



ภาคผนวก

ลิขสิทธิ์มหาวิทยาลัยเชียงใหม่

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**ภาคผนวก ก**  
**ข้อมูลที่ใช้ในการศึกษา**

ตารางภาคผนวก ก-1 แสดงข้อมูลราคาทองคำล่วงหน้าในตลาดอนุพันธ์(ประเทศไทย)และราคาทองคำในตลาดโลก ตั้งแต่วันที่ 2 กุมภาพันธ์ 2552 ถึง 26 กุมภาพันธ์ 2553

| TFEX - GOLD FUTURES |       |       |       |       | SPOT GOLD |         |         |         |         |
|---------------------|-------|-------|-------|-------|-----------|---------|---------|---------|---------|
| DATE                | HIGH  | LOW   | OPEN  | CLOSE | DATE      | HIGH    | LOW     | OPEN    | CLOSE   |
| 2/26/10             | 17670 | 17550 | 17580 | 17660 | 2/26/10   | 1118.8  | 1104    | 1104.6  | 1116.1  |
| 2/25/10             | 17230 | 17060 | 17230 | 17170 | 2/25/10   | 1108.75 | 1088.2  | 1097.2  | 1105.7  |
| 2/24/10             | 17460 | 17130 | 17460 | 17140 | 2/24/10   | 1107.95 | 1089.45 | 1103    | 1096    |
| 2/23/10             | 17630 | 17540 | 17550 | 17570 | 2/23/10   | 1120.8  | 1098.95 | 1113.4  | 1101.65 |
| 2/22/10             | 17760 | 17650 | 17720 | 17660 | 2/22/10   | 1130.65 | 1109.3  | 1124.5  | 1113.3  |
| 2/19/10             | 17540 | 17420 | 17430 | 17520 | 2/19/10   | 1126.55 | 1098.55 | 1110.9  | 1118.45 |
| 2/18/10             | 17480 | 17350 | 17460 | 17420 | 2/18/10   | 1123.65 | 1097.8  | 1105.95 | 1123.5  |
| 2/17/10             | 17750 | 17560 | 17560 | 17680 | 2/17/10   | 1126.85 | 1111.3  | 1118.85 | 1114.8  |
| 2/16/10             | 17630 | 17420 | 17470 | 17560 | 2/16/10   | 1120.8  | 1097.45 | 1099.2  | 1119.55 |
| 2/15/10             | 17320 | 17230 | 17230 | 17300 | 2/15/10   | 1102.15 | 1091.5  | 1092.35 | 1100.5  |
| 2/12/10             | 17230 | 17140 | 17190 | 17150 | 2/12/10   | 1096.35 | 1077.55 | 1095.7  | 1092.4  |
| 2/11/10             | 17080 | 17040 | 17060 | 17050 | 2/11/10   | 1097.75 | 1070.95 | 1071.6  | 1094.95 |
| 2/10/10             | 17080 | 17010 | 17020 | 17030 | 2/10/10   | 1082.1  | 1063.1  | 1077.05 | 1072.45 |
| 2/9/10              | 17010 | 16910 | 16910 | 16930 | 2/9/10    | 1083.05 | 1061.4  | 1062.55 | 1076.9  |
| 2/8/10              | 17030 | 16880 | 16890 | 16980 | 2/8/10    | 1073.5  | 1061.5  | 1067    | 1063.35 |
| 2/5/10              | 16930 | 16630 | 16840 | 16760 | 2/5/10    | 1068.65 | 1043.75 | 1062.65 | 1064.95 |
| 2/4/10              | 17640 | 17470 | 17640 | 17490 | 2/4/10    | 1110.7  | 1059.1  | 1108.9  | 1063.05 |
| 2/3/10              | 17810 | 17610 | 17640 | 17780 | 2/3/10    | 1124.45 | 1106.8  | 1114    | 1109.25 |
| 2/2/10              | 17610 | 17440 | 17480 | 17600 | 2/2/10    | 1117.95 | 1098.6  | 1105.4  | 1114.8  |
| 2/1/10              | 17200 | 17090 | 17130 | 17190 | 2/1/10    | 1107.5  | 1076.4  | 1079.7  | 1106.95 |
| 1/29/10             | 17230 | 17150 | 17210 | 17170 | 1/29/10   | 1090.1  | 1074.35 | 1086.7  | 1081.05 |
| 1/28/10             | 17310 | 17180 | 17190 | 17270 | 1/28/10   | 1095.95 | 1073.75 | 1087.4  | 1085.9  |
| 1/27/10             | 17420 | 17280 | 17380 | 17320 | 1/27/10   | 1102.2  | 1083.15 | 1097.2  | 1086.35 |
| 1/26/10             | 17440 | 17240 | 17420 | 17250 | 1/26/10   | 1103.15 | 1085.4  | 1098    | 1097.65 |
| 1/25/10             | 17450 | 17400 | 17400 | 17430 | 1/25/10   | 1103.8  | 1090.65 | 1090.65 | 1097.85 |
| 1/22/10             | 17400 | 17270 | 17330 | 17360 | 1/22/10   | 1098.75 | 1081.9  | 1094.25 | 1092.6  |
| 1/21/10             | 17600 | 17420 | 17560 | 17460 | 1/21/10   | 1117.45 | 1088.3  | 1111.25 | 1094.75 |
| 1/20/10             | 17960 | 17810 | 17940 | 17880 | 1/20/10   | 1141.2  | 1107    | 1138.1  | 1111.3  |
| 1/19/10             | 17990 | 17930 | 17990 | 17930 | 1/19/10   | 1140.4  | 1128.6  | 1131.65 | 1137.7  |
| 1/18/10             | 17980 | 17910 | 17940 | 17960 | 1/18/10   | 1137.05 | 1126.25 | 1128.9  | 1132.5  |
| 1/15/10             | 18040 | 17930 | 18030 | 17980 | 1/15/10   | 1145.6  | 1126.5  | 1142.1  | 1129.9  |
| 1/14/10             | 18150 | 17970 | 18130 | 17990 | 1/14/10   | 1146.25 | 1130.75 | 1137.55 | 1142.85 |
| 1/13/10             | 18020 | 17910 | 17950 | 18000 | 1/13/10   | 1138.45 | 1119.35 | 1128.1  | 1138.4  |
| 1/12/10             | 18380 | 18250 | 18270 | 18320 | 1/12/10   | 1158    | 1124.95 | 1151.15 | 1127.3  |
| 1/11/10             | 18350 | 18250 | 18250 | 18340 | 1/11/10   | 1161.5  | 1136.8  | 1136.8  | 1152.6  |
| 1/8/10              | 17930 | 17860 | 17890 | 17890 | 1/8/10    | 1139.3  | 1119.45 | 1131.35 | 1136.1  |
| 1/7/10              | 18040 | 17970 | 18040 | 17980 | 1/7/10    | 1138.75 | 1128.2  | 1137.8  | 1131.9  |
| 1/6/10              | 17960 | 17890 | 17900 | 17950 | 1/6/10    | 1140.2  | 1115.6  | 1118    | 1138.5  |

