ)

Date	EN	FTE	DJUSEN	HK
2/23/2549	15167.85	1451.24	444.08	7158.6
2/24/2549	15296.41	1456.54	449.66	7078.49
2/27/2549	15389.07	1454.75	442.51	7132.58
2/28/2549	15293.38	1429.18	438.86	7107.55
3/1/2549	15302.36	1444.16	446.16	7081.37
3/2/2549	15432.06	1430.59	452.33	7154.08
3/3/2549	15589.55	1435.17	452.78	7206.55
3/6/2549	15537.99	1431.15	439.2	7236.28
3/7/2549	15322.28	1426.03	433.24	7017.4
3/8/2549	15080.51	1424.55	433.42	6852.55
3/9/2549	15141.19	1426.71	429.05	6755.9
3/10/2549	15147.77	1431.46	430.81	6706.45
3/13/2549	15239.66	1443.93	438.14	6799.94
3/14/2549	15412.32	1447.73	446.55	6886.2
3/15/2549	15369.78	1459.92	448.22	6944.27
3/16/2549	15461.71	1449.81	454.95	6951.8
3/17/2549	15559.23	1448.68	450.62	6940.75
3/20/2549	15326.13	1443.32	442.46	7072.42
3/21/2549	15172.29	1435.2	441.42	7048.2
3/22/2549	15011.33	1440.76	444.27	7005.42
3/23/2549	15207.04	1437.65	449.83	7180.05
3/24/2549	15175.49	1462.98	452.98	7206.11
3/27/2549	15179.07	1453.23	455.12	7112.78
3/28/2549	15026.81	1456.78	457.86	6979.45
3/29/2549	14942.53	1469.93	462.95	6902.45
3/30/2549	15015.02	1477.56	463.18	7024.65
3/31/2549	15213.01	1460.72	457.89	7029.7

ตารางข้อมูลที่ใช้ในการศึกษา(ต่อ)

Date	EN	FTE	DJUSEN	HK
4/3/2549	15322.38	1478.88	459.95	7191.71
4/4/2549	15657.01	1460.2	466.06	7185.78
4/7/2549	16381.47	1494.5	465.68	7287.77
4/10/2549	16000.55	1522.85	472.86	7320.62
4/11/2549	16102.07	1521.89	469.71	7366.55
4/12/2549	16142.44	1516.33	466.63	7412.13
4/18/2549	16720.21	1537.03	487.76	7650.41
4/20/2549	17278.55	1542.42	490.78	8117.34
4/21/2549	17142.47	1565.6	500.5	8033.25
4/24/2549	17417.55	1569.73	493.52	7953.03
4/25/2549	16885.26	1553.53	488.05	7679.79
4/26/2549	16985.7	1549.85	481.18	7739.07
4/27/2549	16756.69	1523.23	475.83	7605.69
4/28/2549	16636.63	1507.24	481.21	7488.01
5/2/2549	16722.86	1535.36	499.27	7711.52
5/3/2549	16926.37	1515.11	491.78	7832.71
5/4/2549	16737.41	1524.24	489.34	7921.74
5/8/2549	16919.02	1515.96	492.93	8055.96
5/9/2549	16806.6	1526.06	496.36	7953.69
5/10/2549	16708.82	1504.16	499.21	7918.56
5/11/2549	16668.99	1511.23	493.3	7978.96
5/15/2549	16260.69	1453.4	469.34	7593.54
5/16/2549	16142.67	1452.18	470.24	7443.77
5/17/2549	16057.11	1411.09	458.01	7631.91
5/18/2549	15832.94	1404.47	451.58	7362.12
5/19/2549	15851.9	1404.98	454.22	7433.46
5/22/2549	15457.09	1372.88	451.78	7042.23

ตารางข้อมูลที่ใช้ในการศึกษา(ต่อ)

Date	EN	FTE	DJUSEN	HK
5/23/2549	15487.65	1418.95	452.11	7152.86
5/24/2549	15295.69	1394.33	447.1	7174.21
5/25/2549	14936.58	1424.8	461.42	7019.64
5/26/2549	15290.08	1444.39	463.56	7146.54
5/30/2549	15348.16	1411.87	455.36	7107.66
6/1/2549	15317.66	1426.87	467.76	6910.45
6/2/2549	15554.24	1422.15	474.11	6984.76
6/5/2549	15312.37	1425.04	459.56	7048.92
6/6/2549	15167.02	1397.85	459.66	7025.87
6/7/2549	14941.47	1395.86	443.77	6902.72
6/8/2549	14547.39	1350.49	447.38	6585.3
6/9/2549	14225.46	1373.83	443.1	6525.02
6/14/2549	13459.65	1326.46	431.9	6126.97
6/15/2549	13548.44	1361.51	448.05	6388.82
6/16/2549	14125.27	1357.72	445.68	6756.45
6/19/2549	14013.16	1347.53	431.12	6679.07
6/20/2549	13684.31	1360.44	427.93	6515.8
6/21/2549	13759.5	1357.16	436.81	6618.59
6/22/2549	14021.01	1364.14	438.67	6696.44
6/23/2549	14049.66	1389.66	447.03	6716.35
6/26/2549	14064.67	1374.71	452.04	6782.71
6/27/2549	14016.95	1381.12	453.86	6845.17
6/28/2549	14270.85	1393.56	462.51	6919.23
6/29/2549	14338.71	1413.87	475.54	7021.38
6/30/2549	14533	1430.47	475.91	7267.06
7/3/2549	14880.78	1443.49	481.59	7303.73
7/5/2549	14781.68	1428.05	483.05	7337.08

ตารางข้อมูลที่ใช้ในการศึกษา(ต่อ)

Date	EN	FTE	DJUSEN	HK
7/6/2549	15085.17	1440.96	482.87	7412.8
7/7/2549	14925.87	1455.61	476.39	7423.25
7/10/2549	14935.92	1458.51	477.72	7427.29
7/12/2549	15007.17	1454	485.03	7433.94
7/13/2549	14621.94	1447.99	481.01	7342.74
7/14/2549	14545.99	1444.15	486.51	7311.25
7/17/2549	14526.99	1437.43	472.73	7274.26
7/18/2549	14575.73	1432.31	473.69	7190.19
7/19/2549	14577.03	1438.23	477.91	7242.85
7/20/2549	14794.57	1431.91	468.23	7399.68
7/21/2549	15272.78	1424.19	461.25	7451.8
7/24/2549	15144.75	1443.85	474.99	7419.44
7/25/2549	15316.97	1448.79	483.48	7497.38
7/26/2549	15398.76	1463.32	491.95	7472.78
7/27/2549	15470.35	1491.74	489.53	7578.89
7/28/2549	15366.01	1495.56	489.65	7622.58
7/31/2549	15356.25	1483.76	497.08	7578.71
8/1/2549	15295.41	1478.42	498.96	7535.89
8/2/2549	15590.53	1488.93	499.85	7586.72
8/3/2549	15777.49	1471.29	496.34	7657.3
8/4/2549	15694.46	1478.51	492.76	7578.79
8/7/2549	15785.68	1466.95	496.65	7665.96
8/8/2549	16032.78	1460.75	495.16	7724.33
8/9/2549	15949.01	1475.23	497.53	7863.11
8/10/2549	15589.99	1462.58	495.16	7900.77
8/11/2549	15883.24	1461.9	494.47	7947.67
8/15/2549	15821.41	1471.2	487.66	7950.91

ตารางข้อมูลที่ใช้ในการศึกษา(ต่อ)

Date	EN	FTE	DJUSEN	HK
8/16/2549	16058.7	1464.06	484.35	8008.37
8/17/2549	15790.77	1451.58	481.95	7846.57
8/18/2549	15648.53	1458.29	489.16	7714.8
8/21/2549	15589.12	1469.25	492.72	7616.63
8/22/2549	15660.04	1469.66	495.39	7824.03
8/23/2549	15496.28	1463.26	488.05	7802.09
8/24/2549	15307.86	1462.02	493.66	7698.84
8/25/2549	15183.03	1462.71	495.97	7698.92
8/28/2549	14944.2	1464.46	489.3	7690.95
8/29/2549	15021.33	1443.29	487.26	7712.38
8/30/2549	14782.71	1441.32	479.41	7722.49
8/31/2549	14925.38	1435.83	476.55	7714.45
9/1/2549	15197.34	1436.37	482.26	7704.31
9/5/2549	15118.58	1438.6	487.48	7762.66
9/6/2549	15164.62	1416.21	472.95	7627.93
9/7/2549	14669.1	1393.08	473.33	7481.98
9/8/2549	14452.77	1401.13	463.65	7495.28
9/11/2549	14100.61	1374.8	448.75	7315.96
9/12/2549	14031.4	1377.98	445.9	7315.8
9/13/2549	14239.91	1380	453.61	7308.69
9/14/2549	14459.11	1376.39	445.21	7370.25
9/15/2549	14334.79	1362.16	445.27	7347.91
9/18/2549	14444.72	1370.42	456.59	7406.45
9/19/2549	14377.58	1374.41	449.02	7474.33
9/21/2549	14091.38	1375.22	444.43	7374.06
9/22/2549	14068.83	1359.1	441.92	7401.97
9/25/2549	14097.1	1343.24	442.38	7312.99

ตารางข้อมูลที่ใช้ในการศึกษา(ต่อ)

Date	EN	FTE	DJUSEN	HK
9/26/2549	14173.2	1367.79	451.92	7233.5
9/27/2549	14407.6	1380.99	458.95	7289.95
9/28/2549	14385	1397.92	459.18	7360.72
9/29/2549	14272.35	1388.84	460.98	7407.7
10/3/2549	14277.92	1365.66	440.02	7375.93
10/4/2549	14176.5	1360.7	446.78	7147.52
10/5/2549	14225.87	1375.54	453.56	7217.81
10/6/2549	14307.27	1376.09	453.98	7233.53
10/9/2549	14334.1	1386.43	448.44	7173.16
10/10/2549	14474.1	1392.41	455.41	7216.1
10/11/2549	14391.91	1394	449.31	7274.95
10/12/2549	14481.97	1403.48	457.92	7304.79
10/13/2549	14449.27	1421.15	464.39	7396.37
10/16/2549	14636.2	1439.33	475	7513.54
10/17/2549	14602.27	1441.7	471.51	7547.03
10/18/2549	14746.66	1441.63	468.39	7576.03
10/19/2549	14745.82	1441.24	477.53	7569.7
10/20/2549	14954.65	1448.38	472.72	7617.31
10/24/2549	14848.01	1447	480.99	7593.9
10/25/2549	15007.55	1456.51	489.38	7604.68
10/26/2549	15110.05	1463.82	489.09	7694.4
10/27/2549	15075.67	1456.38	484.48	7607.78
10/31/2549	14844.3	1437.73	482.27	7640.6
11/1/2549	15061.82	1436.18	478.15	7686.57
11/2/2549	14917.04	1429.6	478.71	7686.33
11/3/2549	14939.54	1445.47	488.14	7666.91
11/6/2549	14950.37	1464.29	493.24	7727.06

ตารางข้อมูลที่ใช้ในการศึกษา(ต่อ)

