



*Shifting Gears*

# The Volatility (Regime) Switch Indicator

*Here's how you can construct a simple Excel spreadsheet for the volatility switch indicator.*

*by Ron McEwan*



Which trading strategy should you use? This is a dilemma that most traders face, especially when the market changes its trend, which seems to be the norm these days. You may be dealing with a market that is reversing direction every

few days, and without warning, the market breaks out into a lengthy trend that catches you off-guard. By the time you can adapt to the new mode, you could have sustained a considerable drawdown.

## REGIME SWITCHING

Years ago, some very clever individuals came up with methods to cope with abrupt and dramatic changes. This concept was labeled “regime switching,” a method for adapting a trading strategy when the market changes from a trending mode to a mean-reverting one.

Many regime switching algorithms are available today. They generally involve complex mathematical algorithms. At the heart of most of the regime switching strategies is a measure of volatility. The direction of volatility, rising or falling, as well as the level of volatility, will give a good indication of whether the market is in a trending or mean reversion mode. As a basic first step, this article will explain how to construct a simple volatility switch indicator to assist in determining whether your security of choice is trending or in a mean reversion mode.

To start, you should have at least one year's worth of data for your security. Three to five years (or more) will give you a more reliable picture of how the security reacts over time to change in volatility.

## THE VOLATILITY SWITCH INDICATOR

To create the 21-day volatility switch indicator for the Standard & Poor's 500:

**Step 1: Enter data.** In a blank spreadsheet, enter data for the date, open, high, low, and close of the security you are analyzing in columns A to E (Figure 1).

**Step 2: Daily change.** In column G2, enter this formula  $=((E3-E2)/((E3+E2)/2))$ . Copy this down to the end of the security data (Figure 2).

**Step 3: 21-day historical volatility.** In column H23, enter this formula

|     | A        | B       | C       | D       | E       |
|-----|----------|---------|---------|---------|---------|