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| TFEX - GOLD FUTURES |       |       |       |       | SPOT GOLD |         |         |         |         |
|---------------------|-------|-------|-------|-------|-----------|---------|---------|---------|---------|
| DATE                | HIGH  | LOW   | OPEN  | CLOSE | DATE      | HIGH    | LOW     | OPEN    | CLOSE   |
| 1/5/10              | 17980 | 17840 | 17870 | 17970 | 1/5/10    | 1127.7  | 1114.85 | 1120.9  | 1118.65 |
| 1/4/10              | 17760 | 17490 | 17580 | 17760 | 1/4/10    | 1123.4  | 1093.05 | 1095.85 | 1120    |
| 1/1/10              | #N/A  | #N/A  | #N/A  | #N/A  | 1/1/10    | 1096.9  | 1096.05 | 1096.25 | 1096.35 |
| 12/31/09            | #N/A  | #N/A  | #N/A  | #N/A  | 12/31/09  | 1106.6  | 1091.6  | 1092.65 | 1095.7  |
| 12/30/09            | 17530 | 17460 | 17500 | 17500 | 12/30/09  | 1097.65 | 1085.9  | 1096.85 | 1091.55 |
| 12/29/09            | 17570 | 17485 | 17500 | 17485 | 12/29/09  | 1108.2  | 1096.25 | 1105.7  | 1097.35 |
| 12/28/09            | 17750 | 17640 | 17730 | 17680 | 12/28/09  | 1113.6  | 1101.35 | 1106.55 | 1106.45 |
| 12/25/09            | 17620 | 17560 | 17580 | 17610 | 12/25/09  | 1104    | 1103.5  | 1103.5  | 1104    |
| 12/24/09            | 17620 | 17560 | 17580 | 17610 | 12/25/09  | 1104    | 1103.5  | 1103.5  | 1104    |
| 12/24/09            | 17590 | 17360 | 17360 | 17580 | 12/24/09  | 1105.65 | 1086.25 | 1086.9  | 1104.45 |
| 12/23/09            | 17240 | 17180 | 17240 | 17180 | 12/23/09  | 1095.55 | 1079.1  | 1083.6  | 1086.7  |
| 12/22/09            | 17390 | 17290 | 17350 | 17360 | 12/22/09  | 1097.1  | 1074.1  | 1092.75 | 1083.25 |
| 12/21/09            | 17690 | 17580 | 17600 | 17600 | 12/21/09  | 1118.7  | 1089.85 | 1111.05 | 1091.7  |
| 12/18/09            | 17620 | 17510 | 17590 | 17520 | 12/18/09  | 1116.6  | 1095.65 | 1097.6  | 1112.1  |
| 12/17/09            | 18000 | 17840 | 18000 | 17850 | 12/17/09  | 1141.5  | 1094.5  | 1137.9  | 1097.85 |
| 12/16/09            | 17930 | 17700 | 17770 | 17910 | 12/16/09  | 1140.7  | 1121    | 1124.45 | 1137.55 |
| 12/15/09            | 17840 | 17620 | 17790 | 17670 | 12/15/09  | 1128.8  | 1111.2  | 1126.25 | 1124    |
| 12/14/09            | 17770 | 17670 | 17740 | 17730 | 12/14/09  | 1127.5  | 1109.85 | 1113.4  | 1124.15 |
| 12/11/09            | 17990 | 17900 | 17940 | 17970 | 12/11/09  | 1141.9  | 1109.1  | 1130.2  | 1114.5  |
| 12/10/09            | #N/A  | #N/A  | #N/A  | #N/A  | 12/10/09  | 1136.6  | 1121.3  | 1128.7  | 1131.65 |
| 12/9/09             | 18000 | 17840 | 17920 | 17950 | 12/9/09   | 1146.4  | 1116.8  | 1129.35 | 1128.3  |
| 12/8/09             | 18500 | 18290 | 18450 | 18400 | 12/8/09   | 1168.5  | 1125.15 | 1156.85 | 1129.65 |
| 12/7/09             | #N/A  | #N/A  | #N/A  | #N/A  | 12/7/09   | 1164.55 | 1135.8  | 1160.05 | 1157.9  |
| 12/4/09             | 19120 | 18960 | 19040 | 19090 | 12/4/09   | 1212.1  | 1147.25 | 1207.2  | 1161.2  |
| 12/1/09             | 18900 | 18600 | 18680 | 18850 | 12/1/09   | 1201.4  | 1175.05 | 1179.25 | 1197.3  |
| 11/30/09            | 18760 | 18380 | 18680 | 18520 | 11/30/09  | 1181.6  | 1163    | 1176.2  | 1178.45 |
| 11/27/09            | 18830 | 17940 | 18800 | 18360 | 11/27/09  | 1191.2  | 1136.8  | 1190.9  | 1176.7  |
| 11/26/09            | 18940 | 18650 | 18920 | 18780 | 11/26/09  | 1194.9  | 1179.9  | 1190.35 | 1192.6  |
| 11/25/09            | 18740 | 18610 | 18680 | 18710 | 11/25/09  | 1191.5  | 1166.55 | 1168.75 | 1189.55 |
| 11/24/09            | 18510 | 18430 | 18460 | 18500 | 11/24/09  | 1171.1  | 1157.35 | 1165.45 | 1169.3  |
| 11/23/09            | 18490 | 18330 | 18350 | 18460 | 11/23/09  | 1173.5  | 1150.45 | 1150.8  | 1164.85 |
| 11/20/09            | 18010 | 17900 | 17910 | 17970 | 11/20/09  | 1150.9  | 1132.4  | 1143.55 | 1149.55 |
| 11/19/09            | 17970 | 17830 | 17970 | 17870 | 11/19/09  | 1145.75 | 1129.5  | 1144.75 | 1143.7  |
| 11/18/09            | 18020 | 17850 | 17880 | 18000 | 11/18/09  | 1152.75 | 1135.5  | 1141.05 | 1144.25 |
| 11/17/09            | 17880 | 17800 | 17850 | 17840 | 11/17/09  | 1141.45 | 1127.45 | 1139.1  | 1140.55 |
| 11/16/09            | 17800 | 17670 | 17690 | 17750 | 11/16/09  | 1143.25 | 1117.9  | 1117.9  | 1139.95 |
| 11/13/09            | 17570 | 17450 | 17490 | 17530 | 11/13/09  | 1118.95 | 1100.8  | 1103.35 | 1118.8  |
| 11/12/09            | 17730 | 17580 | 17660 | 17600 | 11/12/09  | 1122.85 | 1102.3  | 1117.3  | 1103.4  |
| 11/11/09            | 17580 | 17440 | 17480 | 17540 | 11/11/09  | 1118.35 | 1104.75 | 1105.25 | 1117.75 |
| 11/10/09            | 17430 | 17310 | 17430 | 17420 | 11/10/09  | 1109.2  | 1096.6  | 1103.8  | 1105.1  |
| 11/9/09             | 17530 | 17310 | 17330 | 17520 | 11/9/09   | 1110.85 | 1095.4  | 1097.01 | 1103.65 |
| 11/6/09             | 17260 | 17180 | 17180 | 17250 | 11/6/09   | 1100.9  | 1086.3  | 1089.45 | 1094.65 |
| 11/5/09             | 17220 | 17090 | 17160 | 17200 | 11/5/09   | 1093.95 | 1083.5  | 1092.45 | 1090.55 |
| 11/4/09             | 17220 | 17010 | 17020 | 17170 | 11/4/09   | 1097.25 | 1079.5  | 1084.45 | 1092.2  |
| 11/3/09             | 16890 | 16780 | 16890 | 16810 | 11/3/09   | 1087.45 | 1055    | 1059.45 | 1083.85 |
| 11/2/09             | 16780 | 16620 | 16620 | 16770 | 11/2/09   | 1062.7  | 1040.25 | 1043.9  | 1058.85 |
| 10/30/09            | 16700 | 16600 | 16650 | 16650 | 10/30/09  | 1048.65 | 1034.85 | 1045.3  | 1044.4  |
| 10/29/09            | 16470 | 16400 | 16440 | 16451 | 10/29/09  | 1047.5  | 1025.75 | 1027.25 | 1044.55 |
| 10/28/09            | 16560 | 16470 | 16540 | 16470 | 10/28/09  | 1041.6  | 1026.35 | 1038.5  | 1026.85 |
| 10/27/09            | 16570 | 16520 | 16570 | 16530 | 10/27/09  | 1043.5  | 1032.25 | 1036.9  | 1038.8  |
| 10/26/09            | 16760 | 16720 | 16740 | 16750 | 10/26/09  | 1059.6  | 1037.45 | 1053.8  | 1037.6  |
| 10/23/09            | #N/A  | #N/A  | #N/A  | #N/A  | 10/23/09  | 1067.3  | 1050.05 | 1059.4  | 1054.45 |