Date	EN	FTE	DJUSEN	HK
11/7/2549	14986.14	1470.37	489.33	7738.68
11/8/2549	15013.65	1477.28	498.14	7735.94
11/9/2549	15037.81	1484.54	501.94	7897.17
11/10/2549	14985.1	1489.7	497.24	7988.42
11/13/2549	14857.77	1477.83	497.26	7971.83
11/14/2549	14883.18	1481.68	499.02	7938.17
11/15/2549	14873.57	1484.13	503.59	7956.94
11/16/2549	14845.15	1489.16	489.38	7974.26
11/17/2549	14745.7	1451.62	493.85	7952.28
11/20/2549	14598.28	1456.1	492.17	7928.56
11/21/2549	14523.52	1459.01	501.09	7946.23
11/22/2549	14676.9	1446.43	498.4	8225.6
11/24/2549	14607.66	1435.49	496.58	8345.24
11/27/2549	14797.64	1423.61	494.45	8295.4
11/28/2549	14703.47	1426.97	503.8	7995.21
11/29/2549	14980.16	1441.22	518.72	8203.8
11/30/2549	15176.94	1431.13	522.59	8368.01
12/1/2549	15257.44	1417.19	525.42	8359.74
12/4/2549	15351.45	1415.49	525.26	8404.55
12/6/2549	15299.84	1436.53	523.62	8550.34
12/7/2549	15147.22	1435.65	520.77	8523.47
12/8/2549	15036.37	1440.2	520.19	8475.17
12/12/2549	14829.3	1438.2	520.63	8584.67
12/13/2549	14708.44	1446.44	526.14	8524.26
12/14/2549	14685.67	1456.37	535.49	8621.04
12/15/2549	14816.5	1468.92	529.43	8767.44
12/18/2549	14681.71	1462.34	514.31	8792.69

ตารางข้อมูลที่ใช้ในการศึกษา(ต่อ)

Date	EN	FTE	DJUSEN	HK
12/19/2549	12349.15	1455.39	522.39	8629.75
12/20/2549	14014.13	1450.56	515.83	8757.04
12/21/2549	13601.76	1445.52	512.77	8776.25
12/22/2549	13791.29	1438.54	508.82	8777.85
12/27/2549	13859.98	1456.01	514.78	9073.83
12/28/2549	13765.49	1452.4	515.57	9228.81
12/29/2549	13799.68	1443.58	510.72	9331.68

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ภาคผนวก ข

ข้อมูลที่ใช้ในการศึกษาในรูปแบบของลอกการิทึม

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ภาคผนวก ข

ข้อมูลที่ใช้ในการศึกษาในรูปแบบของลอกการิทึม

โดยที่ EN = คำนีราคาหลักทรัพย์กลุ่มพลังงานของประเทศไทย
 FTE = คำนีราคาหลักทรัพย์กลุ่มพลังงานของประเทศไทย
 DJUSEN = คำนีราคาหลักทรัพย์กลุ่มพลังงานของสหรัฐอเมริกา
 HK = คำนีราคาหลักทรัพย์กลุ่มพลังงานของประเทศไทย

ตารางข้อมูลที่ใช้ในการศึกษา

Date	EN	FTE	DJUSEN	HK
2/14/2548	4.079271	3.071948	2.55095	3.66001
2/15/2548	4.083945	3.074476	2.551499	3.666183
2/16/2548	4.087288	3.075361	2.563161	3.664146
2/17/2548	4.091909	3.078946	2.558144	3.670012
2/18/2548	4.095594	3.081581	2.567509	3.67102
2/22/2548	4.093093	3.081228	2.562864	3.675995
2/24/2548	4.101162	3.077938	2.578696	3.675861
2/25/2548	4.108828	3.086449	2.589793	3.687657
2/28/2548	4.126933	3.086588	2.588328	3.698912
3/1/2548	4.119197	3.087235	2.579235	3.699288
3/2/2548	4.102031	3.089301	2.584557	3.681082
3/3/2548	4.103396	3.093268	2.590474	3.685778
3/4/2548	4.111502	3.098561	2.595783	3.681717
3/7/2548	4.123782	3.095215	2.592643	3.684199
3/8/2548	4.111956	3.093838	2.592077	3.697517
3/9/2548	4.116258	3.091642	2.579109	3.700837
3/10/2548	4.115743	3.082132	2.57193	3.693853
3/11/2548	4.106411	3.083359	2.575049	3.686312
3/14/2548	4.100809	3.084051	2.578146	3.6868

ตารางข้อมูลที่ใช้ในการศึกษา(ต่อ)

Date	EN	FTE	DJUSEN	HK
3/15/2548	4.099477	3.088721	2.571907	3.681583
3/16/2548	4.103787	3.083076	2.572686	3.680631
3/17/2548	4.104844	3.082653	2.579852	3.685472
3/18/2548	4.108817	3.087764	2.585562	3.694071
3/21/2548	4.104214	3.087039	2.582166	3.697683
3/22/2548	4.098604	3.086666	2.576595	3.6862
3/23/2548	4.093119	3.080063	2.568378	3.674573
3/24/2548	4.083725	3.079416	2.566449	3.670524
3/29/2548	4.079074	3.082993	2.559954	3.668307
3/30/2548	4.073673	3.07916	2.566107	3.667477
3/31/2548	4.084243	3.081092	2.573405	3.667827
4/1/2548	4.100545	3.0837	2.58304	3.674837
4/4/2548	4.09644	3.088604	2.580765	3.681186
4/7/2548	4.099659	3.096774	2.580936	3.678829
4/8/2548	4.111625	3.09339	2.573545	3.67966
4/11/2548	4.120171	3.090537	2.575984	3.673868
4/12/2548	4.120754	3.090456	2.571208	3.674717
4/18/2548	4.098765	3.06735	2.549126	3.645323
4/19/2548	4.09903	3.071996	2.55932	3.653123
4/20/2548	4.101504	3.069668	2.550461	3.659242
4/21/2548	4.102415	3.067342	2.564335	3.662611
4/22/2548	4.100546	3.073641	2.566084	3.66926
4/25/2548	4.095667	3.07959	2.571651	3.669329
4/26/2548	4.096478	3.079959	2.565009	3.674644
4/27/2548	4.101194	3.072305	2.555082	3.672594
4/28/2548	4.101272	3.071948	2.543795	3.671134
4/29/2548	4.104853	3.072757	2.548586	3.66257

ตารางข้อมูลที่ใช้ในการศึกษา(ต่อ)

Date	EN	FTE	DJUSEN	HK
5/3/2548	4.106959	3.07359	2.546259	3.661903
5/4/2548	4.105519	3.073388	2.551596	3.662689
5/6/2548	4.11445	3.083456	2.554719	3.668169
5/9/2548	4.115266	3.080183	2.559954	3.676099
5/10/2548	4.109806	3.079832	2.553069	3.67791
5/11/2548	4.111091	3.075328	2.554683	3.677007
5/12/2548	4.108747	3.074681	2.53537	3.676053
5/13/2548	4.104007	3.070946	2.527978	3.662653
5/17/2548	4.08445	3.067933	2.532589	3.652018
5/18/2548	4.088063	3.075065	2.531696	3.653738
5/19/2548	4.08497	3.078217	2.539866	3.660037
5/20/2548	4.085693	3.078558	2.535686	3.663557
5/24/2548	4.086935	3.081192	2.545245	3.659319
5/25/2548	4.090205	3.084387	2.550204	3.653822
5/26/2548	4.08955	3.090075	2.553531	3.651438
5/27/2548	4.091702	3.089053	2.559703	3.660465
5/31/2548	4.094263	3.089195	2.556508	3.66658
6/1/2548	4.09561	3.098304	2.564335	3.659339
6/2/2548	4.102097	3.099819	2.564702	3.661728
6/3/2548	4.106335	3.098152	2.565907	3.662331
6/6/2548	4.112385	3.09749	2.568002	3.670172
6/7/2548	4.113684	3.101744	2.564773	3.673194
6/8/2548	4.113266	3.101039	2.564216	3.672718
6/9/2548	4.106919	3.101386	2.576537	3.662611
6/10/2548	4.111624	3.108467	2.57648	3.671659
6/13/2548	4.108072	3.113612	2.57794	3.6716
6/14/2548	4.113655	3.11587	2.579715	3.666798

ตารางข้อมูลที่ใช้ในการศึกษา(ต่อ)

Date	EN	FTE	DJUSEN	HK
6/15/2548	4.11775	3.114241	2.584987	3.672038
6/16/2548	4.120755	3.118615	2.59141	3.677
6/17/2548	4.116886	3.123057	2.597914	3.669772
6/20/2548	4.121102	3.125231	2.598156	3.676994
6/21/2548	4.135074	3.123959	2.589067	3.674944
6/22/2548	4.129922	3.122186	2.591009	3.678143
6/23/2548	4.140698	3.126586	2.589693	3.681207
6/24/2548	4.138375	3.126268	2.586396	3.684476
6/27/2548	4.133	3.125507	2.59343	3.684704
6/28/2548	4.138123	3.135152	2.587486	3.705786
6/29/2548	4.137867	3.128677	2.585844	3.706314
6/30/2548	4.128362	3.126453	2.582518	3.705136
7/5/2548	4.12344	3.143624	2.604064	3.713009
7/6/2548	4.125882	3.149964	2.596564	3.726297
7/7/2548	4.113345	3.140759	2.601049	3.722911
7/8/2548	4.114881	3.151502	2.598791	3.715913
7/11/2548	4.111655	3.145047	2.602136	3.721476
7/12/2548	4.120616	3.139671	2.605434	3.72343
7/13/2548	4.125272	3.142289	2.603274	3.728437
7/14/2548	4.130207	3.145221	2.593087	3.723313
7/15/2548	4.120969	3.140106	2.590742	3.71068
7/18/2548	4.122408	3.13859	2.5891	3.708492
7/19/2548	4.120464	3.138896	2.59775	3.708098
7/20/2548	4.123522	3.133255	2.598528	3.713333
7/21/2548	4.120217	3.129316	2.593397	3.729982
7/25/2548	4.13025	3.140882	2.611575	3.740378
7/26/2548	4.125929	3.137421	2.60984	3.738342

ตารางข้อมูลที่ใช้ในการศึกษา(ต่อ)

Date	EN	FTE	DJUSEN	HK
7/27/2548	4.133842	3.13634	2.611415	3.74801
7/28/2548	4.13997	3.13505	2.61381	3.74768
7/29/2548	4.146777	3.138574	2.608654	3.765095
8/1/2548	4.151488	3.139262	2.61272	3.769261
8/2/2548	4.157808	3.145072	2.619438	3.782322
8/3/2548	4.158193	3.147605	2.616895	3.777106
8/4/2548	4.155161	3.143415	2.617189	3.767227
8/5/2548	4.154925	3.141098	2.613947	3.76545
8/8/2548	4.156152	3.148183	2.61926	3.777886
8/9/2548	4.155987	3.155069	2.619177	3.78307
8/10/2548	4.155368	3.157862	2.625734	3.797949
8/11/2548	4.152255	3.160345	2.630357	3.799622
8/15/2548	4.151564	3.158453	2.624849	3.807773
8/16/2548	4.142023	3.153003	2.615413	3.798288
8/17/2548	4.142627	3.152148	2.605693	3.786414
8/18/2548	4.144749	3.145131	2.605111	3.770331
8/19/2548	4.154537	3.151802	2.61166	3.76351
8/22/2548	4.166224	3.151685	2.612593	3.774036
8/23/2548	4.169083	3.147061	2.612275	3.770112
8/24/2548	4.178726	3.146599	2.614855	3.761467
8/25/2548	4.1774	3.143171	2.615055	3.769289
8/26/2548	4.177219	3.139822	2.609658	3.773013
8/29/2548	4.174789	3.14102	2.612678	3.772559
8/30/2548	4.172132	3.144668	2.619427	3.772899
8/31/2548	4.177266	3.153598	2.630956	3.76155
9/1/2548	4.185219	3.159955	2.641989	3.773186
9/2/2548	4.179101	3.157695	2.633479	3.778843