| 1   | Date     | Open    | High    | Low     | Close   |
| 463 | 12/30/11 | 1262.82 | 1264.12 | 1257.46 | 1257.60 |
| 464 | 1/3/12   | 1258.86 | 1284.62 | 1258.86 | 1277.06 |
| 465 | 1/4/12   | 1277.03 | 1278.73 | 1268.10 | 1277.30 |
| 466 | 1/5/12   | 1277.30 | 1283.05 | 1265.26 | 1281.06 |
| 467 | 1/6/12   | 1280.93 | 1281.84 | 1273.34 | 1277.81 |
| 468 | 1/9/12   | 1277.83 | 1281.99 | 1274.55 | 1280.70 |
| 469 | 1/10/12  | 1280.77 | 1296.46 | 1280.77 | 1292.08 |
| 470 | 1/11/12  | 1292.02 | 1293.80 | 1285.41 | 1292.48 |
| 471 | 1/12/12  | 1292.48 | 1296.82 | 1285.77 | 1295.50 |
| 472 | 1/13/12  | 1294.82 | 1294.82 | 1277.58 | 1289.09 |
| 473 | 1/17/12  | 1294.82 | 1303.00 | 1290.22 | 1293.67 |
| 474 | 1/18/12  | 1293.65 | 1308.11 | 1290.99 | 1308.04 |
| 475 | 1/19/12  | 1308.07 | 1315.49 | 1308.07 | 1314.50 |
| 476 | 1/20/12  | 1314.49 | 1315.38 | 1309.17 | 1315.38 |
| 477 | 1/23/12  | 1315.29 | 1322.28 | 1309.89 | 1316.00 |
| 478 | 1/24/12  | 1315.96 | 1315.96 | 1306.06 | 1314.65 |
| 479 | 1/25/12  | 1314.40 | 1328.30 | 1307.65 | 1326.06 |
| 480 | 1/26/12  | 1326.28 | 1333.47 | 1313.60 | 1318.43 |
| 481 | 1/27/12  | 1318.25 | 1320.06 | 1311.72 | 1316.33 |
| 482 | 1/30/12  | 1316.16 | 1316.16 | 1300.49 | 1313.01 |
| 483 | 1/31/12  | 1313.53 | 1321.41 | 1306.69 | 1312.41 |
| 484 | 2/1/12   | 1312.45 | 1330.52 | 1312.45 | 1324.09 |
| 485 | 2/2/12   | 1324.24 | 1329.19 | 1321.57 | 1325.54 |
| 486 | 2/3/12   | 1326.21 | 1345.34 | 1326.21 | 1344.90 |
| 487 | 2/6/12   | 1344.32 | 1344.36 | 1337.52 | 1344.33 |
| 488 | 2/7/12   | 1344.33 | 1349.24 | 1335.92 | 1347.05 |
| 489 | 2/8/12   | 1347.04 | 1351.00 | 1341.95 | 1349.96 |
| 490 | 2/9/12   | 1349.97 | 1354.32 | 1344.63 | 1351.95 |
| 491 | 2/10/12  | 1351.21 | 1351.21 | 1337.35 | 1342.64 |
| 492 | 2/13/12  | 1343.06 | 1353.35 | 1343.06 | 1351.77 |
| 493 | 2/14/12  | 1351.30 | 1351.30 | 1340.83 | 1350.50 |
| 494 | 2/15/12  | 1350.52 | 1355.87 | 1340.80 | 1343.23 |
| 495 | 2/16/12  | 1342.61 | 1359.02 | 1341.22 | 1358.04 |
| 496 | 2/17/12  | 1358.06 | 1363.40 | 1357.24 | 1361.23 |
| 497 | 2/21/12  | 1361.22 | 1367.76 | 1358.11 | 1362.21 |
| 498 | 2/22/12  | 1362.11 | 1362.70 | 1355.53 | 1357.66 |
| 499 | 2/23/12  | 1357.53 | 1364.24 | 1352.28 | 1363.46 |