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| TFEX - GOLD FUTURES |       |       |       |       | SPOT GOLD |         |         |         |         |
|---------------------|-------|-------|-------|-------|-----------|---------|---------|---------|---------|
| DATE                | HIGH  | LOW   | OPEN  | CLOSE | DATE      | HIGH    | LOW     | OPEN    | CLOSE   |
| 10/22/09            | 16800 | 16730 | 16800 | 16740 | 10/22/09  | 1061.35 | 1051.4  | 1057.5  | 1060    |
| 10/21/09            | 16800 | 16710 | 16720 | 16720 | 10/21/09  | 1064.7  | 1047.4  | 1054.5  | 1058.95 |
| 10/20/09            | 16890 | 16760 | 16890 | 16820 | 10/20/09  | 1067.7  | 1051.6  | 1064.1  | 1054.6  |
| 10/19/09            | 16770 | 16640 | 16640 | 16730 | 10/19/09  | 1064.5  | 1047.5  | 1051.65 | 1062.7  |
| 10/16/09            | 16670 | 16470 | 16660 | 16590 | 10/16/09  | 1056.7  | 1042.9  | 1049.55 | 1052.25 |
| 10/15/09            | 16850 | 16630 | 16820 | 16640 | 10/15/09  | 1065.5  | 1046.2  | 1061.8  | 1049.85 |
| 10/14/09            | 16860 | 16750 | 16750 | 16820 | 10/14/09  | 1070.4  | 1055.5  | 1063.9  | 1061.95 |
| 10/13/09            | 16720 | 16540 | 16540 | 16680 | 10/13/09  | 1068.3  | 1050.9  | 1053.4  | 1063.35 |
| 10/12/09            | 16520 | 16450 | 16450 | 16520 | 10/12/09  | 1058.75 | 1046.9  | 1048    | 1055.25 |
| 10/9/09             | 16480 | 16410 | 16460 | 16430 | 10/9/09   | 1055    | 1043.3  | 1055    | 1048.25 |
| 10/8/09             | 16600 | 16400 | 16400 | 16530 | 10/8/09   | 1061.2  | 1042.5  | 1043.85 | 1054    |
| 10/7/09             | 16380 | 16220 | 16220 | 16340 | 10/7/09   | 1048.2  | 1036.3  | 1040.35 | 1043.7  |
| 10/6/09             | 16040 | 16010 | 16030 | 16030 | 10/6/09   | 1043.45 | 1014.74 | 1016    | 1040.85 |
| 10/5/09             | 15950 | 15900 | 15910 | 15930 | 10/5/09   | 1017.45 | 1000.55 | 1000.8  | 1016.75 |
| 10/2/09             | 15900 | 15870 | 15880 | 15890 | 10/2/09   | 1007.2  | 986.2   | 997.6   | 1001.35 |
| 10/1/09             | 15950 | 15910 | 15930 | 15920 | 10/1/09   | 1009.4  | 997.4   | 1006.2  | 998.5   |
| 9/30/09             | 15920 | 15860 | 15860 | 15890 | 9/30/09   | 1008.95 | 991.2   | 991.2   | 1006.7  |
| 9/29/09             | 15860 | 15830 | 15840 | 15850 | 9/29/09   | 995.7   | 984.9   | 990.35  | 991.2   |
| 9/28/09             | 15870 | 15780 | 15860 | 15840 | 9/28/09   | 996.5   | 985.6   | 992     | 989.95  |
| 9/25/09             | 15940 | 15880 | 15920 | 15920 | 9/25/09   | 998.9   | 984.7   | 993.25  | 991.35  |
| 9/24/09             | 16080 | 15950 | 15980 | 16060 | 9/24/09   | 1018.5  | 990.2   | 1006.35 | 993.75  |
| 9/23/09             | 16050 | 16010 | 16010 | 16020 | 9/23/09   | 1017.95 | 1005.5  | 1013.45 | 1008.05 |
| 9/22/09             | 16030 | 15940 | 15940 | 16010 | 9/22/09   | 1019.5  | 1001.9  | 1002.6  | 1013.8  |
| 9/21/09             | 15930 | 15850 | 15910 | 15860 | 9/21/09   | 1006.6  | 995.5   | 1004.45 | 1002.55 |
| 9/18/09             | 16050 | 15960 | 16030 | 16020 | 9/18/09   | 1017.55 | 1005.9  | 1012.5  | 1006.15 |
| 9/17/09             | 16120 | 16070 | 16090 | 16080 | 9/17/09   | 1023.85 | 1009.6  | 1016.25 | 1011.45 |
| 9/16/09             | 16070 | 15960 | 15980 | 16060 | 9/16/09   | 1020.5  | 1005.9  | 1006.1  | 1016.7  |
| 9/15/09             | 15930 | 15890 | 15910 | 15900 | 9/15/09   | 1009.5  | 991.9   | 998.35  | 1005.9  |
| 9/14/09             | 15960 | 15870 | 15930 | 15900 | 9/14/09   | 1008.7  | 992.9   | 1004.35 | 999.15  |
| 9/11/09             | 15960 | 15890 | 15930 | 15910 | 9/11/09   | 1011.55 | 994.4   | 995     | 1004.85 |
| 9/10/09             | 15860 | 15780 | 15820 | 15800 | 9/10/09   | 997.9   | 982.1   | 991.05  | 995.5   |
| 9/9/09              | 15940 | 15840 | 15910 | 15850 | 9/9/09    | 1002.95 | 986.95  | 995.8   | 991.65  |
| 9/8/09              | 16000 | 15850 | 15850 | 15960 | 9/8/09    | 1007.45 | 992.55  | 994     | 995.2   |
| 9/7/09              | 15850 | 15780 | 15800 | 15830 | 9/7/09    | 996.35  | 990.65  | 992.9   | 993.85  |
| 9/4/09              | 15870 | 15750 | 15810 | 15760 | 9/4/09    | 996.3   | 985.1   | 991.3   | 993.4   |
| 9/3/09              | 15720 | 15640 | 15650 | 15700 | 9/3/09    | 997.2   | 974.2   | 976.55  | 990.6   |
| 9/2/09              | 15470 | 15450 | 15460 | 15450 | 9/2/09    | 980.1   | 951.45  | 955.65  | 976.9   |
| 9/1/09              | 15460 | 15420 | 15430 | 15430 | 9/1/09    | 957     | 946     | 949.55  | 956.35  |
| 8/31/09             | 15490 | 15430 | 15480 | 15440 | 8/31/09   | 960.35  | 943.8   | 954.65  | 949.65  |
| 8/28/09             | 15390 | 15310 | 15330 | 15372 | 8/28/09   | 961     | 947.7   | 947.7   | 954.95  |
| 8/27/09             | 15300 | 15270 | 15290 | 15290 | 8/27/09   | 950.45  | 941.1   | 944     | 947.25  |
| 8/26/09             | 15330 | 15310 | 15320 | 15330 | 8/26/09   | 949.85  | 939.3   | 943.3   | 945.1   |
| 8/25/09             | 15320 | 15280 | 15280 | 15320 | 8/25/09   | 954.2   | 940.15  | 941.75  | 943.55  |
| 8/24/09             | 15390 | 15360 | 15380 | 15360 | 8/24/09   | 956.7   | 939.3   | 951.9   | 942.4   |
| 8/19/09             | 15320 | 15190 | 15320 | 15220 | 8/19/09   | 944.8   | 931.9   | 937.25  | 941.55  |
| 8/18/09             | 15320 | 15270 | 15310 | 15290 | 8/18/09   | 940     | 932.65  | 932.65  | 937.3   |
| 8/17/09             | 15380 | 15260 | 15340 | 15290 | 8/17/09   | 947.85  | 929.7   | 946     | 932.8   |
| 8/14/09             | 15450 | 15430 | 15450 | 15440 | 8/14/09   | 959     | 942.9   | 953.55  | 945.85  |
| 8/13/09             | 15450 | 15400 | 15410 | 15440 | 8/13/09   | 960.55  | 946.55  | 946.55  | 953.5   |
| 8/12/09             | #N/A  | #N/A  | #N/A  | #N/A  | 8/12/09   | 951.9   | 939.4   | 945     | 946.25  |
| 8/11/09             | 15370 | 15310 | 15330 | 15360 | 8/11/09   | 949.45  | 941.5   | 944.9   | 944.55  |
| 8/10/09             | 15410 | 15370 | 15390 | 15380 | 8/10/09   | 956.6   | 942     | 953.25  | 944.65  |