ตารางข้อมูลที่ใช้ในการศึกษา(ต่อ)

Date	EN	FTE	DJUSEN	HK
9/6/2548	4.168908	3.159074	2.636337	3.773927
9/7/2548	4.167822	3.157786	2.63733	3.767292
9/8/2548	4.173426	3.156231	2.636939	3.759282
9/9/2548	4.173497	3.160147	2.648653	3.761988
9/12/2548	4.173443	3.160841	2.640829	3.766258
9/13/2548	4.169178	3.156782	2.636829	3.755252
9/14/2548	4.171894	3.158175	2.641434	3.752874
9/15/2548	4.168587	3.164156	2.641692	3.756887
9/16/2548	4.164247	3.168512	2.646463	3.752813
9/20/2548	4.181476	3.174972	2.653512	3.768165
9/21/2548	4.179946	3.174929	2.658612	3.768838
9/22/2548	4.18538	3.176444	2.656002	3.767068
9/23/2548	4.181506	3.173218	2.648623	3.76249
9/26/2548	4.172872	3.173722	2.656204	3.759048
9/27/2548	4.175898	3.175506	2.656625	3.75759
9/28/2548	4.177764	3.178871	2.660609	3.757721
9/29/2548	4.178648	3.181152	2.664134	3.775335
9/30/2548	4.178498	3.178617	2.657448	3.776471
10/3/2548	4.176109	3.180126	2.656184	3.772769
10/4/2548	4.172847	3.171519	2.641097	3.770689
10/5/2548	4.171127	3.159173	2.625251	3.762716
10/6/2548	4.165293	3.147979	2.615192	3.746012
10/7/2548	4.159924	3.147454	2.624406	3.740238
10/10/2548	4.15674	3.149564	2.617462	3.746964
10/12/2548	4.167384	3.15036	2.619333	3.739401
10/13/2548	4.161621	3.142655	2.608473	3.73924
10/14/2548	4.157993	3.136096	2.615055	3.727931

ตารางข้อมูลที่ใช้ในการศึกษา(ต่อ)

Date	EN	FTE	DJUSEN	HK
10/17/2548	4.154155	3.143071	2.619448	3.732535
10/18/2548	4.152084	3.138947	2.599621	3.737822
10/19/2548	4.138977	3.129616	2.607852	3.726538
10/20/2548	4.134008	3.131625	2.589413	3.725619
10/21/2548	4.138403	3.128344	2.592743	3.722087
10/25/2548	4.132662	3.132381	2.615855	3.722043
10/26/2548	4.1413	3.140373	2.611936	3.725314
10/27/2548	4.14377	3.13352	2.601712	3.725697
10/28/2548	4.14168	3.135718	2.612116	3.720574
10/31/2548	4.13898	3.14537	2.615382	3.728742
11/1/2548	4.143424	3.145805	2.618079	3.737316
11/2/2548	4.148523	3.146587	2.625734	3.74128
11/3/2548	4.150539	3.156207	2.633398	3.739396
11/4/2548	4.155701	3.156089	2.622369	3.745173
11/7/2548	4.151876	3.153177	2.615287	3.73407
11/8/2548	4.144764	3.153632	2.618236	3.7323
11/9/2548	4.145388	3.151964	2.615224	3.736323
11/10/2548	4.142552	3.143489	2.602635	3.73622
11/11/2548	4.137939	3.143739	2.60524	3.729129
11/14/2548	4.141513	3.149724	2.607584	3.727125
11/15/2548	4.142552	3.153208	2.607412	3.728546
11/16/2548	4.135699	3.148963	2.616654	3.728424
11/17/2548	4.134791	3.154196	2.617451	3.736793
11/18/2548	4.137222	3.157167	2.61878	3.738927
11/21/2548	4.132862	3.163626	2.628491	3.73706
11/22/2548	4.134955	3.169057	2.634719	3.739038
11/23/2548	4.134607	3.166211	2.633327	3.750211

ตารางข้อมูลที่ใช้ในการศึกษา(ต่อ)

Date	EN	FTE	DJUSEN	HK
11/25/2548	4.136763	3.165941	2.634659	3.748972
11/28/2548	4.134964	3.157327	2.620219	3.750978
11/29/2548	4.136664	3.156576	2.620376	3.743768
11/30/2548	4.129346	3.152735	2.621509	3.743536
12/1/2548	4.124932	3.162953	2.634044	3.752419
12/2/2548	4.124498	3.167208	2.634417	3.756183
12/6/2548	4.142804	3.169057	2.639755	3.757031
12/7/2548	4.153781	3.164576	2.63726	3.772461
12/8/2548	4.154513	3.167943	2.64432	3.766695
12/9/2548	4.156817	3.16357	2.638699	3.770011
12/13/2548	4.154699	3.16317	2.642366	3.77005
12/14/2548	4.150035	3.160282	2.647627	3.766472
12/15/2548	4.143848	3.155691	2.643906	3.765775
12/16/2548	4.147723	3.155166	2.633509	3.758906
12/19/2548	4.14837	3.150643	2.630743	3.761778
12/20/2548	4.155182	3.15234	2.634759	3.761557
12/21/2548	4.151283	3.154762	2.635624	3.762063
12/22/2548	4.149833	3.15333	2.634437	3.763988
12/23/2548	4.149548	3.152227	2.633529	3.761183
12/28/2548	4.149811	3.149939	2.627243	3.758764
12/29/2548	4.150706	3.1519	2.62422	3.75946
12/30/2548	4.152631	3.149179	2.625436	3.759576
1/3/2549	4.161126	3.160147	2.644803	3.760055
1/4/2549	4.168582	3.161056	2.646894	3.772013
1/5/2549	4.170484	3.159206	2.641672	3.774082
1/6/2549	4.174699	3.164861	2.651501	3.774988
1/9/2549	4.186663	3.167193	2.651414	3.785268

ตารางข้อมูลที่ใช้ในการศึกษา(ต่อ)

Date	EN	FTE	DJUSEN	HK
1/10/2549	4.185852	3.166113	2.655686	3.786057
1/11/2549	4.188864	3.165583	2.657773	3.79485
1/12/2549	4.186437	3.172883	2.6541	3.80122
1/13/2549	4.185178	3.171062	2.660277	3.807488
1/17/2549	4.187878	3.174217	2.668628	3.814351
1/18/2549	4.180143	3.170127	2.662748	3.821781
1/19/2549	4.180483	3.170056	2.67231	3.827637
1/20/2549	4.183228	3.170863	2.673214	3.833111
1/23/2549	4.191343	3.169577	2.677981	3.832013
1/24/2549	4.189607	3.168883	2.675476	3.837108
1/25/2549	4.204055	3.170306	2.666845	3.834659
1/26/2549	4.20485	3.168586	2.666808	3.831136
1/27/2549	4.20385	3.176603	2.674558	3.846264
2/1/2549	4.20739	3.184921	2.673887	3.862656
2/2/2549	4.19397	3.174138	2.669865	3.853602
2/3/2549	4.192649	3.172708	2.666771	3.839287
2/6/2549	4.190129	3.175291	2.673546	3.858227
2/7/2549	4.189087	3.167001	2.65629	3.864837
2/8/2549	4.181084	3.160393	2.656204	3.850269
2/9/2549	4.180297	3.166525	2.646815	3.846661
2/10/2549	4.184465	3.162032	2.64496	3.851936
2/14/2549	4.175539	3.159799	2.638629	3.850777
2/15/2549	4.17232	3.162612	2.636608	3.848273
2/16/2549	4.176307	3.163361	2.645088	3.837985
2/17/2549	4.179382	3.165265	2.647989	3.839226
2/21/2549	4.178014	3.169962	2.655475	3.853725
2/22/2549	4.176741	3.164564	2.64875	3.857383

ตารางข้อมูลที่ใช้ในการศึกษา(ต่อ)

Date	EN	FTE	DJUSEN	HK
2/23/2549	4.180924	3.161739	2.647461	3.854828
2/24/2549	4.18459	3.163322	2.652884	3.849941
2/27/2549	4.187212	3.162788	2.645923	3.853247
2/28/2549	4.184503	3.155087	2.642326	3.85172
3/1/2549	4.184758	3.159615	2.649491	3.850117
3/2/2549	4.188424	3.155515	2.655455	3.854554
3/3/2549	4.192834	3.156903	2.655887	3.857727
3/6/2549	4.191395	3.155685	2.642662	3.859515
3/7/2549	4.185323	3.154129	2.636729	3.846176
3/8/2549	4.178416	3.153678	2.636909	3.835852
3/9/2549	4.18016	3.154336	2.632508	3.829683
3/10/2549	4.180349	3.155779	2.634286	3.826493
3/13/2549	4.182975	3.159546	2.641613	3.832505
3/14/2549	4.187868	3.160688	2.64987	3.83798
3/15/2549	4.186668	3.164329	2.651491	3.841627
3/16/2549	4.189258	3.161311	2.657964	3.842097
3/17/2549	4.191988	3.160972	2.65381	3.841406
3/20/2549	4.185433	3.159363	2.645874	3.849568
3/21/2549	4.181051	3.156912	2.644852	3.848078
3/22/2549	4.176419	3.158592	2.647647	3.845434
3/23/2549	4.182045	3.157653	2.653048	3.856127
3/24/2549	4.181143	3.165238	2.656079	3.857701
3/27/2549	4.181245	3.162334	2.658126	3.852039
3/28/2549	4.176867	3.163394	2.660733	3.843821
3/29/2549	4.174424	3.167297	2.665534	3.839003
3/30/2549	4.176526	3.169545	2.66575	3.846625
3/31/2549	4.182215	3.164567	2.660761	3.846937

ตารางข้อมูลที่ใช้ในการศึกษา(ต่อ)

Date	EN	FTE	DJUSEN	HK
4/3/2549	4.185326	3.169933	2.662711	3.856832
4/4/2549	4.194709	3.164412	2.668442	3.856474
4/7/2549	4.214353	3.174496	2.668088	3.862595
4/10/2549	4.204135	3.182657	2.674733	3.864548
4/11/2549	4.206882	3.182383	2.67183	3.867264
4/12/2549	4.207969	3.180794	2.668973	3.869943
4/18/2549	4.223242	3.186682	2.688206	3.883685
4/20/2549	4.237507	3.188203	2.690887	3.909414
4/21/2549	4.234073	3.194681	2.699404	3.904891
4/24/2549	4.240987	3.195825	2.693305	3.900533
4/25/2549	4.227508	3.19132	2.688464	3.885349
4/26/2549	4.230083	3.19029	2.682308	3.888689
4/27/2549	4.224188	3.182765	2.677452	3.881139
4/28/2549	4.221065	3.178182	2.682335	3.874366
5/2/2549	4.223311	3.18621	2.698335	3.88714
5/3/2549	4.228564	3.180444	2.691771	3.893912
5/4/2549	4.223688	3.183053	2.689611	3.898821
5/8/2549	4.228375	3.180688	2.692785	3.906117
5/9/2549	4.22548	3.183572	2.695797	3.900569
5/10/2549	4.222946	3.177294	2.698283	3.898646
5/11/2549	4.221909	3.179331	2.693111	3.901946
5/15/2549	4.211139	3.162385	2.671488	3.880444
5/16/2549	4.207975	3.16202	2.67232	3.871793
5/17/2549	4.205667	3.149555	2.660875	3.882633
5/18/2549	4.199562	3.147512	2.654735	3.867003
5/19/2549	4.200081	3.14767	2.657266	3.871191
5/22/2549	4.189128	3.137633	2.654927	3.84771