**FIGURE 1: FIRST STEP.** Enter daily data for open, high, low, and close.

|    | A       | B       | C       | D       | E       | F | G            |
|----|---------|---------|---------|---------|---------|---|--------------|
| 1  | Date    | Open    | High    | Low     | Close   |   | daily return |
| 2  | 3/5/10  | 1125.12 | 1139.38 | 1125.12 | 1138.70 |   |              |
| 3  | 3/8/10  | 1138.40 | 1141.05 | 1136.77 | 1138.50 |   | 0.000        |
| 4  | 3/9/10  | 1137.56 | 1145.37 | 1134.90 | 1140.45 |   | 0.002        |
| 5  | 3/10/10 | 1140.22 | 1148.26 | 1140.09 | 1145.61 |   | 0.005        |
| 6  | 3/11/10 | 1143.96 | 1150.24 | 1138.99 | 1150.24 |   | 0.004        |
| 7  | 3/12/10 | 1151.71 | 1153.41 | 1146.97 | 1149.99 |   | 0.000        |
| 8  | 3/15/10 | 1148.53 | 1150.98 | 1141.45 | 1150.51 |   | 0.000        |
| 9  | 3/16/10 | 1150.83 | 1160.28 | 1150.35 | 1159.46 |   | 0.008        |
| 10 | 3/17/10 | 1159.94 | 1169.84 | 1159.94 | 1166.21 |   | 0.006        |
| 11 | 3/18/10 | 1166.13 | 1167.77 | 1161.16 | 1165.83 |   | 0.000        |
| 12 | 3/19/10 | 1166.68 | 1169.20 | 1155.33 | 1159.90 |   | -0.005       |
| 13 | 3/22/10 | 1157.25 | 1167.82 | 1152.88 | 1165.81 |   | 0.005        |
| 14 | 3/23/10 | 1166.47 | 1174.72 | 1163.83 | 1174.17 |   | 0.007        |
| 15 | 3/24/10 | 1172.70 | 1173.04 | 1166.01 | 1167.72 |   | -0.006       |
| 16 | 3/25/10 | 1170.03 | 1180.69 | 1165.09 | 1165.73 |   | -0.002       |
| 17 | 3/26/10 | 1167.58 | 1173.93 | 1161.48 | 1166.59 |   | 0.001        |
| 18 | 3/29/10 | 1167.71 | 1174.85 | 1167.71 | 1173.22 |   | 0.006        |
| 19 | 3/30/10 | 1173.75 | 1177.83 | 1168.92 | 1173.27 |   | 0.000        |
| 20 | 3/31/10 | 1171.75 | 1174.56 | 1165.77 | 1169.43 |   | -0.003       |
| 21 | 4/1/10  | 1171.23 | 1181.43 | 1170.69 | 1178.10 |   | 0.007        |
| 22 | 4/5/10  | 1178.71 | 1187.73 | 1178.71 | 1187.44 |   | 0.008        |
| 23 | 4/6/10  | 1186.01 | 1191.80 | 1182.77 | 1189.44 |   | 0.002        |
| 24 | 4/7/10  | 1188.23 | 1189.60 | 1177.25 | 1182.45 |   | -0.006       |
| 25 | 4/8/10  | 1181.75 | 1188.55 | 1175.12 | 1186.44 |   | 0.003        |
| 26 | 4/9/10  | 1187.47 | 1194.66 | 1187.15 | 1194.37 |   | 0.007        |
| 27 | 4/12/10 | 1194.94 | 1199.20 | 1194.71 | 1196.48 |   | 0.002        |
| 28 | 4/13/10 | 1195.94 | 1199.04 | 1188.82 | 1197.30 |   | 0.001        |
| 29 | 4/14/10 | 1198.69 | 1210.65 | 1198.69 | 1210.65 |   | 0.011        |
| 30 | 4/15/10 | 1210.77 | 1213.92 | 1208.50 | 1211.67 |   | 0.001        |
| 31 | 4/16/10 | 1210.17 | 1210.17 | 1186.77 | 1192.13 |   | -0.016       |
| 32 | 4/19/10 | 1192.06 | 1197.87 | 1183.68 | 1197.52 |   | 0.005        |
| 33 | 4/20/10 | 1199.04 | 1208.58 | 1199.04 | 1207.17 |   | 0.008        |
| 34 | 4/21/10 | 1207.16 | 1210.99 | 1198.85 | 1205.94 |   | -0.001       |
| 35 | 4/22/10 | 1202.52 | 1210.27 | 1190.19 | 1208.67 |   | 0.002        |
| 36 | 4/23/10 | 1207.87 | 1217.28 | 1205.10 | 1217.28 |   | 0.007        |
| 37 | 4/26/10 | 1217.07 | 1219.80 | 1211.07 | 1212.05 |   | -0.004       |
| 38 | 4/27/10 | 1209.92 | 1211.38 | 1181.62 | 1183.71 |   | -0.024       |

**FIGURE 2: SECOND STEP.** Calculate the daily change of price.

=STDEV(G3:G23). Copy this down to the end of the security data (Figure 3).

**Step 4: 21-day volatility switch indicator.** This formula creates the 21-day switch indicator. It normalizes the historical volatility created in step 3 to a value between zero and 1.

A rising indicator (crossing above 0.5) indicates that volatility in the market is increasing and you can expect a more choppy market with abrupt moves. A stochastic indicator is appropriate for such conditions to aid in picking short-term reversals. A declining indicator, particularly from a recent high reading near 1 and crossing below 0.5, will indicate a decrease in market volatility and a new trend in direction. A trending indicator such as the moving average convergence/divergence (MACD) can be usefully applied in these market conditions. A simple