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| TFEX - GOLD FUTURES |       |       |       |       | SPOT GOLD |        |        |        |        |
|---------------------|-------|-------|-------|-------|-----------|--------|--------|--------|--------|
| DATE                | HIGH  | LOW   | OPEN  | CLOSE | DATE      | HIGH   | LOW    | OPEN   | CLOSE  |
| 8/7/09              | 15460 | 15400 | 15440 | 15410 | 8/7/09    | 964.7  | 953.2  | 962.65 | 953.9  |
| 8/6/09              | 15490 | 15430 | 15460 | 15450 | 8/6/09    | 971.25 | 955.85 | 962.3  | 962.15 |
| 8/5/09              | 15530 | 15470 | 15480 | 15490 | 8/5/09    | 967.75 | 958.55 | 966.8  | 961.95 |
| 8/4/09              | 15440 | 15360 | 15430 | 15370 | 8/4/09    | 970.05 | 950.85 | 956.5  | 966.75 |
| 8/3/09              | 15440 | 15370 | 15410 | 15400 | 8/3/09    | 962.1  | 951.2  | 952.3  | 955.5  |
| 7/31/09             | 15300 | 15250 | 15300 | 15260 | 7/31/09   | 956.2  | 931.6  | 933.6  | 953.75 |
| 7/30/09             | 15250 | 15160 | 15200 | 15240 | 7/30/09   | 936.8  | 928    | 928.95 | 933.3  |
| 7/29/09             | 15310 | 15220 | 15300 | 15240 | 7/29/09   | 940.7  | 925.1  | 936.9  | 929    |
| 7/24/09             | 15420 | 15380 | 15390 | 15400 | 7/24/09   | 953.9  | 945.95 | 946.7  | 950.35 |
| 7/23/09             | 15470 | 15400 | 15400 | 15440 | 7/23/09   | 957.1  | 947.1  | 951.75 | 947.15 |
| 7/22/09             | 15410 | 15340 | 15380 | 15360 | 7/22/09   | 954.4  | 944.5  | 948    | 950.4  |
| 7/21/09             | 15430 | 15360 | 15400 | 15380 | 7/21/09   | 953.4  | 944.1  | 949    | 948.15 |
| 7/20/09             | 15450 | 15300 | 15300 | 15430 | 7/20/09   | 954.9  | 936.65 | 937.3  | 948.35 |
| 7/17/09             | 15270 | 15190 | 15190 | 15230 | 7/17/09   | 939.7  | 931.6  | 936.7  | 936.7  |
| 7/16/09             | 15310 | 15210 | 15280 | 15220 | 7/16/09   | 940.05 | 932.4  | 939    | 936.35 |
| 7/15/09             | 15220 | 15160 | 15180 | 15200 | 7/15/09   | 941.95 | 924.3  | 924.95 | 938.45 |
| 7/14/09             | 15150 | 15060 | 15070 | 15130 | 7/14/09   | 927.25 | 917.6  | 920.3  | 924.6  |
| 7/13/09             | 15020 | 14970 | 15010 | 14980 | 7/13/09   | 923.1  | 907.4  | 911.1  | 920    |
| 7/10/09             | 15040 | 14950 | 15030 | 14980 | 7/10/09   | 915.1  | 906.8  | 911.3  | 912.15 |
| 7/9/09              | 15070 | 14980 | 15020 | 15060 | 7/9/09    | 918.3  | 906.1  | 908.35 | 911.45 |
| 7/8/09              | 15240 | 15120 | 15230 | 15150 | 7/8/09    | 924.9  | 905.8  | 922.95 | 908.45 |
| 7/7/09              | #N/A  | #N/A  | #N/A  | #N/A  | 7/7/09    | 931.55 | 921.05 | 923.6  | 923.3  |
| 7/6/09              | #N/A  | #N/A  | #N/A  | #N/A  | 7/6/09    | 932.1  | 920.1  | 931.55 | 924    |
| 7/3/09              | 15360 | 15290 | 15300 | 15350 | 7/3/09    | 933.9  | 926.9  | 927.85 | 931.5  |
| 7/2/09              | 15370 | 15300 | 15360 | 15310 | 7/2/09    | 941.05 | 926.1  | 939.8  | 928.65 |
| 7/1/09              | #N/A  | #N/A  | #N/A  | #N/A  | 7/1/09    | 946.25 | 925.25 | 925.3  | 940.25 |
| 6/30/09             | 15430 | 15350 | 15410 | 15370 | 6/30/09   | 944.7  | 922.6  | 936.6  | 925.85 |
| 6/29/09             | 15212 | 15120 | 15120 | 15212 | 6/29/09   | 942.5  | 933.4  | 939.6  | 937.05 |
| 6/26/09             | 15290 | 15240 | 15270 | 15280 | 6/26/09   | 948.2  | 935.8  | 938.15 | 938.55 |
| 6/25/09             | 15230 | 15170 | 15220 | 15210 | 6/25/09   | 939.7  | 929.5  | 930.5  | 938.75 |
| 6/24/09             | 15190 | 15020 | 15020 | 15140 | 6/24/09   | 942.2  | 922    | 925.1  | 931.1  |
| 6/23/09             | 15010 | 14850 | 14920 | 14980 | 6/23/09   | 926.75 | 912.9  | 921.7  | 925.15 |
| 6/22/09             | 15250 | 15080 | 15230 | 15100 | 6/22/09   | 934.4  | 917.9  | 932.95 | 921.9  |
| 6/19/09             | 15270 | 15240 | 15260 | 15240 | 6/19/09   | 938.8  | 930.45 | 933.45 | 933.3  |
| 6/18/09             | 15350 | 15290 | 15340 | 15300 | 6/18/09   | 942.7  | 929.6  | 939.55 | 932.35 |
| 6/17/09             | 15340 | 15260 | 15340 | 15270 | 6/17/09   | 939.95 | 927.5  | 933.85 | 938.4  |
| 6/16/09             | 15370 | 15280 | 15300 | 15350 | 6/16/09   | 939.25 | 926.4  | 927.75 | 934.1  |
| 6/15/09             | 15400 | 15290 | 15330 | 15310 | 6/15/09   | 938.8  | 925.5  | 938.5  | 927.85 |
| 6/12/09             | 15590 | 15510 | 15580 | 15530 | 6/12/09   | 957.95 | 936    | 954.3  | 937.9  |
| 6/11/09             | 15600 | 15520 | 15570 | 15560 | 6/11/09   | 961.7  | 943.1  | 953.6  | 954    |
| 6/10/09             | 15640 | 15570 | 15610 | 15610 | 6/10/09   | 965.25 | 946.6  | 954.35 | 953.65 |
| 6/9/09              | 15610 | 15520 | 15560 | 15580 | 6/9/09    | 961.6  | 947    | 950.2  | 953.75 |
| 6/8/09              | 15750 | 15530 | 15690 | 15550 | 6/8/09    | 959.45 | 943.3  | 954.65 | 950.05 |
| 6/5/09              | 15880 | 15790 | 15790 | 15860 | 6/5/09    | 982.45 | 952.5  | 980.25 | 955.3  |
| 6/4/09              | 15740 | 15660 | 15660 | 15730 | 6/4/09    | 981.5  | 960.7  | 962.25 | 979.1  |
| 6/3/09              | 15920 | 15760 | 15870 | 15780 | 6/3/09    | 989.8  | 960.35 | 981.05 | 962.15 |
| 6/2/09              | 15840 | 15690 | 15820 | 15780 | 6/2/09    | 986.4  | 968.6  | 974.25 | 980.85 |
| 6/1/09              | 15950 | 15860 | 15900 | 15930 | 6/1/09    | 988.5  | 973.1  | 978.6  | 974.2  |
| 5/29/09             | 15750 | 15570 | 15570 | 15720 | 5/29/09   | 980    | 955.5  | 958.65 | 979    |
| 5/28/09             | 15470 | 15430 | 15450 | 15470 | 5/28/09   | 964.95 | 943.55 | 947.65 | 958.8  |
| 5/27/09             | 15470 | 15430 | 15430 | 15460 | 5/27/09   | 959.2  | 941.25 | 952.25 | 948    |
| 5/26/09             | 15510 | 15400 | 15490 | 15430 | 5/26/09   | 957.95 | 940.1  | 957    | 951.15 |

