

## AMIBROKER CODE FOR SPEARMAN INDICATOR

```
// Spearman indicator:
//
// r1 - time series order
// r11 - price (close)
// r21 - internal sort table
// r22 - order of prices (close)
// This code has been written only to support findings
// described in this article. It can be modified for
// improved efficiency.
//
/* Number of periods */
n = Param("Periods: ", 10, 5, 200, 1 );

/* Start loop and computations based on Close */

for( k = n; k <= BarCount-1; k++ )

/* Populate internal tables for n elements */

{
    r1=0; r11 = 0; r2=0; r21=0; r22=0;
    //////////////////////////////////////
    for(i=n; i>=1; i--)

    {
        r1[i] = i;
        r22[i] = i;

        r11[i] = Close[k-n+i];
        r21[i] = Close[k-n+i];
    } // for ...
    //////////////////////////////////////
    /* Sort internal table r21 descending */

    changed = 1;
    while(changed > 0)
    {
        changed = 0;
        for(i=1; i<=(n-1); i++)
        {
            if(r21[i+1]<r21[i])
            {
                temp = r21[i];
                r21[i] = r21[i+1];
                r21[i+1] = temp;
                changed = 1;
            }
        } // for ....
    } // while ....
    //////////////////////////////////////
    for(i = 1; i<=n; i++)

    {
        found = 0;
        while(found < 1)
        {
```

```
            for(j =1; j<=n; j++)
            {
                if(r21[j] == r11[i])
                {
                    r22[i] = j;
                    found = 1;
                }
            } // for ...
        } // while ...

    } // for ...
    //////////////////////////////////////

    /* Compute Spearman's rank correlation coefficient for n bars */

    absum=0;

    for(i = 1; i<=n; i++)

    {
        ab = r1[i] - r22[i];
        ab2 = ab*ab;
        absum = absum+ab2;
    } // for ...

    coefcorr[k] = (1-(6*absum)/(n*(n-1)));

    /* coefcorr[k]: Spearman's rank correlation coefficient for
    current bar k */

    sc[k]=100*coefcorr[k]; // multiplied by 100

    //////////////////////////////////////

} // for k.....

//

/* Plot Spearman's rank correlation coefficient multiplied by
100 */

Plot(sc, "Spearman indicator", colorBlue, styleLine);

/* Plot 3-bar simple moving average */

Plot(MA(sc,3), "SMA(3)", colorRed, styleLine);

Title = Date() + " " + Interval(2) + " " + Name() + "
Spearman("+n+") = " + sc;

/* end */
```