| 1  | Date    | Open    | High    | Low     | Close   |  | daily return | 21d hist Volatility |
|----|---------|---------|---------|---------|---------|--|--------------|---------------------|
| 2  | 3/5/10  | 1125.12 | 1139.38 | 1125.12 | 1138.70 |  |              |                     |
| 3  | 3/8/10  | 1138.40 | 1141.05 | 1136.77 | 1138.50 |  | 0.000        |                     |
| 4  | 3/9/10  | 1137.56 | 1145.37 | 1134.90 | 1140.45 |  | 0.002        |                     |
| 5  | 3/10/10 | 1140.22 | 1148.26 | 1140.09 | 1145.61 |  | 0.005        |                     |
| 6  | 3/11/10 | 1143.96 | 1150.24 | 1138.99 | 1150.24 |  | 0.004        |                     |
| 7  | 3/12/10 | 1151.71 | 1153.41 | 1146.97 | 1149.99 |  | 0.000        |                     |
| 8  | 3/15/10 | 1148.53 | 1150.98 | 1141.45 | 1150.51 |  | 0.000        |                     |
| 9  | 3/16/10 | 1150.83 | 1160.28 | 1150.35 | 1159.46 |  | 0.008        |                     |
| 10 | 3/17/10 | 1159.94 | 1169.84 | 1159.94 | 1166.21 |  | 0.006        |                     |
| 11 | 3/18/10 | 1166.13 | 1167.77 | 1161.16 | 1165.83 |  | 0.000        |                     |
| 12 | 3/19/10 | 1166.68 | 1169.20 | 1155.33 | 1159.90 |  | -0.005       |                     |
| 13 | 3/22/10 | 1157.25 | 1167.82 | 1152.88 | 1165.81 |  | 0.005        |                     |
| 14 | 3/23/10 | 1166.47 | 1174.72 | 1163.83 | 1174.17 |  | 0.007        |                     |
| 15 | 3/24/10 | 1172.70 | 1173.04 | 1166.01 | 1167.72 |  | -0.006       |                     |
| 16 | 3/25/10 | 1170.03 | 1180.69 | 1165.09 | 1165.73 |  | -0.002       |                     |
| 17 | 3/26/10 | 1167.58 | 1173.93 | 1161.48 | 1166.59 |  | 0.001        |                     |
| 18 | 3/29/10 | 1167.71 | 1174.85 | 1167.71 | 1173.22 |  | 0.006        |                     |
| 19 | 3/30/10 | 1173.75 | 1177.83 | 1168.92 | 1173.27 |  | 0.000        |                     |
| 20 | 3/31/10 | 1171.75 | 1174.56 | 1165.77 | 1169.43 |  | -0.003       |                     |
| 21 | 4/1/10  | 1171.23 | 1181.43 | 1170.69 | 1178.10 |  | 0.007        |                     |
| 22 | 4/5/10  | 1178.71 | 1187.73 | 1178.71 | 1187.44 |  | 0.008        |                     |
| 23 | 4/6/10  | 1186.01 | 1191.80 | 1182.77 | 1189.44 |  | 0.002        | 0.004               |
| 24 | 4/7/10  | 1188.23 | 1189.60 | 1177.25 | 1182.45 |  | -0.006       | 0.004               |
| 25 | 4/8/10  | 1181.75 | 1188.55 | 1175.12 | 1186.44 |  | 0.003        | 0.004               |
| 26 | 4/9/10  | 1187.47 | 1194.66 | 1187.15 | 1194.37 |  | 0.007        | 0.005               |
| 27 | 4/12/10 | 1194.94 | 1199.20 | 1194.71 | 1196.48 |  | 0.002        | 0.005               |
| 28 | 4/13/10 | 1195.94 | 1199.04 | 1188.82 | 1197.30 |  | 0.001        | 0.005               |
| 29 | 4/14/10 | 1198.69 | 1210.65 | 1198.69 | 1210.65 |  | 0.011        | 0.005               |
| 30 | 4/15/10 | 1210.77 | 1213.92 | 1208.50 | 1211.67 |  | 0.001        | 0.005               |
| 31 | 4/16/10 | 1210.17 | 1210.17 | 1186.77 | 1192.13 |  | -0.016       | 0.006               |
| 32 | 4/19/10 | 1192.06 | 1197.87 | 1183.68 | 1197.52 |  | 0.005        | 0.006               |
| 33 | 4/20/10 | 1199.04 | 1208.58 | 1199.04 | 1207.17 |  | 0.008        | 0.006               |
| 34 | 4/21/10 | 1207.16 | 1210.99 | 1198.85 | 1205.94 |  | -0.001       | 0.006               |
| 35 | 4/22/10 | 1202.52 | 1210.27 | 1190.19 | 1208.67 |  | 0.002        | 0.006               |
| 36 | 4/23/10 | 1207.87 | 1217.28 | 1205.10 | 1217.28 |  | 0.007        | 0.006               |
| 37 | 4/26/10 | 1217.07 | 1219.80 | 1211.07 | 1212.05 |  | -0.004       | 0.006               |
| 38 | 4/27/10 | 1209.92 | 1211.38 | 1181.62 | 1183.71 |  | -0.024       | 0.008               |
| 39 | 4/28/10 | 1194.59 | 1195.05 | 1181.81 | 1181.36 |  | -0.006       | 0.008               |