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| TFEX - GOLD FUTURES |       |       |       |       | SPOT GOLD |        |        |        |        |
|---------------------|-------|-------|-------|-------|-----------|--------|--------|--------|--------|
| DATE                | HIGH  | LOW   | OPEN  | CLOSE | DATE      | HIGH   | LOW    | OPEN   | CLOSE  |
| 5/25/09             | 15500 | 15450 | 15460 | 15480 | 5/25/09   | 959.05 | 952.1  | 956    | 957.8  |
| 5/22/09             | 15520 | 15430 | 15520 | 15450 | 5/22/09   | 961.3  | 949.4  | 954.05 | 956.35 |
| 5/21/09             | 15460 | 15390 | 15430 | 15400 | 5/21/09   | 955.95 | 935    | 937.5  | 953.4  |
| 5/20/09             | 15380 | 15330 | 15330 | 15360 | 5/20/09   | 940.25 | 924.4  | 924.5  | 937.1  |
| 5/19/09             | 15330 | 15280 | 15280 | 15300 | 5/19/09   | 929.15 | 916.1  | 917.25 | 924.65 |
| 5/18/09             | 15410 | 15350 | 15390 | 15370 | 5/18/09   | 933.5  | 915.05 | 929.6  | 917.2  |
| 5/15/09             | 15360 | 15300 | 15330 | 15310 | 5/15/09   | 933.65 | 922.9  | 925.6  | 930.7  |
| 5/14/09             | 15400 | 15300 | 15380 | 15300 | 5/14/09   | 928.45 | 919.6  | 925.4  | 925.35 |
| 5/13/09             | 15420 | 15380 | 15380 | 15380 | 5/13/09   | 930.4  | 916.7  | 922.2  | 925.45 |
| 5/12/09             | 15380 | 15270 | 15290 | 15370 | 5/12/09   | 923.75 | 911.4  | 912.25 | 921.85 |
| 5/11/09             | 15320 | 15260 | 15320 | 15270 | 5/11/09   | 917.55 | 908    | 915.65 | 912.6  |
| 5/8/09              | #N/A  | #N/A  | #N/A  | #N/A  | 5/8/09    | 919.65 | 904.4  | 909.8  | 916.05 |
| 5/7/09              | 15380 | 15320 | 15380 | 15350 | 5/7/09    | 925.15 | 908.2  | 909.1  | 909.05 |
| 5/6/09              | 15320 | 15230 | 15270 | 15310 | 5/6/09    | 912.25 | 894.3  | 894.8  | 909.9  |
| 5/5/09              | #N/A  | #N/A  | #N/A  | #N/A  | 5/5/09    | 915.45 | 895.1  | 901.7  | 895.7  |
| 5/4/09              | 15250 | 15160 | 15190 | 15210 | 5/4/09    | 906.6  | 884.05 | 886.3  | 902.35 |
| 5/1/09              | #N/A  | #N/A  | #N/A  | #N/A  | 5/1/09    | 889.05 | 879.55 | 886.3  | 885.8  |
| 4/30/09             | 15240 | 15080 | 15180 | 15100 | 4/30/09   | 899.7  | 879.8  | 896.65 | 885.5  |
| 4/29/09             | 15042 | 14950 | 14950 | 15042 | 4/29/09   | 902.6  | 887.5  | 891.6  | 897.6  |
| 4/28/09             | 15140 | 15090 | 15120 | 15090 | 4/28/09   | 906.75 | 883.7  | 905.55 | 891.1  |
| 4/27/09             | 15400 | 15270 | 15400 | 15270 | 4/27/09   | 918.25 | 904.4  | 912.1  | 905.65 |
| 4/24/09             | 15330 | 15230 | 15230 | 15280 | 4/24/09   | 913.5  | 902.25 | 903.4  | 912.1  |
| 4/23/09             | 15100 | 15050 | 15060 | 15090 | 4/23/09   | 908.7  | 888.75 | 889.55 | 902    |
| 4/22/09             | 15020 | 14950 | 14970 | 14990 | 4/22/09   | 893.15 | 881.3  | 882.5  | 889.15 |
| 4/21/09             | 15100 | 15010 | 15050 | 15050 | 4/21/09   | 894.75 | 878.7  | 884    | 882.25 |
| 4/20/09             | 14820 | 14680 | 14750 | 14800 | 4/20/09   | 888.2  | 864.5  | 868.05 | 884.15 |
| 4/17/09             | 14900 | 14700 | 14870 | 14740 | 4/17/09   | 876.15 | 864    | 874.95 | 867.9  |
| 4/16/09             | 15180 | 15070 | 15180 | 15070 | 4/16/09   | 893.45 | 871.5  | 890.5  | 874.55 |
| 4/15/09             | #N/A  | #N/A  | #N/A  | #N/A  | 4/15/09   | 898.8  | 885.55 | 888.6  | 890.6  |
| 4/14/09             | #N/A  | #N/A  | #N/A  | #N/A  | 4/14/09   | 898.05 | 885.3  | 892.9  | 888.85 |
| 4/13/09             | #N/A  | #N/A  | #N/A  | #N/A  | 4/13/09   | 899.35 | 880.65 | 880.65 | 892.05 |
| 4/10/09             | 15080 | 15030 | 15050 | 15080 | 4/10/09   | 884.9  | 877    | 878    | 880.65 |
| 4/9/09              | 15160 | 15050 | 15090 | 15070 | 4/9/09    | 886.05 | 874.1  | 880.05 | 878.4  |
| 4/8/09              | 15190 | 15070 | 15100 | 15140 | 4/8/09    | 889.85 | 877.3  | 879.85 | 879.55 |
| 4/7/09              | 15060 | 14960 | 15000 | 15000 | 4/7/09    | 884.15 | 867.85 | 867.95 | 880.05 |
| 4/6/09              | #N/A  | #N/A  | #N/A  | #N/A  | 4/6/09    | 895.8  | 864.3  | 893.85 | 868.8  |
| 4/3/09              | 15600 | 15390 | 15550 | 15440 | 4/3/09    | 908.7  | 890    | 902.45 | 891.9  |
| 4/2/09              | 15900 | 15770 | 15900 | 15780 | 4/2/09    | 928.8  | 893.7  | 926.3  | 903.15 |
| 4/1/09              | 15900 | 15820 | 15900 | 15860 | 4/1/09    | 932.35 | 915.7  | 917.55 | 926.4  |
| 3/27/09             | 15990 | 15940 | 15980 | 15940 | 3/27/09   | 935.85 | 918.1  | 933.7  | 921.05 |
| 3/26/09             | 16030 | 15990 | 16020 | 16030 | 3/26/09   | 944.95 | 931.4  | 933.25 | 933.05 |
| 3/25/09             | 15970 | 15930 | 15960 | 15950 | 3/25/09   | 940    | 916.1  | 926.15 | 933.15 |
| 3/24/09             | 16070 | 15950 | 16000 | 16000 | 3/24/09   | 943.8  | 916.65 | 936.95 | 925.65 |
| 3/23/09             | 16170 | 16020 | 16020 | 16100 | 3/23/09   | 957    | 936.75 | 949.85 | 937.15 |
| 3/20/09             | 16180 | 16000 | 16010 | 16120 | 3/20/09   | 966.7  | 945.5  | 958.15 | 950.85 |
| 3/19/09             | 15910 | 15860 | 15900 | 15870 | 3/19/09   | 961.5  | 925    | 939    | 958.6  |
| 3/18/09             | 15820 | 15770 | 15800 | 15800 | 3/18/09   | 945.05 | 882.9  | 914.5  | 939.9  |
| 3/17/09             | 15890 | 15820 | 15870 | 15870 | 3/17/09   | 923.9  | 911.4  | 923.3  | 914.2  |
| 3/16/09             | 15950 | 15840 | 15880 | 15890 | 3/16/09   | 929.45 | 914.7  | 927.55 | 922.55 |
| 3/13/09             | 15950 | 15830 | 15950 | 15860 | 3/13/09   | 938.5  | 918.8  | 926.05 | 927.2  |
| 3/12/09             | 15890 | 15790 | 15870 | 15820 | 3/12/09   | 930.45 | 904.95 | 905.95 | 926.65 |
| 3/11/09             | 15840 | 15590 | 15610 | 15780 | 3/11/09   | 912.75 | 891.55 | 895.65 | 906.65 |

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| TFEX - GOLD FUTURES |       |       |       |       | SPOT GOLD |        |        |        |        |
|---------------------|-------|-------|-------|-------|-----------|--------|--------|--------|--------|
| DATE                | HIGH  | LOW   | OPEN  | CLOSE | DATE      | HIGH   | LOW    | OPEN   | CLOSE  |
| 3/10/09             | 16000 | 15860 | 15980 | 15890 | 3/10/09   | 921.95 | 890.3  | 921.2  | 895.8  |
| 3/9/09              | 16270 | 16190 | 16190 | 16250 | 3/9/09    | 941.75 | 910.4  | 938.5  | 920.95 |
| 3/6/09              | 16290 | 16160 | 16200 | 16240 | 3/6/09    | 944.6  | 929.25 | 932.05 | 936.55 |
| 3/5/09              | 15950 | 15850 | 15880 | 15950 | 3/5/09    | 936.15 | 904.8  | 906.6  | 931.85 |
| 3/4/09              | 15950 | 15760 | 15770 | 15910 | 3/4/09    | 923    | 900.95 | 915.75 | 906.85 |
| 3/3/09              | 16070 | 15890 | 16020 | 15930 | 3/3/09    | 932.3  | 904.3  | 925.3  | 915.25 |
| 3/2/09              | 16440 | 16170 | 16190 | 16390 | 3/2/09    | 958    | 925.55 | 939    | 925.65 |
| 2/27/09             | 16080 | 15850 | 15900 | 16030 | 2/27/09   | 962.1  | 926.75 | 944.75 | 944.15 |
| 2/26/09             | 16310 | 16080 | 16190 | 16144 | 2/26/09   | 956    | 930.8  | 952.15 | 944.5  |
| 2/25/09             | 16370 | 16030 | 16320 | 16130 | 2/25/09   | 977.6  | 943.55 | 962.55 | 949.25 |
| 2/24/09             | 16750 | 16550 | 16600 | 16670 | 2/24/09   | 994.8  | 958.75 | 991    | 963.15 |
| 2/23/09             | 16610 | 16410 | 16450 | 16600 | 2/23/09   | 997.35 | 975    | 992.5  | 992.25 |
| 2/20/09             | 16350 | 16000 | 16030 | 16310 | 2/20/09   | 1005.4 | 969.6  | 973.65 | 992.3  |
| 2/19/09             | 16080 | 15880 | 16030 | 15950 | 2/19/09   | 985.95 | 967.9  | 984.4  | 973.85 |
| 2/18/09             | 15990 | 15800 | 15900 | 15890 | 2/18/09   | 984.65 | 959.8  | 968.4  | 984    |
| 2/17/09             | 15800 | 15450 | 15450 | 15780 | 2/17/09   | 973.2  | 939.35 | 941    | 969.15 |
| 2/16/09             | 15430 | 15260 | 15260 | 15430 | 2/16/09   | 943.55 | 935.45 | 940.7  | 941.05 |
| 2/13/09             | 15350 | 15260 | 15340 | 15280 | 2/13/09   | 946.65 | 931.4  | 945    | 941.1  |
| 2/12/09             | 15430 | 15130 | 15130 | 15350 | 2/12/09   | 951.8  | 934.3  | 938.2  | 946.9  |
| 2/11/09             | 14990 | 14910 | 14950 | 14940 | 2/11/09   | 946.25 | 910    | 914.45 | 938.15 |
| 2/10/09             | 14870 | 14800 | 14850 | 14840 | 2/10/09   | 918    | 890.2  | 894.95 | 916.25 |
| 2/9/09              | #N/A  | #N/A  | #N/A  | #N/A  | 2/9/09    | 911.7  | 890.2  | 909.65 | 894.5  |
| 2/6/09              | 15010 | 14900 | 14950 | 14950 | 2/6/09    | 921.5  | 903.25 | 913.7  | 910.55 |
| 2/5/09              | 14910 | 14820 | 14860 | 14900 | 2/5/09    | 924    | 901.6  | 904.7  | 914.75 |
| 2/4/09              | 14840 | 14780 | 14800 | 14830 | 2/4/09    | 908.7  | 894.5  | 900.3  | 905.4  |
| 2/3/09              | 14900 | 14780 | 14850 | 14900 | 2/3/09    | 912.1  | 887    | 903.3  | 901.6  |
| 2/2/09              | 14990 | 14760 | 14760 | 14930 | 2/2/09    | 928.2  | 900.7  | 926.95 | 901.25 |