ตารางข้อมูลที่ใช้ในการศึกษา(ต่อ)

Date	EN	FTE	DJUSEN	HK
5/23/2549	4.189986	3.151967	2.655244	3.85448
5/24/2549	4.184569	3.144366	2.650405	3.855774
5/25/2549	4.174251	3.153754	2.664096	3.846315
5/26/2549	4.18441	3.159684	2.666106	3.854096
5/30/2549	4.186056	3.149795	2.658355	3.851727
6/1/2549	4.185192	3.154384	2.670023	3.839506
6/2/2549	4.191849	3.152945	2.675879	3.844151
6/5/2549	4.185042	3.153827	2.662342	3.848123
6/6/2549	4.1809	3.145461	2.662437	3.8467
6/7/2549	4.174393	3.144842	2.647158	3.83902
6/8/2549	4.162785	3.130491	2.650677	3.818576
6/9/2549	4.153066	3.137933	2.646502	3.814582
6/14/2549	4.129034	3.122694	2.635383	3.787246
6/15/2549	4.131889	3.134021	2.651326	3.805421
6/16/2549	4.149997	3.13281	2.649023	3.829719
6/19/2549	4.146536	3.129538	2.634598	3.824716
6/20/2549	4.136223	3.133679	2.631373	3.813968
6/21/2549	4.138603	3.132631	2.640293	3.820765
6/22/2549	4.146779	3.134859	2.642138	3.825844
6/23/2549	4.147666	3.142909	2.650337	3.827133
6/26/2549	4.14813	3.138211	2.655177	3.831403
6/27/2549	4.146654	3.140231	2.656922	3.835384
6/28/2549	4.15445	3.144126	2.665121	3.840058
6/29/2549	4.15651	3.150409	2.677187	3.846422
6/30/2549	4.162355	3.155479	2.677525	3.861359
7/3/2549	4.172626	3.159414	2.682677	3.863545
7/5/2549	4.169724	3.154743	2.683992	3.865523

ตารางข้อมูลที่ใช้ในการศึกษา(ต่อ)

Date	EN	FTE	DJUSEN	HK
7/6/2549	4.17855	3.158652	2.68383	3.869982
7/7/2549	4.17394	3.163045	2.677963	3.870594
7/10/2549	4.174232	3.163909	2.679173	3.87083
7/12/2549	4.176299	3.162564	2.685769	3.871219
7/13/2549	4.165005	3.160766	2.682154	3.865858
7/14/2549	4.162743	3.159612	2.687092	3.863992
7/17/2549	4.162176	3.157587	2.674613	3.861789
7/18/2549	4.16363	3.156037	2.675494	3.85674
7/19/2549	4.163669	3.157828	2.679346	3.859909
7/20/2549	4.170102	3.155916	2.670459	3.869213
7/21/2549	4.183918	3.153568	2.663936	3.872261
7/24/2549	4.180262	3.159522	2.676684	3.870371
7/25/2549	4.185173	3.161005	2.684379	3.87491
7/26/2549	4.187486	3.165339	2.691921	3.873482
7/27/2549	4.1895	3.173693	2.689779	3.879606
7/28/2549	4.186561	3.174804	2.689886	3.882102
7/31/2549	4.186285	3.171364	2.696426	3.879595
8/1/2549	4.184561	3.169798	2.698066	3.877135
8/2/2549	4.192861	3.172874	2.69884	3.880054
8/3/2549	4.198038	3.167698	2.695779	3.884076
8/4/2549	4.195746	3.169824	2.692635	3.8796
8/7/2549	4.198263	3.166415	2.69605	3.884567
8/8/2549	4.205009	3.164576	2.694746	3.887861
8/9/2549	4.202734	3.16886	2.696819	3.895594
8/10/2549	4.192846	3.16512	2.694746	3.897669
8/11/2549	4.200939	3.164918	2.69414	3.90024
8/15/2549	4.199245	3.167672	2.688117	3.900417

ตารางข้อมูลที่ใช้ในการศึกษา(ต่อ)

Date	EN	FTE	DJUSEN	HK
8/16/2549	4.20571	3.165559	2.685159	3.903544
8/17/2549	4.198403	3.161841	2.683002	3.89468
8/18/2549	4.194474	3.163844	2.689451	3.887325
8/21/2549	4.192822	3.167096	2.6926	3.881763
8/22/2549	4.194793	3.167217	2.694947	3.89343
8/23/2549	4.190227	3.165322	2.688464	3.892211
8/24/2549	4.184914	3.164953	2.693428	3.886425
8/25/2549	4.181358	3.165158	2.695455	3.88643
8/28/2549	4.174473	3.165678	2.689575	3.88598
8/29/2549	4.176708	3.159354	2.687761	3.887188
8/30/2549	4.169754	3.15876	2.680707	3.887757
8/31/2549	4.173925	3.157103	2.678108	3.887305
9/1/2549	4.181768	3.157266	2.683281	3.886734
9/5/2549	4.179511	3.15794	2.687957	3.890011
9/6/2549	4.180832	3.151128	2.674815	3.882407
9/7/2549	4.166403	3.143976	2.675164	3.874017
9/8/2549	4.159951	3.146478	2.66619	3.874788
9/11/2549	4.149238	3.13824	2.652004	3.864271
9/12/2549	4.147101	3.139243	2.649237	3.864262
9/13/2549	4.153507	3.139879	2.656683	3.86384
9/14/2549	4.160142	3.138742	2.648565	3.867482
9/15/2549	4.156391	3.134228	2.648623	3.866164
9/18/2549	4.159709	3.136854	2.659526	3.86961
9/19/2549	4.157686	3.138116	2.652266	3.873572
9/21/2549	4.148954	3.138372	2.647803	3.867707
9/22/2549	4.148258	3.133251	2.645344	3.869347
9/25/2549	4.14913	3.128154	2.645795	3.864095

ตารางข้อมูลที่ใช้ในการศึกษา(ต่อ)

Date	EN	FTE	DJUSEN	HK
9/26/2549	4.151468	3.136019	2.655062	3.859348
9/27/2549	4.158592	3.140191	2.661765	3.862725
9/28/2549	4.15791	3.145482	2.661983	3.86692
9/29/2549	4.154495	3.142652	2.663682	3.869683
10/3/2549	4.154665	3.135343	2.643472	3.867817
10/4/2549	4.151569	3.133762	2.650094	3.854155
10/5/2549	4.153079	3.138473	2.656635	3.858405
10/6/2549	4.155557	3.138647	2.657037	3.85935
10/9/2549	4.15637	3.141898	2.651704	3.855711
10/10/2549	4.160592	3.143767	2.658403	3.858303
10/11/2549	4.158118	3.144263	2.652546	3.86183
10/12/2549	4.160828	3.147206	2.66079	3.863608
10/13/2549	4.159846	3.15264	2.666883	3.869019
10/16/2549	4.165428	3.15816	2.676694	3.875845
10/17/2549	4.16442	3.158875	2.673491	3.877776
10/18/2549	4.168694	3.158854	2.670608	3.879442
10/19/2549	4.168669	3.158736	2.679001	3.879079
10/20/2549	4.174776	3.160883	2.674604	3.881802
10/24/2549	4.171668	3.160469	2.682136	3.880465
10/25/2549	4.17631	3.163313	2.689646	3.881081
10/26/2549	4.179266	3.165488	2.689389	3.886175
10/27/2549	4.178277	3.163275	2.685276	3.881258
10/31/2549	4.17156	3.157677	2.68329	3.883127
11/1/2549	4.177877	3.157209	2.679564	3.885733
11/2/2549	4.173683	3.155215	2.680072	3.885719
11/3/2549	4.174337	3.160009	2.688544	3.88462
11/6/2549	4.174652	3.165627	2.693058	3.888014

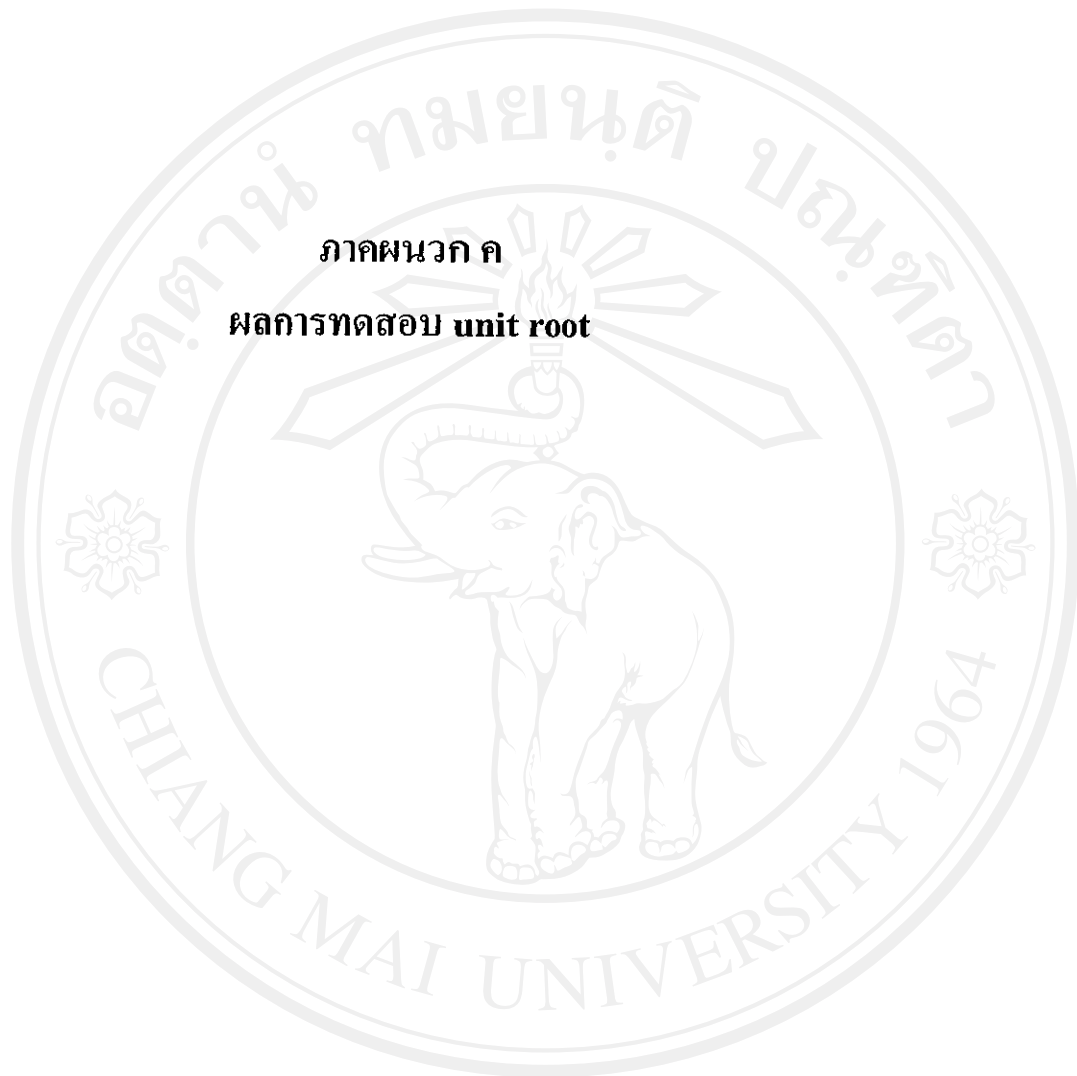
ตารางข้อมูลที่ใช้ในการศึกษา(ต่อ)