**FIGURE 3: THIRD STEP.** Calculate the 21-day historical volatility.



**Which trading strategy should you use? This dilemma faces most traders, especially when the market changes its trend.**



|    | A       | B       | C       | D       | E       | F | G            | H                   | I                 |
|----|---------|---------|---------|---------|---------|---|--------------|---------------------|-------------------|
| 1  | Date    | Open    | High    | Low     | Close   |   | daily return | 21d hist Volatility | Volatility Switch |
| 39 | 4/28/10 | 1184.59 | 1195.05 | 1181.81 | 1191.36 |   | 0.006        | 0.008               |                   |
| 40 | 4/29/10 | 1193.30 | 1209.36 | 1193.30 | 1206.78 |   | 0.013        | 0.009               |                   |
| 41 | 4/30/10 | 1206.77 | 1207.99 | 1186.32 | 1186.69 |   | -0.017       | 0.009               |                   |
| 42 | 5/3/10  | 1188.58 | 1205.13 | 1188.58 | 1202.26 |   | 0.013        | 0.010               |                   |
| 43 | 5/4/10  | 1197.50 | 1197.50 | 1168.12 | 1173.60 |   | -0.024       | 0.011               | 1.0000            |
| 44 | 5/5/10  | 1169.24 | 1175.95 | 1158.15 | 1165.87 |   | -0.007       | 0.011               | 1.0000            |
| 45 | 5/6/10  | 1164.38 | 1167.58 | 1065.79 | 1128.15 |   | -0.033       | 0.013               | 1.0000            |
| 46 | 5/7/10  | 1127.04 | 1135.13 | 1094.15 | 1110.88 |   | -0.015       | 0.013               | 1.0000            |
| 47 | 5/10/10 | 1122.27 | 1163.85 | 1122.27 | 1159.73 |   | 0.043        | 0.017               | 1.0000            |
| 48 | 5/11/10 | 1156.39 | 1170.48 | 1147.71 | 1155.79 |   | -0.003       | 0.017               | 0.9524            |
| 49 | 5/12/10 | 1155.43 | 1172.87 | 1155.43 | 1171.67 |   | 0.014        | 0.017               | 1.0000            |
| 50 | 5/13/10 | 1170.04 | 1173.57 | 1156.14 | 1157.44 |   | -0.012       | 0.017               | 0.9524            |
| 51 | 5/14/10 | 1157.19 | 1157.19 | 1126.14 | 1135.68 |   | -0.019       | 0.017               | 1.0000            |
| 52 | 5/17/10 | 1136.52 | 1141.88 | 1114.96 | 1136.94 |   | 0.001        | 0.017               | 0.9524            |
| 53 | 5/18/10 | 1138.78 | 1148.66 | 1117.20 | 1120.80 |   | -0.014       | 0.017               | 0.9524            |
| 54 | 5/19/10 | 1119.57 | 1124.27 | 1100.66 | 1115.05 |   | -0.005       | 0.017               | 0.8095            |
| 55 | 5/20/10 | 1107.34 | 1107.34 | 1071.58 | 1071.59 |   | -0.040       | 0.019               | 1.0000            |
| 56 | 5/21/10 | 1067.26 | 1090.16 | 1055.90 | 1087.69 |   | 0.015        | 0.019               | 1.0000            |
| 57 | 5/24/10 | 1084.78 | 1089.95 | 1072.70 | 1073.65 |   | -0.013       | 0.019               | 0.9524            |
| 58 | 5/25/10 | 1067.42 | 1074.75 | 1040.78 | 1074.03 |   | 0.000        | 0.019               | 0.9524            |