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ภาคผนวก ข

ตารางผลการคำนวณจากโปรแกรม Eviews 5.1

ผลการทดสอบความนิ่งของข้อมูลหรือยูนิทราก (Unit Root Test)

ตารางภาคผนวก ข-1 การทดสอบ Unit root ของตัวแปรราคาทองคำล่วงหน้าในตลาดอนุพันธ์ (ประเทศไทย) SET50 Index futures (ระดับ first difference ) with trend and intercept

Null Hypothesis: D(GF) has a unit root  
Exogenous: None  
Lag Length: 0 (Fixed)

|  | t-Statistic | Prob.* |
|--|-------------|--------|
| Augmented Dickey-Fuller test statistic | -14.64397   | 0.0000 |
| Test critical values:                  |             |        |
| 1% level                               | -2.574797   |        |
| 5% level                               | -1.942176   |        |
| 10% level                              | -1.615803   |        |

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(GF,2)

Method: Least Squares

Date: 03/24/10 Time: 22:14

Sample (adjusted): 2/04/2009 2/26/2010

Included observations: 236 after adjustments

| Variable           | Coefficient | Std. Error            | t-Statistic | Prob.     |
|--------------------|-------------|-----------------------|-------------|-----------|
| D(GF (-1))         | -0.947505   | 0.064703              | -14.64397   | 0.0000    |
| R-squared          | 0.477068    | Mean dependent var    |             | 0.000156  |
| Adjusted R-squared | 0.477068    | S.D. dependent var    |             | 0.013850  |
| S.E. of regression | 0.010015    | Akaike info criterion |             | -6.365144 |
| Sum squared resid  | 0.023573    | Schwarz criterion     |             | -6.350466 |
| Log likelihood     | 752.0869    | Durbin-Watson stat    |             | 1.992859  |



ตารางภาคผนวก ข-2 แสดงผลการทดสอบยูนิตรูทที่ระดับ Level ,I(0) ที่มีจุดตัดแกนแต่ปราศจาก  
แนวโน้ม

Null Hypothesis: D(GF) has a unit root

Exogenous: Constant

Lag Length: 0 (Fixed)

|  | t-Statistic | Prob.* |
|--|-------------|--------|
| Augmented Dickey-Fuller test statistic | -14.74592   | 0.0000 |
| Test critical values:                  |             |        |
| 1% level                               | -3.457984   |        |
| 5% level                               | -2.873596   |        |
| 10% level                              | -2.573270   |        |

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(GF,2)

Method: Least Squares

Date: 03/24/10 Time: 22:13

Sample (adjusted): 2/04/2009 2/26/2010

Included observations: 236 after adjustments

| Variable           | Coefficient | Std. Error            | t-Statistic | Prob.     |
|--------------------|-------------|-----------------------|-------------|-----------|
| D(GF(-1))          | -0.958149   | 0.064977              | -14.74592   | 0.0000    |
| C                  | -0.000943   | 0.000655              | -1.439989   | 0.1512    |
| R-squared          | 0.481661    | Mean dependent var    |             | 0.000156  |
| Adjusted R-squared | 0.479446    | S.D. dependent var    |             | 0.013850  |
| S.E. of regression | 0.009993    | Akaike info criterion |             | -6.365491 |
| Sum squared resid  | 0.023366    | Schwarz criterion     |             | -6.336137 |
| Log likelihood     | 753.1280    | F-statistic           |             | 217.4421  |
| Durbin-Watson stat | 1.993228    | Prob(F-statistic)     |             | 0.000000  |

ตารางภาคผนวก ข-3 แสดงผลการทดสอบยูนิตรูทที่ระดับ Level ,I(0) ที่มีจุดตัดแกนและแนวโน้ม

Null Hypothesis: D(GF) has a unit root

Exogenous: Constant, Linear Trend

Lag Length: 0 (Fixed)

|  | t-Statistic | Prob.* |
|--|-------------|--------|
| Augmented Dickey-Fuller test statistic | -14.71881   | 0.0000 |
| Test critical values: 1% level         | -3.997418   |        |
| 5% level                               | -3.428981   |        |
| 10% level                              | -3.137946   |        |

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(GF,2)

Method: Least Squares

Date: 03/24/10 Time: 22:11

Sample (adjusted): 2/04/2009 2/26/2010

Included observations: 236 after adjustments

| Variable          | Coefficient | Std. Error | t-Statistic | Prob.  |
|-------------------|-------------|------------|-------------|--------|
| D(GF(-1))         | -0.958176   | 0.065099   | -14.71881   | 0.0000 |
| C                 | -0.000547   | 0.001286   | -0.425658   | 0.6708 |
| @TREND(2/02/2009) | -2.89E-06   | 8.09E-06   | -0.357494   | 0.7210 |

|                    |          |                       |           |
|--------------------|----------|-----------------------|-----------|
| R-squared          | 0.481945 | Mean dependent var    | 0.000156  |
| Adjusted R-squared | 0.477498 | S.D. dependent var    | 0.013850  |
| S.E. of regression | 0.010011 | Akaike info criterion | -6.357565 |
| Sum squared resid  | 0.023353 | Schwarz criterion     | -6.313533 |
| Log likelihood     | 753.1927 | F-statistic           | 108.3797  |
| Durbin-Watson stat | 1.994277 | Prob(F-statistic)     | 0.000000  |

ตารางภาคผนวก ข-4 แสดงผลการทดสอบยูนิตรูทที่ระดับ Level ,I(0) แบบจำลองปราศจากจุดตัด  
แกนและแนวโน้ม ของราคาทองคำในตลาดโลก

Null Hypothesis: D(SG) has a unit root

Exogenous: None

Lag Length: 0 (Fixed)

|  | t-Statistic | Prob.* |
|--|-------------|--------|
| Augmented Dickey-Fuller test statistic | -16.14885   | 0.0000 |
| Test critical values:                  |             |        |
| 1% level                               | -2.573307   |        |
| 5% level                               | -1.941969   |        |
| 10% level                              | -1.615937   |        |

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(SG,2)

Method: Least Squares

Date: 03/24/10 Time: 22:23

Sample (adjusted): 2/04/2009 2/26/2010

Included observations: 278 after adjustments

| Variable           | Coefficient | Std. Error            | t-Statistic | Prob.     |
|--------------------|-------------|-----------------------|-------------|-----------|
| D(SG(-1))          | -0.968730   | 0.059988              | -16.14885   | 0.0000    |
| R-squared          | 0.484923    | Mean dependent var    |             | 3.23E-05  |
| Adjusted R-squared | 0.484923    | S.D. dependent var    |             | 0.016538  |
| S.E. of regression | 0.011869    | Akaike info criterion |             | -6.026219 |
| Sum squared resid  | 0.039020    | Schwarz criterion     |             | -6.013170 |
| Log likelihood     | 838.6444    | Durbin-Watson stat    |             | 1.999906  |

ตารางภาคผนวก ข-5 แสดงผลการทดสอบยูนิตรูทที่ระดับ Level ,I(0) ที่มีจุดตัดแกนแต่ปราศจาก  
แนวโน้ม

Null Hypothesis: D(SG) has a unit root

Exogenous: Constant

Lag Length: 0 (Fixed)

|  | t-Statistic | Prob.* |
|--|-------------|--------|
| Augmented Dickey-Fuller test statistic | -16.17990   | 0.0000 |
| Test critical values:                  |             |        |
| 1% level                               | -3.453737   |        |
| 5% level                               | -2.871731   |        |
| 10% level                              | -2.572273   |        |