Date	EN	FTE	DJUSEN	HK
11/7/2549	4.17569	3.167427	2.689602	3.888667
11/8/2549	4.176486	3.169463	2.697351	3.888513
11/9/2549	4.177185	3.171592	2.700652	3.897471
11/10/2549	4.17566	3.173099	2.696566	3.902461
11/13/2549	4.171954	3.169624	2.696584	3.901558
11/14/2549	4.172696	3.170754	2.698118	3.89972
11/15/2549	4.172415	3.171472	2.702077	3.900746
11/16/2549	4.171585	3.172941	2.689646	3.90169
11/17/2549	4.168665	3.161853	2.693595	3.900492
11/20/2549	4.164302	3.163191	2.692115	3.899194
11/21/2549	4.162072	3.164058	2.699916	3.900161
11/22/2549	4.166634	3.160297	2.697578	3.915168
11/24/2549	4.164581	3.157	2.695989	3.921439
11/27/2549	4.170192	3.153391	2.694122	3.918837
11/28/2549	4.16742	3.154415	2.702258	3.90283
11/29/2549	4.175516	3.15873	2.714933	3.914015
11/30/2549	4.181184	3.155679	2.718161	3.922622
12/1/2549	4.183482	3.151428	2.720507	3.922193
12/4/2549	4.186149	3.150907	2.720374	3.924514
12/6/2549	4.184687	3.157315	2.719016	3.931983
12/7/2549	4.180333	3.157049	2.716646	3.930616
12/8/2549	4.177143	3.158423	2.716162	3.928148
12/12/2549	4.171121	3.157819	2.716529	3.933724
12/13/2549	4.167567	3.1603	2.721101	3.930657
12/14/2549	4.166894	3.163272	2.728751	3.93556
12/15/2549	4.170746	3.166998	2.723809	3.942873
12/18/2549	4.166777	3.165048	2.711225	3.944122

ตารางข้อมูลที่ใช้ในการศึกษา(ต่อ)

Date	EN	FTE	DJUSEN	HK
12/19/2549	4.091637	3.162979	2.717995	3.935998
12/20/2549	4.146566	3.161536	2.712507	3.942357
12/21/2549	4.133595	3.160024	2.709923	3.943309
12/22/2549	4.139605	3.157922	2.706564	3.943388
12/27/2549	4.141763	3.163164	2.711622	3.957791
12/28/2549	4.138792	3.162086	2.712288	3.965146
12/29/2549	4.139869	3.159441	2.708183	3.96996

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ภาคผนวก ค
ผลการทดสอบ unit root

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ภาคผนวก ก

ผลการทดสอบ unit root

ดัชนีหลักทรัพย์กลุ่มพลังงานของประเทศไทย

ผลการทดสอบยูนิทรูทที่ระดับ level, I(0) ที่มีจุดตัดแกนและแนวโน้ม

Null Hypothesis: EN has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=17)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.690253	0.2412
Test critical values:		
1% level	-3.979543	
5% level	-3.420308	
10% level	-3.132826	

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(EN)

Method: Least Squares

Date: 05/10/07 Time: 17:34

Sample (adjusted): 2 431

Included observations: 430 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
EN(-1)	-0.036145	0.013436	-2.690253	0.0074
C	500.3547	178.2039	2.807766	0.0052
@TREND(1)	0.111023	0.121099	0.916800	0.3598
R-squared	0.019095	Mean dependent var		4.179510
Adjusted R-squared	0.014501	S.D. dependent var		241.8791
S.E. of regression	240.1190	Akaike info criterion		13.80710
Sum squared resid	24619595	Schwarz criterion		13.83545
Log likelihood	-2965.526	F-statistic		4.156148
Durbin-Watson stat	2.197708	Prob(F-statistic)		0.016306

ผลการทดสอบยูนิทรูทที่ระดับ level, I(0) ที่มีจุดตัดแต่ปราศจากแนวโน้ม

Null Hypothesis: EN has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic based on SIC, MAXLAG=17)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.733964	0.0691
Test critical values:		
1% level	-3.445338	
5% level	-2.868042	
10% level	-2.570298	

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(EN)

Method: Least Squares

Date: 05/10/07 Time: 17:35

Sample (adjusted): 2 431

Included observations: 430 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
EN(-1)	-0.028291	0.010348	-2.733964	0.0065
C	411.2617	149.3476	2.753722	0.0061
R-squared	0.017164	Mean dependent var		4.179510
Adjusted R-squared	0.014868	S.D. dependent var		241.8791
S.E. of regression	240.0743	Akaike info criterion		13.80441
Sum squared resid	24668057	Schwarz criterion		13.82332
Log likelihood	-2965.949	F-statistic		7.474559
Durbin-Watson stat	2.210743	Prob(F-statistic)		0.006517

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ผลการทดสอบยูนิตรูทที่ระดับ level, I(0)แบบจำลองปราศจากจุดตัดแกนและแนวโน้ม

Null Hypothesis: EN has a unit root

Exogenous: None

Lag Length: 1 (Automatic based on SIC, MAXLAG=17)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	0.183755	0.7392
Test critical values: 1% level	-2.570364	
5% level	-1.941563	
10% level	-1.616204	

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(EN)

Method: Least Squares

Date: 05/10/07 Time: 17:36

Sample (adjusted): 3 431

Included observations: 429 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
EN(-1)	0.000148	0.000805	0.183755	0.8543
D(EN(-1))	-0.117864	0.048053	-2.452767	0.0146
R-squared	0.013675	Mean dependent var		3.886525
Adjusted R-squared	0.011365	S.D. dependent var		242.0851
S.E. of regression	240.7055	Akaike info criterion		13.80968
Sum squared resid	24740017	Schwarz criterion		13.82861
Log likelihood	-2960.176	Durbin-Watson stat		1.990900

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ผลการทดสอบยูนิทรุตที่ระดับ level, I(1) ที่มีจุดตัดแกนและแนวโน้ม

Null Hypothesis: D(EN) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=17)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-23.30477	0.0000
Test critical values:		
1% level	-3.979594	
5% level	-3.420332	
10% level	-3.132840	

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(EN,2)

Method: Least Squares

Date: 05/10/07 Time: 17:37

Sample (adjusted): 3 431

Included observations: 429 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(EN(-1))	-1.120675	0.048088	-23.30477	0.0000
C	27.09596	23.38673	1.158604	0.2473
@TREND(1)	-0.105155	0.093920	-1.119620	0.2635
R-squared	0.560424	Mean dependent var	-0.223032	
Adjusted R-squared	0.558360	S.D. dependent var	362.0497	
S.E. of regression	240.6038	Akaike info criterion	13.81115	
Sum squared resid	24661210	Schwarz criterion	13.83955	
Log likelihood	-2959.491	F-statistic	271.5576	
Durbin-Watson stat	1.991109	Prob(F-statistic)	0.000000	

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ผลการทดสอบยูนิทรุตที่ระดับ level, I(1) ที่มีจุดตัดแต่ปราศจากแนวโน้ม

Null Hypothesis: D(EN) has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic based on SIC, MAXLAG=17)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-23.27102	0.0000
Test critical values:		
1% level	-3.445373	
5% level	-2.868058	
10% level	-2.570306	

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(EN,2)

Method: Least Squares

Date: 05/10/07 Time: 17:40

Sample (adjusted): 3 431

Included observations: 429 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(EN(-1))	-1.117963	0.048041	-23.27102	0.0000
C	4.371301	11.62158	0.376136	0.7070
R-squared	0.559130	Mean dependent var		-0.223032
Adjusted R-squared	0.558098	S.D. dependent var		362.0497
S.E. of regression	240.6752	Akaike info criterion		13.80942
Sum squared resid	24733778	Schwarz criterion		13.82836
Log likelihood	-2960.122	F-statistic		541.5401
Durbin-Watson stat	1.990900	Prob(F-statistic)		0.000000

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ผลการทดสอบยูนิทรูทที่ระดับ level, I(1)แบบจำลองปราศจากจุดตัดแกนและแนวโน้ม

Null Hypothesis: D(EN) has a unit root

Exogenous: None

Lag Length: 0 (Automatic based on SIC, MAXLAG=17)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-23.29135	0.0000
Test critical values:		
1% level	-2.570364	
5% level	-1.941563	
10% level	-1.616204	

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(EN,2)

Method: Least Squares

Date: 05/10/07 Time: 17:42

Sample (adjusted): 3 431

Included observations: 429 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(EN(-1))	-1.117656	0.047986	-23.29135	0.0000
R-squared	0.558984	Mean dependent var		-0.223032
Adjusted R-squared	0.558984	S.D. dependent var		362.0497
S.E. of regression	240.4337	Akaike info criterion		13.80509
Sum squared resid	24741973	Schwarz criterion		13.81456
Log likelihood	-2960.193	Durbin-Watson stat		1.990880

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ดัชนีหลักทรัพย์กลุ่มพลังงานของประเทศอังกฤษ

ผลการทดสอบยูนิตรูทที่ระดับ level, I(0) ที่มีจุดตัดแกนและแนวโน้ม

Null Hypothesis: FTE has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=17)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.471474	0.3423
Test critical values:		
1% level	-3.979543	
5% level	-3.420308	
10% level	-3.132826	

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(FTE)

Method: Least Squares

Date: 05/10/07 Time: 17:58

Sample (adjusted): 2 431

Included observations: 430 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
FTE(-1)	-0.025923	0.010489	-2.471474	0.0138
C	35.25006	13.61536	2.588992	0.0100
@TREND(1)	0.007254	0.007886	0.919894	0.3581
R-squared	0.016046	Mean dependent var		0.612558
Adjusted R-squared	0.011437	S.D. dependent var		15.42727
S.E. of regression	15.33879	Akaike info criterion		8.305600
Sum squared resid	100464.0	Schwarz criterion		8.333952
Log likelihood	-1782.704	F-statistic		3.481583
Durbin-Watson stat	2.124363	Prob(F-statistic)		0.031635

ผลการทดสอบยูนิตรุตที่ระดับ level, I(0) ที่มีจุดตัดแต่ปราศจากแนวโน้ม

Null Hypothesis: FTE has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic based on SIC, MAXLAG=17)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.473694	0.1227
Test critical values:		
1% level	-3.445338	
5% level	-2.868042	
10% level	-2.570298	

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(FTE)

Method: Least Squares

Date: 05/10/07 Time: 17:59

Sample (adjusted): 2 431

Included observations: 430 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
FTE(-1)	-0.019604	0.007925	-2.473694	0.0138
C	27.98870	11.09159	2.523416	0.0120
R-squared	0.014096	Mean dependent var		0.612558
Adjusted R-squared	0.011792	S.D. dependent var		15.42727
S.E. of regression	15.33604	Akaike info criterion		8.302928
Sum squared resid	100663.1	Schwarz criterion		8.321830
Log likelihood	-1783.130	F-statistic		6.119161
Durbin-Watson stat	2.133616	Prob(F-statistic)		0.013759

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ผลการทดสอบยูนิตรูลที่ระดับ level, I(0)แบบจำลองปราศจากจุดตัดแกนและแนวโน้ม