| 59 | 5/26/10 | 1075.51 | 1090.75 | 1065.59 | 1067.95 |   | -0.006       | 0.019               | 0.8095            |
| 60 | 5/27/10 | 1074.27 | 1103.52 | 1074.27 | 1103.06 |   | 0.032        | 0.020               | 1.0000            |
| 61 | 5/28/10 | 1102.59 | 1102.59 | 1084.78 | 1089.41 |   | -0.012       | 0.020               | 0.9524            |
| 62 | 6/1/10  | 1087.30 | 1094.77 | 1069.89 | 1070.71 |   | -0.017       | 0.020               | 0.9524            |
| 63 | 6/2/10  | 1073.01 | 1098.56 | 1072.03 | 1098.38 |   | 0.026        | 0.021               | 1.0000            |
| 64 | 6/3/10  | 1098.82 | 1105.67 | 1091.81 | 1102.83 |   | 0.004        | 0.020               | 0.9524            |
| 65 | 6/4/10  | 1098.43 | 1098.43 | 1060.50 | 1064.88 |   | -0.035       | 0.021               | 1.0000            |
| 66 | 6/7/10  | 1065.84 | 1071.36 | 1049.86 | 1050.47 |   | -0.014       | 0.020               | 0.9048            |
| 67 | 6/8/10  | 1050.81 | 1063.15 | 1042.17 | 1062.00 |   | 0.011        | 0.020               | 0.9048            |
| 68 | 6/9/10  | 1062.75 | 1077.74 | 1052.25 | 1055.69 |   | -0.006       | 0.018               | 0.3810            |
| 69 | 6/10/10 | 1058.77 | 1087.85 | 1058.77 | 1086.84 |   | 0.029        | 0.019               | 0.6190            |
| 70 | 6/11/10 | 1082.65 | 1092.25 | 1077.12 | 1091.60 |   | 0.004        | 0.019               | 0.4286            |
| 71 | 6/14/10 | 1095.00 | 1105.91 | 1089.03 | 1089.63 |   | -0.002       | 0.019               | 0.3810            |
| 72 | 6/15/10 | 1091.21 | 1115.59 | 1091.21 | 1115.23 |   | 0.023        | 0.019               | 0.6190            |
| 73 | 6/16/10 | 1114.02 | 1118.74 | 1107.13 | 1114.61 |   | -0.001       | 0.019               | 0.5714            |
| 74 | 6/17/10 | 1115.98 | 1117.72 | 1105.87 | 1116.04 |   | 0.001        | 0.019               | 0.3333            |
| 75 | 6/18/10 | 1116.16 | 1121.01 | 1113.93 | 1117.51 |   | 0.001        | 0.019               | 0.2857            |

**FIGURE 4: FOURTH STEP.** Calculate the 21-day volatility switch indicator. A cell value greater than 0.5 is red, whereas a cell value less than 0.5 is green.

moving average crossover is also suitable for keeping you long (or short, as the case may be) in a trending market.

In column I43, enter this formula:

```
=COUNTIF(H23:H43,"<=" & VALUE(H43))/
COUNT(H23:H43)
```

Copy this down to the end of the security data (Figure 4).

time to apply your favorite trend-following indicator, such as the moving average crossover or moving average convergence/divergence (MACD).

The key here is that rising volatility leads to increasing uncertainty and a choppy market. Falling volatility leads to less anxiety and increased certainty in market direction. Finally, I should mention that the 21-day time period is not optimized;

finding the optimal lookback period is beyond the scope of this article. It should, however, represent a good starting point. I leave it to you to determine what gives the best results.