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

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(SG,2)

Method: Least Squares

Date: 03/24/10 Time: 22:21

Sample (adjusted): 2/04/2009 2/26/2010

Included observations: 278 after adjustments

| Variable           | Coefficient | Std. Error            | t-Statistic | Prob.     |
|--------------------|-------------|-----------------------|-------------|-----------|
| D(SG(-1))          | -0.972625   | 0.060113              | -16.17990   | 0.0000    |
| C                  | -0.000714   | 0.000713              | -1.001524   | 0.3175    |
| R-squared          | 0.486788    | Mean dependent var    |             | 3.23E-05  |
| Adjusted R-squared | 0.484928    | S.D. dependent var    |             | 0.016538  |
| S.E. of regression | 0.011869    | Akaike info criterion |             | -6.022652 |
| Sum squared resid  | 0.038879    | Schwarz criterion     |             | -5.996554 |
| Log likelihood     | 839.1487    | F-statistic           |             | 261.7892  |
| Durbin-Watson stat | 1.999659    | Prob(F-statistic)     |             | 0.000000  |

ตารางภาคผนวก ข-6 แสดงผลการทดสอบยูนิตรูลที่ระดับ Level ,I(0) ที่มีจุดตัดแกนและแนวโน้ม

Null Hypothesis: D(SG) has a unit root  
Exogenous: Constant, Linear Trend  
Lag Length: 0 (Fixed)

|  | t-Statistic | Prob.* |
|--|-------------|--------|
| Augmented Dickey-Fuller test statistic | -16.15041   | 0.0000 |
| Test critical values:                  |             |        |
| 1% level                               | -3.991412   |        |
| 5% level                               | -3.426073   |        |
| 10% level                              | -3.136231   |        |

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

Augmented Dickey-Fuller Test Equation  
Dependent Variable: D(SG,2)  
Method: Least Squares  
Date: 03/24/10 Time: 22:19  
Sample (adjusted): 2/04/2009 2/26/2010  
Included observations: 278 after adjustments

| Variable           | Coefficient | Std. Error            | t-Statistic | Prob.     |
|--------------------|-------------|-----------------------|-------------|-----------|
| D(SG(-1))          | -0.972629   | 0.060223              | -16.15041   | 0.0000    |
| C                  | -0.000729   | 0.001439              | -0.506984   | 0.6126    |
| @TREND(2/02/2009)  | 1.07E-07    | 8.89E-06              | 0.012032    | 0.9904    |
| R-squared          | 0.486788    | Mean dependent var    |             | 3.23E-05  |
| Adjusted R-squared | 0.483056    | S.D. dependent var    |             | 0.016538  |
| S.E. of regression | 0.011890    | Akaike info criterion |             | -6.015459 |
| Sum squared resid  | 0.038879    | Schwarz criterion     |             | -5.976312 |
| Log likelihood     | 839.1487    | F-statistic           |             | 130.4205  |
| Durbin-Watson stat | 1.999653    | Prob(F-statistic)     |             | 0.000000  |

ตารางภาคผนวก ข-7 แสดงผลการทดสอบความสัมพันธ์เชิงดูดยภาพในระยะยาว กรณีที่ราคาทองคำล่วงหน้าในตลาดอนุพันธ์(ประเทศไทย) เป็นตัวแปรต้นและให้ราคาทองคำในตลาดโลกเป็นตัวแปรตาม

Dependent Variable: GF  
Method: Least Squares  
Date: 03/24/10 Time: 22:25  
Sample: 2/02/2009 2/26/2010  
Included observations: 263

| Variable           | Coefficient | Std. Error            | t-Statistic | Prob.     |
|--------------------|-------------|-----------------------|-------------|-----------|
| C                  | 4.656986    | 0.101137              | 46.04609    | 0.0000    |
| SG                 | 0.729292    | 0.014639              | 49.81717    | 0.0000    |
| R-squared          | 0.904840    | Mean dependent var    |             | 9.694984  |
| Adjusted R-squared | 0.904475    | S.D. dependent var    |             | 0.065559  |
| S.E. of regression | 0.020262    | Akaike info criterion |             | -4.952541 |
| Sum squared resid  | 0.107156    | Schwarz criterion     |             | -4.925377 |
| Log likelihood     | 653.2592    | F-statistic           |             | 2481.750  |
| Durbin-Watson stat | 0.280228    | Prob(F-statistic)     |             | 0.000000  |

White Heteroskedasticity Test:

|               |          |                     |          |
|---------------|----------|---------------------|----------|
| F-statistic   | 7.985597 | Prob. F(2,260)      | 0.000431 |
| Obs*R-squared | 15.22052 | Prob. Chi-Square(2) | 0.000495 |

Test Equation:

Dependent Variable: RESID^2  
Method: Least Squares  
Date: 03/24/10 Time: 22:27  
Sample: 2/02/2009 2/26/2010  
Included observations: 263

| Variable           | Coefficient | Std. Error            | t-Statistic | Prob.     |
|--------------------|-------------|-----------------------|-------------|-----------|
| C                  | 0.495617    | 0.307863              | 1.609862    | 0.1086    |
| SG                 | -0.141396   | 0.088917              | -1.590208   | 0.1130    |
| SG^2               | 0.010090    | 0.006419              | 1.571749    | 0.1172    |
| R-squared          | 0.057873    | Mean dependent var    |             | 0.000407  |
| Adjusted R-squared | 0.050626    | S.D. dependent var    |             | 0.000635  |
| S.E. of regression | 0.000619    | Akaike info criterion |             | -11.92581 |
| Sum squared resid  | 9.96E-05    | Schwarz criterion     |             | -11.88506 |
| Log likelihood     | 1571.244    | F-statistic           |             | 7.985597  |
| Durbin-Watson stat | 0.657447    | Prob(F-statistic)     |             | 0.000431  |

ตารางภาคผนวก ข-8 แสดงผลการทดสอบ unit root ของค่าความคลาดเคลื่อน

Null Hypothesis: ERROR01 has a unit root  
 Exogenous: None  
 Lag Length: 0 (Fixed)

|  | t-Statistic | Prob.* |
|--|-------------|--------|
| Augmented Dickey-Fuller test statistic | -4.584543   | 0.0000 |
| Test critical values:                  |             |        |
| 1% level                               | -2.574282   |        |
| 5% level                               | -1.942104   |        |
| 10% level                              | -1.615849   |        |

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

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(ERROR01)  
 Method: Least Squares  
 Date: 03/24/10 Time: 22:28  
 Sample (adjusted): 2/03/2009 2/26/2010  
 Included observations: 249 after adjustments

| Variable           | Coefficient | Std. Error            | t-Statistic | Prob.     |
|--------------------|-------------|-----------------------|-------------|-----------|
| ERROR01(-1)        | -0.146955   | 0.032054              | -4.584543   | 0.0000    |
| R-squared          | 0.077806    | Mean dependent var    |             | -0.000200 |
| Adjusted R-squared | 0.077806    | S.D. dependent var    |             | 0.010726  |
| S.E. of regression | 0.010301    | Akaike info criterion |             | -6.309212 |
| Sum squared resid  | 0.026314    | Schwarz criterion     |             | -6.295086 |
| Log likelihood     | 786.4969    | Durbin-Watson stat    |             | 2.434271  |

ตารางภาคผนวก ข-9 แสดงผลการทดสอบความสัมพันธ์เชิงดูดยภาพในระยะยาว กรณีที่ราคาทองคำล่วงหน้าในตลาดอนุพันธ์(ประเทศไทย)เป็นตัวแปรตามและให้ราคาทองคำในตลาดโลกเป็นตัวแปรต้น

Dependent Variable: SG  
Method: Least Squares  
Date: 03/24/10 Time: 22:29  
Sample: 2/02/2009 2/26/2010  
Included observations: 263

| Variable | Coefficient | Std. Error | t-Statistic | Prob.  |
|----------|-------------|------------|-------------|--------|
| C        | -5.120597   | 0.241462   | -21.20667   | 0.0000 |
| GF       | 1.240710    | 0.024905   | 49.81717    | 0.0000 |

|                    |          |                       |           |
|--------------------|----------|-----------------------|-----------|
| R-squared          | 0.904840 | Mean dependent var    | 6.908065  |
| Adjusted R-squared | 0.904475 | S.D. dependent var    | 0.085509  |
| S.E. of regression | 0.026428 | Akaike info criterion | -4.421177 |
| Sum squared resid  | 0.182299 | Schwarz criterion     | -4.394012 |
| Log likelihood     | 583.3847 | F-statistic           | 2481.750  |
| Durbin-Watson stat | 0.274682 | Prob(F-statistic)     | 0.000000  |