Null Hypothesis: FTE has a unit root

Exogenous: None

Lag Length: 0 (Automatic based on SIC, MAXLAG=17)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	0.657378	0.8577
Test critical values:		
1% level	-2.570351	
5% level	-1.941562	
10% level	-1.616205	

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(FTE)

Method: Least Squares

Date: 05/10/07 Time: 17:59

Sample (adjusted): 2 431

Included observations: 430 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
FTE(-1)	0.000350	0.000532	0.657378	0.5113
R-squared	-0.000572	Mean dependent var		0.612558
Adjusted R-squared	-0.000572	S.D. dependent var		15.42727
S.E. of regression	15.43168	Akaike info criterion		8.313045
Sum squared resid	102160.7	Schwarz criterion		8.322496
Log likelihood	-1786.305	Durbin-Watson stat		2.144727

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ผลการทดสอบยูนิทรูทที่ระดับ level, I(1) ที่มีจุดตัดแกนและแนวโน้ม

Null Hypothesis: D(FTE) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=17)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-22.25096	0.0000
Test critical values:		
1% level	-3.979594	
5% level	-3.420332	
10% level	-3.132840	

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(FTE,2)

Method: Least Squares

Date: 05/10/07 Time: 18:00

Sample (adjusted): 3 431

Included observations: 429 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(FTE(-1))	-1.075233	0.048323	-22.25096	0.0000
C	1.885039	1.499263	1.257311	0.2093
@TREND(1)	-0.005738	0.006017	-0.953589	0.3408
R-squared	0.537512	Mean dependent var		-0.036620
Adjusted R-squared	0.535341	S.D. dependent var		22.62193
S.E. of regression	15.42044	Akaike info criterion		8.316233
Sum squared resid	101298.5	Schwarz criterion		8.344635
Log likelihood	-1780.832	F-statistic		247.5529
Durbin-Watson stat	1.996258	Prob(F-statistic)		0.000000

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ผลการทดสอบยูนิตรุตที่ระดับ level, I(1) ที่มีจุดตัดแต่ปราศจากแนวโน้ม

Null Hypothesis: D(FTE) has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic based on SIC, MAXLAG=17)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-22.23289	0.0000
Test critical values:		
1% level	-3.445373	
5% level	-2.868058	
10% level	-2.570306	

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(FTE,2)

Method: Least Squares

Date: 05/10/07 Time: 18:01

Sample (adjusted): 3 431

Included observations: 429 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(FTE(-1))	-1.073294	0.048275	-22.23289	0.0000
C	0.644434	0.745057	0.864946	0.3876
R-squared	0.536525	Mean dependent var		-0.036620
Adjusted R-squared	0.535440	S.D. dependent var		22.62193
S.E. of regression	15.41880	Akaike info criterion		8.313703
Sum squared resid	101514.7	Schwarz criterion		8.332638
Log likelihood	-1781.289	F-statistic		494.3014
Durbin-Watson stat	1.995965	Prob(F-statistic)		0.000000

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ผลการทดสอบยูนิตรูทที่ระดับ level, I(1)แบบจำลองปราคจากจุดตัดแกนและแนวโน้ม

Null Hypothesis: D(FTE) has a unit root

Exogenous: None

Lag Length: 0 (Automatic based on SIC, MAXLAG=17)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-22.22265	0.0000
Test critical values:		
1% level	-2.570364	
5% level	-1.941563	
10% level	-1.616204	

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(FTE,2)

Method: Least Squares

Date: 05/10/07 Time: 18:02

Sample (adjusted): 3 431

Included observations: 429 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(FTE(-1))	-1.071577	0.048220	-22.22265	0.0000
R-squared	0.535713	Mean dependent var		-0.036620
Adjusted R-squared	0.535713	S.D. dependent var		22.62193
S.E. of regression	15.41426	Akaike info criterion		8.310792
Sum squared resid	101692.6	Schwarz criterion		8.320259
Log likelihood	-1781.665	Durbin-Watson stat		1.995985

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ดัชนีหลักทรัพย์กลุ่มพลังงานของสหรัฐอเมริกา

ผลการทดสอบยูนิตรูทที่ระดับ level, $I(0)$ ที่มีจุดตัดแกนและแนวโน้ม

Null Hypothesis: DJUSEN has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=17)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-3.772174	0.0189
Test critical values:		
1% level	-3.979543	
5% level	-3.420308	
10% level	-3.132826	

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(DJUSEN)

Method: Least Squares

Date: 05/10/07 Time: 18:07

Sample (adjusted): 2 431

Included observations: 430 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DJUSEN(-1)	-0.064062	0.016983	-3.772174	0.0002
C	23.96264	6.274368	3.819132	0.0002
@TREND(1)	0.020578	0.006140	3.351672	0.0009
R-squared	0.032278	Mean dependent var		0.360767
Adjusted R-squared	0.027745	S.D. dependent var		6.932460
S.E. of regression	6.835613	Akaike info criterion		6.689122
Sum squared resid	19951.83	Schwarz criterion		6.717474
Log likelihood	-1435.161	F-statistic		7.121167
Durbin-Watson stat	1.978101	Prob(F-statistic)		0.000907

ผลการทดสอบยูนิทรุตที่ระดับ level, I(0) ที่มีจุดตัดแต่ปราศจากแนวโน้ม

Null Hypothesis: DJUSEN has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic based on SIC, MAXLAG=17)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.714167	0.4234
Test critical values:		
1% level	-3.445338	
5% level	-2.868042	
10% level	-2.570298	

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(DJUSEN)

Method: Least Squares

Date: 05/10/07 Time: 18:07

Sample (adjusted): 2 431

Included observations: 430 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DJUSEN(-1)	-0.012741	0.007433	-1.714167	0.0872
C	5.936911	3.270033	1.815551	0.0701
R-squared	0.006819	Mean dependent var		0.360767
Adjusted R-squared	0.004498	S.D. dependent var		6.932460
S.E. of regression	6.916851	Akaike info criterion		6.710439
Sum squared resid	20476.73	Schwarz criterion		6.729340
Log likelihood	-1440.744	F-statistic		2.938368
Durbin-Watson stat	2.028817	Prob(F-statistic)		0.087222

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ผลการทดสอบยูนิตรุตที่ระดับ level, I(0)แบบจำลองปราศจากจุดตัดแกนและแนวโน้ม

Null Hypothesis: DJUSEN has a unit root

Exogenous: None

Lag Length: 0 (Automatic based on SIC, MAXLAG=17)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	0.898669	0.9014
Test critical values:		
1% level	-2.570351	
5% level	-1.941562	
10% level	-1.616205	

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(DJUSEN)

Method: Least Squares

Date: 05/10/07 Time: 18:08

Sample (adjusted): 2 431

Included observations: 430 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DJUSEN(-1)	0.000683	0.000760	0.898669	0.3693
R-squared	-0.000830	Mean dependent var		0.360767
Adjusted R-squared	-0.000830	S.D. dependent var		6.932460
S.E. of regression	6.935338	Akaike info criterion		6.713460
Sum squared resid	20634.43	Schwarz criterion		6.722910
Log likelihood	-1442.394	Durbin-Watson stat		2.040508

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ผลการทดสอบยูนิตรูลที่ระดับ level, I(1) ที่มีจุดตัดแกนและแนวโน้ม

Null Hypothesis: D(DJUSEN) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=17)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-21.06637	0.0000
Test critical values:		
1% level	-3.979594	
5% level	-3.420332	
10% level	-3.132840	

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(DJUSEN,2)

Method: Least Squares

Date: 05/10/07 Time: 18:08

Sample (adjusted): 3 431

Included observations: 429 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(DJUSEN(-1))	-1.021104	0.048471	-21.06637	0.0000
C	0.434375	0.675406	0.643132	0.5205
@TREND(1)	-0.000305	0.002712	-0.112595	0.9104
R-squared	0.510230	Mean dependent var		-0.012354
Adjusted R-squared	0.507931	S.D. dependent var		9.915052
S.E. of regression	6.955177	Akaike info criterion		6.723818
Sum squared resid	20607.53	Schwarz criterion		6.752220
Log likelihood	-1439.259	F-statistic		221.8979
Durbin-Watson stat	1.996560	Prob(F-statistic)		0.000000

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ผลการทดสอบยูนิตรูลที่ระดับ level, $I(1)$ ที่มีจุดตัดแต่ปราศจากแนวโน้ม

Null Hypothesis: $D(DJUSEN)$ has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic based on SIC, MAXLAG=17)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-21.09056	0.0000
Test critical values:		
1% level	-3.445373	
5% level	-2.868058	
10% level	-2.570306	

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: $D(DJUSEN,2)$

Method: Least Squares

Date: 05/10/07 Time: 18:09

Sample (adjusted): 3 431

Included observations: 429 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
$D(DJUSEN(-1))$	-1.021091	0.048415	-21.09056	0.0000
C	0.368425	0.335896	1.096840	0.2733
R-squared	0.510215	Mean dependent var		-0.012354
Adjusted R-squared	0.509068	S.D. dependent var		9.915052
S.E. of regression	6.947132	Akaike info criterion		6.719186
Sum squared resid	20608.15	Schwarz criterion		6.738120
Log likelihood	-1439.265	F-statistic		444.8117
Durbin-Watson stat	1.996526	Prob(F-statistic)		0.000000

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ผลการทดสอบยูนิตรูลที่ระดับ level, I(1)แบบจำลองปราศจากจุดตัดแกนและแนวโน้ม

Null Hypothesis: D(DJUSEN) has a unit root

Exogenous: None

Lag Length: 0 (Automatic based on SIC, MAXLAG=17)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-21.05706	0.0000
Test critical values:		
1% level	-2.570364	
5% level	-1.941563	
10% level	-1.616204	

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(DJUSEN,2)

Method: Least Squares

Date: 05/10/07 Time: 18:10

Sample (adjusted): 3 431

Included observations: 429 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(DJUSEN(-1))	-1.018237	0.048356	-21.05706	0.0000
R-squared	0.508835	Mean dependent var		-0.012354
Adjusted R-squared	0.508835	S.D. dependent var		9.915052
S.E. of regression	6.948779	Akaike info criterion		6.717337
Sum squared resid	20666.21	Schwarz criterion		6.726805
Log likelihood	-1439.869	Durbin-Watson stat		1.996350

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ดัชนีหลักทรัพย์กลุ่มพลังงานของประเทศไทย

ผลการทดสอบยูนิตรูลที่ระดับ level, $I(0)$ ที่มีจุดตัดแกนและแนวโน้ม

Null Hypothesis: HK has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=17)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.230739	0.4707
Test critical values:		
1% level	-3.979543	
5% level	-3.420308	
10% level	-3.132826	

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(HK)

Method: Least Squares

Date: 05/10/07 Time: 18:11

Sample (adjusted): 2 431

Included observations: 430 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
HK(-1)	-0.028195	0.012640	-2.230739	0.0262
C	128.3948	57.01088	2.252111	0.0248
@TREND(1)	0.292331	0.122468	2.387002	0.0174

R-squared	0.013171	Mean dependent var	11.07137
Adjusted R-squared	0.008548	S.D. dependent var	108.6277
S.E. of regression	108.1624	Akaike info criterion	12.21210
Sum squared resid	4995519.	Schwarz criterion	12.24045
Log likelihood	-2622.601	F-statistic	2.849437
Durbin-Watson stat	1.798073	Prob(F-statistic)	0.058978

ผลการทดสอบยูนิตรูลที่ระดับ level, $I(0)$ ที่มีจุดตัดแต่ปราศจากแนวโน้ม

Null Hypothesis: HK has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic based on SIC, MAXLAG=17)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	0.032909	0.9601
Test critical values:		
1% level	-3.445338	
5% level	-2.868042	
10% level	-2.570298	