While this article presents an oversimplified example of using volatility in a regime switching strategy, it will help those not familiar with this concept to start implementing it along



**FIGURE 5: MEAN REVERTING MARKET.** Red cell value indicates the market is either in a mean reverting mode or is entering it soon.

**Rising volatility leads to increasing uncertainty; falling volatility leads to increased certainty.**



with their other trading tools.

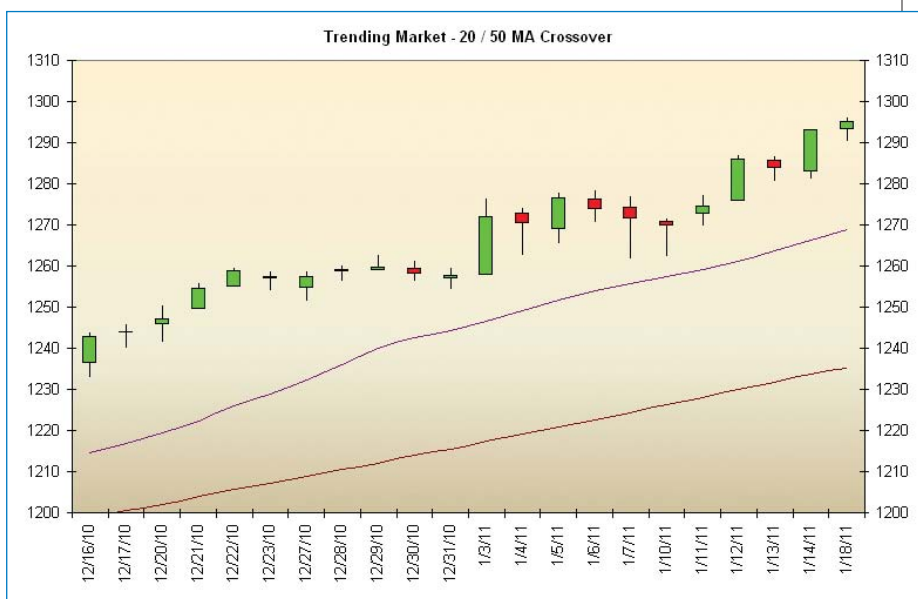
*Ron McEwan is an independent trader and market technician. He may be reached at [rmac@juno.com](mailto:rmac@juno.com).*

## SUGGESTED READING

- Quantum Financier. "Regime Switching System Using Volatility Forecast." <https://quantumfinancier.wordpress.com/2010/08/27/regime-switching-system-using-volatility-forecast/>
- Systematic Investor. "Trading Using Garch Volatility Forecast." <https://systematicinvestor.wordpress.com/>

‡Microsoft Excel

See Traders' Tips section beginning on page 66 for commentary and implementation of Ron McEwan's technique in various technical analysis programs. Accompanying program code can be found in the Traders' Tips area of Traders.com.



**FIGURE 6: TRENDING MARKET.** Green cell value indicates the market is either in a trending mode or will enter it soon.

Find similar articles online at [Traders.com](http://Traders.com)



# How Do You Turn Trading Possibilities into Profit?



For **30 years**, eSignal has provided traders with the tools they need, in an easy-to-use platform:

- **Lightning-fast data:** Stocks, Forex, Futures, Options, ETFs
- **Advanced Charting:** Customizable technical analysis tools
- **Access to 100s of exchanges and indices worldwide**
- **Trading integration with 50+ brokers**

**eSignal**  
smarter trading tools



Award-Winning Products  
eSignal products have consistently been voted #1 by users worldwide

**Try eSignal Risk-Free for 30 days!\***

**Sign up now and start trading in minutes.**

**800.900.1779 | [www.eSignal.com](http://www.eSignal.com)**

eSignal, an Interactive Data company.

\*If you're not completely satisfied during the trial, cancel the service, and we will refund your subscription fees. Exchange fees are non-refundable. x14789

Join us on  
**Facebook**

Follow us on  
**Twitter**