White Heteroskedasticity Test:

|               |          |                     |          |
|---------------|----------|---------------------|----------|
| F-statistic   | 10.32263 | Prob. F(2,260)      | 0.000049 |
| Obs*R-squared | 19.34721 | Prob. Chi-Square(2) | 0.000063 |

Test Equation:

Dependent Variable: RESID^2  
Method: Least Squares  
Date: 03/24/10 Time: 22:33  
Sample: 2/02/2009 2/26/2010  
Included observations: 263

| Variable | Coefficient | Std. Error | t-Statistic | Prob.  |
|----------|-------------|------------|-------------|--------|
| C        | -7.536496   | 1.759168   | -4.284124   | 0.0000 |
| GF       | 1.553309    | 0.362156   | 4.289062    | 0.0000 |
| GF^2     | -0.080025   | 0.018638   | -4.293585   | 0.0000 |

|                    |          |                       |           |
|--------------------|----------|-----------------------|-----------|
| R-squared          | 0.073564 | Mean dependent var    | 0.000693  |
| Adjusted R-squared | 0.066437 | S.D. dependent var    | 0.001205  |
| S.E. of regression | 0.001164 | Akaike info criterion | -10.66247 |
| Sum squared resid  | 0.000352 | Schwarz criterion     | -10.62172 |
| Log likelihood     | 1405.114 | F-statistic           | 10.32263  |
| Durbin-Watson stat | 0.536706 | Prob(F-statistic)     | 0.000049  |



ตารางภาคผนวก ข-10 แสดงผลการทดสอบ unit root ของค่าความคลาดเคลื่อน

Null Hypothesis: ERROR02 has a unit root  
 Exogenous: None  
 Lag Length: 0 (Fixed)

|  | t-Statistic | Prob.* |
|--|-------------|--------|
| Augmented Dickey-Fuller test statistic | -4.572204   | 0.0000 |
| Test critical values:                  |             |        |
| 1% level                               | -2.574282   |        |
| 5% level                               | -1.942104   |        |
| 10% level                              | -1.615849   |        |

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

Augmented Dickey-Fuller Test Equation  
 Dependent Variable: D(ERROR02)  
 Method: Least Squares  
 Date: 03/24/10 Time: 22:33  
 Sample (adjusted): 2/03/2009 2/26/2010  
 Included observations: 249 after adjustments

| Variable           | Coefficient | Std. Error            | t-Statistic | Prob.     |
|--------------------|-------------|-----------------------|-------------|-----------|
| ERROR02(-1)        | -0.144959   | 0.031704              | -4.572204   | 0.0000    |
| R-squared          | 0.077626    | Mean dependent var    |             | 0.000155  |
| Adjusted R-squared | 0.077626    | S.D. dependent var    |             | 0.013853  |
| S.E. of regression | 0.013305    | Akaike info criterion |             | -5.797416 |
| Sum squared resid  | 0.043899    | Schwarz criterion     |             | -5.783289 |
| Log likelihood     | 722.7782    | Durbin-Watson stat    |             | 2.455897  |

### ผลการประมาณค่าสัมประสิทธิ์ โดยใช้ Error Correction Model (ECM)

ตารางภาคผนวก ข-11 แสดงผลการทดสอบ Error correction mechanism ในกรณีที่ว่าราคาทองคำล่วงหน้าในตลาดอนุพันธ์(ประเทศไทย)เป็นตัวแปรต้นและราคาทองคำในตลาดโลกเป็นตัวแปรตาม

Dependent Variable: D(GF)

Method: Least Squares

Date: 03/24/10 Time: 22:41

Sample (adjusted): 2/03/2009 2/26/2010

Included observations: 249 after adjustments

| Variable           | Coefficient | Std. Error            | t-Statistic | Prob.     |
|--------------------|-------------|-----------------------|-------------|-----------|
| C                  | -0.000597   | 0.000604              | -0.987477   | 0.3244    |
| D(SG)              | 0.345323    | 0.056951              | 6.063563    | 0.0000    |
| ERROR01(-1)        | -0.056875   | 0.032454              | -1.752459   | 0.0809    |
| R-squared          | 0.132101    | Mean dependent var    |             | -0.000918 |
| Adjusted R-squared | 0.125045    | S.D. dependent var    |             | 0.010155  |
| S.E. of regression | 0.009499    | Akaike info criterion |             | -6.463293 |
| Sum squared resid  | 0.022197    | Schwarz criterion     |             | -6.420914 |
| Log likelihood     | 807.6799    | F-statistic           |             | 18.72164  |
| Durbin-Watson stat | 2.203520    | Prob(F-statistic)     |             | 0.000000  |

ตารางภาคผนวก ข-12 แสดงผลการทดสอบ Error correction mechanism กรณีที่ราคาทองคำ  
 ล่วงหน้าในตลาดอนุพันธ์(ประเทศไทย) เป็นตัวแปรตามและราคาทองคำในตลาดโลกเป็นตัวแปร  
 ต้น

Dependent Variable: D(SG)  
 Method: Least Squares  
 Date: 03/24/10 Time: 22:43  
 Sample (adjusted): 2/03/2009 2/26/2010  
 Included observations: 249 after adjustments

| Variable           | Coefficient | Std. Error            | t-Statistic | Prob.     |
|--------------------|-------------|-----------------------|-------------|-----------|
| C                  | -0.000542   | 0.000633              | -0.856132   | 0.3928    |
| D(GF)              | 0.363586    | 0.062374              | 5.829146    | 0.0000    |
| ERROR02(-1)        | -0.171311   | 0.023777              | -7.204974   | 0.0000    |
| R-squared          | 0.274387    | Mean dependent var    |             | -0.000984 |
| Adjusted R-squared | 0.268488    | S.D. dependent var    |             | 0.011627  |
| S.E. of regression | 0.009944    | Akaike info criterion |             | -6.371625 |
| Sum squared resid  | 0.024328    | Schwarz criterion     |             | -6.329246 |
| Log likelihood     | 796.2673    | F-statistic           |             | 46.51194  |
| Durbin-Watson stat | 2.123478    | Prob(F-statistic)     |             | 0.000000  |

ตารางภาคผนวก ข-13 แสดงผลการทดสอบการหาช่วงเวลาที่เหมาะสมและผลการทดสอบ

สมมติฐานเชิงเป็นเหตุเป็นผล

VAR Lag Order Selection Criteria

Endogenous variables: SF SG

Exogenous variables: C

Date: 03/24/10 Time: 22:46

Sample: 2/02/2009 2/26/2010

Included observations: 167

| Lag | LogL     | LR        | FPE       | AIC        | SC         | HQ         |
|-----|----------|-----------|-----------|------------|------------|------------|
| 0   | 610.8049 | NA        | 2.34e-06  | -7.291076  | -7.253735  | -7.275920  |
| 1   | 1056.271 | 874.9278  | 1.18e-08  | -12.57810  | -12.46607  | -12.53263  |
| 2   | 1096.120 | 77.31082  | 7.69e-09  | -13.00742  | -12.82071* | -12.93164  |
| 3   | 1102.072 | 11.40542  | 7.51e-09  | -13.03080  | -12.76941  | -12.92471  |
| 4   | 1109.634 | 14.30940  | 7.20e-09* | -13.07346* | -12.73739  | -12.93706* |
| 5   | 1111.118 | 2.772294  | 7.42e-09  | -13.04333  | -12.63258  | -12.87661  |
| 6   | 1116.960 | 10.77433* | 7.26e-09  | -13.06539  | -12.57995  | -12.86836  |
| 7   | 1121.026 | 7.402188  | 7.26e-09  | -13.06618  | -12.50606  | -12.83884  |
| 8   | 1123.125 | 3.770877  | 7.43e-09  | -13.04342  | -12.40862  | -12.78577  |
| 9   | 1123.963 | 1.485150  | 7.72e-09  | -13.00555  | -12.29606  | -12.71758  |
| 10  | 1125.105 | 1.995968  | 8.00e-09  | -12.97132  | -12.18715  | -12.65304  |

\* indicates lag order selected by the criterion

LR: sequential modified LR test statistic (each test at 5% level)

FPE: Final prediction error

AIC: Akaike information criterion

SC: Schwarz information criterion

HQ: Hannan-Quinn information criterion

Pairwise Granger Causality Tests

Date: 03/24/10 Time: 22:48

Sample: 2/02/2009 2/26/2010

Lags: 4

| Null Hypothesis:             | Obs | F-Statistic | Probability |
|------------------------------|-----|-------------|-------------|
| SG does not Granger Cause GF | 216 | 2.30938     | 0.05911     |
| GF does not Granger Cause SG |     | 44.7873     | 4.6E-27     |

## ประวัติผู้เขียน

ชื่อ - สกุล      นางสาวชिरาพร ประเสริฐฐานนท์

วัน เดือน ปี เกิด      25 มกราคม 2524

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