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(HK)

Method: Least Squares

Date: 05/10/07 Time: 18:12

Sample (adjusted): 2 431

Included observations: 430 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
HK(-1)	0.000144	0.004361	0.032909	0.9738
C	10.15362	28.37645	0.357818	0.7207
R-squared	0.000003	Mean dependent var		11.07137
Adjusted R-squared	-0.002334	S.D. dependent var		108.6277
S.E. of regression	108.7544	Akaike info criterion		12.22070
Sum squared resid	5062178.	Schwarz criterion		12.23960
Log likelihood	-2625.451	F-statistic		0.001083
Durbin-Watson stat	1.825291	Prob(F-statistic)		0.973762

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ผลการทดสอบยูนิตรุตที่ระดับ level, I(0)แบบจำลองปราศจากจุดตัดแกนและแนวโน้ม

Null Hypothesis: HK has a unit root

Exogenous: None

Lag Length: 0 (Automatic based on SIC, MAXLAG=17)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	2.082834	0.9914
Test critical values:		
1% level	-2.570351	
5% level	-1.941562	
10% level	-1.616205	

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(HK)

Method: Least Squares

Date: 05/10/07 Time: 18:13

Sample (adjusted): 2 431

Included observations: 430 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
HK(-1)	0.001677	0.000805	2.082834	0.0379
R-squared	-0.000297	Mean dependent var		11.07137
Adjusted R-squared	-0.000297	S.D. dependent var		108.6277
S.E. of regression	108.6438	Akaike info criterion		12.21635
Sum squared resid	5063692.	Schwarz criterion		12.22580
Log likelihood	-2625.515	Durbin-Watson stat		1.827543

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ผลการทดสอบยูนิตรูทที่ระดับ level, I(1) ที่มีจุดตัดแกนและแนวโน้ม

Null Hypothesis: D(HK) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Automatic based on SIC, MAXLAG=17)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-18.94771	0.0000
Test critical values:		
1% level	-3.979594	
5% level	-3.420332	
10% level	-3.132840	

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(HK,2)

Method: Least Squares

Date: 05/10/07 Time: 18:13

Sample (adjusted): 3 431

Included observations: 429 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(HK(-1))	-0.914994	0.048291	-18.94771	0.0000
C	2.473399	10.53175	0.234852	0.8144
@TREND(1)	0.034946	0.042323	0.825701	0.4094

R-squared	0.457344	Mean dependent var	0.087274
Adjusted R-squared	0.454797	S.D. dependent var	146.9202
S.E. of regression	108.4828	Akaike info criterion	12.21803
Sum squared resid	5013387.	Schwarz criterion	12.24643
Log likelihood	-2617.767	F-statistic	179.5142
Durbin-Watson stat	1.978267	Prob(F-statistic)	0.000000

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ผลการทดสอบยูนิตรูทที่ระดับ level, I(1) ที่มีจุดตัดแต่ปราศจากแนวโน้ม

Null Hypothesis: D(HK) has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic based on SIC, MAXLAG=17)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-18.93710	0.0000
Test critical values:		
1% level	-3.445373	
5% level	-2.868058	
10% level	-2.570306	

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(HK,2)

Method: Least Squares

Date: 05/10/07 Time: 18:14

Sample (adjusted): 3 431

Included observations: 429 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(HK(-1))	-0.913494	0.048238	-18.93710	0.0000
C	10.00544	5.261777	1.901532	0.0579
R-squared	0.456476	Mean dependent var		0.087274
Adjusted R-squared	0.455203	S.D. dependent var		146.9202
S.E. of regression	108.4424	Akaike info criterion		12.21497
Sum squared resid	5021411.	Schwarz criterion		12.23390
Log likelihood	-2618.110	F-statistic		358.6139
Durbin-Watson stat	1.977760	Prob(F-statistic)		0.000000

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ผลการทดสอบยูนิตรุตที่ระดับ level, I(1)แบบจำลองปราศจากจุดตัดแกนและแนวโน้ม

Null Hypothesis: D(HK) has a unit root

Exogenous: None

Lag Length: 0 (Automatic based on SIC, MAXLAG=17)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-18.78409	0.0000
Test critical values:		
1% level	-2.570364	
5% level	-1.941563	
10% level	-1.616204	

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(HK,2)

Method: Least Squares

Date: 05/10/07 Time: 18:14

Sample (adjusted): 3 431

Included observations: 429 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(HK(-1))	-0.904364	0.048145	-18.78409	0.0000
R-squared	0.451873	Mean dependent var		0.087274
Adjusted R-squared	0.451873	S.D. dependent var		146.9202
S.E. of regression	108.7732	Akaike info criterion		12.21874
Sum squared resid	5063932.	Schwarz criterion		12.22820
Log likelihood	-2619.919	Durbin-Watson stat		1.977338

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ภาคผนวก ง
ผลการทดสอบความสัมพันธ์เชิงดูดยภาพในระยะยาว

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ภาคผนวก ง

ผลการทดสอบความสัมพันธ์เชิงคู่ระยะยาว

ในกรณีที่ดัชนีราคาหลักทรัพย์กลุ่มพลังงานของต่างประเทศเป็นตัวแปรต้นและให้ดัชนีราคา

หลักทรัพย์กลุ่มพลังงานของประเทศไทยเป็นตัวแปรตาม

ดัชนีหลักทรัพย์กลุ่มพลังงานของ FTE ประเทศอังกฤษ

Dependent Variable: EN

Method: Least Squares

Date: 05/19/07 Time: 14:18

Sample: 1 431

Included observations: 431

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.087029	0.086573	12.55618	0.0000
FTE	0.976333	0.027534	35.45876	0.0000
R-squared	0.745600	Mean dependent var		4.156666
Adjusted R-squared	0.745007	S.D. dependent var		0.034148
S.E. of regression	0.017244	Akaike info criterion		-5.278127
Sum squared resid	0.127559	Schwarz criterion		-5.259259
Log likelihood	1139.436	F-statistic		1257.324
Durbin-Watson stat	0.204598	Prob(F-statistic)		0.000000

Null Hypothesis: RESID_EN_FTE has a unit root

Exogenous: None

Lag Length: 1 (Automatic based on SIC, MAXLAG=17)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-3.751306	0.0002
Test critical values:		
1% level	-2.570364	
5% level	-1.941563	
10% level	-1.616204	

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(RESID_EN_FTE)

Method: Least Squares

Date: 05/19/07 Time: 14:20

Sample (adjusted): 3 431

Included observations: 429 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RESID_EN_FTE(-1)	-0.081747	0.021792	-3.751306	0.0002
D(RESID_EN_FTE(-1))	-0.162009	0.047988	-3.376031	0.0008
R-squared	0.072428	Mean dependent var		-6.30E-05
Adjusted R-squared	0.070255	S.D. dependent var		0.007808
S.E. of regression	0.007529	Akaike info criterion		-6.935577
Sum squared resid	0.024202	Schwarz criterion		-6.916642
Log likelihood	1489.681	Durbin-Watson stat		2.002056

ดัชนีหลักทรัพ์กลุ่มพลังงานของ DJUSEN ประเทศสหรัฐอเมริกา

Dependent Variable: EN

Method: Least Squares

Date: 05/19/07 Time: 14:21

Sample: 1 431

Included observations: 431

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.546244	0.055638	45.76427	0.0000
DJUSEN	0.610252	0.021080	28.94880	0.0000
R-squared	0.661414	Mean dependent var		4.156666
Adjusted R-squared	0.660625	S.D. dependent var		0.034148
S.E. of regression	0.019893	Akaike info criterion		-4.992254
Sum squared resid	0.169771	Schwarz criterion		-4.973386
Log likelihood	1077.831	F-statistic		838.0331
Durbin-Watson stat	0.168933	Prob(F-statistic)		0.000000

Null Hypothesis: RESID_EN_DJUSEN has a unit root

Exogenous: None

Lag Length: 1 (Automatic based on SIC, MAXLAG=17)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.671217	0.0075
Test critical values:		
1% level	-2.570364	
5% level	-1.941563	
10% level	-1.616204	

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(RESID_EN_DJUSEN)

Method: Least Squares

Date: 05/19/07 Time: 14:22

Sample (adjusted): 3 431

Included observations: 429 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RESID_EN_DJUSEN(-1)	-0.052574	0.019682	-2.671217	0.0078
D(RESID_EN_DJUSEN(-1))	-0.253637	0.047322	-5.359847	0.0000
R-squared	0.095113	Mean dependent var		-9.25E-05
Adjusted R-squared	0.092993	S.D. dependent var		0.008183
S.E. of regression	0.007793	Akaike info criterion		-6.866542
Sum squared resid	0.025932	Schwarz criterion		-6.847607
Log likelihood	1474.873	Durbin-Watson stat		2.038186

ดัชนีหลักทรัพย์กลุ่มพลังงานของ HK ประเทศฮ่องกง

Dependent Variable: EN

Method: Least Squares

Date: 05/19/07 Time: 14:23

Sample: 1 431

Included observations: 431

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.939610	0.045834	64.13606	0.0000
HK	0.320417	0.012064	26.56007	0.0000
R-squared	0.621839	Mean dependent var		4.156666
Adjusted R-squared	0.620957	S.D. dependent var		0.034148
S.E. of regression	0.021024	Akaike info criterion		-4.881713
Sum squared resid	0.189614	Schwarz criterion		-4.862845
Log likelihood	1054.009	F-statistic		705.4374
Durbin-Watson stat	0.106222	Prob(F-statistic)		0.000000

Null Hypothesis: RESID_EN_HK has a unit root

Exogenous: None

Lag Length: 1 (Automatic based on SIC, MAXLAG=17)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.000297	0.0437
Test critical values:		
1% level	-2.570364	
5% level	-1.941563	
10% level	-1.616204	

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(RESID_EN_HK)

Method: Least Squares

Date: 05/19/07 Time: 14:24

Sample (adjusted): 3 431

Included observations: 429 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RESID_EN_HK(-1)	-0.031967	0.015981	-2.000297	0.0461
D(RESID_EN_HK(-1))	-0.173198	0.048220	-3.591799	0.0004
R-squared	0.045762	Mean dependent var		-9.65E-05
Adjusted R-squared	0.043527	S.D. dependent var		0.006858
S.E. of regression	0.006707	Akaike info criterion		-7.166647
Sum squared resid	0.019209	Schwarz criterion		-7.147712
Log likelihood	1539.246	Durbin-Watson stat		1.983669

ในกรณีที่ดัชนีราคาหลักทรัพย์กลุ่มพลังงานของประเทศไทยเป็นตัวแปรต้นและให้ดัชนีราคา

หลักทรัพย์กลุ่มพลังงานของต่างประเทศเป็นตัวแปรตาม

ดัชนีหลักทรัพย์กลุ่มพลังงานของ FTE ประเทศอังกฤษ

Dependent Variable: FTE

Method: Least Squares

Date: 05/19/07 Time: 23:40

Sample: 1 431

Included observations: 431

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.030292	0.089525	-0.338360	0.7353
EN	0.763674	0.021537	35.45876	0.0000
R-squared	0.745600	Mean dependent var		3.144047
Adjusted R-squared	0.745007	S.D. dependent var		0.030201
S.E. of regression	0.015250	Akaike info criterion		-5.523790
Sum squared resid	0.099775	Schwarz criterion		-5.504922
Log likelihood	1192.377	F-statistic		1257.324
Durbin-Watson stat	0.181859	Prob(F-statistic)		0.000000

Null Hypothesis: RESID_FTE_EN has a unit root

Exogenous: None

Lag Length: 1 (Automatic based on SIC, MAXLAG=17)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-3.541237	0.0004
Test critical values:		
1% level	-2.570364	
5% level	-1.941563	
10% level	-1.616204	

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(RESID_FTE_EN)

Method: Least Squares

Date: 05/19/07 Time: 23:42

Sample (adjusted): 3 431

Included observations: 429 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RESID_FTE_EN(-1)	-0.072681	0.020524	-3.541237	0.0004
D(RESID_FTE_EN(-1))	-0.167716	0.047911	-3.500604	0.0005
R-squared	0.069410	Mean dependent var		9.85E-05
Adjusted R-squared	0.067230	S.D. dependent var		0.006510
S.E. of regression	0.006288	Akaike info criterion		-7.295846
Sum squared resid	0.016881	Schwarz criterion		-7.276911
Log likelihood	1566.959	Durbin-Watson stat		2.006678

ดัชนีหลักทรัพย์กลุ่มพลังงานของ DJUSEN ประเทศสหรัฐอเมริกา

Dependent Variable: DJUSEN

Method: Least Squares

Date: 05/19/07 Time: 23:44

Sample: 1 431

Included observations: 431

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1.866203	0.155630	-11.99128	0.0000
EN	1.083837	0.037440	28.94880	0.0000
R-squared	0.661414	Mean dependent var		2.638945
Adjusted R-squared	0.660625	S.D. dependent var		0.045508
S.E. of regression	0.026511	Akaike info criterion		-4.417864
Sum squared resid	0.301522	Schwarz criterion		-4.398996
Log likelihood	954.0497	F-statistic		838.0331
Durbin-Watson stat	0.144145	Prob(F-statistic)		0.000000

Null Hypothesis: RESID_DJUSEN_EN has a unit root
 Exogenous: None
 Lag Length: 1 (Automatic based on SIC, MAXLAG=17)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.043841	0.0394
Test critical values:		
1% level	-2.570364	
5% level	-1.941563	
10% level	-1.616204	

*MacKinnon (1996) one-sided p-values.
 Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(RESID_DJUSEN_EN)
 Method: Least Squares
 Date: 05/19/07 Time: 23:45
 Sample (adjusted): 3 431
 Included observations: 429 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RESID_DJUSEN_EN(-1)	-0.037200	0.018201	-2.043841	0.0416
D(RESID_DJUSEN_EN(-1))	-0.269305	0.047341	-5.688573	0.0000

R-squared	0.093419	Mean dependent var	0.000224
Adjusted R-squared	0.091296	S.D. dependent var	0.010072
S.E. of regression	0.009601	Akaike info criterion	-6.449148
Sum squared resid	0.039364	Schwarz criterion	-6.430214
Log likelihood	1385.342	Durbin-Watson stat	2.058435

ดัชนีหลักทรัพ์ยกกลุ่มพลังงานของ HK ประเทศฮ่องกง

Dependent Variable: HK
 Method: Least Squares
 Date: 05/19/07 Time: 23:47
 Sample: 1 431
 Included observations: 431

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-4.268561	0.303733	-14.05365	0.0000
EN	1.940716	0.073069	26.56007	0.0000

R-squared	0.621839	Mean dependent var	3.798347
Adjusted R-squared	0.620957	S.D. dependent var	0.084040
S.E. of regression	0.051740	Akaike info criterion	-3.080525
Sum squared resid	1.148464	Schwarz criterion	-3.061657
Log likelihood	665.8531	F-statistic	705.4374
Durbin-Watson stat	0.065635	Prob(F-statistic)	0.000000

Null Hypothesis: RESID_HK_EN has a unit root

Exogenous: None

Lag Length: 1 (Automatic based on SIC, MAXLAG=17)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-0.381288	0.5466
Test critical values:		
1% level	-2.570364	
5% level	-1.941563	
10% level	-1.616204	

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(RESID_HK_EN)

Method: Least Squares

Date: 05/19/07 Time: 23:48

Sample (adjusted): 3 431

Included observations: 429 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RESID_HK_EN(-1)	-0.004812	0.012621	-0.381288	0.7032
D(RESID_HK_EN(-1))	-0.199423	0.048358	-4.123852	0.0000
R-squared	0.040454	Mean dependent var		0.000455
Adjusted R-squared	0.038206	S.D. dependent var		0.013262
S.E. of regression	0.013007	Akaike info criterion		-5.842068
Sum squared resid	0.072236	Schwarz criterion		-5.823134
Log likelihood	1255.124	Durbin-Watson stat		1.989754

ลิขสิทธิ์มหาวิทยาลัยเชียงใหม่

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ภาคผนวก จ
ผลการทดสอบความสัมพันธ์เชิงดูดยภาพในระยะสั้น

ลิขสิทธิ์มหาวิทยาลัยเชียงใหม่
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ภาคผนวก จ

ผลการทดสอบความสัมพันธ์เชิงคุณภาพในระยะสั้น

ในกรณีที่ดัชนีราคาหลักทรัพย์กลุ่มพลังงานของต่างประเทศเป็นตัวแปรต้นและให้ดัชนีราคา

หลักทรัพย์กลุ่มพลังงานของประเทศไทยเป็นตัวแปรตาม

ดัชนีหลักทรัพย์กลุ่มพลังงานของ FTE ประเทศอังกฤษ

Dependent Variable: D(EN)

Method: Least Squares

Date: 05/19/07 Time: 14:27

Sample (adjusted): 3 431

Included observations: 429 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.000106	0.000352	0.300509	0.7639
RESID_EN_FTE(-1)	-0.093510	0.020797	-4.496339	0.0000
D(FTE(-1))	0.157380	0.074164	2.122062	0.0344
R-squared	0.063672	Mean dependent var		0.000130
Adjusted R-squared	0.059277	S.D. dependent var		0.007507
S.E. of regression	0.007281	Akaike info criterion		-6.999999
Sum squared resid	0.022586	Schwarz criterion		-6.971597
Log likelihood	1504.500	F-statistic		14.48449
Durbin-Watson stat	2.243632	Prob(F-statistic)		0.000001

ดัชนีหลักทรัพย์กลุ่มพลังงานของ DJUSEN ประเทศสหรัฐอเมริกา

Dependent Variable: D(EN)

Method: Least Squares

Date: 05/19/07 Time: 22:53

Sample(adjusted): 2 431

Included observations: 430 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	7.01E-05	0.000341	0.205248	0.8375
RESID_EN_FTE(-1)	-0.100620	0.019886	-5.059904	0.0000
D(FTE)	0.384790	0.070899	5.427260	0.0000
R-squared	0.115025	Mean dependent var		0.000141
Adjusted R-squared	0.110879	S.D. dependent var		0.007502
S.E. of regression	0.007074	Akaike info criterion		-7.057912
Sum squared resid	0.021366	Schwarz criterion		-7.029560
Log likelihood	1520.451	F-statistic		27.74963
Durbin-Watson stat	2.231146	Prob(F-statistic)		0.000000

ดัชนีหลักทรัพย์กลุ่มพลังงานของ HK ประเทศฮ่องกง

Dependent Variable: D(EN)

Method: Least Squares

Date: 05/19/07 Time: 14:29

Sample (adjusted): 3 431

Included observations: 429 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.46E-05	0.000339	0.042984	0.9657
RESID_EN_DJUSEN(-1)	-0.055027	0.017454	-3.152764	0.0017
D(DJUSEN(-1))	0.336112	0.049333	6.813196	0.0000
R-squared	0.132756	Mean dependent var		0.000130
Adjusted R-squared	0.128684	S.D. dependent var		0.007507
S.E. of regression	0.007008	Akaike info criterion		-7.076644
Sum squared resid	0.020920	Schwarz criterion		-7.048242
Log likelihood	1520.940	F-statistic		32.60560
Durbin-Watson stat	2.342158	Prob(F-statistic)		0.000000

ในกรณีที่ดัชนีราคาหลักทรัพย์กลุ่มพลังงานของประเทศไทยเป็นตัวแปรต้นและให้ดัชนีราคา

หลักทรัพย์กลุ่มพลังงานของต่างประเทศเป็นตัวแปรตาม

ดัชนีหลักทรัพย์กลุ่มพลังงานของ FTE ประเทศอังกฤษ

Dependent Variable: D(FTE)

Method: Least Squares

Date: 05/19/07 Time: 23:43

Sample (adjusted): 2 431

Included observations: 430 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.000177	0.000224	0.789042	0.4305
RESID_FTE_EN(-1)	-0.033149	0.015053	-2.202058	0.0282
D(EN)	0.172557	0.030479	5.661437	0.0000
R-squared	0.072495	Mean dependent var		0.000203
Adjusted R-squared	0.068151	S.D. dependent var		0.004817
S.E. of regression	0.004650	Akaike info criterion		-7.896903
Sum squared resid	0.009233	Schwarz criterion		-7.868551
Log likelihood	1700.834	F-statistic		16.68741
Durbin-Watson stat	2.188473	Prob(F-statistic)		0.000000

ดัชนีหลักทรัพย์กลุ่มพลังงานของ DJUSEN ประเทศสหรัฐอเมริกา

Dependent Variable: D(DJUSEN)

Method: Least Squares

Date: 05/19/07 Time: 23:46

Sample (adjusted): 2 431

Included observations: 430 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.000345	0.000333	1.034859	0.3013
RESID_DJUSEN_EN(-1)	-0.020998	0.012870	-1.631517	0.1035
D(EN)	0.119094	0.044900	2.652404	0.0083
R-squared	0.019805	Mean dependent var		0.000366
Adjusted R-squared	0.015214	S.D. dependent var		0.006957
S.E. of regression	0.006904	Akaike info criterion		-7.106601
Sum squared resid	0.020351	Schwarz criterion		-7.078249
Log likelihood	1530.919	F-statistic		4.313847
Durbin-Watson stat	2.118108	Prob(F-statistic)		0.013970

ดัชนีหลักทรัพย์กลุ่มพลังงานของ HK ประเทศฮ่องกง

Dependent Variable: D(HK)

Method: Least Squares

Date: 05/24/07 Time: 11:38

Sample(adjusted): 2 431

Included observations: 430 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.000663	0.000319	2.077657	0.0383
D(EN)	0.410153	0.042580	9.632427	0.0000
R-squared	0.178162	Mean dependent var		0.000721
Adjusted R-squared	0.176241	S.D. dependent var		0.007290
S.E. of regression	0.006616	Akaike info criterion		-7.193967
Sum squared resid	0.018735	Schwarz criterion		-7.175066
Log likelihood	1548.703	F-statistic		92.78365
Durbin-Watson stat	1.965519	Prob(F-statistic)		0.000000

ประวัติผู้เขียน

ชื่อ	นางสาวปัทมาภรณ์ ค้วงบุญมา
วัน เดือน ปี เกิด	29 สิงหาคม 2526
ประวัติการศึกษา	สำเร็จการศึกษามัธยมศึกษาตอนปลาย โรงเรียนบุญวาทย์วิทยาลัย ลำปาง ปีการศึกษา 2544 สำเร็จการศึกษาระดับปริญญาวิทยาศาสตรบัณฑิต สาขาเคมี อุตสาหกรรม คณะวิทยาศาสตร์ มหาวิทยาลัยเชียงใหม่ ปีการศึกษา 2548

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